HERCULES

Hercules - Kenvil Works Facility
Kenvil, New Jersey

Surface Water/Sediment Site Investigation

Volume I: Text and Figures

November 2004

MWH

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SURFACE WATER/SEDIMENT SITE INVESTIGATION
VOLUME I: TEXT AND FIGURES

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LIST OF ACRONYMS AND ABBREVIATIONS

AOC	Areas of Concern
Alliant	Alliant Techsystems
AN	Ammonia Nitrate
ANFO	Ammonium Nitrate/Fuel Oil
AQAPP	Analytical Quality Assurance Project Plan
Bgs	Below ground surface
CCC	Criterion Continuous Concentration
C&D	Construction and Demolition
CF	Conversion Factor
CMC	Criterion Maximum Concentration
DIAZO	Diazodinitrophenol
DNT	2,4/2,6-Dinitrotoluene
DQO	Data Quality Objectives
E&E	Explosive and Energetic
EDDs	Electronic Database Deliverables
EDI	Electronic Data Interchange
EDM	Electronic Distance Measurement
FA	Further Action
Facility	Kenvil Works facility
FQAPP	*Field Quality Assurance Project Plan*
FSSG	Freshwater Sediment Screening Guidelines
FW2-NT(C1)	Fresh Water 2 – Non Trout Production Criteria 1
GC/MS	Gas Chromatograph/Mass Spectrograph
GIS	Geographic Information System
GPM	Gallons per minute
GPS	Global Positioning System
GW	Groundwater
GWQS	Groundwater Quality Criteria/Standards
Hercules	Hercules Incorporated
HMX	Cyclotetramethylenetetranitramine
HPLC	High Performance Liquid Chromatograph
IGWSCC	Impact to Groundwater Soil Clean-up Criteria
ISRA	New Jersey's Industrial Site Recovery Act
LCS	Laboratory Control Samples
LEL	Lowest Effect Level
LLI	Lancaster Laboratories, Inc.
MCMUA	Morris County Municipal Utilities Authority
MS/MSD	Matrix Spike and Matrix Spike Duplicate
MWH	MWH Americas, Inc.
N.J.A.C	New Jersey Administrative Code
NAVD	North American Vertical Datum

LIST OF ACRONYMS AND ABBREVIATIONS (continued)

NC	Nitrocellulose
NFA	No Further Action
NG	Nitroglycerin
NJDEP	New Jersey Department of Environmental Protection
NJSWQC	New Jersey Surface Water Quality Criteria
NRDSCC	Non-Residential Direct Contact Soil Clean-up Criteria
PA	Preliminary Assessment
PAH	Polycyclic Aromatic Hydrocarbons
PARCC	Precision, Accuracy, Representativeness, Comparability, Completeness
PCE	Tetrachloroethene
PETN	Pentaerythritol Tetranitrate
PQL	Practical Quantitation Limit
PSO	Project Safety Officer
QA/QC	Quality Assurance/Quality Control
RA	Remedial Agreement
RDCSCC	Residential Direct Contact Soil Clean-up Criteria
RDX	Cyclotrimethylenetrinitramine
Roux	Roux Associates
SD	Sediment
SDG	Sample Delivery Group
SEL	Severe Effects Level
SI	Site Investigation
SOP	Standard Operating Procedures
Sq. ft.	Square Feet
SSHSP	Site-Specific Health and Safety Plan
SVOCs	Semi-Volatile Organic Constituents
SW	Surface Water
SWQC	Surface Water Quality Criteria
SW/SD – SI	Surface Water and Sediment Site Investigation
SW/SD/GW – SI SAP	Surface water/Sediment/Groundwater Site Investigation Sampling and Analysis Plan
Technical Requirements	Technical Requirements for Site Remediation
TCE	Trichloroethylene
TNT	Trinitrotoluene
TOC	Total Organic Carbon
USEPA	United States Environmental Protection Agency
VOCs	Volatile Organic Constituents
WER	Water Effects Ratio
WWTP	Waste Water Treatment Plane

EXECUTIVE SUMMARY

Hercules Incorporated (Hercules) retained MWH Americas, Inc. (MWH) to conduct a Surface Water and Sediment Site Investigation (SW/SD - SI) at the Kenvil Works Facility (Facility) as part of their obligation to execute a Remedial Agreement (RA) with the New Jersey Department of Environmental Protection (NJDEP). The RA was signed on March 10, 1995 and establishes the basis for conducting activities at the site under New Jersey's Industrial Site Recovery Act (ISRA).

The primary objective of the SW/SD – SI as described in N.J.A.C. 7:26E-3.3(a) is to determine on a facility-wide basis, and in a manageable and cost effective manner, if there are any contaminants present within the Facility surface water or sediment at concentrations exceeding any of the applicable regulatory standards, criteria, or levels, and will require further action.

The results of the laboratory analysis collected during the SW/SD – SI field investigation (120 surface water and 157 sediment samples) were compared to the following regulatory criteria:

- NJDEP Surface Water Quality Standards N.J.A.C. 7:9B, August 2004 (Surface Water Human Health Evaluation and Surface Water Aquatic Life Evaluation).
- The United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria (Surface Water Aquatic Life Evaluation).
- Guidance for Sediment Quality Evaluations, Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL) and Severe Effects Level (SEL).

Key conclusions drawn from this comparison are:

- There are no site-related constituents with an established FSSG (LEL or SEL) or SWQC (Human Health or Aquatic Life) exiting the Facility. Constituents identified in the surface water and sediment samples at concentrations exceeding the FSSG (LEL or SEL) or SWQC (Human Health) adjacent to the only surface water/sediment discharge point are attributed to impacts from Route 46.
- The detected concentrations of Tetrachloroethylene (PCE) within the Western Drainage Area are not attributed to historic Facility operations. A large regional

chlorinated solvent plume underlies the Facility in the region of the Western Drainage System. The chlorinated solvent plume is derived from off-site sources and has not been attributed to historic operations performed at the Facility. The NJDEP conducted a groundwater investigation of the southern portion of the Facility in March 1999 and concluded the Facility was not a chlorinated solvent source area to the regional plume.

- The detected concentrations of Semi-volatile Organic Constituents (SVOC) within the surface water and sediment samples are comprised primarily of Polyaromatic Hydrocarbon (PAH) constituents. The SVOC PAH constituents are likely associated with the historically common practice of using fly ash as fill material (Historic Fill) to improve the grade of the Facility and recover undevelopable land.

- The detected concentrations of total and dissolved metal constituents are likely associated with the historically common practice of using fly ash as fill material (Historic Fill) to improve the grade of the Facility and recover undevelopable land.

- The single detection of Bromodichloromethane is attributed to chlorine treated potable water from a leaking water supply main and is not associated with the former manufacturing processes. Since the time of this investigation, the Facility has dismantled the water distribution system in the Western Drainage Area and further potable water cannot enter the surface water.

- The two detections of Bis(2-ethylhexyl)phthalate present at concentrations exceeding the SWQC (Human Health) within The Central Drainage System and Duck Pond and its Tributaries Drainage System are likely a result of historic manufacturing operations.

- The single detection of 2,4-Dinitrotoluene (2,4-DNT) present at a concentration exceeding the SWQC (Human Health) within the Central Drainage System is likely a result of historic manufacturing operations.

Key recommendations for future regulatory activities include the following:

- Begin to implement the Triad approach for future investigation and remedial evaluations. Utilize the information presented in the Soils-SI, Groundwater-SI, and this SW/SD - SI to begin developing dynamic workplans addressing the interconnection of the facility's environmental media. Future efforts when appropriate, should focus on contaminated areas rather than individual AOCs.

- The results of this SW/SD-SI fulfill the requirements of N.J.A.C 7:26E-3.11(a)4.i Contamination of ecological concern exists onsite; therefore the performance of a baseline ecological evaluation (BEE) is not necessary. Future efforts should be compliant with N.J.A.C. 7:26E-4.7 Remedial Investigation of Ecological Receptors.

- Generate site-specific clean-up standards for identified constituents in the Soils-SI, Groundwater-SI, and this SW/SD-SI without an established regulatory criterion.

- Future investigation and remedial evaluations should not attempt to encompass the entire Facility as performed for Soils-SI, Groundwater-SI and this SW/SD-SI. These were necessary to understand the portions of the Facility requiring future investigation and begin understanding the possible economics involved with site restoration. However, future efforts should be directed toward the portions of the Facility that can be restored the quickest to generate funding to support further restoration. The northeast portion of the Facility (Development, Finishing, Storage, and B-Line Areas) are the most applicable to begin restoration activities. These areas will be the initial focus areas for the implementation of the remedial investigation.

- Identify and evaluate the use of innovative technologies that may prove effective in remediating/stabilizing site constituents.

1.0 INTRODUCTION

Hercules Incorporated (Hercules) retained MWH Americas, Inc. (MWH) to conduct a Site Investigation (SI) on the surface water and sediment (SW/SD – SI) of the Kenvil Works Facility (Facility) as part of their obligation to execute a Remedial Agreement (RA) with the New Jersey Department of Environmental Protection (NJDEP). The RA was signed on March 10, 1995 and establishes the basis for conducting activities at the site under New Jersey's Industrial Site Recovery Act (ISRA). Appendix A presents a description of the Facility, general geology/hydrogeology, and summarizes the previous investigations.

The SW/SD - SI was designed to comply with the intent of the NJDEP's Technical Requirements for Site Remediation (Technical Requirements) documented in the New Jersey Administrative Code (N.J.A.C.) 7:26E. Specifically, the SW/SD – SI field investigation complies with the SI requirements established in N.J.A.C. 7:26E-3.3, 3.4, 3.8, 3.9, and 3.13. This report has been prepared following the requirements of N.J.A.C 7:26E-3.13 for the submittal of SI reports.

This SW/SD – SI is one of a series of phases that comprise a facility-wide restoration strategy previously approved by the NJDEP. The facility-wide restoration strategy, graphically presented on Figure 1-1, incorporates flexibility to address each major environmental media (i.e. soil, groundwater, sediment, surface water) either on a facility-wide or former operational area basis.

The following documents, each previously submitted to NJDEP, were integral to the performance of the SW/SD - SI:

- The *Field Site-Specific Health and Safety Plan* (SSHSP – Montgomery Watson, April 1999) provides the health and safety procedures adhered to during the facility-wide investigation. The NJDEP received the SSHSP in compliance with N.J.A.C. 7:26E-1.9.

- The *Revised Analytical Quality Assurance Project Plan* (AQAPP - Montgomery Watson, December 2000) describes the quality assurance/quality control (QA/QC) procedures for all analytical activities conducted during the facility-wide investigation. The Revised AQAPP was modified to include Lancaster Laboratories as a contract laboratory. The NJDEP has approved the previous AQAPP.

- The *Final Field Quality Assurance Project Plan* (FQAPP - Montgomery Watson, June 1999) was developed to describe, in detail, the field sampling and screening methodologies to be followed during the facility-wide investigation. NJDEP has approved the FQAPP.

- The Surface Water/Sediment/Groundwater Site Investigation Sampling and Analysis Plan (SW/SD/GW-SI SAP - Montgomery Watson, May 2001) presented the field sampling tasks to be conducted during the SW/SD – SI. The NJDEP has approved the SW/SD/GW-SI SAP.

1.1 PROJECT OBJECTIVE

The primary objective of the SW/SD – SI as described in N.J.A.C. 7:26E-3.3(a) is to determine on a facility-wide basis, and in a manageable and cost effective manner, if there are any contaminants present within the Facility surface water or sediment at concentrations exceeding any of the applicable regulatory standards, criteria, or levels. Figure 1-2 presents the Facility base map.

To accomplish this objective, Hercules categorized sections of the surface water bodies and sediment into common groups based on drainage systems and/or surface water feature types (morphologic features, i.e. ponds) to aid the SI process. A description of each SW/SD drainage system and surface water feature type is provided in Section 4.0. The results of the laboratory analysis collected during the SW/SD – SI field investigation were compared to the following regulatory criteria:

- NJDEP Surface Water Quality Standards N.J.A.C. 7:9B, August 2004 (Surface Water Human Health Evaluation and Surface Water Aquatic Life Evaluation).

- The United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria (Surface Water Aquatic Life Evaluation).

- NJDEP Sediment Quality Evaluations, Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL) and Severe Effects Level (SEL).

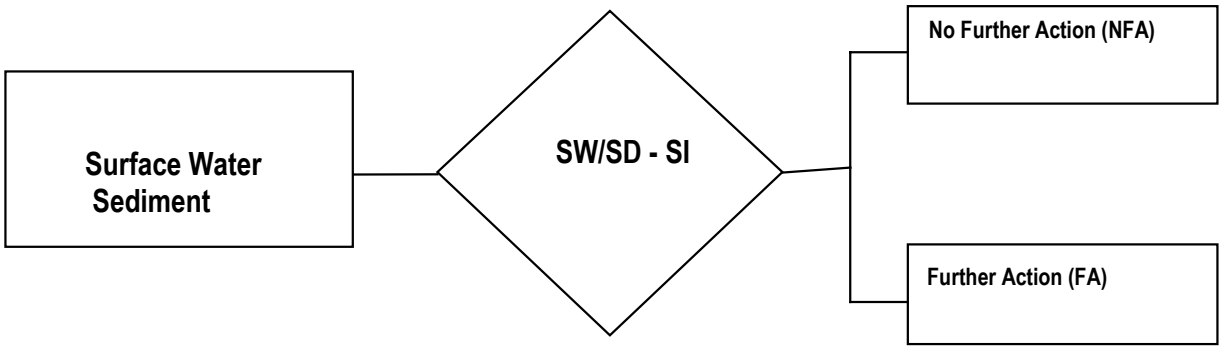
Based on these comparisons, 120 surface water and 157 sediment sample locations were placed into the following categories:

- Locations requiring no further action (NFA). NFA is requested for locations identified not to have constituents within the surface water and/or sediment exceeding any of the applicable criteria, standards, or guidelines.

- Locations requiring further action (FA) and additional investigation. Locations that have identified constituents within the surface water and/or sediment exceeding the applicable criteria, standards, or levels will continue through the facility-wide restoration strategy as depicted in Figure 1-1.

The following chart graphically depicts the SW/SD – SI process.

AOC Processing Concept



1.2 REPORT ORGANIZATION

This report is organized as follows:

- Section 1.0 presents the report introduction, objectives, and organization.

- Section 2.0 presents the scope of work for the SW/SD – SI, which describes the specific sampling procedures and requirements followed during site sampling activities.

- Section 3.0 presents the data quality objectives, describing the reliability and validity of the data.

- Section 4.0 presents description of the Facility's surface water drainage systems and surface water feature types.

- Section 5.0 summarizes the results of the sediment and surface water analytical data.

- Section 6.0 presents the conclusions and recommendations.

2.0 SCOPE OF WORK

This section describes the field investigation and related office tasks conducted by MWH for the SW/SD - SI.

2.1 HEALTH AND SAFETY

The field activities conducted during the SW/SD – SI were performed according to the health and safety requirements of the *Final Site-Specific Health and Safety Plan* (Montgomery Watson, 1999).

Personnel involved in site activities conducted at the Facility received initial or refresher Explosive and Energetic (E&E) compound safety education prior to commencement of work. The site E&E compound safety education was directed by the MWH project safety officer (PSO) and the Hercules PSO. This education was designed to provide employees with a thorough knowledge of and the ability to identify E&E compounds that could potentially be encountered on-site. All personnel new to the site were required to receive this training before they were permitted to undertake field activities.

2.2 FIELD SAFETY SCREENING METHODS

Sediment sample locations were visually inspected and field screened for the presence of E&E compounds prior to initiating sampling activities. Surface water sample locations did not warrant safety screening because the potential for dissolved concentrations of any site related explosive compound was sufficiently low to not represent a potential safety hazard. Figure 2-1 presents the surface water and sediment sample locations. The following procedures were used to ensure sediment samples were collected safely:

- Visual observation for the presence of E&E compounds was conducted throughout the entire sample collection activity. If E&E compounds were visually identified at any time during the sampling event, the project manager was notified and personally inspected the area. The project manager determined if the concentration of E&E compounds were significant and, if the sampling activities could be safely conducted. Following the visual inspection, the sediment surface at the sampling location was field screened with the EX-PRAY® E&E compound detection test kit.

- The EX-PRAY® E&E compound detection test kit is an aerosol based technique that utilizes a patented paper and colorimetric reaction to identify E&E compounds down to residual levels. This kit can differentiate between polynitro-aromatics (TNT, picric acid, etc.), nitrate esters (nitroglycerin (NG), nitrocellulose (NC), etc.), and Nitramines {cyclotrimethylenetrinitramine (RDX), cyclotetramethylenetetranitramine (HMX), etc.}. The EX-PRAY® kit, however, does not provide contaminant concentration data, it is designed only to determine if E&E compounds are present in ranges from residual levels to near percentage concentrations. The manufacturers' information and instructions for performing the EX-PRAY® tests is included in Appendix A of the FQAPP. If no E&E compounds were detected, it was considered safe to begin sediment sampling activities.

- There were no instances where E&E compounds warranted a modification of the sediment sampling program.

2.3 SURFACE WATER AND SEDIMENT SAMPLING

Surface water and sediment samples were collected at each stream and surface water body with the potential to have been impacted by historic Facility operations, as specified in N.J.A.C. 7:26E-3.8. Figure 2-1 presents the surface water and sediment locations. A total of 120 surface water and 157 sediment samples were collected from the Facility. Surface water and sediment samples were collected at the same location when possible. Some small tributaries and ponds contain surface water only intermittently and primarily during precipitation events. If, at the time of sample collection, surface water was not present in small tributaries and/or ponds, only sediment samples were collected for laboratory analysis.

Sampling was conducted in April and May 2001 during the seasonally high precipitation months to maximize the amount of available streams for surface water sampling. Streams were sampled at a frequency of approximately every 500 linear feet, as best approximated in the field. Samples were also collected at each significant stream intersection and weir. Weirs were historically placed in the Facility's streams to artificially raise the surface water elevation within the Dynamite Area. This was done to improve safety (reduce occurrence of brush fires) for personnel working in the Dynamite Area. Another function of the weirs, though not intentional, was to restrict the movement of sediment beyond the Dynamite Area and off-site.

Small ponds were sampled at a minimum frequency of 2 samples per pond. Duck Pond was sampled at 9 locations and Shooting Pond at 5 locations, as these ponds are large and possess the greatest potential to have been impacted by Facility operations.

All sample locations were biased to areas of greatest potential contamination based on field conditions and knowledge of operational history, as defined in N.J.A.C.7:26E-3.4.

2.3.1 Surface Water Sample Collection

Surface water samples were collected using grab and composite sampling techniques. Surface water samples were collected in accordance with the NJDEP Field Sampling Procedures Manual (1992), and N.J.A.C. 7:26E-3.8. In all cases, the surface water samples were collected as follows:

- Surface water samples were collected prior to sediment samples to ensure disturbed sediment did not impact the integrity of the surface water samples.
- Surface water sampling began in the most down-gradient stream location and progressed in the up-gradient stream direction. This was done to ensure up-stream disturbances did not impact the integrity of the surface water samples.

The following sampling techniques were used for streams and shallow ponds:

- Grab surface water samples were collected for all analytes from each stream and shallow pond sampling location. The streams and shallow ponds are generally less than 2-feet deep and well mixed, therefore, composite sampling was not warranted. Samples were collected as a grab sample from the middle of the water column. Laboratory-provided clean glassware was used to collect each grab surface water sample.

The following sampling techniques were used for the large ponds (Duck Pond and Shooting Pond):

- Composite surface water samples, for all non-Volatile Organic Constituents (VOC) analytes, were collected from Duck Pond and Shooting Pond. These ponds represent the only surface water bodies with average depths greater than 2-feet with the potential to have a stratified water column. The composite surface water samples were comprised of equal amounts of water collected at the top, middle, and bottom of the water column. Sample aliquots were collected at the

middle and bottom levels of the composite sample with a weighted bottle sampler.

- VOC samples were collected as a grab sample from the middle of the water column.

Section 10.0 of the FQAPP presents a detailed description of the surface water sampling methods.

2.3.2 Sediment Sample Collection

The primary sediment sampling method (used at approximately 96% of the sampling locations) was the manual sample collection method utilizing a stainless steel soil coring device and bucket auger. The secondary sediment sampling method was the test pit sample collection method utilizing a track-mounted excavator. The track-mounted excavator was only used at seven sampling locations to investigate the sediment of two buried former ditches, which was part of the Eastern Stream Drainage System (Section 4.0 presents a complete description of drainage systems) located in the Development Area. The following seven sample locations were sampled utilizing a track-mounted excavator:

SD-H6-1-01	SD-H8-1-01	SD-H9-1-01	SD-H10-1-01
SD-I10-2-01	SD-J10-1-01	SD-J10-2-01	

Sediment samples were collected in accordance with NJDEP Guidance for Sediment Quality Evaluations, NJDEP Field Sampling Procedures Manual (1992), and N.J.A.C. 7:26E-3.8. In all cases, the sediment samples were collected as follows:

- Sediment samples were collected after surface water samples to ensure disturbed sediment did not impact the integrity of the surface water samples.
- Sediment sampling began in the most down-gradient stream location and progressed in the up-gradient stream direction. This was done to ensure up-stream disturbances did not impact the integrity of the sediment or surface water samples.

Analytical sample collection was biased to the interval of greatest potential contamination based on field conditions or professional judgement. Stream sediment samples were collected in depositional areas, such as in slower moving water. Sediment samples collected from ponds were biased toward inflow and outflow areas.

All samples collected for VOC analysis were collected from an undisturbed 6-inch interval obtained from a depth at least 6 inches below the surface water/sediment interface pursuant to the NJDEP Guidance for Sediment Quality Evaluations. All remaining samples were derived from a composite of the 0 to 2-foot interval below the surface water/sediment interface sample interval. Section 8.0 of the FQAPP provides a detailed description of the sediment sampling procedures. Section 16.0 of the FQAPP provides detailed description of the methanol preservation procedure for non-aqueous VOC preservation.

***Note**: Every attempt was made to achieve the desired sample depth range. However, because of the operational history of the Facility and geologic conditions, not all sample intervals could be advanced over the full desired two foot depth range. In these cases, the sediment boring was terminated at refusal. Refusal was interpreted to be the base of recent fine-grained sedimentary deposition covering the coarse glacial till sediments. Additionally, in the event of encountering E&E compounds in the bore-hole, it is not safe to force sampling equipment. The exact sample collection depth for each analytical sample collected during the SW/SD – SI is presented in the data summary tables discussed in Section 5.0.*

2.4 LABORATORY ANALYSIS

During the SW/SD – SI, 120 surface water samples and 157 sediment samples were collected for analytical analyses. The samples were submitted to Lancaster Laboratories, Inc. (LLI) of Lancaster, Pennsylvania. LLI is certified to provide laboratory services in the State of New Jersey (Certification No. 77011). The samples were analyzed for the following:

Analysis	Matrix	Method
VOCs	Solid	SW-846-8260B
	Aqueous	SW-846-8260B
SVOCs	Solid	SW-846-8270C
	Aqueous	SW-846-8270C
Explosives and Energetics (E&E)	Solid	SW-846-8330 modified
	Aqueous	SW-846-8330 modified
Nitroglycerin (NG)	Solid	SW-846-8332
	Aqueous	SW-846-8330 modified
Metals (Total/Dissolved)	Solid	SW-846-6010B
	Aqueous	SW-846-6010B
Ethers and Alcohols	Solid	SW-846-8015B
	Aqueous	SW-846-8015B
General Chemistry	Solid	E160.3/DY22/LYOKHN
	Aqueous	E150.1/E360.1/E130.2

Table 2-1 presents the analytical sampling requirements for all surface water and sediment samples. Section 6.0 of the AQAAP provides specific analytical information for each analyte or parameter selected during the SW/SD – SI.

2.5 SAMPLE HANDLING AND SHIPMENT

Analytical samples submitted for analysis were immediately packaged in the appropriate sample containers and placed in an iced cooler for shipment to LLI. The coolers were shipped to LLI via courier and were received by the laboratory within 24-hours of sample collection.

2.6 SAMPLE IDENTIFICATION

All samples collected were designated with an alpha-numeric code that identifies each sample by the matrix sampled, site location number, sequential sample number and depth interval, as appropriate. Sampled matrices were identified by a two-letter code, (e.g., SW for a surface water sample, SD for a sediment sample). The site location number corresponds to the Facility grid location and sample number (i.e. A15-3). Sequential sample numbers within each grid for each sample type began with 01 and increased accordingly. Sample designations for surface water reference depth ranges below top of water column. Sample designations for sediment reference depth ranges below top of sediment. The following is a guide for sample identification:

Matrix	Site Location Number		Sequential Sample	Top of Sample Interval Depth in feet (if applicable)
AA	ANN-NN	–	NN	(N-N)

where:

A = Alphabetic

N = Numeric

Matrix codes for this project will be as follows:

SD = Sediment samples

SW = Surface Water

EQ = Equipment blank

TB = Trip blank

MS = Matrix Spike

MSD = Matrix Spike Duplicate

Example sample designations are shown below:

- Sequential sediment samples collected from grid A15 were labeled as SD-A15-1-01(0-2), SD-A15-2-01(0-2), SD-A15-3-01(0-2), etc.

2.7 EQUIPMENT DECONTAMINATION PROCEDURES

The following subsections describe the equipment decontamination procedures used during the SW/SD – SI.

2.7.1 Manual Sampling Equipment. All non-disposable manual sampling equipment (i.e. soil coring devices, spoons, bowls, etc.) was decontaminated prior to mobilization to each sampling location and after each use. The following procedures were used to decontaminate the manual sampling equipment:

- Equipment was washed with potable water and laboratory-grade detergent.
- Equipment was thoroughly rinsed with potable tap water.
- Equipment was rinsed with distilled water from an approved potable water source.
- If the equipment was used to collect samples for metals analysis, equipment was rinsed with a 10 percent solution of laboratory grade nitric acid followed by another rinse with distilled water.
- If the equipment was used to collect samples for organic analysis the equipment was rinsed with pesticide-grade acetone rinse, air dried, and followed by another rinse with distilled water.
- Equipment was wrapped for storage in aluminum foil, shiny side out.

2.7.2 Heavy Equipment. The excavator used to conduct test-pitting activities was decontaminated upon arrival at the site, between each subsurface sampling location, and upon leaving the site. The bucket and arm of the excavator was decontaminated with a high-pressure cleaner.

2.8 INVESTIGATION-DERIVED WASTE MANAGEMENT

The following subsections describe the disposal practices used for excess sediment cuttings and equipment decontamination fluids.

2.8.1 Sediment Cuttings. Excess sediment collected during sampling activities were returned to the sample collection location in compliance with the NJDEP *Field Sampling Procedures Manual* (NJDEP, 1992).

2.8.2 Decontamination Water. All decontamination fluids were contained and disposed of at the on-site WWTP.

2.9 FIELD DOCUMENTATION

All aspects of the SW/SD – SI field activities were permanently recorded in spiral bound field notebooks so that information obtained and decisions made during field activities could be reproduced and future events could benefit from the information gained. Documentation recorded in the field book was performed according to the procedure detailed in Section 17.0 of the FQAPP. The field documentation is not submitted as part of the SW/SD – SI, however it can be made available upon request.

2.10 SURVEY METHODS

All screening and analytical sampling locations were surveyed as part of the SW/SD – SI as required by the Technical Requirements, N.J.A.C. 7:26E. Surveying was accomplished using a combination of global positioning system (GPS) and traditional electronic distance measurement (EDM) equipment. Combined survey methods were necessary because communication with GPS satellites was blocked at various locations by existing structures and physiographic features, thus requiring conventional survey methods to obtain survey data. The horizontal survey control references the New Jersey State Plane coordinate system and the vertical survey control references the North American Vertical Datum (NAVD 1988).

2.11 SW/SD – SI REPORT

This report is prepared in accordance with the N.J.A.C. 7:26E3.13. In addition to the hardcopy information presented in this report, an Electronic Database Deliverable (EDD) will be submitted with this report which meets the requirements of the NJDEP Electronic Data Interchange (EDI) submittal format.

The analytical laboratory data was reduced and validated in accordance with Section 4.0 of the *Revised Analytical Quality Assurance Project Plan (AQAPP)* (Montgomery Watson, 1999). In accordance with Section 4.2 of the AQAPP, data validation indicates any limitations or qualifications concerning the use of laboratory data documented by the data validator. Deliverables include hard copies and electronic files of the data as specified in Section 9.0 of the AQAPP.

3.0 DATA QUALITY CONTROL

This section is a summary of the quality control review for samples collected as part of the SW/SD-SI. LLI (State of New Jersey Certification No. 77011) performed the chemical analyses of all samples. The samples were validated in accordance with the National Functional Guidelines for Inorganic Data Review (USEPA 1994), the National Functional Guidelines for Organic Data Review (USEPA 1999), and Explosives Residue Standard Operating Procedure (USEPA Region II 1994) as applicable to SW-846 analyses. The United States Environmental Protection Agency (USEPA) Functional Guidelines for Evaluating Organic/Inorganic Analyses (USEPA, 1994) and PARCC were used to summarize the specific data review criteria set forth in the NJDEP approved (February 3, 1999) AQAPP. Specific information contained within the AQAPP consists of holding times, reporting limits, LCS, MS, and MSD limits, etc, which were originally provided by the laboratory and approved by the NJDEP.

Appendix B presents the data validation notes for each sample delivery group (SDG) pertaining to the SW/SD – SI. The field samples and associated quality control samples were analyzed for the following parameters:

- Volatile organic compounds (VOCs) by SW-846 8260B,
- Semivolatile organic compounds (SVOCs) by SW-846 8270C,
- Metals by SW-846 6010/7471 (solid), and metals (Total/Dissolved:water) by SW-846 6010/7470,
- Hardness by method E130.2,
- Dissolved Oxygen by method E360.1,
- Nitrocellulose by IAAP,
- Percent solids by method E160.3,
- pH by method E150.1,
- Non-halogenated hydrocarbons (ethers and alcohols) by SW-846 8015B,
- Total organic carbon (TOC) by the Lloyd Kahn method,

- Nitroglycerin by SW-846 8332,
- Perchlorate by E314.0,
- Grain Size by method D422,
- Explosives by SW-846 8330.

The quality of the data was assessed according to the USEPA's PARCC (precision, accuracy, representativeness, comparability and completeness) parameters. These criteria were used to identify unacceptable or biased data that could result in corrective actions being implemented or otherwise require qualification of the data. The following is a brief summary of the data quality evaluation and resulting qualification of the results, as applicable.

3.1 PRECISION AND ACCURACY

Precision and accuracy were evaluated based on the quality control results generated from laboratory matrix spike and matrix spike duplicate (MS/MSD) samples, laboratory duplicates, laboratory control samples (LCS), internal compounds and surrogate spike compounds. In addition, initial and continuing calibration results were used to assess accuracy.

Analyses that failed to meet precision or accuracy limits established in the AQAPP, or defined by the laboratory if not specified in the AQAPP, were assigned a data qualifier in accordance with the USEPA functional guidelines or Region II SOP as appropriate. There were several sediment samples that were qualified as rejected ('R') for acrolein, due to poor response of this compound in the initial calibration. As specified in the Region II Standard Operating Procedures (SOP) for Explosives Residues (US USEPA Region II 1994), there were several samples that were qualified as rejected ('R') for explosives due to the column percent difference between the primary and secondary column exceeding limits specified in the Region II SOP. As defined in the Region II SOP, the 'R' qualification deems the data unusable. Tables 3-1 presents sediment analytical samples with constituent concentrations that were rejected by a third party validator. Surface water analytical samples did not have any constituent concentrations that were rejected by a third party validator.

3.1.1 Matrix Spikes/Matrix Spike Duplicate

Matrix spike samples were collected in the field and sent to the laboratory along with the field samples. If a field sample was not designated as a matrix spike and matrix spike duplicate for a particular analysis, the laboratory provided matrix spike results from the analytical batch, which were then used to assess accuracy. Data were then qualified in accordance with the functional guidelines or the Region II SOP in cases where the accuracy limits were not met.

3.1.2 Laboratory Duplicates

Laboratory duplicates were analyzed as appropriate throughout the analytical program. Field duplicates were collected and analyzed at the frequency of one duplicate per ten samples as specified in the AQAPP, thus laboratory and field precision could be reviewed during data validation. Field data associated with a laboratory duplicate that failed to meet precision criteria were qualified as estimated in the data packages.

3.1.3 Laboratory Control Samples

Laboratory control samples were analyzed by the laboratory at the appropriate frequency throughout the project. Low or unacceptable LCS results led to qualification of laboratory data as specified in the Region II SOP and USEPA functional guidelines.

3.1.4 Surrogate Recoveries

Surrogate spikes were introduced into samples as required in the analytical methods. Surrogate recoveries that were outside control limits were qualified as estimated in accordance with the Region II SOP and USEPA functional guidelines.

3.1.5 Calibration

Initial and continuing calibration results were reviewed against specific analytical method criteria. Calibration results that were outside acceptable limits were then qualified for the particular failing compounds, in accordance with the USEPA functional guidelines and/or the

Region II SOP. There were no significant problems identified during review of the calibration data.

3.2 REPRESENTATIVENESS

Representativeness was evaluated through the analysis of laboratory method blank samples, field blank samples, and trip blank samples. Analysis of these types of samples was important to distinguish between ambient sampling and analytical levels, and actual site contamination. There were no significant problems identified in any of the blanks. Blank data were used to further qualify associated field data if applicable. Data results that were less than five times the associated method blank result were qualified as undetected, 'U' for several samples.

3.3 COMPLETENESS

Data completeness was evaluated based on the samples requested on the chain-of-custody documentation and the samples reported by the laboratory**.**

The following anomalies, occurring in the surface water analysis, were noted during the completeness review:

- SDG KVL 06/07, KVL 10/11, KVL 14/15, KVL 17/18: The laboratory did not analyze nitrocellulose due to grossly exceeded holding times.
- SDG KVL 10/11: The laboratory did not analyze sample SW-F14-1-01 (0-2) for nitroglycerin due to grossly exceeded holding times.

Nitrocellulose and nitroglycerin were recollected at the locations where the holding times were exceeded, with the following exceptions: SW-E12-3 and SW-H12-1. No surface water was encountered at these locations at the time of recollection.

3.4 COMPARABILITY

Comparability was achieved by analyzing the samples according to the specified standard methods, reporting limits and holding times for both extraction and analysis. The laboratory

analyzed the field samples in accordance with the methods specified in the AQAPP. Reporting limits were met with the following exceptions in several samples:

- Sediment matrix: acrolein, 2,4-dinitrophenol, antimony, selenium, and Pentaerythritol Tetranitrate (PETN).
- Water matrix: antimony, lead, 2,4-dinitrophenol, PETN, nitrocellulose, and nitroglycerin.

The reporting limits provided by the laboratory were elevated if the sample was analyzed at a dilution. Data were not qualified based on elevated reporting limits. If the sample holding time was over two times the method specification, the data were qualified as rejected, "R". For analytical sample results qualified with non-detections ("U"), the practical quantitation limit (PQL) was used versus the acronym "ND". The sample locations where the PQL for analyzed constituents exceeded the applicable surface water or sediment regulatory criteria are presented in Tables 3-2 and 3-3 respectively.

3.5 SUMMARY OF DATA QUALITY AND RELIABILITY

The evaluation of the data against PARCC criteria provided information on the data quality and reliability. As a result of this evaluation, all data are of known and acceptable quality, excluding rejected data as qualified based on the laboratory-established acceptance control limits or USEPA guidance. These data are considered valid and useable for decision-making purposes.

3.6 DATA QUALITY OBJECTIVES

The data quality objectives (DQOs) set forth in the AQAPP on Table 4-1 and the comparison of these DQOs with actual laboratory data results are summarized in the following table. Only DQOs specific to definitive data and resulting data validation are summarized**.**

DQO summary for data validation parameters

Parameter	Sample Media	DQO goal	Actual	DQO Met?	Comments
Sample documentation	SW/SD	100%	100%	Yes	
Chain-of-custody documentation	SW/SD	100%	100%	Yes	
Parameter	**Sample Media**	**DQO goal**	**Actual**	**DQO Met?**	**Comments**
Instrument calibration meets laboratory's specification	SW/SD	100%	100%	Yes	
Analyte identification and quantification	SW/SD	100%	100%	Yes	
Trip blanks for VOCs	SW/SD	1 per cooler	100%	Yes	
Instrument blanks	SW/SD	GC -every 10 samples GC/MS – every 12 hours Metals – every 10 samples	100% 100% 100%	Yes Yes Yes	
Laboratory method blank	SW/SD	1 per SDG	100%	Yes	
Rinseate samples	SW/SD	1 per day	100%	Yes	Sampled as appropriate.
Laboratory precision and accuracy	SW/SD	100% within established limits for MS, LCS, duplicates, surrogates	<100% precision and accuracy performed by laboratory	Yes	Data exceeding precision and accuracy limits were qualified.
Laboratory MDLs<PQLs	SW/SD	100%	100%	Yes	
LCS samples	SW/SD	100% within established limits per SDG	<100% LCS samples analyzed as specified in QAPP	Yes	Data exceeding limits were qualified.
MS/MSD samples	SW/SD	5%	100% each SDG or sample batch contained an MS/MSD	Yes	
Field duplicates	SW/SD	10%	10%	Yes	

All analytical DQOs as set forth in the AQAPP were met. Data that exceeded limits for LCS and MS/MSD samples were qualified in accordance with USEPA functional guidelines or the Region II SOP.

4.0 FACILITY SURFACE WATER DESCRIPTION

To accomplish the objective of the SW/SD – SI, as stated in Section 1.0, Hercules categorized sections of the surface water bodies and sediment into common groups based on drainage systems and surface water feature types (morphologic features) to aid the SI process. The following sections describe the drainage systems and surface water feature types (morphologic features, i.e. ponds) present at the Facility.

4.1 DRAINAGE SYSTEM DESCRIPTION

Five primary drainage systems were identified at the Facility and are presented on Figure 2-1. The 5 drainage systems include:

- Western Drainage System
- Central Drainage System
- Eastern Drainage System
- Duck Pond and its Tributaries
- Miscellaneous Ponds

Western Drainage System

The western drainage system originates with two streams flowing into the southwest corner of the Facility. The first stream flows easterly from Howard Boulevard, approximately 300-feet north of the intersection of Howard Boulevard and Route 46 (SW/SD-A15-1-01). The stream second flows north from Route 46 approximately 1,000-feet east from the intersection of Howard Boulevard and Route 46 (SW/SD-B16-1-01). These two streams converge within a drainage swale and flow north. The primary channel turns east and is joined by the central and eastern drainage systems. From the confluence of the central, western and eastern drainage systems the channel flows southward and exits the Facility at Route 46, approximately 300-feet west of the intersection of Route 46 and Hercules Road (SW/SD-E16-3-01). This is the only SW/SD exit point preset at the Facility. The channels and the majority of the tributaries are filled with water throughout the year. The two tributaries in the northwest section of the western drainage system are intermittent depending on precipitation.

Central Drainage System

The central drainage system is formed by an off-site stream that flows in a generally southern direction from Howard Boulevard. The stream enters the Facility near the existing Morris County Municipal Utilities Authority (MCMUA) water pump station (SW/SD-B8-1-01), flows into the Undeveloped Area, and continues through the TNT Area to the Dynamite Area respectively. Its primary on-site tributary flows from the A-Line Area into the Dynamite Area. Other tributaries consist of smaller streams and process ditches. Segments of the main stream and tributaries are intermittent based on precipitation. The terminus of the central drainage system is located at a weir used to restrict the flow of sediment from the Facility (SW/SD-E14-1-01). The location of the weir was used to justify the separation of the central and western drainage systems for discussion purposes.

Eastern Drainage System

The eastern drainage stream flows onto the Facility just north of the Construction and Demolition (C&D) Landfill (SW/SD-I5-1-01). The stream flows southwest through the Development Area to the Powder Mill Road, where it is then piped underground along the road, flowing through the Finishing Area. The pipe crosses under Powder Mill Road, emerging above ground near the wastewater treatment plant, and continues southwest through the Maintenance Area and into the Dynamite Area. Tributaries include process ditches from the B-Line Area and the Maintenance Area. The main channel is primarily filled with water throughout the year and the tributaries are intermittent based on precipitation. The terminus of the eastern drainage system is located at a weir within the Dynamite Area used to restrict the flow of sediment from the Facility (SW/SD-F14-2-01). The location of the weir was used to justify the separation of the eastern and western drainage systems for discussion purposes.

Duck Pond and Its Tributaries

Duck Pond extends nearly 9-acres and is the largest surface water body at the Facility. Duck Pond is a closed system with two inlets originating within the Facility boundary and no outlets. One inlet originates near the C&D Landfill and flows east through the Development

Area, where it discharges into Duck Pond. The second inlet originates at Shooting Pond and discharges via a small stream to the northeast corner of Duck Pond. Shooting Pond is the deepest surface water body at the Facility, approximately 15 feet deep in the center. Duck Pond and Shooting Pond are filled with water throughout the year. The tributaries to Duck Pond and Shooting Pond are seasonally intermittent and can be dry during the summer months.

Miscellaneous Ponds

There are 19 miscellaneous ponds at the Facility; 13 are found in the Storage Area, 3 in the Development Area, 2 in the Dynamite Area, and 1 in the B-Line Area. All are labeled miscellaneous because there are no inlets or outlets at any of these ponds. The miscellaneous ponds are seasonally intermittent and can be dry during the summer months.

4.2 SURFACE WATER FEATURE TYPES

Four surface water feature types were identified to be present at the Facility. The surface water feature types include the following:

- Streams
- Intermittent Streams
- Ponds
- Wetland Areas

Many of the drainage systems incorporate combinations of the above listed surface water feature types. However, each drainage system may not posses all of the identified surface water feature types.

Streams

Streams are characterized as channeled bodies of water that flow through the Facility. They are generally less than 5-feet wide and less than 2-feet deep. Streams generally contain water the majority of the year and are dry only during periods of severe drought.

Intermittent Streams

Intermittent streams are similar to streams except that they are typically smaller. Intermittent streams do not contain water throughout the year and are greatly influenced by atmospheric precipitation. Typically, the intermittent streams act at tributaries to the streams during seasonal periods of high precipitation. Former process ditches are classified as intermittent streams.

Ponds

Ponds are characterized as depressions within the ground surface that retain surface water. The majority of the ponds at the Facility (with the exception of Duck Pond and the Shooting Hole) are generally less than 50-feet in diameter and less than 2-feet deep. Most of the facility ponds fluctuate significantly due to variations in seasonal precipitation. Duck Pond and Shooting Hole have been historically modified by man and are much larger and deeper than the majority of the ponds at the Facility and warrant their own drainage system as discussed in Section 4.1.

Wetland Areas

Wetland areas of the Facility are typically low lying areas that are frequently saturated and often contain some degree of surface water.

5.0 SURFACE WATER AND SEDIMENT ANALYTICAL RESULTS

The following sections describe the results of the analyses performed on the surface water and sediment samples collected as part of the SW/SD – SI. The text is supported by data tables and figures to aid in data evaluation and presentation. This section is divided into the following primary sections:

- **Section 5.1**: Regulatory Criteria Selection/Calculation.
- **Section 5.2**: Western Drainage System – Surface Water and Sediment Analytical Results.
- **Section 5.3**: Central Drainage System – Surface Water and Sediment Analytical Results.
- **Section 5.4**: Eastern Drainage System – Surface Water and Sediment Analytical Results.
- **Section 5.5**: Duck Pond and its Tributaries – Surface Water and Sediment Analytical Results.
- **Section 5.6**: Miscellaneous Ponds – Surface Water and Sediment Analytical Results.

5.1 REGULATORY CRITERIA SELECTION/CALCULATION

The following sections present the regulatory criteria selected for comparison to the results of laboratory analysis. This section also provides the methodology for calculating site specific criteria as specified by the applicable regulatory guidance.

5.1.1 Surface Water Analytical Samples

The analytical results for surface water samples were compared to the following applicable surface water quality criteria (SWQC):

- NJDEP Surface Water Quality Criteria (NJSWQC) as specified in N.J.A.C. 7:9B August 2004. Specifically, all the connected surface water bodies that flow from the Facility to the Lamington River were compared to the NJSWQC Fresh Water 2 – Non Trout Production Criteria 1 (FW2-NT(C1)) for human health and aquatic life parameters, as assigned by the N.J.A.C 7:9B to the Lamington River (Succasunna) – Source to Rt. 206 bridge. Surface water bodies within the Facility

that are isolated from and do not contribute surface water to the Lamington River were compared to the NJSWQC FW2-NT human health and aquatic life criteria as specified by N.J.A.C. 7:9B.

- The United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

    - The NJSWQC does not provide values for all detected constituents. In accordance with N.J.A.C. 7.26E-3.8, the EPASWQC values were utilized if the NJSWQC did not provide values.

Table 5-1 presents each analyzed constituent per analytical group and the source of the corresponding criteria (i.e. Dissolved Lead Aquatic Life SWQC source is NJSWQC). Table 5-2 identifies detected constituents identified in surface water samples without a corresponding SWQC value.

5.1.2 Surface Water Aquatic Life Criteria Calculation

Dissolved metal aquatic life criteria were calculated per drainage system based on hardness values collected during field sampling efforts as specified in the EPASWQC. Pentachlorophenol (SVOC) aquatic life criteria were calculated per drainage system based on pH values collected during field sampling efforts as specified in the EPASWQC. Dissolved metal and pentachlorophenol aquatic life criteria were calculated per drainage system because the natural flow of surface water is highly transient and experiences similar environmental conditions within each discrete drainage system.

The log-average methodology was utilized to calculate hardness and pH values for use in the development of dissolved metal hardness-dependent criteria and Pentachlorophenol pH-dependent criteria for aquatic life values. Application of the log-average method for determining average values was used because this method filters out the potential effects of a limited number of anomalously large or small values.

Calculation of Hardness-Dependent Dissolved Metal Aquatic Life Criteria

The following formulas were used to calculate the hardness-dependant dissolved metal aquatic life criteria:

Acute Aquatic Life (CMC) = WER*e^(mA[ln(log-average hardness value per drainage sytem)]+bA)*Acute CF

Chronic Aquatic Life (CCC) = WERe^(mC[ln(log-average hardness value per drainage sytem)]+bC)*Chronic CF

Where:

- CMC = Criterion Maximum Concentration (Acute), the water quality criteria to protect against acute effects in aquatic life is the highest in-stream concentration of a priority toxic pollutant consisting of a one-hour average not to be exceeded more than once every three years on the average.

- CCC = Criterion Continuous Concentration (Chronic), the water quality criteria to protect against chronic effects in aquatic life is the highest in-stream concentration of a priority toxic pollutant consisting of a four-day average not to be exceeded more than once every three years on the average.

- WER = Water Effects Ratio, Assumed WER=1 as stated in EPASWQC footnote e.

- e = Constant (2.718281828)

- MA, bA, mC, bC = Constituent specific values presented in EPASWQC general notes.

- CF = Constituent specific conversion factor presented in EPASWQC general notes.

The log-average hardness values were calculated as follows:

- Converting the field-measured hardness values in each of the five drainage systems into its log base 10 value.

- The hardness values converted to log base 10 were then summed and divided by the number of values yielding an average hardness log base 10 within each drainage system.

- The average hardness log base 10 was then inversed into a standard numerical value representing the average hardness value used in the calculation of the dissolved metal aquatic life criteria.

- The log-average hardness calculated per drainage system is as follows:

  1. Western Drainage System - 127 mg/L

  2. Central Drainage System - 62 mg/L

  3. Eastern Drainage System - 109 mg/L

4. Duck Ponds and its Tributaries - 70 mg/L

5. Miscellaneous Ponds - 38 mg/L

Table 5-3 presents the log-average calculations and the dissolved metal hardness-dependent aquatic life calculations for each drainage system. All dissolved metal aquatic life criteria calculations utilized the above equations with the exception of lead. The NJDEP Surface Water Quality Criteria (NJSWQC) provided acute and chronic values for dissolved lead, therefore those values were used.

Calculation of pH Dependent Aquatic Life Criteria for Pentachlorophenol:

The following formulas were used to calculate the pH dependent aquatic life criteria for Pentachlorophenol as specified in the EPASWQC:

Acute Aquatic Life (CMC) = e^(1.005(log-average pH value per drainage system)-4.830)

Chronic Aquatic Life (CCC) = e^(1.005(log-average pH value per drainage system)-5.290)

Where:

- CMC = Criterion Maximum Concentration (Acute), the water quality criteria to protect against acute effects in aquatic life is the highest in-stream concentration of a priority toxic pollutant consisting of a one-hour average not to be exceeded more than once every three years on the average. Equation provided in EPASWQC footnote f.

- CCC = Criterion Continuous Concentration (Chronic), the water quality criteria to protect against chronic effects in aquatic life is the highest in-stream concentration of a priority toxic pollutant consisting of a four-day average not to be exceeded more than once every three years on the average. Equation provided in EPASWQC footnote f.

- e = Constant (2.718281828).

The log-average pH values were calculated as follows:

- Converting the field-measured pH values in each of the five drainage systems into its log base 10 value.

- The pH values converted to log base 10 were then summed and divided by the number of values yielding an average pH log base 10 within each drainage system.

- The average pH log base 10 was then inversed into a standard numerical value representing the average pH value used in the calculation of the pentachlorophenol aquatic life criteria.
- The log-average pH calculated per drainage system is as follows:

    1. Western Drainage System – 6.5
    2. Central Drainage System - 6.8,
    3. Eastern Drainage System - 7.4
    4. Duck Ponds and its Tributaries - 6.4
    5. Miscellaneous Ponds - 6.0

Table 5-4 presents the log-average calculations and the pH-dependent aquatic life calculations for pentachlorophenol for each drainage system.

5.1.3 Sediment Analytical Samples

The analytical results of the sediment samples were compared to the following regulatory criteria:

- NJDEP Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
- NJDEP FSSG Severe Effects Level (SEL)

Table 5-5 identifies each analyzed constituent per analytical group and the source of the corresponding criteria. Table 5-6 identifies detected constituents identified in sediment samples without a corresponding FSSG value.

5.1.4 Calculation of Site-Specific Sediment FSSG SEL Criteria

Polyaromatic Hydrocarbons (PAHs) SEL values were calculated based on site-specific Total Organic Carbon (TOC) levels as described in the NJDEP Guidance for Sediment Quality Evaluations. PAH SEL values listed in NJDEP Guidance for Sediment Evaluations are based on 100% TOC and require correction to site-specific conditions.

PAH SEL values were calculated for each surface water feature type (Section 4.0) based on TOC values collected during the field sampling effort. Surface water feature types were chosen as the basis for calculating FSSG SEL Criteria because the natural deposition and movement of sediment is not nearly as transient as surface water but will experience similar environmental conditions within each discrete feature type (i.e. intermittent stream, pond, etc.).

The log-average methodology was utilized in the development of PAH SEL TOC-dependent criteria. Application of the log-average method for determining average values was used because this method filters out the potential effects of a limited number of anomalously large or small values.

Calculation TOC-Dependent PAH SEL Values:

The following formula was used to calculate the site specific PAH SEL value:

SEL Value = TOC value * FSSG SEL

Where:

- TOC value = log-average TOC value per surface water feature type
- FSSG SEL = PAH SEL values provided in Table 1, Freshwater Sediment Screening Guidelines (FSSG) of the NJDEP Guidance for Sediment Quality Evaluations.

The log-average TOC values were calculated as follows:

- Converting the field-measured TOC values in each of the five drainage systems into its log base 10 value.
- The TOC values converted to log base 10 were then summed and divided by the number of values yielding an average TOC log base 10 within each drainage system.
- The average TOC log base 10 was then inversed into a standard numerical value representing the average TOC value used in the calculation of the site-specific SEL values for PAHs.
- The log-average TOC calculated per surface water feature type is as follows:

1. Intermittent streams - 17,296 mg/L
2. Streams - 16,326 mg/L
3. Ponds - 59,862 mg/L
4. Wet areas - 50,884 mg/L.

Table 5-7 presents the log-average TOC calculations and the PAH SEL calculations for each surface water feature type.

5.2 WESTERN DRAINAGE SYSTEM ANALYTICAL RESULTS

This section describes the results of the chemical analysis performed on the surface water and sediment samples collected from the Western Drainage System. A total of 33 sediment samples and 23 surface water samples were collected from within the Western Drainage System during the SW/SD – SI. Figure 2-1 presents the Sample Location Map.

5.2.1 Surface Water - Analytical Results Section

Two VOC, 2 SVOC, and four total metal constituents were detected at concentrations exceeding the Human Health SWQC. Tables 5-8 through 5-12 provide the comparison of laboratory analyses to the Human Health SWQC. Table 5-13 presents the comparison of laboratory analyses to the Aquatic Life SWQC. Figure 5-1 graphically presents constituents detected by laboratory analyses at concentrations exceeding the Human Health SWQC. The constituents identified as exceeding the Human Health SWQC are presented below:

Constituent	Number of Analyses	Number of Detections	Human Health SWQC	Number of Samples Exceeding Human Health SWQC
VOCs			**µg/l**	
Bromodichloromethane	23	1	0.266	1
PCE	23	4	0.338	4
SVOCs			**µg/l**	
Benzo(b)fluoranthene	23	1	0.031	1
Chrysene	23	1	0.0028	1
Total Metals			**µg/l**	
Arsenic	23	3	0.017	3
Lead	23	11	5	11
Mercury	23	3	0.144	1

Constituent	Number of Analyses	Number of Detections	Human Health SWQC	Number of Samples Exceeding Human Health SWQC
Thallium	23	1	1.7	1

5.2.2 Sediment - Analytical Results Section

One VOC, nine SVOC, and seven metal constituents were detected at concentrations exceeding the FSSG LEL. Two SVOC and two metal constituents were detected at concentrations exceeding the FSSG SEL. Tables 5-14 through 5-28 provide the comparison of laboratory analyses to the FSSG LEL and SEL. Figure 5-2 graphically illustrates the constituents detected by laboratory analyses at concentrations exceeding the FSSG LEL and SEL. The constituents identified to exceed the FSSG LEL and SEL are presented below:

Intermittent Streams						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
SVOCs			µg/kg		µg/kg	
Naphthalene	10	1	160	0	36	1
Total Metals			mg/kg		mg/kg	
Arsenic	10	10	6	2	33	0
Copper	10	10	16	5	110	0
Lead	10	10	31	7	250	1
Zinc	10	10	120	1	820	0

Streams						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
SVOCs			µg/kg		µg/kg	
Acenaphthylene	3	2	44	2	11	2
Benzo(a)anthracene	3	3	320	1	26371	0
Benzo(a)pyrene	3	3	370	2	25658	0
Benzo(g,h,i)perylene	3	3	170	2	5702	0
Chrysene	3	3	340	2	8196	0
Dibenz(a,h)anthracene	3	2	60	2	2316	0
Fluoranthene	3	3	750	1	18174	0

Streams						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
SVOCs			µg/kg		µg/kg	
Pyrene	3	3	490	2	15145	0
Total Metals			mg/kg		mg/kg	
Arsenic	3	3	6	1	33	0
Chromium	3	3	26	1	110	0
Copper	3	3	16	1	110	0
Lead	3	3	31	2	250	0
Mercury	3	3	0.2	2	2.0	0
Zinc	3	3	120	1	820	0

Wet Areas						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
VOCs			µg/kg		µg/kg	
Tetrachloroethylene (PCE)	20	2	450	2	NS	0
SVOCs			µg/kg		µg/kg	
Benzo(a)anthracene	20	6	320	2	75308	0
Benzo(a)pyrene	20	5	370	2	73273	0
Benzo(g,h,i)perylene	20	3	170	2	16283	0
Benzo(k)fluoranthene	20	2	240	1	68185	0
Chrysene	20	6	340	2	23407	0
Fluoranthene	20	9	750	2	51902	0
Pyrene	20	8	490	2	43251	0
Metals			mg/kg		mg/kg	
Arsenic	20	15	6	1	33	0
Cadmium	20	15	0.6	7	10	0
Chromium	20	20	26	2	110	0
Copper	20	20	16	7	110	0
Lead	20	20	31	6	250	1
Mercury	20	19	0.2	4	2.0	2
Zinc	20	20	120	2	820	0

5.2.3 Summary

The following is a summary of the analytical results from the surface water and sediment samples collected from within the Western Drainage System.

- There were no surface water E&E or general chemistry SWQC (Human Health or Aquatic) exceedances.
- There were no sediment E&E or general chemistry FSSG (LEL or SEL) exceedances.
- The detected concentrations of PCE are not attributed to historic Facility operations. A large regional chlorinated solvent plume underlies the Facility in the area of the Western Drainage System. The chlorinated solvent plume is attributed to off-site sources and has not been attributed to historic operations performed at the Facility. The NJDEP conducted a groundwater investigation of the southern portion of the Facility in March 1999 and concluded the Facility was not a source area for the regional plume.
- The single detection of Bromodichloromethane is attributed to chlorine treated potable water from a leaking water supply main and is not associated with the former manufacturing processes.
- The detected concentrations of SVOC constituents exceeding the SWQC (Human Health) and FSSG (LEL and SEL) within the surface water and sediment samples are comprised solely of PAH constituents. The SVOC PAH constituents are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- The detected concentrations of total metal constituents, with the exception of mercury, exceeding SWQC (Human Health) and the FSSG (LEL and SEL) are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- Up-gradient (SW/SD entry point to Facility) sample location SW/SD A15-1-01 detected one metal (cadmium) constituent at concentrations exceeding the FSSG (LEL) and one metal constituent (lead) exceeding the SWQC (Human Health) within the surface water and sediment sample. The occurrence of these metal constituents is believed to result from its close proximity to the heavily traveled Howard Boulevard and is not associated with the former manufacturing processes or historic fill. The metal constituents were likely mobilized by surface water runoff from the roadway during precipitation events and deposited into the Facility's surface water bodies.

- Up-gradient (SW/SD entry point to Facility) sample location SD B16-1-01 detected eight SVOC and two metal constituents at concentrations exceeding the FSSG (LEL) and one SVOC constituent at concentrations exceeding the FSSG (SEL) within the sediment sample. The occurrence of these constituents is believed to result from its close proximity to the heavily traveled Route 46 and is not associated with the former manufacturing processes or historic fill. The metal and SVOC constituents were likely mobilized by surface water runoff from the roadway during precipitation events and deposited into the Facility's surface water bodies.

- Down-gradient (SW/SD exit point to Facility) sample location SW/SD E16-3-01 detected six SVOC and six metal constituents at concentrations exceeding the FSSG (LEL), and one SVOC constituent at concentrations exceeding the FSSG (SEL) within the sediment sample. In addition, two SVOC and three metal constituents exceeded the SWQC (Human Health) within the surface water sample. The occurrence of these constituents is believed to result from its close proximity to the heavily traveled Route 46 and is not associated with the former manufacturing processes or historic fill. Up-gradient sample locations (A15-1-01 and B16-1-01) also detected constituents exceeding the FSSG and SWQC. The metal and SVOC constituents were likely mobilized by surface water runoff from the roadway during precipitation events and deposited into the Facility's surface water bodies. The up-gradient SW/SD sampling point (SW/SD E16-2-01) did not detect any SW/SD exceedances and support this observation.

5.3 CENTRAL DRAINAGE SYSTEM ANALYTICAL RESULTS

This section describes the results of the SW/SD – SI chemical analysis performed on the surface water and sediment samples collected from the Central Drainage System. A total of 44 sediment samples and 30 surface water samples were collected from within the Central Drainage System. Figure 2-1 presents the Sample Location Map.

5.3.1 Surface Water - Analytical Results Section

Eight SVOCs, three total metals, and one E&E constituent (which is also an SVOC) were detected at concentrations exceeding the Human Health SWQC. Three dissolved metal constituents were detected at concentrations exceeding the Aquatic Life SWQC. Tables 5-29 through 5-33 provide the comparison of laboratory analyses to the Human Health SWQC. Table 5-34 presents the comparison of laboratory analyses to the Aquatic Life SWQC. Figure 5-3 graphically illustrates constituents detected by laboratory analyses at

concentrations exceeding the Human Health and Aquatic Life SWQC. The constituents identified that exceed the Human Health and Aquatic Life SWQC are presented below:

Constituent	Number of Analyses	Number of Detections	Human Health SWQC	Number of Samples Exceeding Human Health SWQC
SVOCs			**µg/l**	
2,4-Dinitrotoluene	30	1	0.11	1
Benzo(a)anthracene	30	1	0.0028	1
Benzo(a)pyrene	30	1	0.0028	1
Benzo(b)fluoranthene	30	1	0.031	1
Benzo(g,h,i)perylene	30	1	0.0028	1
Benzo(k)fluoranthene	30	1	0.031	1
Bis(2-Ethylhexyl) Phthalate	30	1	1.76	1
Chrysene	30	1	0.0028	1
Total Metals			**µg/l**	
Arsenic	30	6	0.017	6
Lead	30	10	5	10
Mercury	30	4	0.144	1
E&E			**µg/l**	
2,4-Dinitrotoluene	30	1	0.11	1

Constituent	Number of Analyses	Number of Detections	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Number of Samples Exceeding Aquatic Life SWQC
Dissolved Metals			**µg/l**	**µg/l**	
Lead	30	1	38	5.4	1
Silver	30	1	0.02	NS	1
Zinc	30	26	66.9	66.2	1

NS = No Standard

5.3.2 Sediment - Analytical Results Section

Fourteen SVOC and eight metal constituents were detected at concentrations exceeding the FSSG LEL. Three SVOC and four metal constituents were detected at concentrations exceeding the FSSG SEL. Tables 5-35 through 5-49 present the comparison of laboratory analyses to the FSSG LEL and SEL. Figure 5-4 graphically illustrates the constituents

detected by laboratory analyses at concentrations exceeding the FSSG LEL and SEL. The constituents identified to exceed the FSSG LEL and SEL are presented below:

Intermittent Streams						
Constituent	**Number of Analyses**	**Number of Detections**	**LEL**	**Number of Samples Exceeding the LEL**	**SEL**	**Number of Samples Exceeding the SEL**
SVOCs			**µg/kg**		**µg/kg**	
Acenaphthene	16	2	16	2	9	2
Acenaphthylene	16	2	44	1	11	2
Anthracene	16	4	220	1	6340	0
Benzo(a)anthracene	16	6	320	4	25598	0
Benzo(a)pyrene	16	6	370	3	24906	0
Benzo(g,h,i)perylene	16	6	170	4	5535	0
Benzo(k)fluoranthene	16	6	240	4	23177	0
Chrysene	16	11	340	4	7959	0
Dibenz(a,h)anthracene	16	4	60	4	2248	0
Fluorene	16	3	190	1	2767	0
Fluoranthene	16	12	750	4	17642	0
Naphthalene	16	1	160	0	36	1
Phenanthrene	16	10	560	4	16431	0
Pyrene	16	10	490	4	14702	0
Total Metals			**mg/kg**		**mg/kg**	
Arsenic	16	16	6	9	33	1
Copper	16	16	16	12	110	2
Lead	16	16	31	13	250	6
Mercury	16	16	0.2	3	2.0	0
Zinc	16	16	120	4	820	0

Streams						
Constituent	**Number of Analyses**	**Number of Detections**	**LEL**	**Number of Samples Exceeding the LEL**	**SEL**	**Number of Samples Exceeding the SEL**
SVOCs			**µg/kg**		**µg/kg**	
Benzo(a)anthracene	5	3	320	2	26371	0
Benzo(a)pyrene	5	4	370	2	25658	0
Benzo(g,h,i)perylene	5	3	170	2	5702	0
Benzo(k)fluoranthene	5	3	240	2	23876	0
Chrysene	5	4	340	2	8196	0
Dibenz(a,h)anthracene	5	1	60	1	2316	0

Streams						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding the LEL	SEL	Number of Samples Exceeding the SEL
SVOCs			µg/kg		µg/kg	
Fluoranthene	5	4	750	2	18174	0
Phenanthrene	5	4	560	1	16927	0
Pyrene	5	4	490	2	15145	0
Total Metals			mg/kg		mg/kg	
Arsenic	5	5	6	1	33	0
Chromium	5	5	26	1	110	0
Copper	5	5	16	3	110	0
Lead	5	5	31	3	250	0
Mercury	5	5	0.2	2	2.0	1
Nickel	5	5	16	2	75	0
Zinc	5	5	120	2	820	0

Wet Areas						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding the LEL	SEL	Number of Samples Exceeding the SEL
SVOCs			µg/kg		µg/kg	
Acenaphthene	23	2	16	2	25	2
Acenaphthylene	23	5	44	5	33	5
Anthracene	23	8	220	3	18827	0
Benzo(a)anthracene	23	13	320	7	75308	0
Benzo(a)pyrene	23	13	370	5	73273	0
Benzo(g,h,i)perylene	23	13	170	10	16283	0
Benzo(k)fluoranthene	23	12	240	5	68185	0
Chrysene	23	14	340	8	23407	0
Dibenz(a,h)anthracene	23	7	60	7	6615	0
Fluorene	23	4	190	2	8141	0
Fluoranthene	23	20	750	6	51902	0
Naphthalene	23	2	160	1	107	1
Phenanthrene	23	13	560	3	48340	0
Pyrene	23	17	490	9	43251	0
Total Metals			mg/kg		mg/kg	
Arsenic	23	23	6	15	33	0
Cadmium	23	16	0.6	5	10	0
Chromium	23	23	26	3	110	0
Copper	23	23	16	17	110	1
Lead	23	23	31	21	250	11

Wet Areas						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding the LEL	SEL	Number of Samples Exceeding the SEL
Mercury	23	23	0.2	18	2.0	1
Nickel	23	23	16	2	75	0
Zinc	23	23	120	6	820	0

5.3.3 Summary

The following is a summary of the analytical results from the surface water and sediment samples collected from within the Central Drainage System.

- There were no surface water VOC or general chemistry (Human Health or Aquatic Life) SWQC exceedances.
- There were no sediment VOC, E&E, or general chemistry FSSG (LEL or SEL) exceedances.
- The detected concentrations of SVOC constituents exceeding the SWQC (Human Health) and FSSG (LEL and SEL) within the surface water and sediment samples are comprised primarily of PAH constituents. The SVOC PAH constituents are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- The detected concentrations of total metal constituents, with the exception of mercury, exceeding SWQC (Human Health), FSSG (LEL and SEL) and dissolved metal constituents exceeding the SWQC (Aquatic Life) are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- Up-gradient (SW/SD entry point to Facility) sample location SD B8-1-01 detected eight SVOC and five metal constituents at concentrations exceeding the FSSG (LEL) within the sediment sample. The occurrence of these constituents is believed to result from its close proximity to the heavily traveled Howard Boulevard and is not associated with the former manufacturing processes or historic fill. The metal and SVOC constituents were likely mobilized by surface water runoff from the roadway during precipitation events and deposited into the Facility's surface water bodies.
- The single detection of 2,4-Dinitrotoluene present at a concentration exceeding the SWQC (Human Health) is likely a result of historic manufacturing operations.

- The single detection of Bis(2-ethylhexyl)phthalate present at a concentration exceeding the SWQC (Human Health) is likely a result of historic manufacturing operations. Bis(2-ethylhexyl)phthalate is commonly used in the manufacture of smokeless gunpowder.

5.4 EASTERN DRAINAGE SYSTEM ANALYTICAL RESULTS

This section describes the results of the SW/SD – SI chemical analysis performed on the surface water and sediment samples collected from the Eastern Drainage System. A total of 28 sediment samples and 21 surface water samples were collected from within the Eastern Drainage System during the SW/SD – SI. Figure 2-1 presents the Sample Location Map.

5.4.1 Surface Water - Analytical Results Section

Two total metal constituents were detected at concentrations exceeding the Human Health SWQC. One dissolved metal constituent was detected at a concentration exceeding the Aquatic Life SWQC. Tables 5-50 through 5-54 provide the comparison of laboratory analyses to the Human Health SWQC. Table 5-55 presents the comparison of laboratory analyses of dissolved metals to the Aquatic Life SWQC. Figure 5-5 graphically illustrates constituents detected by laboratory analyses at concentrations exceeding the Human Health and Aquatic Life SWQC. The constituents identified to exceed the Human Health and Aquatic Life SWQC are presented below:

Constituent	Number of Analyses	Number of Detections	Human Health SWQC	Number of Samples Exceeding Human Health SWQC
Total Metals			**µg/l**	
Arsenic	21	1	0.017	1
Lead	21	5	5	5

Constituent	Number of Analyses	Number of Detections	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Number of Samples Exceeding Aquatic Life SWQC
Dissolved Metals			**µg/l**	**µg/l**	
Selenium	21	2	20	4.61	1

5.4.2 Sediment - Analytical Results Section

Fourteen SVOCs and eight metal constituents were detected at concentrations exceeding the FSSG LEL. Seven SVOCs and three metal constituents were detected at concentrations exceeding the FSSG SEL. Tables 5-56 through 5-70 present the comparison of laboratory analyses to the FSSG LEL and SEL. Figure 5-6 graphically illustrates the constituents detected by laboratory analyses at concentration exceeding the FSSG LEL and SEL. The constituents identified to exceed the FSSG LEL and SEL are presented below:

Intermittent Streams						
Constituent	**Number of Analyses**	**Number of Detections**	**LEL**	**Number of Samples Exceeding LEL**	**SEL**	**Number of Samples Exceeding SEL**
SVOCs			**µg/kg**		**µg/kg**	
Acenaphthene	12	2	16	2	9	2
Acenaphthylene	12	4	44	4	11	4
Anthracene	12	5	220	2	6400	0
Benzo(a)anthracene	12	9	320	3	25598	0
Benzo(a)pyrene	12	9	370	3	24906	0
Benzo(g,h,i)perylene	12	9	170	6	5535	1
Benzo(k)fluoranthene	12	9	240	4	23177	0
Chrysene	12	10	340	5	7956	1
Dibenz(a,h)anthracene	12	6	60	6	2248	0
Fluorene	12	3	190	2	2767	0
Fluoranthene	12	10	750	3	17642	1
Naphthalene	12	2	160	1	36	2
Phenanthrene	12	9	560	3	16431	0
Pyrene	12	10	490	4	14702	1
Total Metals			**mg/kg**		**Mg/kg**	
Arsenic	12	12	6	7	33	0
Cadmium	12	2	0.6	1	10	0
Chromium	12	12	26	3	110	3
Copper	12	12	16	9	110	0
Lead	12	12	31	9	250	4
Mercury	12	12	0.2	6	2.0	2
Silver	12	4	1	2	3.70	0
Zinc	12	12	120	2	820	0

Streams						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
SVOCs			µg/kg		µg/kg	
Acenaphthylene	12	5	44	5	11	5
Benzo(a)anthracene	12	9	320	2	26371	0
Benzo(a)pyrene	12	9	370	2	25658	0
Benzo(g,h,i)perylene	12	9	170	3	5702	0
Benzo(k)fluoranthene	12	9	240	2	23876	0
Chrysene	12	10	340	3	8196	0
Dibenz(a,h)anthracene	12	3	60	3	2316	0
Fluoranthene	12	10	750	2	18174	0
Phenanthrene	12	9	560	2	16927	0
Pyrene	12	10	490	4	15145	0
Total Metals			mg/kg		mg/kg	
Arsenic	12	12	6	1	33	0
Chromium	12	12	26	4	110	1
Copper	12	12	16	5	110	0
Lead	12	12	31	2	250	1
Mercury	12	12	0.2	8	2.0	0
Zinc	12	12	120	4	820	0

Wet Areas						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
SVOCs			µg/kg		µg/kg	
Acenaphthylene	4	2	44	2	33	2
Benzo(g,h,i)perylene	4	4	170	2	16289	0
Chrysene	4	4	340	2	23407	0
Dibenz(a,h)anthracene	4	2	60	2	6615	0
Fluoranthene	4	4	750	1	51902	0
Pyrene	4	4	490	2	43251	0
Total Metals			mg/kg		mg/kg	
Arsenic	4	4	6	1	33	0
Chromium	4	4	26	1	110	0
Copper	4	4	16	2	110	0
Lead	4	4	31	4	250	1
Mercury	4	4	0.2	4	2.0	0

5.4.3 Summary

The following is a summary of the analytical results from the surface water and sediment samples collected from within the Eastern Drainage System.

- There were no surface water VOC, SVOC, E&E, or general chemistry SWQC (Human Health or Aquatic Life) exceedances.
- There were no sediment VOC, E&E, or general chemistry FSSG (LEL or SEL) exceedances.
- The detected concentrations of SVOC constituents exceeding the FSSG (LEL and SEL) within the sediment samples are comprised solely of PAH constituents. The SVOC PAHs are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- The detected concentrations of total metal constituents, with the exception of mercury, exceeding SWQC (Human Health), FSSG (LEL and SEL) and dissolved metal constituents exceeding the SWQC (Aquatic Life) are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- Up-gradient (SW/SD entry point to Facility) sample location SD I5-1-01 detected one metal constituent (zinc) at concentrations exceeding the FSSG (LEL) within the sediment sample. The occurrence of this metal constituent is believed to result from its close proximity to the New Jersey Transit Rail and Interstate Route 80 and is not associated with the former manufacturing processes or historic fill. The metal constituent was likely mobilized by surface water runoff from either the roadway or the rail line during precipitation events and deposited into the Facility's surface water bodies.

5.5 DUCK POND AND TRIBUTARIES DRAINAGE SYSTEM ANALYTICAL RESULTS

This section describes the results of the chemical analysis performed on the surface water and sediment samples collected from the Duck Pond and Tributaries Drainage System. A total of 20 sediment samples and 18 surface water samples were collected from within the Duck Pond and Tributaries Drainage System during the SW/SD – SI. Figure 2-1 presents the Sample Location Map.

5.5.1 Surface Water - Analytical Results Section

One SVOC and two total metal constituents were detected at concentration exceeding the Human Health SWQC. One dissolved metal constituent was detected at a concentration exceeding the Aquatic Life SWQC. Tables 5-71 through 5-75 provide the comparison of laboratory analyses to the Human Health SWQC. Table 5-76 presents the comparison of laboratory analyses to the Aquatic Life SWQC. Figure 5-7 graphically illustrates constituents detected by laboratory analyses at concentrations exceeding Human Health and Aquatic Life SWQC. The constituents identified to exceed the SWQC are presented below:

Constituent	Number of Analyses	Number of Detections	Human Health SWQC	Number of Samples Exceeding Human Health SWQC
SVOCs			**µg/l**	
Bis(2-Ethylhexyl) Phthalate	18	1	1.76	1
Total Metals			**µg/l**	
Lead	18	2	5	2
Mercury	18	1	0.144	1

Constituent	Number of Analyses	Number of Detections	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Number of Samples Exceeding Aquatic Life SWQC
Dissolved Metals			**µg/l**	**µg/l**	
Lead	18	1	38	5.4	1

5.5.2 Sediment - Analytical Results Section

Twelve SVOC and eight metal constituents were detected at concentrations exceeding the FSSG LEL. Two SVOC and three metal constituents were detected at concentrations exceeding the FSSG SEL. Tables 5-77 through 5-91 present the comparison of laboratory analyses to the FSSG LEL and SEL. Figure 5-8 graphically illustrates the constituents detected by laboratory analyses at concentrations exceeding the FSSG LEL and SEL. The constituents identified to exceed the FSSG LEL and SEL are presented below:

Ponds						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
SVOCs			µg/kg		µg/kg	
Acenaphthylene	14	2	44	2	38	2
Anthracene	14	1	220	1	21809	0
Benzo(a)anthracene	14	6	320	1	87234	0
Benzo(a)pyrene	14	6	370	1	84876	0
Benzo(g,h,i)perylene	14	4	170	3	18861	0
Benzo(k)fluoranthene	14	2	240	1	78982	0
Chrysene	14	7	340	2	27113	0
Dibenz(a,h)anthracene	14	1	60	1	7663	0
Fluoranthene	14	8	750	1	60121	0
Naphthalene	14	1	160	1	124	1
Phenanthrene	14	5	560	1	55995	0
Pyrene	14	8	490	2	50101	0
Total Metals			mg/kg		mg/kg	
Arsenic	14	14	6	3	33	0
Cadmium	14	9	0.6	3	10	0
Copper	14	14	16	10	110	2
Lead	14	14	31	5	250	3
Mercury	14	14	0.2	3	2.0	1
Nickel	14	14	16	4	75	0
Silver	14	5	1	1	3.70	0
Zinc	14	14	120	5	820	0

Streams						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
Total Metals			mg/kg		mg/kg	
Arsenic	3	3	6	1	33	0
Cadmium	3	2	0.6	1	10	0
Copper	3	3	16	2	110	1
Lead	3	3	31	3	250	0
Mercury	3	3	0.2	3	2.0	0
Zinc	3	3	120	1	820	0

5.5.3 Summary

The following is a summary of the analytical results from the surface water and sediment samples collected from within the Duck Pond and Tributaries Drainage System.

- There were no surface water VOC, E&E, or general chemistry SWQC (Human Health and Aquatic Life) exceedances.
- There were no sediment VOC, E&E, or general chemistry FSSG (LEL and SEL) exceedances.
- The detected concentrations of SVOC constituents exceeding the FSSG (LEL and SEL) within the sediment samples are comprised primarily of PAH constituents. The SVOC PAH constituents are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- The detected concentrations of total metal constituents, with the exception of mercury, exceeding SWQC (Human Health), FSSG (LEL and SEL) and dissolved metal constituent exceeding the SWQC (Aquatic Life) are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.
- The detection of SVOC and metal constituents associated with historic fill indicate past modification of Duck Pond and Shooting Hole.
- The single detection of Bis(2-ethylhexyl)phthalate present at a concentration exceeding the SWQC (Human Health) is likely a result of historic manufacturing operations.

5.6 MISCELLANEOUS PONDS DRAINAGE SYSTEM ANALYTICAL RESULTS

This section describes the results of the SW/SD – SI chemical analysis performed on the surface water and sediment samples collected from the Miscellaneous Ponds Drainage System. A total of 32 sediment samples and 28 surface water samples were collected from within the Miscellaneous Ponds Drainage System during the SW/SD – SI. Figure 2-1 presents the Sample Location Map.

5.6.1 Surface Water - Analytical Results Section

One total metal constituent was detected at concentration exceeding the Human Health SWQC. Two dissolved metal constituents were detected at concentrations exceeding the Aquatic Life SWQC. Tables 5-92 through 5-96 provide the comparison of laboratory

analyses to the Human Health SWQC. Table 5-97 presents the comparison of laboratory analyses to the Aquatic Life SWQC. Figure 5-9 graphically illustrates constituents detected by laboratory analyses at concentrations exceeding the Human Health and Aquatic Life SWQC. The constituents identified to exceed the SWQC are presented below:

Constituent	Number of Analyses	Number of Detections	Human Health SWQC	Number of Samples Exceeding Human Health SWQC
Total Metals			**µg/l**	
Arsenic	28	1	0.017	1

Constituent	Number of Analyses	Number of Detections	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Number of Samples Exceeding Aquatic Life SWQC
Dissolved Metals			**µg/l**	**µg/l**	
Copper	28	5	7.4	6.1	1
Zinc	28	28	44.2	43.4	3

5.6.2 Sediment - Analytical Results Section

Fourteen SVOC and eight metal constituents were detected at concentrations exceeding the FSSG LEL. Five SVOC and six metal constituents were detected at concentrations exceeding the FSSG SEL. Tables 5-98 through 5-102 present the comparison of laboratory analyses to the FSSG LEL and SEL. Figure 5-10 graphically illustrates the constituents detected by laboratory analyses at concentrations exceeding the FSSG LEL and SEL. The constituents identified to exceed the FSSG are presented below:

Ponds						
Constituent	Number of Analyses	Number of Detections	LEL	Number of Samples Exceeding LEL	SEL	Number of Samples Exceeding SEL
SVOCs			µg/kg		µg/kg	
Acenaphthene	32	3	16	3	29	3
Acenaphthylene	32	5	44	5	38	5
Anthracene	32	5	220	3	21809	0
Benzo(a)anthracene	32	9	320	5	87234	0
Benzo(a)pyrene	32	10	370	4	84876	0
Benzo(g,h,i)perylene	32	10	170	4	18861	0
Benzo(k)fluoranthene	32	10	240	4	78982	0
Chrysene	32	14	340	5	27113	1
Dibenz(a,h)anthracene	32	5	60	4	7662	0
Fluorene	32	3	190	1	9431	0
Fluoranthene	32	18	750	3	60121	0
Naphthalene	32	1	160	1	124	1
Phenanthrene	32	15	560	2	55995	0
Pyrene	32	17	490	5	50101	1
Total Metals			mg/kg		mg/kg	
Arsenic	32	32	6	9	33	0
Cadmium	32	20	0.6	4	10	1
Chromium	32	32	26	2	110	1
Copper	32	31	16	17	110	1
Lead	32	32	31	17	250	4
Mercury	32	32	0.2	7	2.0	2
Nickel	32	32	16	3	75	0
Zinc	32	32	120	8	820	1

5.6.3 Summary

The following is a summary of the analytical results from the surface water and sediment samples collected from within the Miscellaneous Ponds Drainage System.

- There were no surface water VOC, SVOCs, E&E, or general chemistry SWQC (Human Health and Aquatic Life) exceedances.
- There were no sediment VOC, E&E, or general chemistry FSSG (LEL and SEL) exceedances.
- The detected concentrations of SVOC constituents exceeding the FSSG (LEL and SEL) within the sediment samples are comprised solely of PAH constituents. The

SVOC PAHs are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.

- The detected concentrations of total metal constituents exceeding SWQC (Human Health), FSSG (LEL and SEL) and dissolved metal constituents exceeding the SWQC (Aquatic Life) are likely associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.

- The detection of SVOC and metal constituents associated with historic fill indicate past modification of Facilities ponds.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The SW/SD – SI completed the stated objective as described N.J.A.C 7:26E-3.3(a). The objective was to determine if there are any contaminants present within the Facility surface water or sediment at concentrations exceeding the applicable regulatory criteria. The following regulatory criteria was used:

- NJDEP Surface Water Quality Standards N.J.A.C. 7:9B, August 2004 (Surface Water Human Health Evaluation and Surface Water Aquatic Life Evaluation).
- The United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria (Surface Water Aquatic Life Evaluation).
- NJDEP Sediment Quality Evaluations, Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL) and Severe Effects Level (SEL). NJDEP Surface Water Quality Standards – N.J.A.C. 7:9B.

6.1 CONCLUSIONS

The following paragraphs present the conclusions of the SW/SD – SI:

- The required sample frequencies and analytical suites presented in the Surface Water/Sediment/Groundwater – Site Investigation Sampling and Analysis Plan were met for all surface water and sediment samples collected at the Facility, with the exception of the analysis of nitrocellulose in surface water at two locations.
- The data quality objectives established for laboratory analysis of samples collected in the field were met. The evaluation of the laboratory analysis against the USEPA precision, accuracy, representativeness, comparability, and completeness parameters determined that the laboratory data is of known and acceptable quality as qualified. Therefore, with the exceptions noted, the laboratory data generated for the SW/SD – SI are considered valid and usable for decision-making purposes.
- There are no site-related constituents with an established FSSG (LEL or SEL) or SWQC (Human Health) exiting the Facility. Constituents identified in the surface water and sediment samples at concentrations exceeding the FSSG (LEL or SEL) or SWQC (Human Health) adjacent to the only surface water sediment discharge point (SW/SD-E16-1-01) are attributed to impacts from Route 46. Similar effects are seen at all the SW/SD inflow points adjacent to roads (Route 46 and Howard Boulevard) and the New Jersey Transit Rail, in particular SD-B8-1-01. The metal

and SVOC constituents were likely mobilized by surface water runoff from the roadway/rail during precipitation events and deposited into the Facility's surface water bodies. A likely source of the SVOC constituents is asphalt roadway material and roadway sealant. A possible source of the metal constituents is discarded metallic debris, oxidizing roadway devices (i.e. signs/guard rails) and lead from the former use of leaded fuels.

- The results of the laboratory analysis of the sediment samples identified 1 VOC, 14 SVOCs, and 9 metal constituents as having exceeded the FSSG LEL at least once.

- The results of the laboratory analysis of the surface water samples identified 3 VOCs, 7 SVOCs, and 9 metal constituents as having exceeded the SWQC (Human Health or Aquatic Life) at least once.

- The detected concentrations of PCE within the Western Drainage System are not attributed to historic Facility operations. A large regional chlorinated solvent plume underlies the Facility in the region of the Western Drainage System. The chlorinated solvent plume is derived from off-site sources and has not been attributed to historic operations performed at the Facility. The NJDEP conducted a groundwater investigation of the southern portion of the Facility in March 1999 and concluded the Facility was not a source area for the regional plume.

- The detected concentrations of SVOC constituents within the surface water and sediment samples are comprised primarily of PAH constituents. The SVOC PAH constituents are associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land.

- The detected concentrations of total and dissolved metal constituents are associated with the historically common practice of using fly ash as fill material (historic fill) to improve the grade of the Facility and recover undevelopable land

- The single detection of Bromodichloromethane is attributed to chlorine treated potable water from a leaking water supply main and is not associated with the former manufacturing processes. Since the time of this investigation the Facility has dismantled the water distribution system in the Western Drainage Area and further potable water cannot enter the surface water.

- The two detections of Bis(2-ethylhexyl)phthalate present at a concentration exceeding the SWQC (Human Health) within The Central Drainage System and Duck Pond and Tributaries Drainage System are likely a result of historic smokeless powder manufacturing operations.

- The single detection of 2,4-Dinitrotoluene present at a concentration exceeding the SWQC (Human Health) within the Central Drainage System is likely a result of historic manufacturing operations.

6.2 RECOMMENDATIONS

The following paragraphs present the recommendations for the SW/SD – SI:

- Begin to implement the Triad approach for future investigation and remedial evaluations. Utilize the information presented in the Soils-SI, Groundwater-SI, and this SW/SD-SI to begin developing dynamic workplans addressing the interconnection of the facilities environmental media. Future efforts when appropriate, should focus on contaminated areas rather than individual AOCs.

- The results of this SW/SD-SI fulfill the requirements of N.J.A.C 7:26E-3.11(a)4.i Contamination of ecological concern exists onsite; therefore the performance of a baseline ecological evaluation is not necessary. Future efforts should be compliant with N.J.A.C. 7:26E-4.7 Remedial Investigation of Ecological Receptors. Figure 6-1 presents the portions of the SW/SD that require no further action (NFA) and further action (FA). Table 6-1 presents the site wide surface water sample locations identified with SWQC exceedances. Table 6-2 presents the site wide sediment sample location identified with FSSG exceedances.

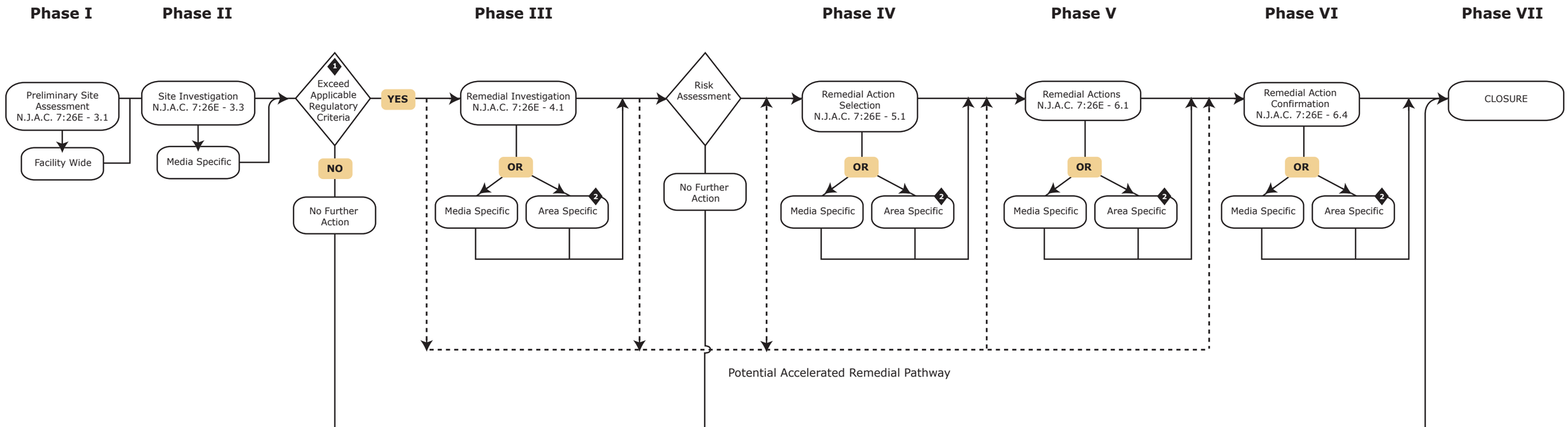
- Generate site-specific clean-up standards for identified constituents in the Soils-SI, Groundwater-SI and this SW/SD-SI without an established regulatory criterion.

- Future investigation and remedial evaluations should not attempt to encompass the entire Facility as performed for Soils-SI, Groundwater-SI and this SW/SD-SI. These were necessary to understand the portions of the Facility requiring future investigation and begin understanding the potential economics involved with site restoration. However, future efforts should be directed toward the portions of the Facility that can be restored the quickest to generate funding to support further restoration. The northeast portion of the Facility (Development, Finishing, Storage, and B-Line Areas) are the most applicable to begin restoration activities. These areas should be the initial focus areas for the implementation of the remedial investigation.

- The constituent 2,4-dinitrotoluene (2,4 - DNT) was incorporated in two analytical groups and analyzed utilizing two separate methodologies in samples analyzed for SVOCs and/or E&E compounds: as a SVOC (method SW-846-8270C using Gas Chromatograph/Mass Spectrograph (GC/MS) techniques, referenced in text, tables, and figures as DNT - SVOC) and as an E&E (method SW-846-8330 using High Performance Liquid Chromatograph (HPLC) techniques, referenced in text, tables, and figures as DNT – E&E). While both methods, HPLC and GC/MS, are accurate and acceptable, GC/MS is more accurate than HPLC and will be the selected analytical method when delineating areas containing 2,4-DNT.

- Identify and evaluate the use of innovative technologies that may prove effective in remediating/stabilizing site constituents.

FIGURES



NOTES:

1. REGULATORY CRITERIA

Soil
NJDEP Residential Direct Contact Soil Cleanup Criteria (NJDEP RDCSCC)
NJDEP Non-Residential Direct Contact Soil Cleanup Criteria (NJDEP NRDCSCC)
NJDEP Impact to Groundwater Criteria (NJDEP IGWSCC)

Groundwater
NJDEP Class II-A Criteria

Surface Water
NJDEP Surface Water Quality Standards

Sediment
NJDEP Guidance for Sediment Quality

2. AREAS

1. Trinitrotoluene (TNT) Area
2. Dynamite Area
3. Nitroglycerin (NG) Area
4. Pentaethritol (PETN) Area
5. Development Area
6. Diazodinitrophenol (DIAZO) Area
7. Maintenance Area
8. B-Line Area
9. A-Line Area
10. Finishing Area
11. Ammonia Nitrate Area
12. Storage Area
13. Miscellaneous/Off-Site Area

HERCULES INCORPORATED
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FACILITY-WIDE RESTORATION STRATEGY

MWH

FIGURE 1-1

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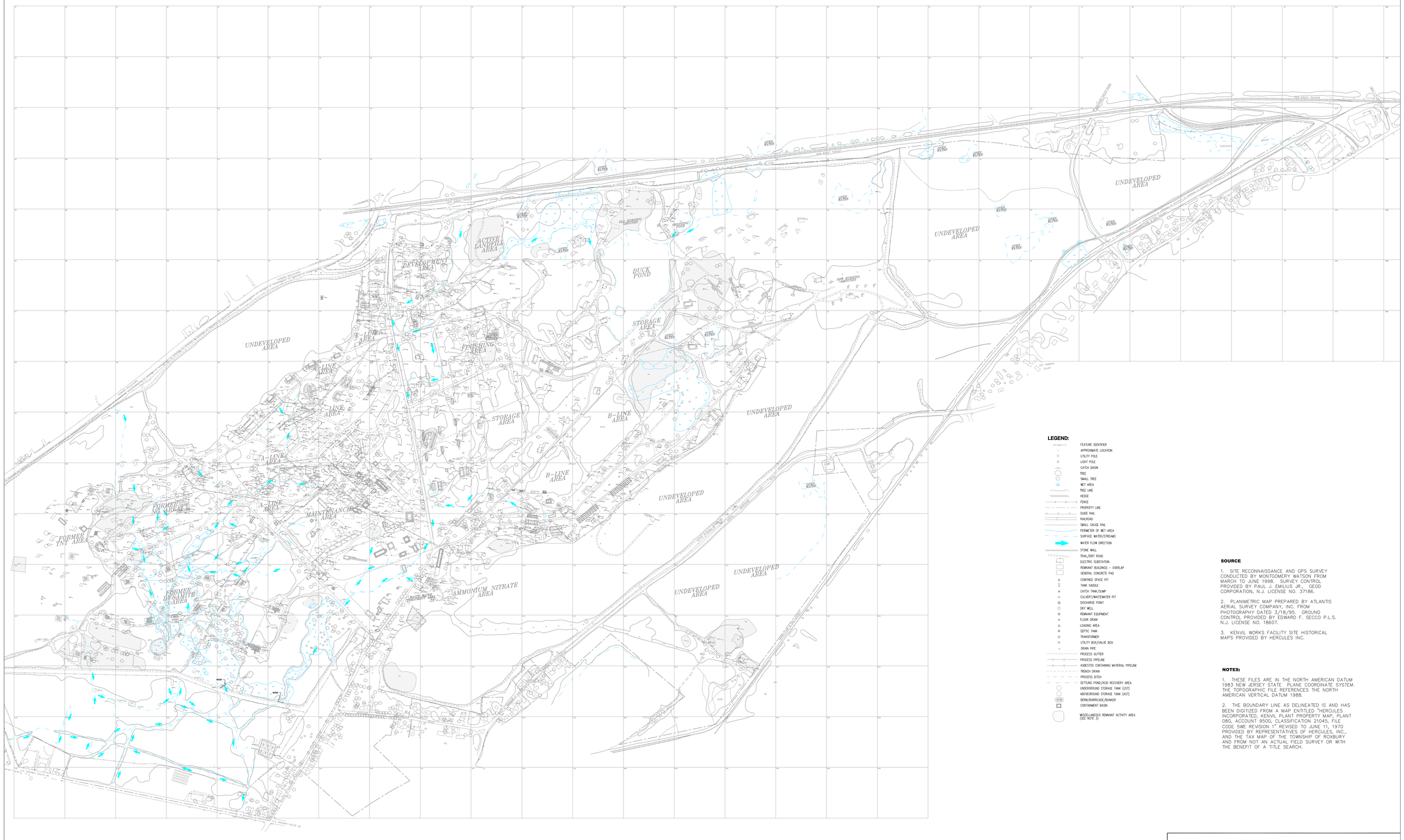


LEGEND:

- FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS – OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)

SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

north

300 0 300 600
SCALE IN FEET
1"=300'

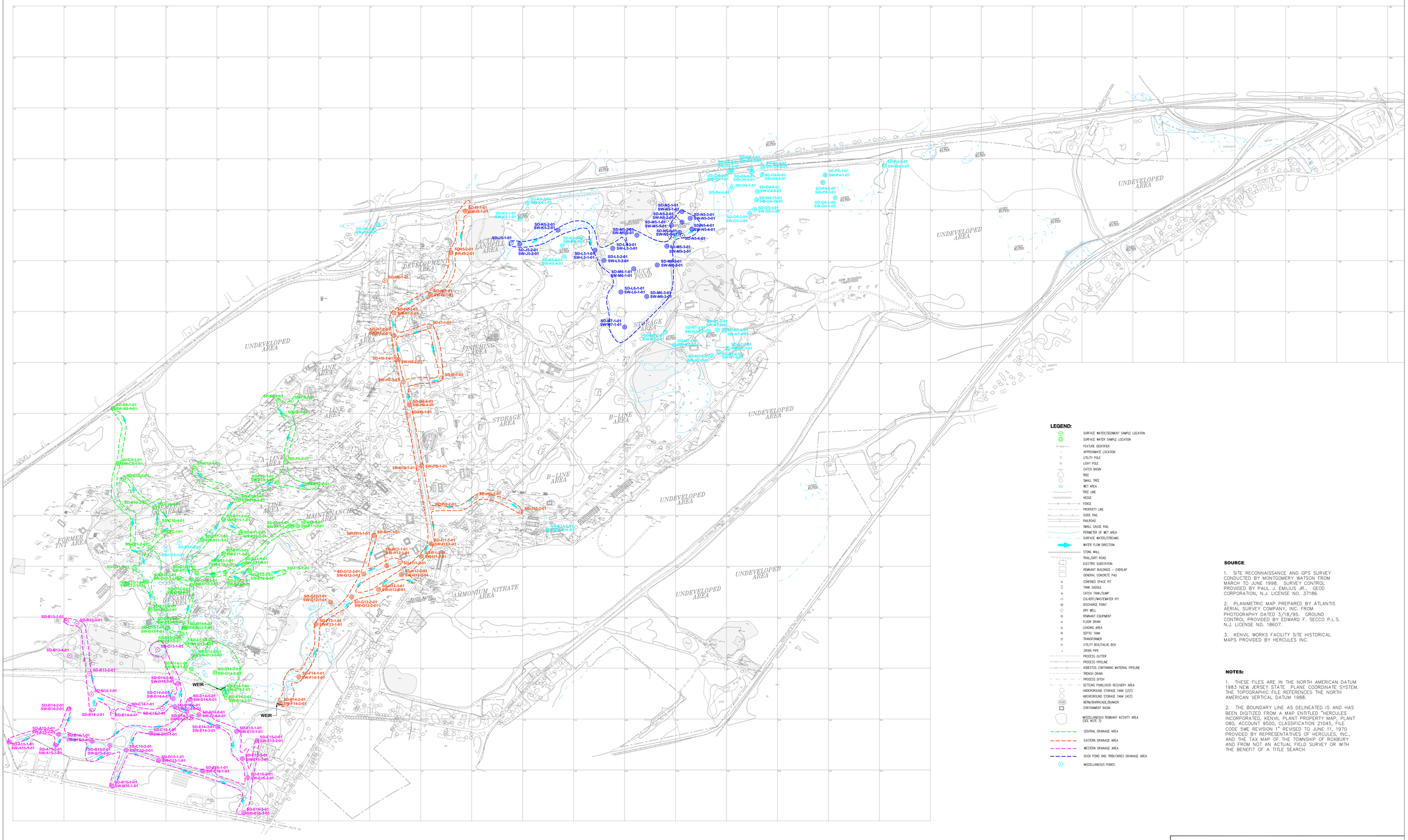
HERCULES INCORPORATED
KENVIL WORKS FACILITY

FACILITY BASE-MAP

MWH

FIGURE 1-2

S:\ND PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED SW FINAL-13.DWG


UNDEVELOPED AREA
DEVELOPMENT AREA
ACTIVE LANDFILL AREA
DUCK POND
STORAGE AREA
FINISHING AREA
A-LINE AREA
B-LINE AREA
MAINTENANCE AREA
FORMER TNT AREA
AMMONIUM NITRATE AREA
WEIR
WEIR
NEW JERSEY TRANSIT
STONEY BROOK
OLD TIMBERS COURT
NEW BUILDING
SD-B8-1-01
SW-B8-1-01
SD-C9-1-01
SW-C9-1-01
SD-C10-1-01
SW-C10-1-01
SD-C11-1-01
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SD-H8-3-01
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SD-H9-1-01
SW-H9-1-01
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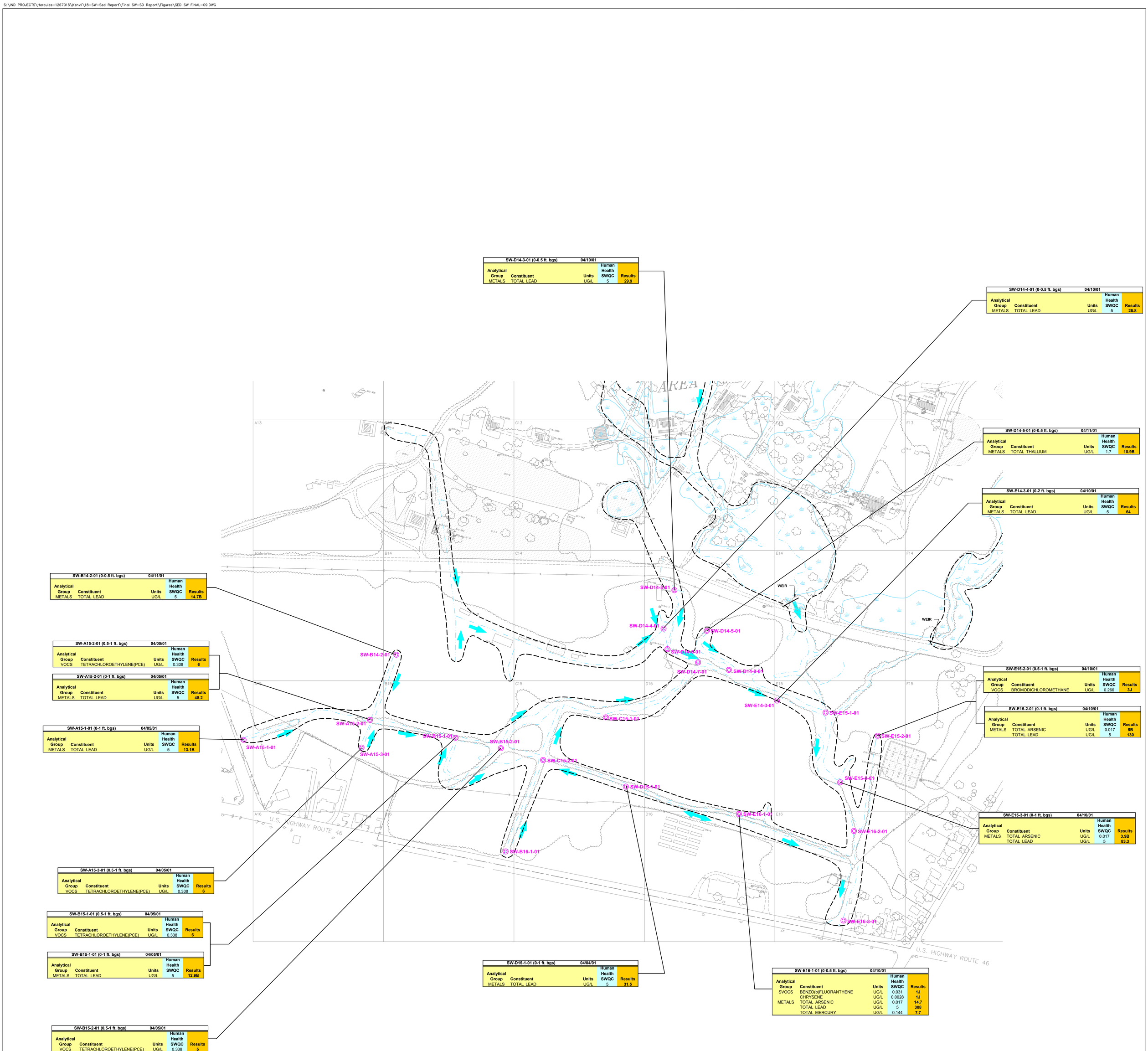


SW-D14-3-01 (0-0.5 ft. bgs)			04/10/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**29.9**

SW-D14-4-01 (0-0.5 ft. bgs)			04/10/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**25.8**

SW-D14-5-01 (0-0.5 ft. bgs)			04/11/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL THALLIUM	UG/L	1.7	**10.9B**

SW-E14-3-01 (0-2 ft. bgs)			04/10/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**64**

SW-B14-2-01 (0-0.5 ft. bgs)			04/11/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**14.7B**

SW-A15-2-01 (0.5-1 ft. bgs)			04/05/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
VOCS	TETRACHLOROETHYLENE(PCE)	UG/L	0.338	**6**

SW-A15-2-01 (0-1 ft. bgs)			04/05/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**48.2**

SW-A15-1-01 (0-1 ft. bgs)			04/05/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**13.1B**

SW-A15-3-01 (0.5-1 ft. bgs)			04/05/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
VOCS	TETRACHLOROETHYLENE(PCE)	UG/L	0.338	**6**

SW-B15-1-01 (0.5-1 ft. bgs)			04/05/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
VOCS	TETRACHLOROETHYLENE(PCE)	UG/L	0.338	**6**

SW-B15-1-01 (0-1 ft. bgs)			04/05/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**12.9B**

SW-B15-2-01 (0.5-1 ft. bgs)			04/05/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
VOCS	TETRACHLOROETHYLENE(PCE)	UG/L	0.338	**5**

SW-D15-1-01 (0-1 ft. bgs)			04/04/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**31.5**

SW-E15-2-01 (0.5-1 ft. bgs)			04/10/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
VOCS	BROMODICHLOROMETHANE	UG/L	0.266	**3J**

SW-E15-2-01 (0-1 ft. bgs)			04/10/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC	UG/L	0.017	**5B**
	TOTAL LEAD	UG/L	5	**130**

SW-E15-3-01 (0-1 ft. bgs)			04/10/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC	UG/L	0.017	**3.9B**
	TOTAL LEAD	UG/L	5	**83.3**

SW-E16-1-01 (0-0.5 ft. bgs)			04/10/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
SVOCS	BENZO(b)FLUORANTHENE	UG/L	0.031	**1J**
	CHRYSENE	UG/L	0.0028	**1J**
METALS	TOTAL ARSENIC	UG/L	0.017	**14.7**
	TOTAL LEAD	UG/L	5	**308**
	TOTAL MERCURY	UG/L	0.144	**7.7**

LEGEND:

- SURFACE WATER SAMPLE LOCATION
- FEATURE IDENTIFIER (N7-9222-7-7)
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE:

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SURFACE WATER ANALYTICAL SAMPLE RESULTS WERE COMPARED TO CRITERIA DERIVED FROM THE FOLLOWING APPLICABLE SURFACE WATER QUALITY CRITERIA (SWQC):

a). THE NJDEP SURFACE WATER QUALITY CRITERIA (NJSWQC) AS SPECIFIED IN N.J.A.C. 7:9B AUGUST 2004. SPECIFICALLY, ALL CONNECTED SURFACE WATER BODIES FLOWING FROM THE FACILITY TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FRESH WATER 2 - NON TROUT PRODUCTION CRITERIA 1 (FW2-NT(C1)) FOR HUMAN HEALTH AND AQUATIC LIFE PARAMTERS, AS ASSIGNED BY THE N.J.A.C. 7:9B TO THE LAMINGTON RIVER (SUCCASUNNA) - SOURCE TO RT. 206 BRIDGE. SURFACE WATER BODIES WITHIN THE FACILITY THAT ARE ISOLATED FROM AND DO NOT CONTRIBUTE SURFACE WATER TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FW2-NT HUMAN HEALTH AND AQUATIC LIFE CRITERIA AS SPECIFIED BY N.J.A.C. 7:9B. DISSOLVED METAL AQUATIC LIFE CRITERIA FOR LEAD HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC HARDNESS VALUES.

b). THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) CODE OF FEDERAL REGULATIONS (CFR) TITLE 40 PROTECTION OF THE ENVIRONMENT PART 131 WATER QUALITY STANDARDS SUB PART D (40 CFR 131.36) FEDERALLY PROMULGATED WATER QUALITY STANDARDS - TOXICS CRITERIA FOR THOSE STATES NOT COMPLYING WITH CLEAN WATER ACT SECTION 303 (C)(2)(B) (EPASWQC). DISSOLVED METAL AQUATIC LIFE CRITERIA FOR ARSENIC, CADMIUM, CHROMIUM, COPPER, NICKEL, SELENIUM, SILVER, AND ZINC HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC HARDNESS VALUES. AQUATIC LIFE CRITERIA FOR PENTACHLOROPHENOL (SVOC) HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC PH VALUES.

north

0 37.5 75 150
SCALE: FEET
1"=150'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SURFACE WATER SAMPLE EXCEEDANCE MAP WESTERN DRAINAGE AREA

MWH

FIGURE 5-1

SD-B14-4-01 (0-2 ft. bgs)		04/12/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	NAPHTHALENE	UG/KG	160	36	**75J**
METALS	LEAD	MG/KG	31	250	**44.4**

SD-B13-3-01 (0-0.5 ft. bgs)		05/01/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	LEAD	MG/KG	31	250	**3260**

SD-B13-1-01 (0-1.5 ft. bgs)		05/01/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	COPPER	MG/KG	16	110	**21.7J**
	LEAD	MG/KG	31	250	**44.4**

SD-C14-2-01 (0-1.5 ft. bgs)		04/12/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	COPPER	MG/KG	16	110	**19.5**
	LEAD	MG/KG	31	250	**69.2**
	ZINC	MG/KG	120	820	**163**

SD-C13-1-01 (0-2 ft. bgs)		05/01/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	LEAD	MG/KG	31	250	**48.6**

SD-D14-3-01 (0-2 ft. bgs)		04/10/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	CADMIUM	MG/KG	0.6	10	**0.69B**
	COPPER	MG/KG	16	110	**17.9**
	LEAD	MG/KG	31	250	**41.4N**
	ZINC	MG/KG	120	820	**139**

SD-D14-4-01 (0-2 ft. bgs)		04/10/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	COPPER	MG/KG	16	110	**25.4**
	MERCURY	MG/KG	0.2	2	**2.3***

SD-B13-4-01 (0-2 ft. bgs)		05/01/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**7.9**
	COPPER	MG/KG	16	110	**46.3**
	LEAD	MG/KG	31	250	**48.5**

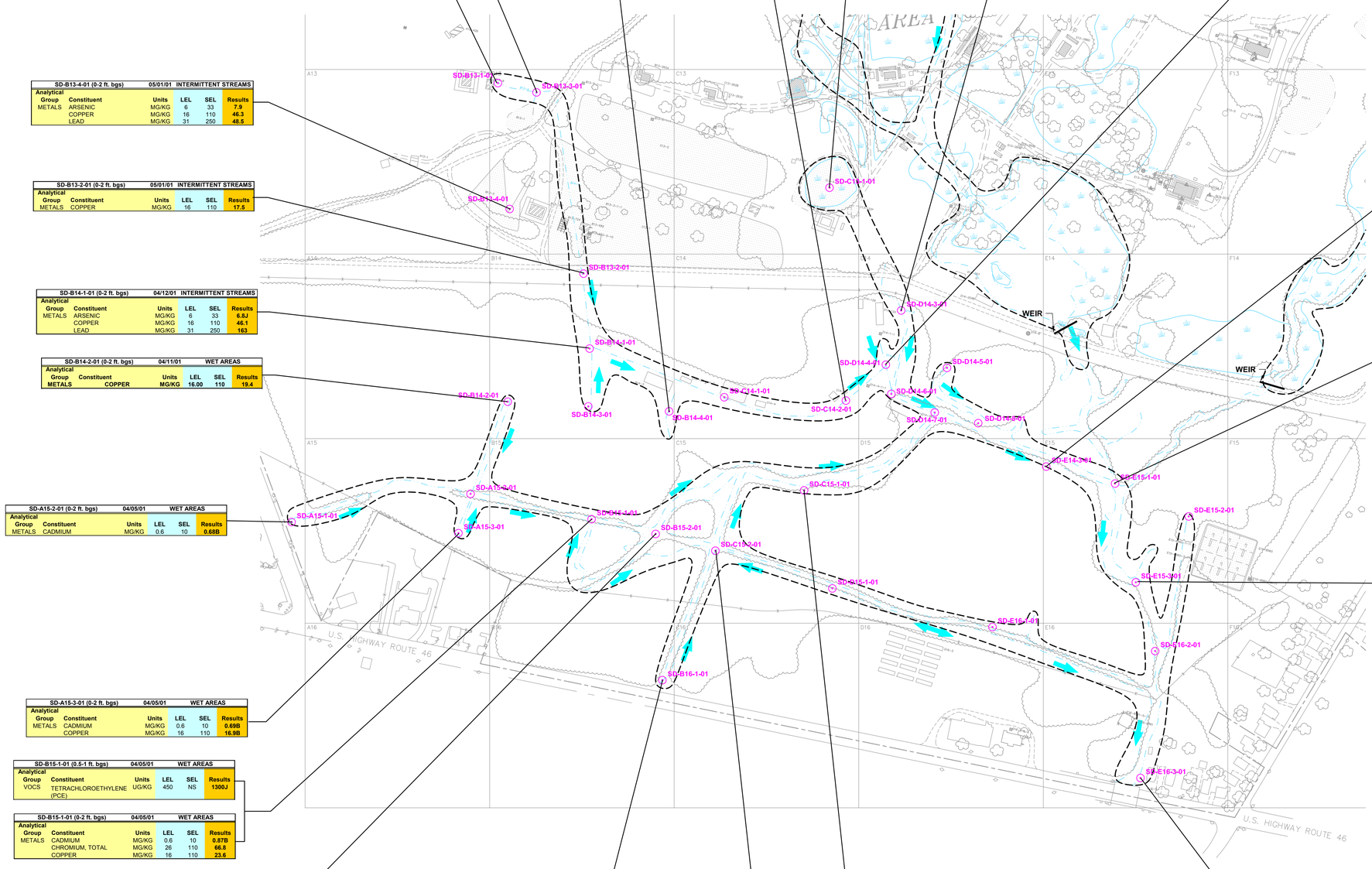
SD-B13-2-01 (0-2 ft. bgs)		05/01/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	COPPER	MG/KG	16	110	**17.5**

SD-B14-1-01 (0-2 ft. bgs)		04/12/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**6.8J**
	COPPER	MG/KG	16	110	**46.1**
	LEAD	MG/KG	31	250	**163**

SD-B14-2-01 (0-2 ft. bgs)		04/11/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	**COPPER**	**MG/KG**	**16.00**	**110**	**19.4**

SD-E14-3-01 (0-2 ft. bgs)		04/10/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**21.7**
	CADMIUM	MG/KG	0.6	10	**0.64B**
	COPPER	MG/KG	16	110	**41.8**
	LEAD	MG/KG	31	250	**715N**
	MERCURY	MG/KG	0.2	2	**3.7***
	ZINC	MG/KG	120	820	**158**

SD-E15-1-01 (0-2 ft. bgs)		04/10/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	LEAD	MG/KG	31	250	**73.3N**
	MERCURY	MG/KG	0.2	2	**0.21***



SD-A15-2-01 (0-2 ft. bgs)		04/05/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	CADMIUM	MG/KG	0.6	10	**0.68B**

SD-A15-3-01 (0-2 ft. bgs)		04/05/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	CADMIUM	MG/KG	0.6	10	**0.69B**
	COPPER	MG/KG	16	110	**16.9B**

SD-B15-1-01 (0.5-1 ft. bgs)		04/05/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
VOCS	TETRACHLOROETHYLENE (PCE)	UG/KG	450	NS	**1300J**

SD-B15-1-01 (0-2 ft. bgs)		04/05/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	CADMIUM	MG/KG	0.6	10	**0.87B**
	CHROMIUM, TOTAL	MG/KG	26	110	**66.8**
	COPPER	MG/KG	16	110	**23.6**

SD-B15-2-01 (0.5-1 ft. bgs)		04/05/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
VOCS	TETRACHLOROETHYLENE (PCE)	UG/KG	450	NS	**1700J**

SD-B15-2-01 (0-2 ft. bgs)		04/05/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**43.2**

SD-B16-1-01 (0-1 ft. bgs)		04/05/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**48J**
	BENZO(a)ANTHRACENE	UG/KG	320	26371	**480**
	BENZO(a)PYRENE	UG/KG	370	25658	**500**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**280J**
	CHRYSENE	UG/KG	340	8196	**600**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**97J**
	FLUORANTHENE	UG/KG	750	18174	**1100**
	PYRENE	UG/KG	490	15145	**1100**
METALS	LEAD	MG/KG	31	250	**84.6***
	MERCURY	MG/KG	0.2	2	**0.37N**

SD-C15-1-01 (0-2 ft. bgs)		04/11/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	75308	**370J**
	BENZO(a)PYRENE	UG/KG	370	73273	**410J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**210J**
	CHRYSENE	UG/KG	340	23407	**380J**
	FLUORANTHENE	UG/KG	750	51902	**780J**
	PYRENE	UG/KG	490	43251	**810J**
METALS	CADMIUM	MG/KG	0.6	10	**0.75B**
	LEAD	MG/KG	31	250	**40.4N**

SD-C15-2-01 (0-2 ft. bgs)		04/04/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	75308	**480J**
	BENZO(a)PYRENE	UG/KG	370	73273	**560J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**350J**
	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**290J**
	CHRYSENE	UG/KG	340	23407	**690J**
	FLUORANTHENE	UG/KG	750	51902	**1000J**
	PYRENE	UG/KG	490	43251	**960J**
METALS	CADMIUM	MG/KG	0.6	10	**0.66B**
	COPPER	MG/KG	16	110	**21.7**
	LEAD	MG/KG	31	250	**50.5***

SD-E15-3-01 (0-1.5 ft. bgs)		04/10/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	LEAD	MG/KG	31	250	**63N**
	MERCURY	MG/KG	0.2	2	**0.51***

SD-E16-3-01 (0-2 ft. bgs)		04/10/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**58J**
	BENZO(a)PYRENE	UG/KG	370	25658	**390J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**340J**
	CHRYSENE	UG/KG	340	8196	**350J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**90J**
	PYRENE	UG/KG	490	15145	**690**
METALS	ARSENIC	MG/KG	6	33	**6.4**
	CHROMIUM, TOTAL	MG/KG	26	110	**51.1**
	COPPER	MG/KG	16	110	**25.1**
	LEAD	MG/KG	31	250	**203N**
	MERCURY	MG/KG	0.2	2	**1.2***
	ZINC	MG/KG	120	820	**158**

LEGEND:

- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- NT-9222-?-? FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE SWE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SEDIMENT EVALUATION CRITERIA ARE DERIVED FROM THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS. THE FRESH WATER SEDIMENT SCREENING GUIDELINES LOWEST EFFECTS LEVELS (LEL) AND SEVERE EFFECTS LEVELS (SEL) ARE COMPARED TO THE LABORATORY ANALYSIS OF SEDIMENT SAMPLES. POLYNUCLEAR AROMATIC HYDROCARBONS (PAH) HAVE BEEN ADJUSTED TO COMPENSATE FOR THE SITE SPECIFIC TOTAL ORGANIC CARBON (TOC).

north

0 37.5 75 150

SCALE: FEET
1"=150'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SEDIMENT SAMPLE EXCEEDANCE MAP WESTERN DRAINAGE AREA

MWH

FIGURE 5-2

S:\IND_PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED_SW FINAL-04.DWG

S:\IND PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED SW FINAL-07.DWG

SW-F10-1-01 (0-0.5 ft. bgs)			05/01/01			
Analytical Group	Constituent		Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Results
METALS	DISSOLVED	ZINC	UG/L	66.9	66.2	**89.6**

SW-F11-1-01 (0-1 ft. bgs)			04/18/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC		UG/L	0.017	**4.1B**

SW-D11-1-01 (0-1 ft. bgs)			04/17/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL LEAD		UG/L	5	**57.8**
E&E	2,4-DINITROTOLUENE		UG/L	0.11	**0.36J**

SW-D12-2-01 (0-0.5 ft. bgs)			04/16/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC		UG/L	0.017	**52.4**
	TOTAL LEAD		UG/L	5	**304**

SW-E11-3-01 (0-0.5 ft. bgs)			04/17/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC		UG/L	0.017	**5.8B**
	TOTAL LEAD		UG/L	5	**113**

SW-C12-1-01 (0-0.5 ft. bgs)			05/02/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC		UG/L	0.017	**4.4B**
	TOTAL LEAD		UG/L	5	**11.7B**

SW-E12-3-01 (0-0.5 ft. bgs)			04/17/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC		UG/L	0.017	**14.6**
	TOTAL LEAD		UG/L	5	**42.4**

SW-C12-2-01 (0-1 ft. bgs)			04/13/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL LEAD		UG/L	5	**16B**

SW-D12-4-01 (0-1 ft. bgs)			04/16/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL LEAD		UG/L	5	**11.2B**

SW-D13-2-01 (0-0.5 ft. bgs)			04/13/01			
Analytical Group	Constituent		Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Results
METALS	DISSOLVED	SILVER	UG/L	0.02	NS	**2.1B**

SW-D13-2-01 (0-0.5 ft. bgs)			04/13/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
SVOCS	BENZO(a)ANTHRACENE	UG/L	0.0028	**2J**
	BENZO(a)PYRENE	UG/L	0.0028	**2J**
	BENZO(b)FLUORANTHENE	UG/L	0.031	**3J**
	BENZO(g,h,i)PERYLENE	UG/L	0.0028	**2J**
	BENZO(k)FLUORANTHENE	UG/L	0.031	**1J**
	CHRYSENE	UG/L	0.0028	**2J**
METALS	TOTAL ARSENIC	UG/L	0.017	**33.7**
	TOTAL LEAD	UG/L	5	**221**
	TOTAL MERCURY	UG/L	0.144	**0.2B**

SW-D13-5-01 (0-1 ft. bgs)			04/13/01			
Analytical Group	Constituent		Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Results
METALS	DISSOLVED	LEAD	UG/L	38	5.4	**17.5B**

SW-D13-4-01 (0-1.5 ft. bgs)			04/12/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
SVOCS	bis(2-ETHYLHEXYL) PHTHALATE		UG/L	1.76	**2J**

SW-E14-2-01 (0-1 ft. bgs)			04/10/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL LEAD		UG/L	5	**21.5**

SW-D14-1-01 (0-1 ft. bgs)			04/12/01		
Analytical Group	Constituent		Units	Human Health SWQC	Results
METALS	TOTAL LEAD		UG/L	5	**23**

LEGEND:

- SURFACE WATER SAMPLE LOCATION
- FEATURE IDENTIFIER (N7-9222-7-7)
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
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- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
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- PROCESS PIPELINE
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SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

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3. SURFACE WATER ANALYTICAL SAMPLE RESULTS WERE COMPARED TO CRITERIA DERIVED FROM THE FOLLOWING APPLICABLE SURFACE WATER QUALITY CRITERIA (SWQC):

a). THE NJDEP SURFACE WATER QUALITY CRITERIA (NJSWQC) AS SPECIFIED IN N.J.A.C. 7:9B AUGUST 2004. SPECIFICALLY, ALL CONNECTED SURFACE WATER BODIES FLOWING FROM THE FACILITY TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FRESH WATER 2 - NON TROUT PRODUCTION CRITERIA 1 (FW2-NT(C1)) FOR HUMAN HEALTH AND AQUATIC LIFE PARAMTERS, AS ASSIGNED BY THE N.J.A.C. 7:9B TO THE LAMINGTON RIVER (SUCCASUNNA) - SOURCE TO RT. 206 BRIDGE. SURFACE WATER BODIES WITHIN THE FACILITY THAT ARE ISOLATED FROM AND DO NOT CONTRIBUTE SURFACE WATER TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FW2-NT HUMAN HEALTH AND AQUATIC LIFE CRITERIA AS SPECIFIED BY N.J.A.C. 7:9B. DISSOLVED METAL AQUATIC LIFE CRITERIA FOR LEAD HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC HARDNESS VALUES.

b). THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) CODE OF FEDERAL REGULATIONS (CFR) TITLE 40 PROTECTION OF THE ENVIRONMENT PART 131 WATER QUALITY STANDARDS SUB PART D (40 CFR 131.36) FEDERALLY PROMULGATED WATER QUALITY STANDARDS - TOXICS CRITERIA FOR THOSE STATES NOT COMPLYING WITH CLEAN WATER ACT SECTION 303 (C)(2)(B) (EPASWQC). DISSOLVED METAL AQUATIC LIFE CRITERIA FOR ARSENIC, CADMIUM, CHROMIUM, COPPER, NICKEL, SELENIUM, SILVER, AND ZINC HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC HARDNESS VALUES. AQUATIC LIFE CRITERIA FOR PENTACHLOROPHENOL (SVOC) HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC PH VALUES.

north

0 37.5 75 150
SCALE: FEET
1"=150'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SURFACE WATER SAMPLE EXCEEDANCE MAP CENTRAL DRAINAGE AREA

MWH

FIGURE 5-3

SD-B8-1-01 (0-1 ft. bgs)	04/25/01		STREAMS		
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	26371	**450**
	BENZO(a)PYRENE	UG/KG	370	25658	**430**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**290J**
	BENZO(k)FLUORANTHENE	UG/KG	240	23876	**250J**
	CHRYSENE	UG/KG	340	8196	**520**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**97J**
	FLUORANTHENE	UG/KG	750	18174	**980**
	PYRENE	UG/KG	490	15145	**730**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**27.5**
	COPPER	MG/KG	16	110	**44.3**
	LEAD	MG/KG	31	250	**49.4J**
	NICKEL	MG/KG	16	75	**17.2**
	ZINC	MG/KG	120	820	**153J**

SD-C10-3-01 (0-1.5 ft. bgs)	05/02/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	25598	**670**
	BENZO(a)PYRENE	UG/KG	370	24906	**380J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**310J**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**280J**
	CHRYSENE	UG/KG	340	7956	**760**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**99J**
	FLUORANTHENE	UG/KG	750	17642	**1500**
	PHENANTHRENE	UG/KG	560	16431	**1200**
	PYRENE	UG/KG	490	14702	**1400**
METALS	ARSENIC	MG/KG	6	33	**7.9**
	LEAD	MG/KG	31	250	**5490**

SD-C9-1-01 (0-1 ft. bgs)	04/25/01		STREAMS		
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	COPPER	MG/KG	16	110	**18.1**
	LEAD	MG/KG	31	250	**68.8J**

SD-C10-1-01 (0-2 ft. bgs)	04/25/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	COPPER	MG/KG	16	110	**26.7**
	LEAD	MG/KG	31	250	**840J**
	MERCURY	MG/KG	0.2	2	**0.35**

SD-C10-2-01 (0-2.5 ft. bgs)	05/02/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	COPPER	MG/KG	16	110	**18.9J**
	LEAD	MG/KG	31	250	**57**

SD-C10-4-01 (0-2 ft. bgs)	05/02/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	LEAD	MG/KG	31	250	**2290**

SD-C11-1-01 (0-2 ft. bgs)	05/01/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**9.5**
	LEAD	MG/KG	31	250	**1220**

SD-C11-2-01 (0-2 ft. bgs)	05/02/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	25598	**410J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**260J**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**240J**
	CHRYSENE	UG/KG	340	7956	**690**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**110J**
	FLUORANTHENE	UG/KG	750	17642	**1200**
	PHENANTHRENE	UG/KG	560	16431	**790**
	PYRENE	UG/KG	490	14702	**850**
METALS	ARSENIC	MG/KG	6	33	**61.2**
	COPPER	MG/KG	16	110	**17.1J**
	LEAD	MG/KG	31	250	**2570**
	MERCURY	MG/KG	0.2	2	**0.53**

SD-C11-3-01 (0-1.5 ft. bgs)	05/02/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**30.2**
	COPPER	MG/KG	16	110	**37.5J**
	LEAD	MG/KG	31	250	**334**

SD-C12-1-01 (0-2 ft. bgs)	05/02/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHYLENE	UG/KG	44	33	**63J**
	BENZO(a)ANTHRACENE	UG/KG	320	75308	**460J**
	BENZO(a)PYRENE	UG/KG	370	73273	**580J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**610J**
	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**360J**
	CHRYSENE	UG/KG	340	23407	**660J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**200J**
	FLUORANTHENE	UG/KG	750	51902	**1000J**
	PYRENE	UG/KG	490	43251	**970J**
METALS	ARSENIC	MG/KG	6	33	**15.4**
	LEAD	MG/KG	31	250	**657**
	MERCURY	MG/KG	0.2	2	**0.74**

SD-C12-2-01 (0-2 ft. bgs)	04/13/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	LEAD	MG/KG	31	250	**159***

SD-D13-1-01 (0-2 ft. bgs)	04/13/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	75308	**530**
	BENZO(a)PYRENE	UG/KG	370	73273	**510J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**360J**
	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**280J**
	CHRYSENE	UG/KG	340	23407	**620**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**110J**
	FLUORANTHENE	UG/KG	750	51902	**1100**
	PHENANTHRENE	UG/KG	560	48340	**670**
	PYRENE	UG/KG	490	43251	**990**
METALS	ARSENIC	MG/KG	6	33	**13.6**
	LEAD	MG/KG	31	250	**741***
	MERCURY	MG/KG	0.2	2	**2.5N**

SD-D13-2-01 (0-2 ft. bgs)	04/13/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	CADMIUM	MG/KG	0.6	10	**0.61B**
	CHROMIUM, TOTAL	MG/KG	26	110	**27.7**
	COPPER	MG/KG	16	110	**22.6**
	LEAD	MG/KG	31	250	**45.3***
	MERCURY	MG/KG	0.2	2	**0.25BN**

SD-D13-3-01 (0-2 ft. bgs)	04/12/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**22J**
	COPPER	MG/KG	16	110	**20.7**
	LEAD	MG/KG	31	250	**363**
	MERCURY	MG/KG	0.2	2	**0.74J**

SD-D13-5-01 (0-2 ft. bgs)	04/13/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	ACENAPHTHYLENE	UG/KG	44	33	**320J**
	ANTHRACENE	UG/KG	220	18827	**510J**
	BENZO(a)ANTHRACENE	UG/KG	320	75308	**2000**
	BENZO(a)PYRENE	UG/KG	370	73273	**1400**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**610J**
	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**1000**
	CHRYSENE	UG/KG	340	23407	**2100**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**290J**
	FLUORANTHENE	UG/KG	750	51902	**1400**
	PYRENE	UG/KG	490	43251	**1600**
METALS	COPPER	MG/KG	16	110	**20**

SD-D13-4-01 (0-2 ft. bgs)	04/12/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	75308	**400J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**220J**
	CHRYSENE	UG/KG	340	23407	**500J**
	FLUORANTHENE	UG/KG	750	51902	**950**
	PYRENE	UG/KG	490	43251	**760**
METALS	ARSENIC	MG/KG	6	33	**12.2J**
	COPPER	MG/KG	16	110	**56.1**
	LEAD	MG/KG	31	250	**605**
	MERCURY	MG/KG	0.2	2	**0.81J**
	ZINC	MG/KG	120	820	**157**

SD-D13-6-01 (0-2 ft. bgs)	04/12/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**10J**
	COPPER	MG/KG	16	110	**30.2**
	LEAD	MG/KG	31	250	**197**
	MERCURY	MG/KG	0.2	2	**0.44J**

SD-D14-2-01 (0-2 ft. bgs)	04/26/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**11.1**
	CADMIUM	MG/KG	0.6	10	**0.86B**
	COPPER	MG/KG	16	110	**26.5B**
	LEAD	MG/KG	31	250	**306**
	MERCURY	MG/KG	0.2	2	**0.41B**

SD-D14-1-01 (0-2 ft. bgs)	04/12/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**28.2J**
	COPPER	MG/KG	16	110	**29.3**
	LEAD	MG/KG	31	250	**728**
	MERCURY	MG/KG	0.2	2	**0.4J**

SD-F9-1-01 (0-1.5 ft. bgs)	04/25/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	ACENAPHTHENE	UG/KG	16	9	**42J**
	ACENAPHTHYLENE	UG/KG	44	11	**38J**
	BENZO(a)ANTHRACENE	UG/KG	320	25598	**460**
	BENZO(a)PYRENE	UG/KG	370	24906	**490**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**330J**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**300J**
	CHRYSENE	UG/KG	340	7956	**550**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**99J**
	FLUORANTHENE	UG/KG	750	17642	**870**
	PHENANTHRENE	UG/KG	560	16431	**560**
	PYRENE	UG/KG	490	14702	**910**
METALS	ARSENIC	MG/KG	6	33	**10.6**
	COPPER	MG/KG	16	110	**331**
	LEAD	MG/KG	31	250	**150J**

SD-F8-1-01 (0-2 ft. bgs)	04/25/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**7.6**
	COPPER	MG/KG	16	110	**62**

SD-D10-1-01 (0-1 ft. bgs)	05/01/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	ACENAPHTHENE	UG/KG	16	9	**610**
	ACENAPHTHYLENE	UG/KG	44	11	**720**
	ANTHRACENE	UG/KG	220	6400	**2500**
	BENZO(a)ANTHRACENE	UG/KG	320	25598	**2900**
	BENZO(a)PYRENE	UG/KG	370	24906	**2500**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**1300**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**1900**
	CHRYSENE	UG/KG	340	7956	**4400**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**500**
	FLUORANTHENE	UG/KG	750	17642	**6200**
	FLUORENE	UG/KG	190	2767	**1000**
	NAPHTHALENE	UG/KG	160	36	**62J**
	PHENANTHRENE	UG/KG	560	16431	**4000**
	PYRENE	UG/KG	490	14702	**5300**
METALS	COPPER	MG/KG	16	110	**16.4J**
	LEAD	MG/KG	31	250	**62.8**

SD-E10-1-01 (0-1.5 ft. bgs)	04/17/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**8.9**
	COPPER	MG/KG	16	110	**59.2**
	LEAD	MG/KG	31	250	**365J**
	MERCURY	MG/KG	0.2	2	**0.5N**

SD-F8-2-01 (1-3 ft. bgs)	04/25/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ZINC	MG/KG	120	820	**138J**

SD-F9-2-01 (0-1.5 ft. bgs)	05/01/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	COPPER	MG/KG	16	110	**58.5J**
	LEAD	MG/KG	31	250	**32.9**
	ZINC	MG/KG	120	820	**250J**

SD-F10-1-01 (0-2 ft. bgs)	05/01/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	COPPER	MG/KG	16	110	**16.8**

SD-F10-2-01 (0-1.5 ft. bgs)	05/01/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**9.4**
	COPPER	MG/KG	16	110	**123**
	LEAD	MG/KG	31	250	**81.5**
	MERCURY	MG/KG	0.2	2	**0.87**
	ZINC	MG/KG	120	820	**245J**

SD-E11-1-01 (0-1 ft. bgs)	04/17/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**180J**
	PYRENE	UG/KG	490	43251	**490J**
METALS	COPPER	MG/KG	16	110	**26.3**
	LEAD	MG/KG	31	250	**138***
	MERCURY	MG/KG	0.2	2	**0.28N**

SD-F11-1-01 (0-2 ft. bgs)	04/18/01	STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	26371	**920J**
	BENZO(a)PYRENE	UG/KG	370	25658	**1000J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**840J**
	BENZO(k)FLUORANTHENE	UG/KG	240	23876	**600J**
	CHRYSENE	UG/KG	340	8196	**1100J**
	FLUORANTHENE	UG/KG	750	18174	**1600J**
	PHENANTHRENE	UG/KG	560	16927	**660J**
	PYRENE	UG/KG	490	15145	**1800J**
METALS	ARSENIC	MG/KG	6	33	**8.4J**
	COPPER	MG/KG	16	110	**17J**
	LEAD	MG/KG	31	250	**34.1**
	MERCURY	MG/KG	0.2	2	**2.5J**
	NICKEL	MG/KG	16	75	**22.6**
	ZINC	MG/KG	120	820	**189N***

SD-F11-2-01 (0-2 ft. bgs)	04/18/01	STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	MERCURY	MG/KG	0.2	2	**0.31J**

SD-E11-3-01 (0-2 ft. bgs)	04/17/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	COPPER	MG/KG	16	110	**23.3**
	LEAD	MG/KG	31	250	**31.9***
	MERCURY	MG/KG	0.2	2	**0.2N**

SD-E11-4-01 (0-2 ft. bgs)	04/17/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	ACENAPHTHYLENE	UG/KG	44	33	**66J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**320J**
	CHRYSENE	UG/KG	340	23407	**370J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**93J**
	PYRENE	UG/KG	490	43251	**600J**
METALS	ARSENIC	MG/KG	6	33	**6.6***
	COPPER	MG/KG	16	110	**29.9**
	LEAD	MG/KG	31	250	**531**
	MERCURY	MG/KG	0.2	2	**0.43N***
	ZINC	MG/KG	120	820	**151**

SD-F12-1-01 (0-2 ft. bgs)	04/17/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**8.2J**
	COPPER	MG/KG	16	110	**24.3B**
	LEAD	MG/KG	31	250	**51.3B**
	ZINC	MG/KG	120	820	**127**

SD-E12-3-01 (0-2 ft. bgs)	04/17/01	INTERMITTENT STREAMS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**20.4J**
	COPPER	MG/KG	16	110	**19.8**
	LEAD	MG/KG	31	250	**54.8**

SD-E12-2-01 (0-2 ft. bgs)	04/16/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	ACENAPHTHENE	UG/KG	16	25	**99J**
	ACENAPHTHYLENE	UG/KG	44	33	**520J**
	ANTHRACENE	UG/KG	220	18827	**580J**
	BENZO(a)ANTHRACENE	UG/KG	320	75308	**1800**
	BENZO(a)PYRENE	UG/KG	370	73273	**2200**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**2000**
	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**1200**
	CHRYSENE	UG/KG	340	23407	**2400**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**640J**
	FLUORANTHENE	UG/KG	750	51902	**3700**
	FLUORENE	UG/KG	190	8141	**230J**
	NAPHTHALENE	UG/KG	160	107	**180J**
	PHENANTHRENE	UG/KG	560	48340	**2200**
	PYRENE	UG/KG	490	43251	**4600**
METALS	ARSENIC	MG/KG	6	33	**29.5**
	COPPER	MG/KG	16	110	**79.3**
	LEAD	MG/KG	31	250	**182***
	MERCURY	MG/KG	0.2	2	**1.8N**
	NICKEL	MG/KG	16	75	**31.8B**
	ZINC	MG/KG	120	820	**368**

SD-E12-1-01 (0-2 ft. bgs)	04/16/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**6.8**

SD-D12-1-01 (0-2 ft. bgs)	04/16/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	LEAD	MG/KG	31	250	**67.7***

SD-D12-3-01 (0-2 ft. bgs)	04/16/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**8.2**
	COPPER	MG/KG	16	110	**74.1**
	LEAD	MG/KG	31	250	**681***
	MERCURY	MG/KG	0.2	2	**0.52N**
	ZINC	MG/KG	120	820	**164**

SD-D12-4-01 (0-2 ft. bgs)	04/16/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**170J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**81J**
METALS	ARSENIC	MG/KG	6	33	**6.7**
	CADMIUM	MG/KG	0.6	10	**0.82B**
	COPPER	MG/KG	16	110	**70.1**
	LEAD	MG/KG	31	250	**480***
	MERCURY	MG/KG	0.2	2	**0.54N**
	ZINC	MG/KG	120	820	**205**

SD-D12-2-01 (0-2 ft. bgs)	04/16/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	ACENAPHTHENE	UG/KG	16	25	**120J**
	ACENAPHTHYLENE	UG/KG	44	33	**280J**
	ANTHRACENE	UG/KG	220	18827	**840**
	BENZO(a)ANTHRACENE	UG/KG	320	75308	**3300**
	BENZO(a)PYRENE	UG/KG	370	73273	**2900**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**1900**
	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**1300**
	CHRYSENE	UG/KG	340	23407	**3200**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**610J**
	FLUORANTHENE	UG/KG	750	51902	**4600**
	FLUORENE	UG/KG	190	8141	**340J**
	PHENANTHRENE	UG/KG	560	48340	**2400**
	PYRENE	UG/KG	490	43251	**6700**
METALS	LEAD	MG/KG	31	250	**123***
	MERCURY	MG/KG	0.2	2	**0.27N**

SD-E14-1-01 (0-2 ft. bgs)	04/11/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
SVOCS	BENZO(a)ANTHRACENE	UG/KG	320	75308	**350J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**220J**
	CHRYSENE	UG/KG	340	23407	**450J**
	PYRENE	UG/KG	490	43251	**690J**
METALS	ARSENIC	MG/KG	6	33	**24.5J**
	CADMIUM	MG/KG	0.6	10	**1.5B**
	CHROMIUM, TOTAL	MG/KG	26	110	**34.4**
	COPPER	MG/KG	16	110	**125**
	LEAD	MG/KG	31	250	**1010**
	MERCURY	MG/KG	0.2	2	**1.9J**
	NICKEL	MG/KG	16	75	**25.9**
	ZINC	MG/KG	120	820	**536**

SD-E14-2-01 (0-2 ft. bgs)	04/10/01	WET AREAS			
Analytical Group	Constituent	Units	LEL	SEL	Result
METALS	ARSENIC	MG/KG	6	33	**6.9**
	CADMIUM	MG/KG	0.6	10	**0.69B**
	CHROMIUM, TOTAL	MG/KG	26	110	**53.1**
	COPPER	MG/KG	16	110	**32.4**
	LEAD	MG/KG	31	250	**192N**
	MERCURY	MG/KG	0.2	2	**0.32B***

LEGEND:

- SEDIMENT SAMPLE LOCATION
- NT-9222-7-7 FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SEDIMENT EVALUATION CRITERIA ARE DERIVED FROM THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS. THE FRESH WATER SEDIMENT SCREENING GUIDELINES LOWEST EFFECTS LEVELS (LEL) AND SEVERE EFFECTS LEVELS (SEL) ARE COMPARED TO THE LABORATORY ANALYSIS OF SEDIMENT SAMPLES. POLYNUCLEAR AROMATIC HYDROCARBONS (PAH) HAVE BEEN ADJUSTED TO COMPENSATE FOR THE SITE SPECIFIC TOTAL ORGANIC CARBON (TOC).

north

0 37.5 75 150

SCALE: FEET
1"=150'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

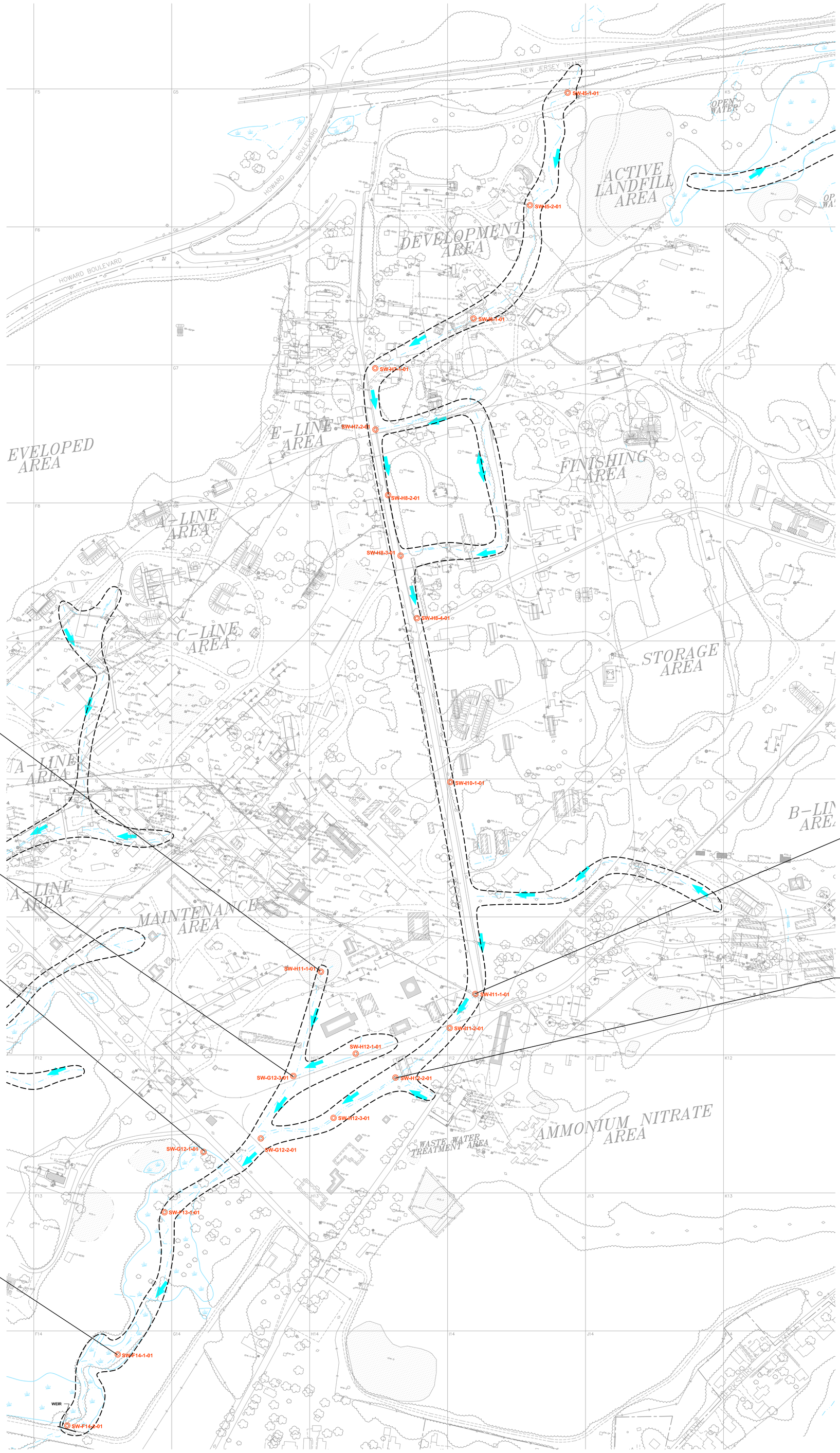
SEDIMENT SAMPLE EXCEEDANCE MAP CENTRAL DRAINAGE AREA

MWH

FIGURE 5-4

S:\IND_PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED_SW FINAL-02.DWG

S:\IND_PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED_SW FINAL-08.DWG



SW-H11-1-01 (0-1 ft. bgs)			04/18/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL ARSENIC	UG/L	0.017	6B
	TOTAL LEAD	UG/L	5	137

SW-G12-3-01 (0-1 ft. bgs)			04/18/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	24.7

SW-G12-1-01 (0-1 ft. bgs)			04/16/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	51.9

SW-F14-1-01 (0-1.5 ft. bgs)			04/13/01		
Analytical Group	Constituent	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Results
METALS	DISSOLVED SELENIUM	UG/L	20	4.61	5.2B

SW-I11-1-01 (0-2 ft. bgs)			04/18/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	8.9B

SW-H12-1-01 (0-1 ft. bgs)			04/18/01	
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	10.9B

LEGEND:

- SURFACE WATER SAMPLE LOCATION
- N7-9222-7-7 FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE:

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SURFACE WATER ANALYTICAL SAMPLE RESULTS WERE COMPARED TO CRITERIA DERIVED FROM THE FOLLOWING APPLICABLE SURFACE WATER QUALITY CRITERIA (SWQC):

a). THE NJDEP SURFACE WATER QUALITY CRITERIA (NJSWQC) AS SPECIFIED IN N.J.A.C. 7:9B AUGUST 2004. SPECIFICALLY, ALL CONNECTED SURFACE WATER BODIES FLOWING FROM THE FACILITY TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FRESH WATER 2 - NON TROUT PRODUCTION CRITERIA 1 (FW2-NT(C1)) FOR HUMAN HEALTH AND AQUATIC LIFE PARAMTERS, AS ASSIGNED BY THE N.J.A.C. 7:9B TO THE LAMINGTON RIVER (SUCCASUNNA) - SOURCE TO RT. 206 BRIDGE. SURFACE WATER BODIES WITHIN THE FACILITY THAT ARE ISOLATED FROM AND DO NOT CONTRIBUTE SURFACE WATER TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FW2-NT HUMAN HEALTH AND AQUATIC LIFE CRITERIA AS SPECIFIED BY N.J.A.C. 7:9B. DISSOLVED METAL AQUATIC LIFE CRITERIA FOR LEAD HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC HARDNESS VALUES.

b). THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) CODE OF FEDERAL REGULATIONS (CFR) TITLE 40 PROTECTION OF THE ENVIRONMENT PART 131 WATER QUALITY STANDARDS SUB PART D (40 CFR 131.36) FEDERALLY PROMULGATED WATER QUALITY STANDARDS - TOXICS CRITERIA FOR THOSE STATES NOT COMPLYING WITH CLEAN WATER ACT SECTION 303 (C)(2)(B) (EPASWQC). DISSOLVED METAL AQUATIC LIFE CRITERIA FOR ARSENIC, CADMIUM, CHROMIUM, COPPER, NICKEL, SELENIUM, SILVER, AND ZINC HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC HARDNESS VALUES. AQUATIC LIFE CRITERIA FOR PENTACHLOROPHENOL (SVOC) HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE-SPECIFIC PH VALUES.

north

0 40 80 160

SCALE: FEET
1"=160'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SURFACE WATER SAMPLE EXCEEDANCE MAP EASTERN DRAINAGE AREA

MWH

FIGURE 5-5

SD-H6-1-01 (2-3 ft. bgs)		04/24/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**140J**
	BENZO(a)ANTHRACENE	UG/KG	320	25598	**640**
	BENZO(a)PYRENE	UG/KG	370	24906	**680**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**400**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**340**
	CHRYSENE	UG/KG	340	7956	**780**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**120J**
	FLUORANTHENE	UG/KG	750	17642	**1300**
	PHENANTHRENE	UG/KG	560	16431	**640**
	PYRENE	UG/KG	490	14702	**1500**
METALS	COPPER	MG/KG	16	110	**21.9**
	LEAD	MG/KG	31	250	**38J**

SD-H7-1-01 (0-2 ft. bgs)		04/19/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	COPPER	MG/KG	16	110	**19.8J**

SD-H7-2-01 (0-1 ft. bgs)		04/19/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**180J**
	BENZO(a)ANTHRACENE	UG/KG	320	26371	**680**
	BENZO(a)PYRENE	UG/KG	370	25658	**700**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**460**
	BENZO(k)FLUORANTHENE	UG/KG	240	23876	**350J**
	CHRYSENE	UG/KG	340	8196	**750**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**120J**
	FLUORANTHENE	UG/KG	750	18174	**1300**
	PHENANTHRENE	UG/KG	560	16927	**690**
	PYRENE	UG/KG	490	15145	**1400**
METALS	COPPER	MG/KG	16	110	**22.9J**
	MERCURY	MG/KG	0.2	2	**0.59J**

SD-H8-1-01 (2-3 ft. bgs)		04/24/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHENE	UG/KG	16	9	**83J**
	ACENAPHTHYLENE	UG/KG	44	11	**410**
	ANTHRACENE	UG/KG	220	6400	**510**
	BENZO(a)ANTHRACENE	UG/KG	320	25598	**1900**
	BENZO(a)PYRENE	UG/KG	370	24906	**2000**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**1200**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**1000**
	CHRYSENE	UG/KG	340	7956	**2400**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**370**
	FLUORANTHENE	UG/KG	750	17642	**3900**
	FLUORENE	UG/KG	190	2767	**210J**
	NAPHTHALENE	UG/KG	160	36	**65J**
	PHENANTHRENE	UG/KG	560	16431	**2400**
	PYRENE	UG/KG	490	14702	**4600**
METALS	CADMIUM	MG/KG	0.6	10	**0.61B**
	CHROMIUM, TOTAL	MG/KG	26	110	**384**
	COPPER	MG/KG	16	110	**28.5**
	LEAD	MG/KG	31	250	**137J**
	MERCURY	MG/KG	0.2	2	**44.8**
	SILVER	MG/KG	1	4	**2.3B**

SD-H8-4-01 (0-1.5 ft. bgs)		04/18/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**84J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**240J**
	CHRYSENE	UG/KG	340	8196	**350J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**70J**
	PYRENE	UG/KG	490	15145	**650**
METALS	LEAD	MG/KG	31	250	**314**
	MERCURY	MG/KG	0.2	2	**0.54J**

SD-H11-1-01 (0-2 ft. bgs)		04/18/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**81J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**240J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**100J**
METALS	ARSENIC	MG/KG	6	33	**16.2J**
	COPPER	MG/KG	16	110	**70.4J**
	LEAD	MG/KG	31	250	**1810**
	MERCURY	MG/KG	0.2	2	**0.29J**
	ZINC	MG/KG	120	820	**153N***

SD-H11-2-01 (0-2 ft. bgs)		04/18/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**15.9J**
	COPPER	MG/KG	16	110	**23J**
	LEAD	MG/KG	31	250	**67.5**
	MERCURY	MG/KG	0.2	2	**0.6J**

SD-H12-1-01 (0-1 ft. bgs)		04/18/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**10J**
	COPPER	MG/KG	16	110	**28.9J**
	LEAD	MG/KG	31	250	**310**
	MERCURY	MG/KG	0.2	2	**0.49J**

SD-H12-3-01 (0-2 ft. bgs)		04/18/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**170J**
	CHRYSENE	UG/KG	340	7956	**380J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**110J**
METALS	ARSENIC	MG/KG	6	33	**18.9J**
	COPPER	MG/KG	16	110	**34.3J**
	LEAD	MG/KG	31	250	**162D**
	MERCURY	MG/KG	0.2	2	**0.86J**

SD-G12-2-01 (0-2 ft. bgs)		04/17/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**51J**
	PYRENE	UG/KG	490	15145	**510**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**32.2**
	MERCURY	MG/KG	0.2	2	**0.23N**

SD-G12-1-01 (0-1 ft. bgs)		04/16/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**7.1J**
	COPPER	MG/KG	16	110	**26.1**
	LEAD	MG/KG	31	250	**453**
	MERCURY	MG/KG	0.2	2	**0.68J**

SD-F13-1-01 (0-1 ft. bgs)		04/16/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	33	**63J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**230J**
	CHRYSENE	UG/KG	340	23407	**360J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**60J**
	FLUORANTHENE	UG/KG	750	51902	**760**
	PYRENE	UG/KG	490	43251	**680**
METALS	LEAD	MG/KG	31	250	**73.1**
	MERCURY	MG/KG	0.2	2	**0.56J**

SD-F14-1-01 (0-1 ft. bgs)		04/13/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	LEAD	MG/KG	31	250	**70***
	MERCURY	MG/KG	0.2	2	**0.26N**

SD-F14-2-01 (0-1.5 ft. bgs)		04/11/01	WET AREAS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	33	**61J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**200J**
	CHRYSENE	UG/KG	340	23407	**370J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**61J**
	PYRENE	UG/KG	490	43251	**610**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**27.9**
	COPPER	MG/KG	16	110	**16.3**
	LEAD	MG/KG	31	250	**87.7**
	MERCURY	MG/KG	0.2	2	**0.43J**

SD-I5-1-01 (0-1 ft. bgs)		04/19/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ZINC	MG/KG	120	820	**123J**

SD-I5-2-01 (0-1 ft. bgs)		04/19/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ZINC	MG/KG	120	820	**167N***

SD-I6-1-01 (0-1.5 ft. bgs)		04/19/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**7.5J**
	ZINC	MG/KG	120	820	**186N***

SD-I7-1-01 (0-1.5 ft. bgs)		04/19/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**6.1J**

SD-I8-1-01 (0-1 ft. bgs)		04/19/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	ARSENIC	MG/KG	6	33	**8J**
	CHROMIUM, TOTAL	MG/KG	26	110	**161N***
	COPPER	MG/KG	16	110	**38.7J**
	LEAD	MG/KG	31	250	**578**

SD-H9-1-01 (4-5 ft. bgs)		04/24/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHENE	UG/KG	16	9	**340**
	ACENAPHTHYLENE	UG/KG	44	11	**2300**
	ANTHRACENE	UG/KG	220	6400	**2600**
	BENZO(a)ANTHRACENE	UG/KG	320	25598	**9900**
	BENZO(a)PYRENE	UG/KG	370	24906	**9700**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**6700**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**4400**
	CHRYSENE	UG/KG	340	7956	**12000**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**1700**
	FLUORANTHENE	UG/KG	750	17642	**19000**
	FLUORENE	UG/KG	190	2767	**1100**
	NAPHTHALENE	UG/KG	160	36	**280J**
	PHENANTHRENE	UG/KG	560	16431	**11000**
	PYRENE	UG/KG	490	14702	**21000**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**2150**
	COPPER	MG/KG	16	110	**28.8**
	LEAD	MG/KG	31	250	**135J**
	MERCURY	MG/KG	0.2	2	**47.7**
	SILVER	MG/KG	1	4	**2.2B**
	ZINC	MG/KG	120	820	**135J**

SD-J10-1-01 (0-1.5 ft. bgs)		04/20/01	INTERMITTENT STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**180J**
	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**430J**
	CHRYSENE	UG/KG	340	7956	**580J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**99J**
	PYRENE	UG/KG	490	14702	**510J**
METALS	ARSENIC	MG/KG	6	33	**14.1**
	COPPER	MG/KG	16	110	**58.4N***
	LEAD	MG/KG	31	250	**39.2***

SD-I10-2-01 (0-1.5 ft. bgs)		04/18/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**48J**
METALS	MERCURY	MG/KG	0.2	2	**0.73J**

SD-I11-1-01 (0-1 ft. bgs)		04/18/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
SVOCS	ACENAPHTHYLENE	UG/KG	44	11	**140J**
	BENZO(a)ANTHRACENE	UG/KG	320	26371	**670**
	BENZO(a)PYRENE	UG/KG	370	25658	**610**
	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**470**
	BENZO(k)FLUORANTHENE	UG/KG	240	23876	**320J**
	CHRYSENE	UG/KG	340	8196	**780**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**140J**
	FLUORANTHENE	UG/KG	750	18174	**1400**
	PHENANTHRENE	UG/KG	560	16927	**630**
	PYRENE	UG/KG	490	15145	**1200**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**66.5N***
	COPPER	MG/KG	16	110	**28.6J**
	LEAD	MG/KG	31	250	**35**
	MERCURY	MG/KG	0.2	2	**0.32J**
	ZINC	MG/KG	120	820	**120N***

SD-I11-2-01 (0-1 ft. bgs)		04/18/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	COPPER	MG/KG	16	110	**16.6J**
	MERCURY	MG/KG	0.2	2	**0.56J**

SD-H12-2-01 (0-1 ft. bgs)		04/17/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**60.7N***
	COPPER	MG/KG	16	110	**36.2J**
	MERCURY	MG/KG	0.2	2	**0.58J**

SD-H12-3-01 (0-2 ft. bgs)		04/17/01	STREAMS		
Analytical Group	**Constituent**	**Units**	**LEL**	**SEL**	**Results**
METALS	CHROMIUM, TOTAL	MG/KG	26	110	**136**
	MERCURY	MG/KG	0.2	2	**0.42N**

LEGEND:

- SEDIMENT SAMPLE LOCATION
- FEATURE IDENTIFIER (e.g. WT-9222-7-7)
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SEDIMENT EVALUATION CRITERIA ARE DERIVED FROM THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS. THE FRESH WATER SEDIMENT SCREENING GUIDELINES LOWEST EFFECTS LEVELS (LEL) AND SEVERE EFFECTS LEVELS (SEL) ARE COMPARED TO THE LABORATORY ANALYSIS OF SEDIMENT SAMPLES. POLYNUCLEAR AROMATIC HYDROCARBONS (PAH) HAVE BEEN ADJUSTED TO COMPENSATE FOR THE SITE SPECIFIC TOTAL ORGANIC CARBON (TOC).

north

0 37.5 75 150
SCALE: FEET
1"=150'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SEDIMENT SAMPLE EXCEEDANCE MAP
EASTERN DRAINAGE AREA

MWH

FIGURE 5-6

S:\ND_PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED_SW FINAL-03.DWG

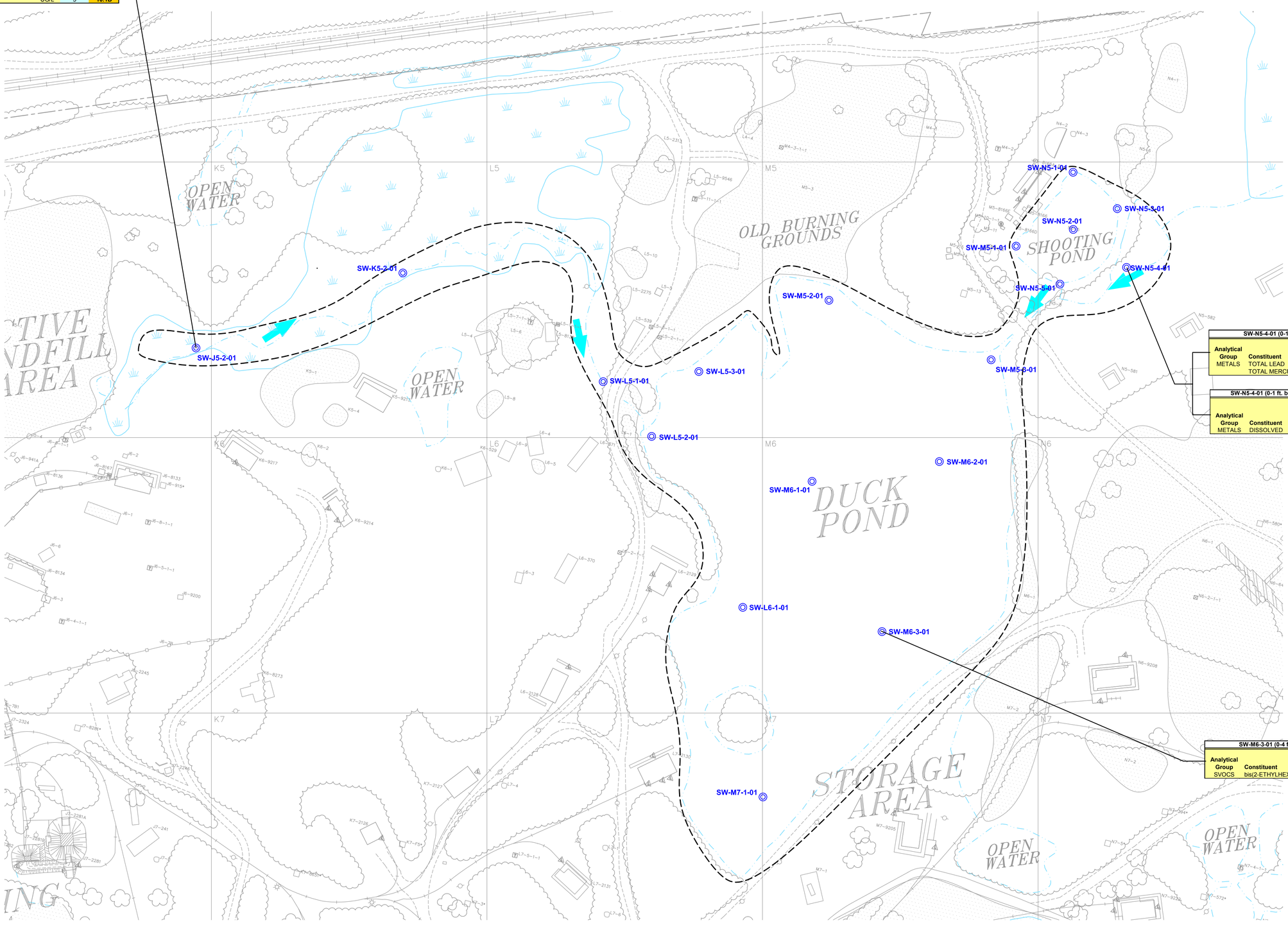
S:\IND PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED SW FINAL-10.DWG

SW-J5-2-01 (0-0.5 ft. bgs)			04/19/01
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**10.1B**

SW-N5-4-01 (0-1 ft. bgs)			04/25/01
Analytical Group	Constituent	Units	Human Health SWQC	Results
METALS	TOTAL LEAD	UG/L	5	**16.9B**
	TOTAL MERCURY	UG/L	0.144	**0.16BN***

SW-N5-4-01 (0-1 ft. bgs)			04/25/01		
Analytical Group	Constituent	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Results
METALS	DISSOLVED LEAD	UG/L	38	5.4	**9.2B**

SW-M6-3-01 (0-4 ft. bgs)			04/19/01
Analytical Group	Constituent	Units	Human Health SWQC	Results
SVOCS	bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	**2J**



SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SURFACE WATER ANALYTICAL SAMPLE RESULTS WERE COMPARED TO CRITERIA DERIVED FROM THE FOLLOWING APPLICABLE SURFACE WATER QUALITY CRITERIA (SWQC):

a). THE NJDEP SURFACE WATER QUALITY CRITERIA (NJSWQC) AS SPECIFIED IN N.J.A.C. 7:9B AUGUST 2004. SPECIFICALLY, ALL CONNECTED SURFACE WATER BODIES FLOWING FROM THE FACILITY TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FRESH WATER 2 – NON TROUT PRODUCTION CRITERIA 1 (FW2–NT(C1)) FOR HUMAN HEALTH AND AQUATIC LIFE PARAMTERS, AS ASSIGNED BY THE N.J.A.C. 7:9B TO THE LAMINGTON RIVER (SUCCASUNNA) – SOURCE TO RT. 206 BRIDGE. SURFACE WATER BODIES WITHIN THE FACILITY THAT ARE ISOLATED FROM AND DO NOT CONTRIBUTE SURFACE WATER TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FW2–NT HUMAN HEALTH AND AQUATIC LIFE CRITERIA AS SPECIFIED BY N.J.A.C. 7:9B. DISSOLVED METAL AQUATIC LIFE CRITERIA FOR LEAD HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE–SPECIFIC HARDNESS VALUES.

b). THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) CODE OF FEDERAL REGULATIONS (CFR) TITLE 40 PROTECTION OF THE ENVIRONMENT PART 131 WATER QUALITY STANDARDS SUB PART D (40 CFR 131.36) FEDERALLY PROMULGATED WATER QUALITY STANDARDS – TOXICS CRITERIA FOR THOSE STATES NOT COMPLYING WITH CLEAN WATER ACT SECTION 303 (C)(2)(B) (EPASWQC). DISSOLVED METAL AQUATIC LIFE CRITERIA FOR ARSENIC, CADMIUM, CHROMIUM, COPPER, NICKEL, SELENIUM, SILVER, AND ZINC HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE–SPECIFIC HARDNESS VALUES. AQUATIC LIFE CRITERIA FOR PENTACHLOROPHENOL (SVOC) HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE–SPECIFIC PH VALUES.

LEGEND:

- SURFACE WATER SAMPLE LOCATION
- N7-9222-7-7 FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS – OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

north

0 25 50 100

SCALE: FEET
1"=100'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SURFACE WATER SAMPLE EXCEEDANCE MAP DUCK POND AND TRIBUTARIES

MWH

FIGURE 5-7

SD-K5-2-01 (0-2 ft. bgs)		04/26/01		STREAMS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**13.6**
	CADMIUM	MG/KG	0.6	10	**1.5B**
	COPPER	MG/KG	16	110	**58.2**
	LEAD	MG/KG	31	250	**181**
	MERCURY	MG/KG	0.2	2	**1.3**
	ZINC	MG/KG	120	820	**372J**

SD-L5-1-01 (0-2 ft. bgs)		04/20/01		STREAMS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**131N***
	LEAD	MG/KG	31	250	**232***
	MERCURY	MG/KG	0.2	2	**0.33**

SD-L5-3-01 (0-2 ft. bgs)		04/09/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**180J**
METALS	ARSENIC	MG/KG	6	33	**17.6**
	CADMIUM	MG/KG	0.6	10	**2.8B**
	COPPER	MG/KG	16	110	**171**
	LEAD	MG/KG	31	250	**498N**
	MERCURY	MG/KG	0.2	2	**2.9***
	NICKEL	MG/KG	16	75	**18.4B**
	SILVER	MG/KG	1	4	**1.1B**
	ZINC	MG/KG	120	820	**531**

SD-M5-2-01 (0-2 ft. bgs)		04/19/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHYLENE	UG/KG	44	38	**1000J**
	ANTHRACENE	UG/KG	220	21809	**830J**
	BENZO(a)ANTHRACENE	UG/KG	320	87234	**4400**
	BENZO(a)PYRENE	UG/KG	370	84876	**5300**
	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**1600**
	BENZO(k)FLUORANTHENE	UG/KG	240	78982	**2500**
	CHRYSENE	UG/KG	340	27113	**4200**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**510J**
	FLUORANTHENE	UG/KG	750	60121	**4700**
	NAPHTHALENE	UG/KG	160	124	**280J**
	PHENANTHRENE	UG/KG	560	55995	**580J**
	PYRENE	UG/KG	490	50101	**4600**
METALS	COPPER	MG/KG	16	110	**18.1N***
	LEAD	MG/KG	31	250	**52.6***
	ZINC	MG/KG	120	820	**134***

SD-M5-1-01 (0-1.5 ft. bgs)		04/24/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**20.4J**
	NICKEL	MG/KG	16	75	**25.3J**

SD-N5-1-01 (0-3 ft. bgs)		04/25/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**18.4**

SD-N5-2-01 (0-2 ft. bgs)		04/24/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**26.9**
	NICKEL	MG/KG	16	75	**20.7**

SD-N5-3-01 (0-2 ft. bgs)		04/25/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**18.6**

SD-N5-5-01 (0-2 ft. bgs)		04/25/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**16.4**

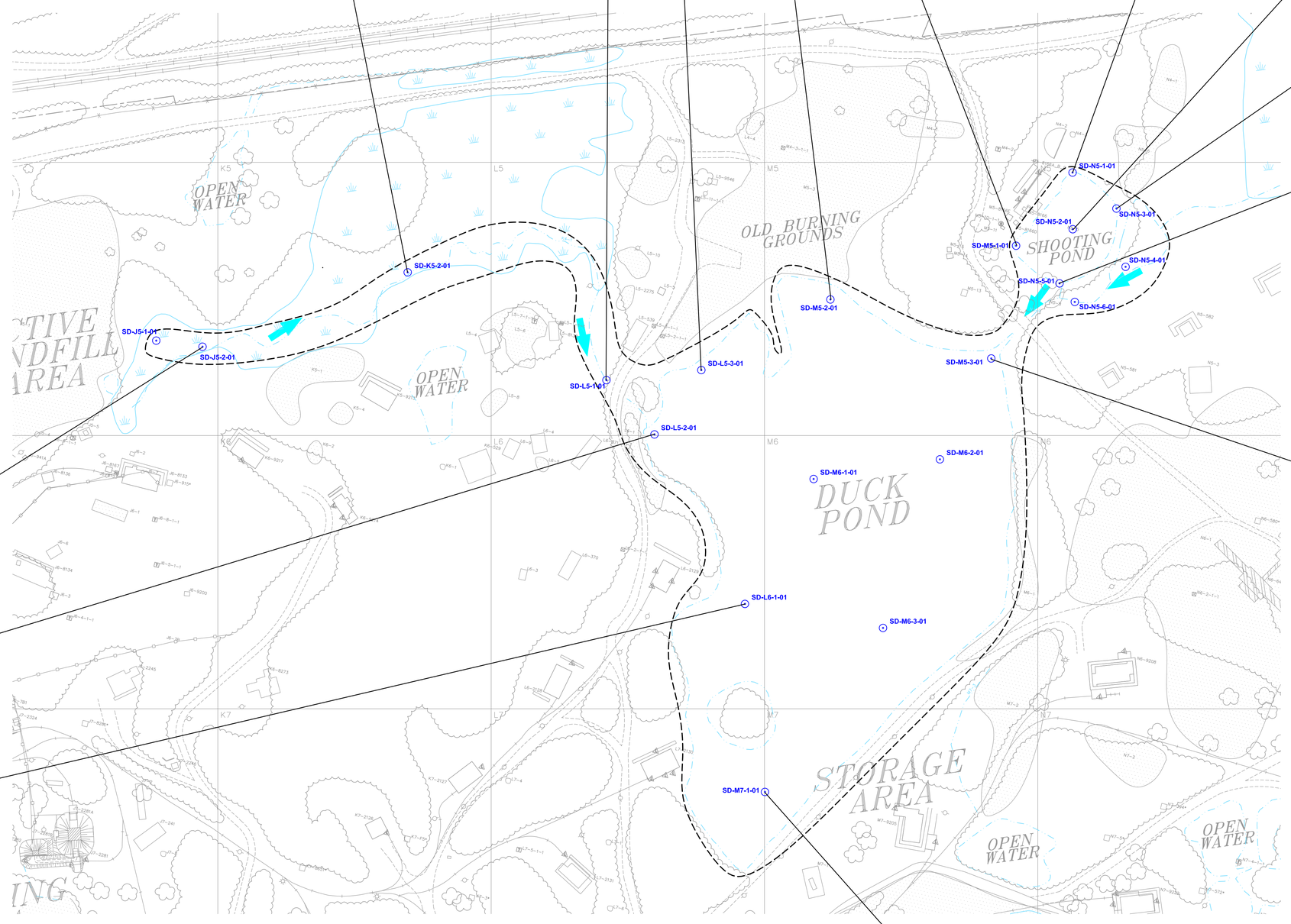
SD-M5-3-01 (0-2 ft. bgs)		04/19/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHYLENE	UG/KG	44	38	**73J**

SD-J5-2-01		04/19/01		STREAMS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	LEAD	MG/KG	31	250	**39.9***
	MERCURY	MG/KG	0.2	2	**0.33**

SD-L5-2-01 (0-2 ft. bgs)		04/09/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**14**
	CADMIUM	MG/KG	0.6	10	**1.5B**
	COPPER	MG/KG	16	110	**123**
	LEAD	MG/KG	31	250	**329N**
	MERCURY	MG/KG	0.2	2	**1.4***
	ZINC	MG/KG	120	820	**497**

SD-L6-1-01 (0-2 ft. bgs)		04/05/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**19.2**
	LEAD	MG/KG	31	250	**63.6***
	ZINC	MG/KG	120	820	**129N**

SD-M7-1-01 (0-2 ft. bgs)		04/05/01		PONDS
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**250J**
	CHRYSENE	UG/KG	340	27113	**510J**
	PYRENE	UG/KG	490	50101	**620J**
METALS	ARSENIC	MG/KG	6	33	**9.8**
	CADMIUM	MG/KG	0.6	10	**1.4B**
	COPPER	MG/KG	16	110	**55.8**
	LEAD	MG/KG	31	250	**288***
	MERCURY	MG/KG	0.2	2	**0.41BN**
	NICKEL	MG/KG	16	75	**18.7B**
	ZINC	MG/KG	120	820	**390N**



LEGEND:

- SEDIMENT SAMPLE LOCATION
- FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SEDIMENT EVALUATION CRITERIA ARE DERIVED FROM THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS. THE FRESH WATER SEDIMENT SCREENING GUIDELINES LOWEST EFFECTS LEVELS (LEL) AND SEVERE EFFECTS LEVELS (SEL) ARE COMPARED TO THE LABORATORY ANALYSIS OF SEDIMENT SAMPLES. POLYNUCLEAR AROMATIC HYDROCARBONS (PAH) HAVE BEEN ADJUSTED TO COMPENSATE FOR THE SITE SPECIFIC TOTAL ORGANIC CARBON (TOC).

north

0 25 50 100
SCALE: FEET
1"=100'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SEDIMENT SAMPLE EXCEEDANCE MAP DUCK POND AND TRIBUTARIES

MWH

FIGURE 5-8

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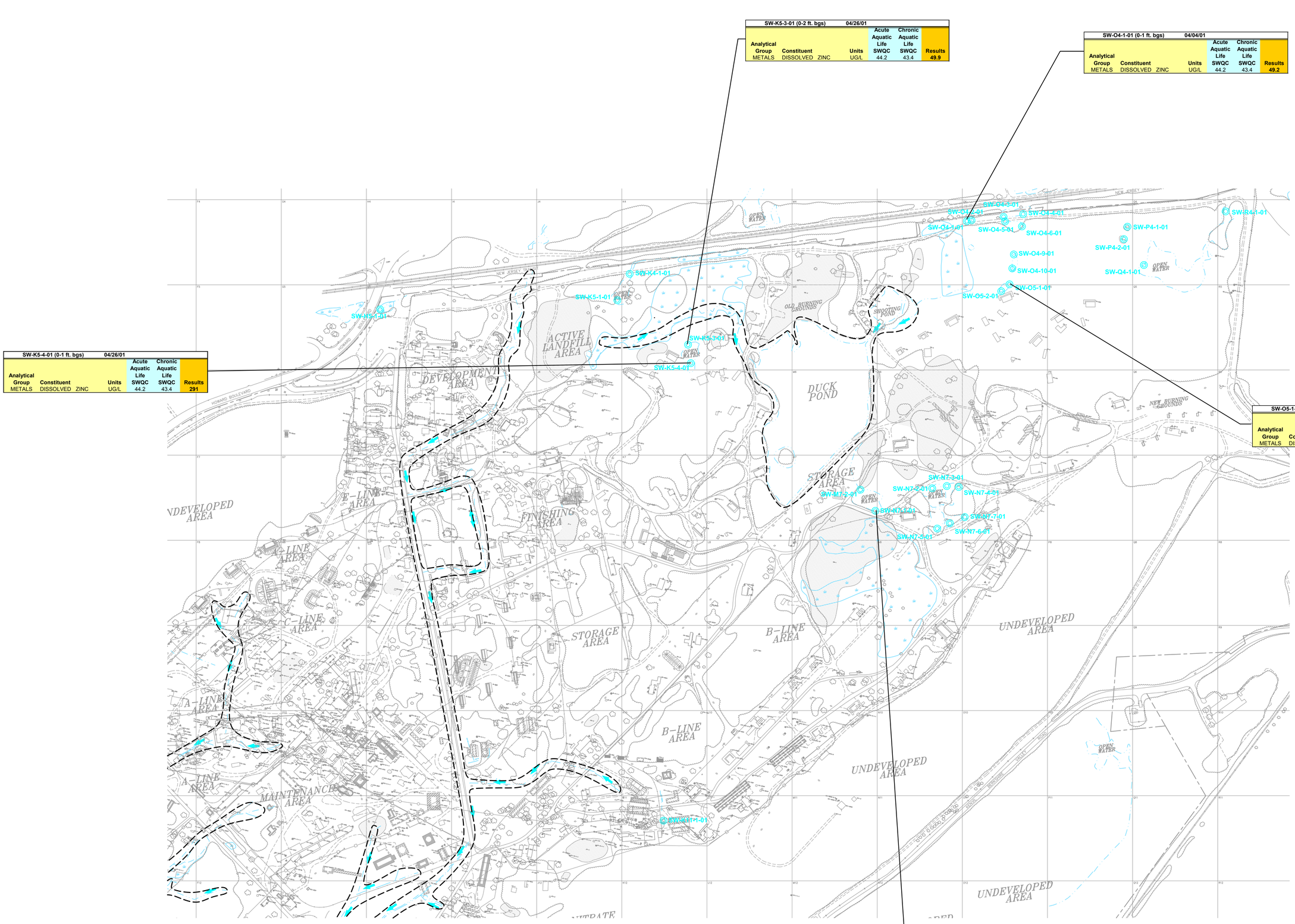


LEGEND:

- SURFACE WATER SAMPLE LOCATION
- N7-9222-7-7 FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE:

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SURFACE WATER ANALYTICAL SAMPLE RESULTS WERE COMPARED TO CRITERIA DERIVED FROM THE FOLLOWING APPLICABLE SURFACE WATER QUALITY CRITERIA (SWQC):

a). THE NJDEP SURFACE WATER QUALITY CRITERIA (NJSWQC) AS SPECIFIED IN N.J.A.C. 7:9B AUGUST 2004. SPECIFICALLY, ALL CONNECTED SURFACE WATER BODIES FLOWING FROM THE FACILITY TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FRESH WATER 2 – NON TROUT PRODUCTION CRITERIA 1 (FW2–NT(C1)) FOR HUMAN HEALTH AND AQUATIC LIFE PARAMTERS, AS ASSIGNED BY THE N.J.A.C. 7:9B TO THE LAMINGTON RIVER (SUCCASUNNA) – SOURCE TO RT. 206 BRIDGE. SURFACE WATER BODIES WITHIN THE FACILITY THAT ARE ISOLATED FROM AND DO NOT CONTRIBUTE SURFACE WATER TO THE LAMINGTON RIVER WERE COMPARED TO THE NJSWQC FW2–NT HUMAN HEALTH AND AQUATIC LIFE CRITERIA AS SPECIFIED BY N.J.A.C. 7:9B. DISSOLVED METAL AQUATIC LIFE CRITERIA FOR LEAD HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE–SPECIFIC HARDNESS VALUES.

b). THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (USEPA) CODE OF FEDERAL REGULATIONS (CFR) TITLE 40 PROTECTION OF THE ENVIRONMENT PART 131 WATER QUALITY STANDARDS SUB PART D (40 CFR 131.36) FEDERALLY PROMULGATED WATER QUALITY STANDARDS – TOXICS CRITERIA FOR THOSE STATES NOT COMPLYING WITH CLEAN WATER ACT SECTION 303 (C)(2)(B) (EPASWQC). DISSOLVED METAL AQUATIC LIFE CRITERIA FOR ARSENIC, CADMIUM, CHROMIUM, COPPER, NICKEL, SELENIUM, SILVER, AND ZINC HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE–SPECIFIC HARDNESS VALUES. AQUATIC LIFE CRITERIA FOR PENTACHLOROPHENOL (SVOC) HAVE BEEN ADJUSTED TO COMPENSATE FOR SITE–SPECIFIC PH VALUES.

north

0 75 150 300

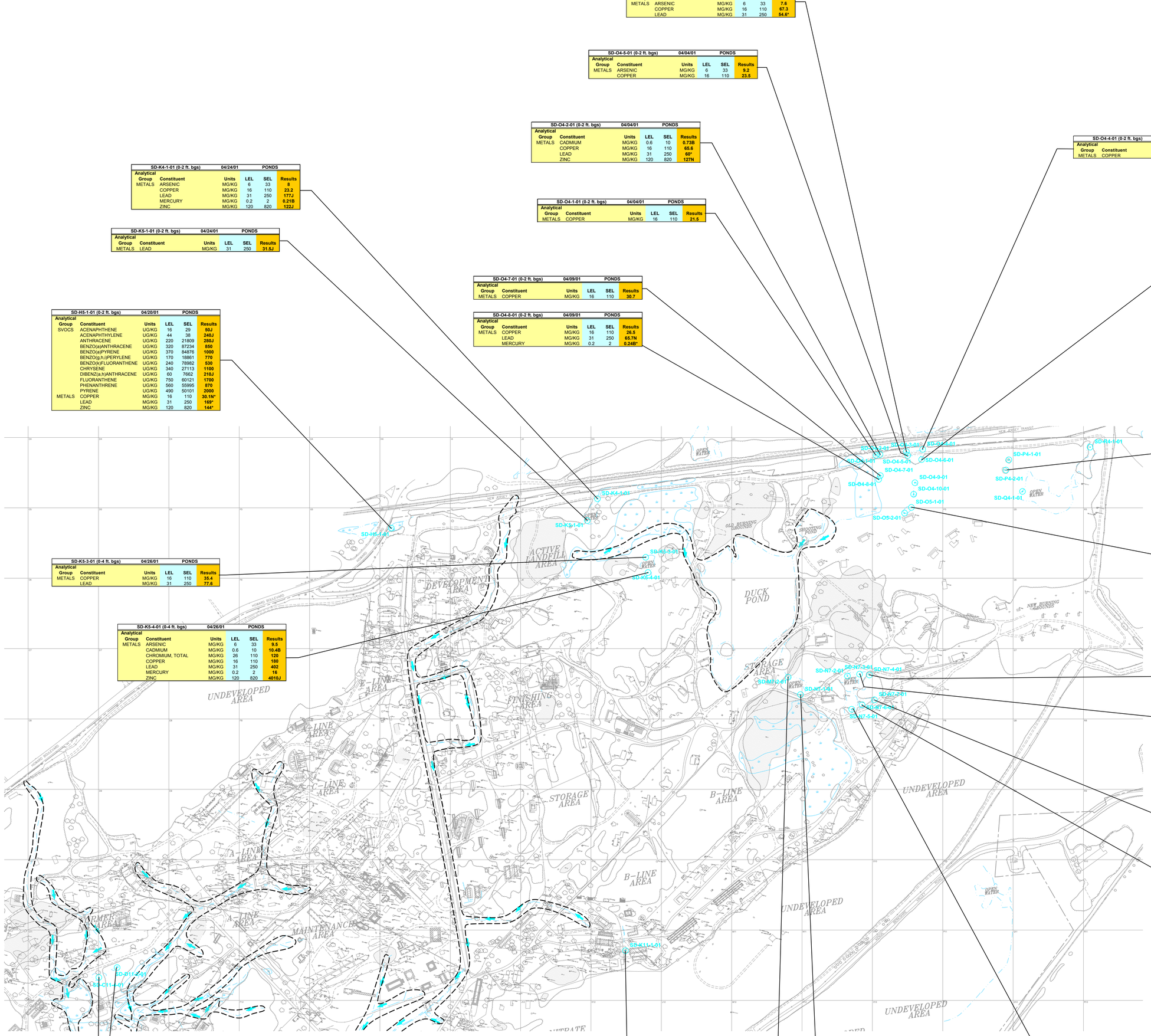
SCALE: FEET
1"=300'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SURFACE WATER SAMPLE EXCEEDANCE MAP MISCELLANEOUS PONDS AND TRIBUTARIES

MWH

FIGURE 5-9



SD-O4-3-01 (0-2 ft. bgs)	04/04/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**7.6**
	COPPER	MG/KG	16	110	**67.3**
	LEAD	MG/KG	31	250	**54.6***

SD-O4-5-01 (0-2 ft. bgs)	04/04/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**9.2**
	COPPER	MG/KG	16	110	**23.5**

SD-O4-2-01 (0-2 ft. bgs)	04/04/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	CADMIUM	MG/KG	0.6	10	**0.73B**
	COPPER	MG/KG	16	110	**65.6**
	LEAD	MG/KG	31	250	**60***
	ZINC	MG/KG	120	820	**127N**

SD-O4-1-01 (0-2 ft. bgs)	04/04/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**21.5**

SD-O4-4-01 (0-2 ft. bgs)	04/04/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**47.9**

SD-K4-1-01 (0-2 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**8**
	COPPER	MG/KG	16	110	**23.2**
	LEAD	MG/KG	31	250	**177J**
	MERCURY	MG/KG	0.2	2	**0.21B**
	ZINC	MG/KG	120	820	**122J**

SD-K5-1-01 (0-2 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	LEAD	MG/KG	31	250	**31.5J**

SD-O4-7-01 (0-2 ft. bgs)	04/09/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**30.7**

SD-O4-8-01 (0-2 ft. bgs)	04/09/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**26.5**
	LEAD	MG/KG	31	250	**65.7N**
	MERCURY	MG/KG	0.2	2	**0.24B***

SD-O4-6-01 (0-2 ft. bgs)	04/04/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**16.1**
	NICKEL	MG/KG	16	75	**21.4**

SD-H5-1-01 (0-2 ft. bgs)	04/20/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHENE	UG/KG	16	29	**50J**
	ACENAPHTHYLENE	UG/KG	44	38	**240J**
	ANTHRACENE	UG/KG	220	21809	**280J**
	BENZO(a)ANTHRACENE	UG/KG	320	87234	**850**
	BENZO(a)PYRENE	UG/KG	370	84876	**1000**
	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**770**
	BENZO(k)FLUORANTHENE	UG/KG	240	78982	**530**
	CHRYSENE	UG/KG	340	27113	**1100**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**210J**
	FLUORANTHENE	UG/KG	750	60121	**1700**
	PHENANTHRENE	UG/KG	560	55995	**870**
	PYRENE	UG/KG	490	50101	**2000**
METALS	COPPER	MG/KG	16	110	**30.1N***
	LEAD	MG/KG	31	250	**169***
	ZINC	MG/KG	120	820	**144***

SD-P4-2-01 (0-1 ft. bgs)	04/23/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	LEAD	MG/KG	31	250	**34.1***

SD-O5-1-01 (0-2 ft. bgs)	04/06/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	CADMIUM	MG/KG	0.6	10	**0.61B**
	CHROMIUM, TOTAL	MG/KG	26	110	**33.3**
	NICKEL	MG/KG	16	75	**17.7E**

SD-K5-3-01 (0-4 ft. bgs)	04/26/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**35.4**
	LEAD	MG/KG	31	250	**77.6**

SD-K5-4-01 (0-4 ft. bgs)	04/26/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**9.5**
	CADMIUM	MG/KG	0.6	10	**10.4B**
	CHROMIUM, TOTAL	MG/KG	26	110	**120**
	COPPER	MG/KG	16	110	**180**
	LEAD	MG/KG	31	250	**402**
	MERCURY	MG/KG	0.2	2	**16**
	ZINC	MG/KG	120	820	**4010J**

SD-N7-4-01 (0-2 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	LEAD	MG/KG	31	250	**31.7EN***

SD-N7-3-01 (0-2 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**6.1**
	COPPER	MG/KG	16	110	**44.2**
	LEAD	MG/KG	31	250	**228J**
	MERCURY	MG/KG	0.2	2	**0.35**
	NICKEL	MG/KG	16	75	**20.2**
	ZINC	MG/KG	120	820	**293J**

SD-N7-7-01 (0-2 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**18**
	LEAD	MG/KG	31	250	**34.9J**

SD-N7-6-01 (0-2 ft. bgs)	04/23/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHYLENE	UG/KG	44	38	**170J**
	BENZO(a)ANTHRACENE	UG/KG	320	87234	**730**
	BENZO(a)PYRENE	UG/KG	370	84876	**570**
	BENZO(k)FLUORANTHENE	UG/KG	240	78982	**550**
	CHRYSENE	UG/KG	340	27113	**880**
	PYRENE	UG/KG	490	50101	**1200**

SD-C11-4-01 (0-2 ft. bgs)	05/02/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**8.2**
	LEAD	MG/KG	31	250	**1350**

SD-D11-2-01 (0-2 ft. bgs)	05/02/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	ARSENIC	MG/KG	6	33	**9.8**
	LEAD	MG/KG	31	250	**85300**
	MERCURY	MG/KG	0.2	2	**1.4**

SD-K11-1-01 (0-2 ft. bgs)	04/19/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHYLENE	UG/KG	44	38	**50J**
	BENZO(a)ANTHRACENE	UG/KG	320	87234	**320J**
	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**200J**
	CHRYSENE	UG/KG	340	27113	**410J**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**63J**
	PYRENE	UG/KG	490	50101	**670**

SD-M7-2-01 (0-1.5 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
METALS	COPPER	MG/KG	16	110	**103**
	LEAD	MG/KG	31	250	**1230J**
	MERCURY	MG/KG	0.2	2	**2.7**
	ZINC	MG/KG	120	820	**274J**

SD-N7-1-01 (0-2 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHENE	UG/KG	16	29	**3300**
	ACENAPHTHYLENE	UG/KG	44	38	**8400J**
	ANTHRACENE	UG/KG	220	21809	**16000**
	BENZO(a)ANTHRACENE	UG/KG	320	87234	**48000**
	BENZO(a)PYRENE	UG/KG	370	84876	**39000**
	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**11000J**
	BENZO(k)FLUORANTHENE	UG/KG	240	78982	**31000**
	CHRYSENE	UG/KG	340	27113	**68000**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**5000J**
	FLUORANTHENE	UG/KG	750	60121	**59000**
	FLUORENE	UG/KG	190	9431	**3400**
	NAPHTHALENE	UG/KG	160	124	**3400**
	PHENANTHRENE	UG/KG	560	55995	**11000**
	PYRENE	UG/KG	490	50101	**78000**
METALS	ARSENIC	MG/KG	6	33	**29.4**
	COPPER	MG/KG	16	110	**25.5J**
	LEAD	MG/KG	31	250	**34.3***
	MERCURY	MG/KG	0.2	2	**0.23**
	ZINC	MG/KG	120	820	**308J**

SD-N7-5-01 (0-2 ft. bgs)	04/24/01		PONDS	
Analytical Group	Constituent	Units	LEL	SEL	Results
SVOCS	ACENAPHTHENE	UG/KG	16	29	**36J**
	ACENAPHTHYLENE	UG/KG	44	38	**1600**
	ANTHRACENE	UG/KG	220	21809	**1300**
	BENZO(a)ANTHRACENE	UG/KG	320	87234	**7000**
	BENZO(a)PYRENE	UG/KG	370	84876	**6700**
	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**2200**
	BENZO(k)FLUORANTHENE	UG/KG	240	78982	**4700**
	CHRYSENE	UG/KG	340	27113	**9300**
	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**950**
	FLUORANTHENE	UG/KG	750	60121	**5300**
	PYRENE	UG/KG	490	50101	**9900**
METALS	ARSENIC	MG/KG	6	33	**7.6**
	CADMIUM	MG/KG	0.6	10	**2.7B**
	COPPER	MG/KG	16	110	**32.5**
	LEAD	MG/KG	31	250	**84.6J**
	ZINC	MG/KG	120	820	**273J**

LEGEND:

- SEDIMENT SAMPLE LOCATION
- FEATURE IDENTIFIER (NT-99222-7-7)
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SMALL TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS - OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/BUNKER
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- DRAINAGE AREA

SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

3. SEDIMENT EVALUATION CRITERIA ARE DERIVED FROM THE NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION GUIDANCE FOR SEDIMENT QUALITY EVALUATIONS. THE FRESH WATER SEDIMENT SCREENING GUIDELINES LOWEST EFFECTS LEVELS (LEL) AND SEVERE EFFECTS LEVELS (SEL) ARE COMPARED TO THE LABORATORY ANALYSIS OF SEDIMENT SAMPLES. POLYNUCLEAR AROMATIC HYDROCARBONS (PAH) HAVE BEEN ADJUSTED TO COMPENSATE FOR THE SITE SPECIFIC TOTAL ORGANIC CARBON (TOC).

north

0 75 150 300

SCALE: FEET
1"=300'

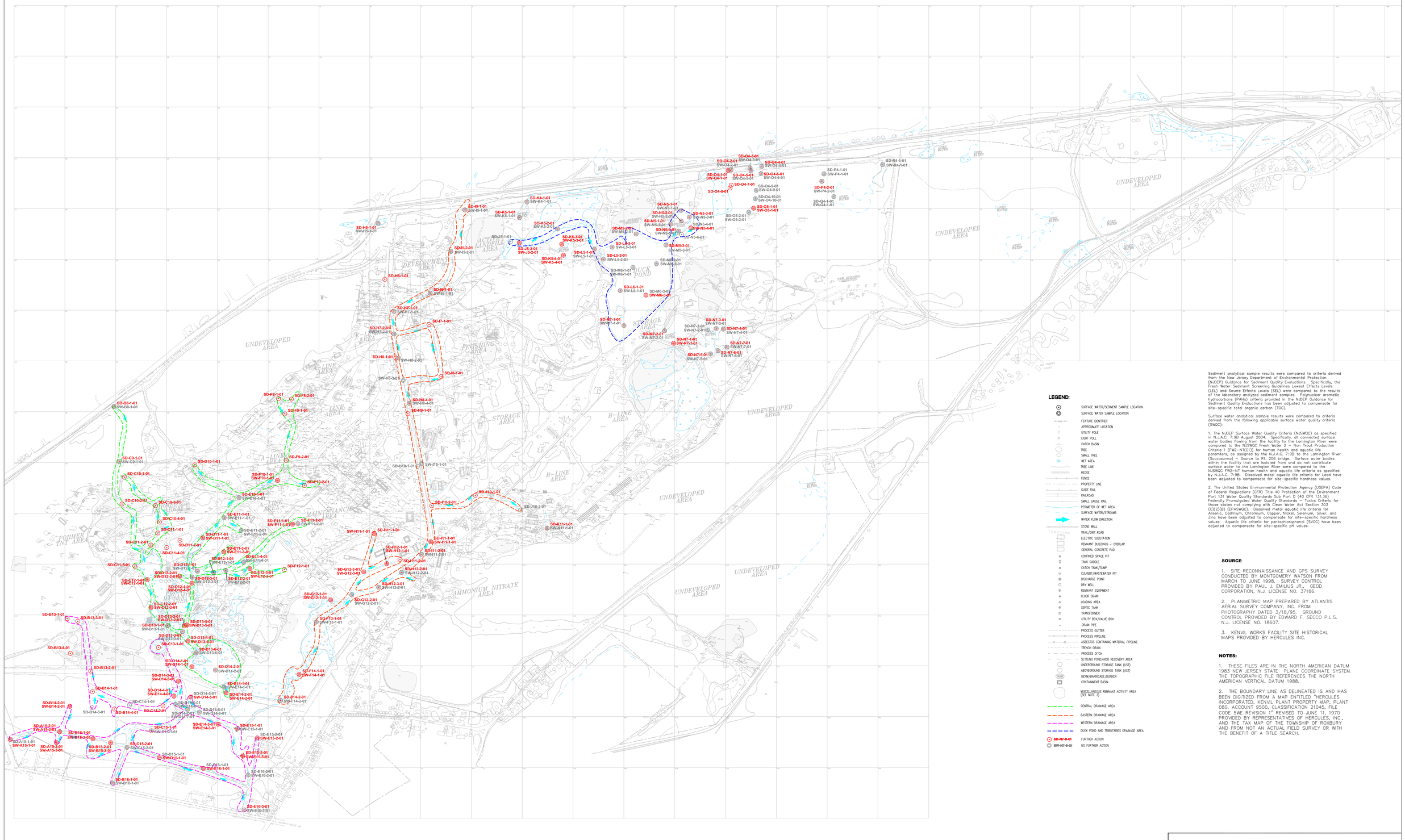
HERCULES INCORPORATED
KENVIL WORKS FACILITY

SEDIMENT SAMPLE EXCEEDANCE MAP MISCELLANEOUS PONDS

MWH

FIGURE 5-10

S:\IND_PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Final SW-SD Report\Figures\SED_SW FINAL-06.DWG



Sediment analytical sample results were compared to criteria derived from the New Jersey Department of Environmental Protection (NJDEP) Guidance for Sediment Quality Evaluations. Specifically, the Fresh Water Sediment Screening Guidelines Lowest Effects Levels (LEL) and Severe Effects Levels (SEL) were compared to the results of the laboratory analyzed sediment samples. Polynuclear aromatic hydrocarbons (PAHs) criteria provided in the NJDEP Guidance for Sediment Quality Evaluations has been adjusted to compensate for site-specific total organic carbon (TOC).

Surface water analytical sample results were compared to criteria derived from the following applicable surface water quality criteria (SWQC):

1. The NJDEP Surface Water Quality Criteria (NJSWQC) as specified in N.J.A.C. 7:9B August 2004. Specifically, all connected surface water bodies flowing from the facility to the Lamington River were compared to the NJSWQC Fresh Water 2 – Non Trout Production Criteria 1 (FW2-NTC(1)) for human health and aquatic life parameters, as assigned by the N.J.A.C. 7:9B to the Lamington River (Succasunna) – Source to Rt. 206 bridge. Surface water bodies within the facility that are isolated from and do not contribute surface water to the Lamington River were compared to the NJSWQC FW2-NT human health and aquatic life criteria as specified by N.J.A.C. 7:9B. Dissolved metal aquatic life criteria for Lead have been adjusted to compensate for site-specific hardness values.

2. The United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC). Dissolved metal aquatic life criteria for Arsenic, Cadmium, Chromium, Copper, Nickel, Selenium, Silver, and Zinc have been adjusted to compensate for site-specific hardness values. Aquatic life criteria for pentachlorophenol (SVOC) have been adjusted to compensate for site-specific pH values.

LEGEND:

- SURFACE WATER/SEDIMENT SAMPLE LOCATION
- SURFACE WATER SAMPLE LOCATION
- FEATURE IDENTIFIER
- APPROXIMATE LOCATION
- UTILITY POLE
- LIGHT POLE
- CATCH BASIN
- TREE
- SHRUB TREE
- WET AREA
- TREE LINE
- HEDGE
- FENCE
- PROPERTY LINE
- GUIDE RAIL
- RAILROAD
- SMALL GAUGE RAIL
- PERIMETER OF WET AREA
- SURFACE WATER/STREAMS
- WATER FLOW DIRECTION
- STONE WALL
- TRAIL/DIRT ROAD
- ELECTRIC SUBSTATION
- REMNANT BUILDINGS – OVERLAP
- GENERAL CONCRETE PAD
- CONFINED SPACE PIT
- TANK SADDLE
- CATCH TANK/SUMP
- CULVERT/WASTEWATER PIT
- DISCHARGE POINT
- DRY WELL
- REMNANT EQUIPMENT
- FLOOR DRAIN
- LOADING AREA
- SEPTIC TANK
- TRANSFORMER
- UTILITY BOX/VALVE BOX
- DRAIN PIPE
- PROCESS GUTTER
- PROCESS PIPELINE
- ASBESTOS CONTAINING MATERIAL PIPELINE
- TRENCH DRAIN
- PROCESS DITCH
- SETTLING POND/ACID RECOVERY AREA
- UNDERGROUND STORAGE TANK (UST)
- ABOVEGROUND STORAGE TANK (AST)
- BERM/BARRICADE/RUNNOR
- CONTAINMENT BASIN
- MISCELLANEOUS REMNANT ACTIVITY AREA (SEE NOTE 3)
- CENTRAL DRAINAGE AREA
- EASTERN DRAINAGE AREA
- WESTERN DRAINAGE AREA
- DUCK POND AND TRIBUTARIES DRAINAGE AREA
- SD-N7-6-01 FURTHER ACTION
- SW-N7-6-01 NO FURTHER ACTION

SOURCE

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

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3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THESE FILES ARE IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM. THE TOPOGRAPHIC FILE REFERENCES THE NORTH AMERICAN VERTICAL DATUM 1988.

2. THE BOUNDARY LINE AS DELINEATED IS AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE SWE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND FROM NOT AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

north

300 0 300 600
SCALE IN FEET
1" = 300'

HERCULES INCORPORATED
KENVIL WORKS FACILITY

SITE-WIDE FURTHER ACTION - NO FURTHER ACTION SAMPLE LOCATION MAP

MWH

FIGURE 6-1

S:\ND PROJECTS\Hercules-1267015\Vienvil\1B-SW-Sed Report\Final SW-SD Report\Figures\SED_SW FINAL-12.DWG

SURFACE WATER/SEDIMENT SITE INVESTIGATION
VOLUME II: TABLES AND APPENDICES

HERCULES INCORPORATED
KENVIL WORKS FACILITY
KENVIL, NEW JERSEY

Prepared For:

HERCULES INCORPORATED
Wilmington, Delaware

Prepared By:

MWH Americas, Inc.
335 Phoenixville Pike
Malvern, Pennsylvania 19355

November 2004

TABLES

Table 2-1

Analytical Sampling Requirements
SW/SD - SI
Kenvil Works Facility, New Jersey

Media Sampled	Number of Analytical Samples Per Location	Total Hardness	Dissolved Oxygen	PP VOC	Ethers	PP SVOC	PP Metals	E&E	NG	NC	PETN	Phenol	pH	Grain Size	TOC	Moisture
Surface Water	1	1	1	1	1	1	1	1	1	1	1	1	1	NA	NA	NA
Sediment	1	NA	NA	1	1	1	1	1	1	1	1	1	NA	1	1	1

PP VOC = Priority Pollutant List Volatile Organic Compounds
PP SVOC = Priority Pollutant List Semivolatile Organic Compounds
PP Metals = Proirity Pollutant List Metals
E&E = Explosives and Energetics
NG = Nitroglycerin
NC = Nitrocellulose
PETN = Pentaerythritol Tetrnitrate
TOC = Total Organic Carbon
NA = Not Analyzed
Ether constituents were incorporated in the VOC analytical group in all data tables, figures, and text to aid in data presentation
NG, NC, and PETN were incorporated in the E&E analytical group in all data tables, figures, and text to aid in data presentation
Total hardness, dissolved oxygen, pH, grain size, TOC, and moisture were incorporated in the General chemistry analytical group in all data tables, figures, and text to aid in data presentation

Table 3-1

Sediment Samples with Rejected Concentrations
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id with Depth	Constituent	Units	LEL	SEL	Result	Corrective Action
CENTRAL	INTERMITTENT STREAMS	SD-C11-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4800R	Sufficient samples collected, no corrective measure necessary
CENTRAL	INTERMITTENT STREAMS	SD-F10-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3400R	Sufficient samples collected, no corrective measure necessary
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3100R	Sufficient samples collected, no corrective measure necessary
CENTRAL	INTERMITTENT STREAMS	SD-F12-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3800R	Sufficient samples collected, no corrective measure necessary
CENTRAL	STREAMS	SD-E11-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3200R	Sufficient samples collected, no corrective measure necessary
CENTRAL	STREAMS	SD-F11-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	6400R	Sufficient samples collected, no corrective measure necessary
CENTRAL	STREAMS	SD-F11-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3600R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-C12-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3400R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-C12-2-01 (0-2 ft. bgs)	2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	680R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-C12-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	11000R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D11-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4900R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D12-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4500R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D12-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5300R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D12-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5300R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D12-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	6700R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D13-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3200R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D13-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	8100R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D13-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	8100R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D13-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5100R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D13-5-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5200R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D13-6-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5800R	Sufficient samples collected, no corrective measure necessary

Table 3-1

Sediment Samples with Rejected Concentrations
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id with Depth	Constituent	Units	LEL	SEL	Result	Corrective Action
CENTRAL	WET AREAS	SD-D14-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	11000R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-D14-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	23000R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-E10-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4100R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-E11-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	460R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-E11-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4700R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-E11-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4200R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-E12-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3100R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-E12-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	6100R	Sufficient samples collected, no corrective measure necessary
CENTRAL	WET AREAS	SD-E14-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	11000R	Sufficient samples collected, no corrective measure necessary
DUCK POND & TRIBUTARIES	PONDS	SD-N5-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3200R	Sufficient samples collected, no corrective measure necessary
DUCK POND & TRIBUTARIES	PONDS	SD-N5-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3100R	Sufficient samples collected, no corrective measure necessary
DUCK POND & TRIBUTARIES	PONDS	SD-N5-5-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2900R	Sufficient samples collected, no corrective measure necessary
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	17000R	Sufficient samples collected, no corrective measure necessary
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3300R	Sufficient samples collected, no corrective measure necessary
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-6-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5700R	Sufficient samples collected, no corrective measure necessary
EASTERN	INTERMITTENT STREAMS	SD-G12-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4900R	Sufficient samples collected, no corrective measure necessary
EASTERN	INTERMITTENT STREAMS	SD-H11-1-01 (0-2 ft. bgs)	PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	73400R	Sufficient samples collected, no corrective measure necessary
EASTERN	INTERMITTENT STREAMS	SD-H11-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3400R	Sufficient samples collected, no corrective measure necessary
EASTERN	INTERMITTENT STREAMS	SD-H11-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3400R	Sufficient samples collected, no corrective measure necessary
EASTERN	INTERMITTENT STREAMS	SD-H12-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4200R	Sufficient samples collected, no corrective measure necessary
EASTERN	INTERMITTENT STREAMS	SD-I7-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3300R	Sufficient samples collected, no corrective measure necessary

Table 3-1

Sediment Samples with Rejected Concentrations
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id with Depth	Constituent	Units	LEL	SEL	Result	Corrective Action
EASTERN	INTERMITTENT STREAMS	SD-I8-1-01 (0-1 ft. bgs)	2,4-DINITROTOLUENE	UG/KG	NS	NS	140R	Sufficient samples collected, no corrective measure necessary
EASTERN	INTERMITTENT STREAMS	SD-I8-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2900R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-G12-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2900R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-H12-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4100R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-H12-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3100R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-H7-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3400R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-H7-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3200R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-H8-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3300R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-I10-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4400R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-I11-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4000R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-I11-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4000R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-I5-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2800R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-I5-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3000R	Sufficient samples collected, no corrective measure necessary
EASTERN	STREAMS	SD-I6-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4500R	Sufficient samples collected, no corrective measure necessary
EASTERN	WET AREAS	SD-F13-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3400R	Sufficient samples collected, no corrective measure necessary
EASTERN	WET AREAS	SD-F14-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3000R	Sufficient samples collected, no corrective measure necessary
EASTERN	WET AREAS	SD-F14-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4200R	Sufficient samples collected, no corrective measure necessary
EASTERN	WET AREAS	SD-G12-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	4600R	Sufficient samples collected, no corrective measure necessary
MISCELLANEOUS PONDS	PONDS	SD-D11-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5300R	Sufficient samples collected, no corrective measure necessary
MISCELLANEOUS PONDS	PONDS	SD-K5-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	7200R	Sufficient samples collected, no corrective measure necessary
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	23000R	Sufficient samples collected, no corrective measure necessary

Table 3-1

Sediment Samples with Rejected Concentrations
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id with Depth	Constituent	Units	LEL	SEL	Result	Corrective Action
WESTERN	INTERMITTENT STREAMS	SD-B13-1-01 (0-1.5 ft. bgs)	2,4-DINITROTOLUENE	UG/KG	NS	NS	240R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B13-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2800R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2400R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2700R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0-2 ft. bgs)	2,6-DINITROTOLUENE	UG/KG	NS	NS	4740R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0-2 ft. bgs)	2,4-DINITROTOLUENE	UG/KG	NS	NS	850R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2900R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B14-3-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	6400R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-B14-4-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	5100R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-C13-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2700R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0-2 ft. bgs)	2,6-DINITROTOLUENE	UG/KG	NS	NS	2580R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0-2 ft. bgs)	2,4-DINITROTOLUENE	UG/KG	NS	NS	280R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	2600R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-C14-2-01 (0-1.5 ft. bgs)	2,4-DINITROTOLUENE	UG/KG	NS	NS	300R	Sufficient samples collected, no corrective measure necessary
WESTERN	INTERMITTENT STREAMS	SD-C14-2-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3400R	Sufficient samples collected, no corrective measure necessary
WESTERN	WET AREAS	SD-D14-5-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3800R	Sufficient samples collected, no corrective measure necessary
WESTERN	WET AREAS	SD-D14-6-01 (0.5-1 ft. bgs)	ACROLEIN	UG/KG	NS	NS	3100R	Sufficient samples collected, no corrective measure necessary

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
R = Rejected based on data validation
NS = No Standard
ft. bgs = Feet below ground surface

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-B8-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-B8-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-B8-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0.5-1 ft. bgs)	5/2/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0.5-1 ft. bgs)	5/2/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0.5-1 ft. bgs)	5/2/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0.5-1 ft. bgs)	5/2/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0.5-1 ft. bgs)	5/2/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0.5-1 ft. bgs)	5/2/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-C12-1-01 (0.5-1 ft. bgs)	5/2/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1UJ**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20UJ**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-C12-1-01 (0-0.5 ft. bgs)	5/2/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-C12-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-C12-2-01 (0-1 ft. bgs)	4/13/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-C9-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-C9-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-C9-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-C9-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-C9-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-C9-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-C9-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**9.7U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-C9-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-D12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	METALS	TOTAL	MERCURY	UG/L	0.144	NS	NS	**0.16U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-2-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**21U**
CENTRAL	SW-D12-3-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D12-3-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-D12-3-01 (0-1 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D12-4-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D12-4-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-D12-4-01 (0-1 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D13-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D13-1-01 (0-1 ft. bgs)	4/13/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D13-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D13-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1UJ**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D13-2-01 (0-0.5 ft. bgs)	4/13/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D13-3-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D13-3-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-4-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D13-4-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D13-4-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D13-4-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D13-4-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D13-4-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D13-4-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D13-4-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-5-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D13-5-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	METALS	DISSOLVED	CADMIUM	UG/L	NS	1.3	1.5	**1.6U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group	Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	METALS	DISSOLVED SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1UJ**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	BENZIDINE	UG/L	0.000118	NS	NS	**21U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D13-5-01 (0-1 ft. bgs)	4/13/2001	SVOCS	1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D13-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D13-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D13-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D13-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D13-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D13-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D13-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	E&E	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	METALS	DISSOLVED SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	METALS	DISSOLVED LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	METALS	TOTAL LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-D13-6-01 (0-1.5 ft. bgs)	4/12/2001	SVOCS	BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D14-1-01 (0.5-1 ft. bgs)	4/12/2001	VOCS	CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D14-1-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D14-1-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D14-1-01 (0-1 ft. bgs)	4/12/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-D14-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-D14-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-D14-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-D14-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-D14-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-D14-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-D14-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-D14-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E10-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E10-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E10-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E10-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E10-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E10-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E10-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1UJ**
CENTRAL	SW-E10-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3UJ**
CENTRAL	SW-E11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-E11-1-01 (0-1 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E11-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-2-01 (0-1 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E11-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-E11-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E11-4-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E11-4-01 (0-2 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E12-1-01 (0-0.5 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-E12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-2-01 (0-1 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**15U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	7.46	4.71	**15U**
CENTRAL	SW-E12-3-01 (0-0.5 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E14-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1UJ**
CENTRAL	SW-E14-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1UJ**
CENTRAL	SW-E14-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1UJ**
CENTRAL	SW-E14-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1UJ**
CENTRAL	SW-E14-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4UJ**
CENTRAL	SW-E14-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1UJ**
CENTRAL	SW-E14-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1UJ**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
CENTRAL	SW-E14-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E14-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-E14-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-E14-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0.5-1 ft. bgs)	5/1/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0.5-1 ft. bgs)	5/1/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0.5-1 ft. bgs)	5/1/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0.5-1 ft. bgs)	5/1/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0.5-1 ft. bgs)	5/1/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0.5-1 ft. bgs)	5/1/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-F10-1-01 (0.5-1 ft. bgs)	5/1/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1UJ**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1UJ**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F10-1-01 (0-0.5 ft. bgs)	5/1/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-F11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-F11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-F11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
CENTRAL	SW-F11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
CENTRAL	SW-F11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-F13-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-F13-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-F13-1-01 (0-1.5 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-F14-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0.5-1 ft. bgs)	4/13/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group	Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	METALS	DISSOLVED SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	METALS	DISSOLVED LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	METALS	TOTAL LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	METALS	TOTAL THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	METALS	TOTAL ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-F14-1-01 (0-1.5 ft. bgs)	4/13/2001	SVOCS	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-F14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-F14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-F14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-F14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-F14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-F14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-F14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	E&E	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	METALS	DISSOLVED LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	METALS	TOTAL LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	METALS	TOTAL ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	METALS	TOTAL THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	METALS	DISSOLVED SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS	BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
EASTERN	SW-F14-2-01 (0-2 ft. bgs)	4/11/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-G12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-G12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0.5-1 ft. bgs)	4/16/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-1-01 (0-1 ft. bgs)	4/16/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-G12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-G12-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-G12-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-H11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H11-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H12-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-2-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-H12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0.5-1 ft. bgs)	4/17/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H12-3-01 (0-1.5 ft. bgs)	4/17/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H7-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H7-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-H7-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H7-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H7-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H8-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**21U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H8-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H8-3-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H8-3-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-H8-4-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-H8-4-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-H8-4-01 (0-1.5 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-I10-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-I10-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**21U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-I10-1-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-I11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-I11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-I11-1-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-1-01 (0-2 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-I11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-I11-2-01 (0.5-1 ft. bgs)	4/18/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-I11-2-01 (0-1 ft. bgs)	4/18/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-I5-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-I5-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-I5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-I5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
EASTERN	SW-I5-2-01 (0-1 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
EASTERN	SW-I6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
EASTERN	SW-I6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
EASTERN	SW-I6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
EASTERN	SW-I6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
EASTERN	SW-I6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
EASTERN	SW-I6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
EASTERN	SW-I6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.03	NS	**1.3U**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1UJ**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1UJ**
EASTERN	SW-I6-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1UJ**
WESTERN	SW-A15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-A15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**22U**
WESTERN	SW-A15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-A15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-A15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-A15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-A15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-A15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-A15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-A15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-A15-3-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-A15-3-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-A15-3-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-A15-3-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-A15-3-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-A15-3-01 (0-1 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-B14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-B14-2-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-B14-2-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-B15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-B15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-B15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-B15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-B15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-B15-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-B15-1-01 (0-1 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-B15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-B15-2-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-B15-2-01 (0-1 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-B16-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-B16-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-B16-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-B16-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-B16-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-B16-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-B16-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-B16-1-01 (0-0.75 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-C15-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-C15-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-C15-1-01 (0-1.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-C15-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-C15-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-D14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-D14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-D14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-D14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-D14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-D14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-D14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-D14-3-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-4-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-D14-4-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-D14-4-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-D14-5-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1UJ**
WESTERN	SW-D14-5-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1UJ**
WESTERN	SW-D14-5-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1UJ**
WESTERN	SW-D14-5-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1UJ**
WESTERN	SW-D14-5-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1UJ**
WESTERN	SW-D14-5-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4UJ**
WESTERN	SW-D14-5-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1UJ**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-D14-5-01 (0-0.5 ft. bgs)	4/11/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-D14-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1UJ**
WESTERN	SW-D14-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1UJ**
WESTERN	SW-D14-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1UJ**
WESTERN	SW-D14-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1UJ**
WESTERN	SW-D14-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1UJ**
WESTERN	SW-D14-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4UJ**
WESTERN	SW-D14-6-01 (0.5-1 ft. bgs)	4/12/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1UJ**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-D14-6-01 (0-0.5 ft. bgs)	4/12/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-D14-7-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-D14-7-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-D14-7-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-D14-7-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-D14-7-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-D14-7-01 (0.5-1 ft. bgs)	4/11/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group	Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	METALS	DISSOLVED LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	METALS	DISSOLVED SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	METALS	TOTAL THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	METALS	TOTAL LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	METALS	TOTAL ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-D14-7-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-D14-8-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0.5-1 ft. bgs)	4/11/2001	VOCS	ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	E&E	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	METALS	TOTAL THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	METALS	DISSOLVED LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	METALS	DISSOLVED SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	METALS	TOTAL ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	METALS	TOTAL LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	BENZIDINE	UG/L	0.000118	NS	NS	**20U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D14-8-01 (0-1 ft. bgs)	4/11/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-D15-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-D15-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-E14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-E14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-E14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-E14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-E14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-E14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-E14-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E14-3-01 (0-2 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-E15-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-E15-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-E15-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-E15-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-E15-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-E15-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-E15-1-01 (0-1.5 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-E15-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-E15-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-E15-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E15-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-E15-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-E15-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-E15-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-E15-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-E15-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-E15-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-E15-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-E16-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-E16-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**22U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
WESTERN	SW-E16-1-01 (0-0.5 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
WESTERN	SW-E16-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-E16-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-E16-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-E16-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-E16-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-E16-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-E16-2-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E16-2-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-E16-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
WESTERN	SW-E16-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
WESTERN	SW-E16-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
WESTERN	SW-E16-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
WESTERN	SW-E16-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
WESTERN	SW-E16-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
WESTERN	SW-E16-3-01 (0.5-1 ft. bgs)	4/10/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.05	NS	**1.3U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
WESTERN	SW-E16-3-01 (0-1 ft. bgs)	4/10/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-J5-2-01 (0-0.5 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**5U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-K5-2-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-2-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L5-3-01 (0-3 ft. bgs)	4/9/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-L6-1-01 (0-4 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.4U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**5.4U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-1-01 (0-2 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M5-3-01 (0-2 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-1-01 (0-6 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-2-01 (0-4 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M6-3-01 (0-4 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0.5-1 ft. bgs)	4/5/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-M7-1-01 (0-2 ft. bgs)	4/5/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**4.6U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-1-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.4U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**10.3U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-2-01 (0-14 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**7.3U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-3-01 (0-2 ft. bgs)	4/25/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-4-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0.5-1 ft. bgs)	4/25/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**4.9U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.02	NS	**1.3U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	METALS	DISSOLVED	LEAD	UG/L	NS	38	5.4	**8.8U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
DUCK POND & TRIBUTARIES	SW-N5-5-01 (0-1 ft. bgs)	4/25/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0.5-1 ft. bgs)	4/20/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-H5-1-01 (0-1 ft. bgs)	4/20/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0.5-1 ft. bgs)	4/19/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K11-1-01 (0-1 ft. bgs)	4/19/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-K4-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-3-01 (0-2 ft. bgs)	4/26/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-K5-4-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0.5-1 ft. bgs)	4/26/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**7.6U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-K5-4-01 (0-1 ft. bgs)	4/26/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-M7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-1-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-N7-2-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-2-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-3-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-4-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0.5-1 ft. bgs)	4/24/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-5-01 (0-1 ft. bgs)	4/24/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-6-01 (0-0.5 ft. bgs)	4/23/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-N7-7-01 (0-1 ft. bgs)	4/23/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-10-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-1-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-O4-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**23U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**4U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-2-01 (0-1 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-3-01 (0-1 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-4-01 (0-1.5 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-O4-5-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-5-01 (0-1 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0.5-1 ft. bgs)	4/4/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-6-01 (0-1 ft. bgs)	4/4/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O4-9-01 (0-0.75 ft. bgs)	4/6/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0.5-1 ft. bgs)	4/6/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O5-1-01 (0-1 ft. bgs)	4/6/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0.5-1 ft. bgs)	4/9/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**0.9U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-O5-2-01 (0-1.5 ft. bgs)	4/9/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**0.9U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1UJ**
MISCELLANEOUS PONDS	SW-P4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3UJ**
MISCELLANEOUS PONDS	SW-P4-2-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**19U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-P4-2-01 (0-1 ft. bgs)	4/23/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**20U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHEF	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-Q4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**

Table 3-2

Surface Water - Concentrations with Practical Quantitation Limits Greater than the SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Id With Depth	Sample Collection Date	Analytical Group		Constituent	Units	Human Health SWQC	Acute Aquaitc Life SWQC	Chronic Aquatic Life SWQC	Result
MISCELLANEOUS PONDS	SW-R4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		ACRYLONITRILE	UG/L	0.0591	NS	NS	**4U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BROMODICHLOROMETHANE	UG/L	0.266	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		BENZENE	UG/L	0.15	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		CARBON TETRACHLORIDE	UG/L	0.363	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		1,2-DICHLOROETHANE	UG/L	0.291	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		VINYL CHLORIDE	UG/L	0.083	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0.5-1 ft. bgs)	4/23/2001	VOCS		TETRACHLOROETHYLENE(PCE)	UG/L	0.338	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	E&E		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**0.2U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	ARSENIC	UG/L	0.017	NS	NS	**3.7U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	LEAD	UG/L	5	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	SILVER	UG/L	NS	0.01	NS	**1.3U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	DISSOLVED	LEAD	UG/L	NS	3.8	5.4	**8.8U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	METALS	TOTAL	THALLIUM	UG/L	1.7	NS	NS	**8.8U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		HEXACHLOROBENZENE	UG/L	0.000748	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		N-NITROSODIMETHYLAMINE	UG/L	0.000686	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	NS	3.32	2.1	**3U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		PENTACHLOROPHENOL	UG/L	0.282	NS	NS	**3U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(b)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	NS	NS	**2U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(g,h,i)PERYLENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER	UG/L	0.0311	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		2,4-DINITROTOLUENE	UG/L	0.11	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(a)PYRENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZIDINE	UG/L	0.000118	NS	NS	**22U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		BENZO(k)FLUORANTHENE	UG/L	0.031	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		CHRYSENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	NS	NS	**1U**
MISCELLANEOUS PONDS	SW-R4-1-01 (0-1 ft. bgs)	4/23/2001	SVOCS		3,3'-DICHLOROBENZIDINE	UG/L	0.0386	NS	NS	**3U**

VOC = Volatile Organic Constituents
SVOC = Semi-Volatile Organic Constituents
E&E = Explosives and Energetics
SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC)
Bold = Indicates Concentration Exceeds SWQC
U = Indicates that the compound was analyzed for but not detected, number indicates the detection limit
J = Value is less than the reporting limit, but greater than zero
ft. = Feet below ground surface

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	INTERMITTENT STREAMS	SD-C10-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-2-01 (0-2.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**36U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-2-01 (0-2.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**36U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-2-01 (0-2.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**36U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-2-01 (0-2.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**36U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**220UJ**
CENTRAL	INTERMITTENT STREAMS	SD-C10-3-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**40U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-3-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**40U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-3-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**40U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-3-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**40U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**44U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-4-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**44U**
CENTRAL	INTERMITTENT STREAMS	SD-C10-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**240UJ**
CENTRAL	INTERMITTENT STREAMS	SD-C11-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**48U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**48U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**48U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**48U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**200U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**58U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**58U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**58U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**58U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-3-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**42U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-3-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**42U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	INTERMITTENT STREAMS	SD-C11-3-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**42U**
CENTRAL	INTERMITTENT STREAMS	SD-C11-3-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**42U**
CENTRAL	INTERMITTENT STREAMS	SD-D10-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130U**
CENTRAL	INTERMITTENT STREAMS	SD-D10-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**37U**
CENTRAL	INTERMITTENT STREAMS	SD-E12-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**200U**
CENTRAL	INTERMITTENT STREAMS	SD-E12-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**57U**
CENTRAL	INTERMITTENT STREAMS	SD-E12-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**57U**
CENTRAL	INTERMITTENT STREAMS	SD-E12-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**57U**
CENTRAL	INTERMITTENT STREAMS	SD-E12-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**57U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**46U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**46U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**46U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**46U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	CHRYSENE	UG/KG	340	7956	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**450UJ**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	FLUORENE	UG/KG	190	2767	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**450UJ**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	ANTHRACENE	UG/KG	220	6400	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	BENZO(a)ANTHRACENE	UG/KG	320	25598	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	BENZO(a)PYRENE	UG/KG	370	24906	**450UJ**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**450U**
CENTRAL	INTERMITTENT STREAMS	SD-F10-2-01 (0-1.5 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**450UJ**
CENTRAL	INTERMITTENT STREAMS	SD-F12-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**190U**
CENTRAL	INTERMITTENT STREAMS	SD-F12-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**54U**
CENTRAL	INTERMITTENT STREAMS	SD-F12-1-01 (0-2 ft. bgs)	SILVER	MG/KG	1	3.7	**1.1U**
CENTRAL	INTERMITTENT STREAMS	SD-F12-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**54U**
CENTRAL	INTERMITTENT STREAMS	SD-F12-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**54U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	INTERMITTENT STREAMS	SD-F12-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**54U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-2-01 (1-1.5 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-2-01 (1-3 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-2-01 (1-3 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-F8-2-01 (1-3 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-F9-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130U**
CENTRAL	INTERMITTENT STREAMS	SD-F9-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
CENTRAL	INTERMITTENT STREAMS	SD-F9-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
CENTRAL	INTERMITTENT STREAMS	SD-F9-2-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**44U**
CENTRAL	INTERMITTENT STREAMS	SD-F9-2-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
CENTRAL	INTERMITTENT STREAMS	SD-F9-2-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**44U**
CENTRAL	INTERMITTENT STREAMS	SD-F9-2-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
CENTRAL	STREAMS	SD-B8-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
CENTRAL	STREAMS	SD-B8-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**33U**
CENTRAL	STREAMS	SD-B8-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**33U**
CENTRAL	STREAMS	SD-C9-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130U**
CENTRAL	STREAMS	SD-C9-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**33U**
CENTRAL	STREAMS	SD-C9-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
CENTRAL	STREAMS	SD-C9-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**33U**
CENTRAL	STREAMS	SD-E11-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
CENTRAL	STREAMS	SD-E11-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**47U**
CENTRAL	STREAMS	SD-E11-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**47U**
CENTRAL	STREAMS	SD-E11-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**47U**
CENTRAL	STREAMS	SD-E11-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**47U**
CENTRAL	STREAMS	SD-F11-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**320U**
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**370U**
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**370U**
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	6593	**370U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**370U**
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**370U**
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	CADMIUM	MG/KG	0.6	10	**0.61U**
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**370U**
CENTRAL	STREAMS	SD-F11-1-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	2851	**370U**
CENTRAL	STREAMS	SD-F11-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**180U**
CENTRAL	STREAMS	SD-F11-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**47U**
CENTRAL	STREAMS	SD-F11-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**47U**
CENTRAL	STREAMS	SD-F11-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**47U**
CENTRAL	STREAMS	SD-F11-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**47U**
CENTRAL	WET AREAS	SD-C12-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
CENTRAL	WET AREAS	SD-C12-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**50UJ**
CENTRAL	WET AREAS	SD-C12-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**50UJ**
CENTRAL	WET AREAS	SD-C12-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**540UJ**
CENTRAL	WET AREAS	SD-C12-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**540UJ**
CENTRAL	WET AREAS	SD-C12-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**540UJ**
CENTRAL	WET AREAS	SD-C12-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**150U**
CENTRAL	WET AREAS	SD-C12-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**150U**
CENTRAL	WET AREAS	SD-C12-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**150U**
CENTRAL	WET AREAS	SD-C12-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**150U**
CENTRAL	WET AREAS	SD-C12-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**150U**
CENTRAL	WET AREAS	SD-D11-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**240U**
CENTRAL	WET AREAS	SD-D11-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**64U**
CENTRAL	WET AREAS	SD-D11-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**64U**
CENTRAL	WET AREAS	SD-D11-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**64U**
CENTRAL	WET AREAS	SD-D11-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**64U**
CENTRAL	WET AREAS	SD-D12-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**230U**
CENTRAL	WET AREAS	SD-D12-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**61U**
CENTRAL	WET AREAS	SD-D12-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**61U**
CENTRAL	WET AREAS	SD-D12-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**61U**
CENTRAL	WET AREAS	SD-D12-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**61U**
CENTRAL	WET AREAS	SD-D12-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**270U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	WET AREAS	SD-D12-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**63U**
CENTRAL	WET AREAS	SD-D12-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**270U**
CENTRAL	WET AREAS	SD-D12-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**74U**
CENTRAL	WET AREAS	SD-D12-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**74U**
CENTRAL	WET AREAS	SD-D12-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**74U**
CENTRAL	WET AREAS	SD-D12-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**74U**
CENTRAL	WET AREAS	SD-D12-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**330U**
CENTRAL	WET AREAS	SD-D12-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**64U**
CENTRAL	WET AREAS	SD-D12-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**64U**
CENTRAL	WET AREAS	SD-D12-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**64U**
CENTRAL	WET AREAS	SD-D13-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
CENTRAL	WET AREAS	SD-D13-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**53U**
CENTRAL	WET AREAS	SD-D13-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**53U**
CENTRAL	WET AREAS	SD-D13-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**53U**
CENTRAL	WET AREAS	SD-D13-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**410UJ**
CENTRAL	WET AREAS	SD-D13-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**410UJ**
CENTRAL	WET AREAS	SD-D13-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**96U**
CENTRAL	WET AREAS	SD-D13-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**96U**
CENTRAL	WET AREAS	SD-D13-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**96U**
CENTRAL	WET AREAS	SD-D13-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**96U**
CENTRAL	WET AREAS	SD-D13-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**410U**
CENTRAL	WET AREAS	SD-D13-3-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**410U**
CENTRAL	WET AREAS	SD-D13-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**97U**
CENTRAL	WET AREAS	SD-D13-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**97U**
CENTRAL	WET AREAS	SD-D13-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**97U**
CENTRAL	WET AREAS	SD-D13-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**97U**
CENTRAL	WET AREAS	SD-D13-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**250U**
CENTRAL	WET AREAS	SD-D13-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**66U**
CENTRAL	WET AREAS	SD-D13-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**66U**
CENTRAL	WET AREAS	SD-D13-4-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**66U**
CENTRAL	WET AREAS	SD-D13-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**66U**
CENTRAL	WET AREAS	SD-D13-5-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**260UJ**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	WET AREAS	SD-D13-5-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**83U**
CENTRAL	WET AREAS	SD-D13-5-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**83U**
CENTRAL	WET AREAS	SD-D13-6-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**290U**
CENTRAL	WET AREAS	SD-D13-6-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**64U**
CENTRAL	WET AREAS	SD-D13-6-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**64U**
CENTRAL	WET AREAS	SD-D13-6-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**64U**
CENTRAL	WET AREAS	SD-D13-6-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**64U**
CENTRAL	WET AREAS	SD-D14-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**550UJ**
CENTRAL	WET AREAS	SD-D14-1-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**550UJ**
CENTRAL	WET AREAS	SD-D14-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**550UJ**
CENTRAL	WET AREAS	SD-D14-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**120U**
CENTRAL	WET AREAS	SD-D14-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**120U**
CENTRAL	WET AREAS	SD-D14-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**120U**
CENTRAL	WET AREAS	SD-D14-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**120U**
CENTRAL	WET AREAS	SD-D14-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**120U**
CENTRAL	WET AREAS	SD-D14-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**1200UJ**
CENTRAL	WET AREAS	SD-D14-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**1200UJ**
CENTRAL	WET AREAS	SD-D14-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**1200UJ**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	8141	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	SILVER	MG/KG	1	3.7	**1.3U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	BENZO(a)ANTHRACENE	UG/KG	320	75308	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	18827	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**320U**
CENTRAL	WET AREAS	SD-D14-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**320U**
CENTRAL	WET AREAS	SD-E10-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**210U**
CENTRAL	WET AREAS	SD-E10-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**55U**
CENTRAL	WET AREAS	SD-E10-1-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**55U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	WET AREAS	SD-E10-1-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**55U**
CENTRAL	WET AREAS	SD-E11-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**460U**
CENTRAL	WET AREAS	SD-E11-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**60U**
CENTRAL	WET AREAS	SD-E11-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**60U**
CENTRAL	WET AREAS	SD-E11-1-01 (0-1 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**60U**
CENTRAL	WET AREAS	SD-E11-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**60U**
CENTRAL	WET AREAS	SD-E11-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**230U**
CENTRAL	WET AREAS	SD-E11-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**66U**
CENTRAL	WET AREAS	SD-E11-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**66U**
CENTRAL	WET AREAS	SD-E11-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**66U**
CENTRAL	WET AREAS	SD-E11-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**66U**
CENTRAL	WET AREAS	SD-E11-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**210U**
CENTRAL	WET AREAS	SD-E11-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**62U**
CENTRAL	WET AREAS	SD-E11-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**62U**
CENTRAL	WET AREAS	SD-E12-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
CENTRAL	WET AREAS	SD-E12-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**48U**
CENTRAL	WET AREAS	SD-E12-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**48U**
CENTRAL	WET AREAS	SD-E12-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**48U**
CENTRAL	WET AREAS	SD-E12-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**300U**
CENTRAL	WET AREAS	SD-E12-2-01 (0-2 ft. bgs)	SILVER	MG/KG	1	3.7	**1.7U**
CENTRAL	WET AREAS	SD-E12-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**80U**
CENTRAL	WET AREAS	SD-E12-2-01 (0-2 ft. bgs)	CADMIUM	MG/KG	0.6	10	**1.3U**
CENTRAL	WET AREAS	SD-E14-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**580UJ**
CENTRAL	WET AREAS	SD-E14-1-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**580UJ**
CENTRAL	WET AREAS	SD-E14-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**580UJ**
CENTRAL	WET AREAS	SD-E14-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**150U**
CENTRAL	WET AREAS	SD-E14-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**150U**
CENTRAL	WET AREAS	SD-E14-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**150U**
CENTRAL	WET AREAS	SD-E14-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**150U**
CENTRAL	WET AREAS	SD-E14-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**150U**
CENTRAL	WET AREAS	SD-E14-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**770U**
CENTRAL	WET AREAS	SD-E14-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**770U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
CENTRAL	WET AREAS	SD-E14-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**770U**
CENTRAL	WET AREAS	SD-E14-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**190U**
CENTRAL	WET AREAS	SD-E14-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**190U**
CENTRAL	WET AREAS	SD-E14-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**190U**
CENTRAL	WET AREAS	SD-E14-2-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**190U**
CENTRAL	WET AREAS	SD-E14-2-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	8141	**190U**
CENTRAL	WET AREAS	SD-E14-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**190U**
CENTRAL	WET AREAS	SD-E14-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**190U**
EASTERN	INTERMITTENT STREAMS	SD-G12-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**240U**
EASTERN	INTERMITTENT STREAMS	SD-G12-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**52U**
EASTERN	INTERMITTENT STREAMS	SD-G12-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**52U**
EASTERN	INTERMITTENT STREAMS	SD-G12-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**52U**
EASTERN	INTERMITTENT STREAMS	SD-G12-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**52U**
EASTERN	INTERMITTENT STREAMS	SD-H10-1-01 (4.5-5 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
EASTERN	INTERMITTENT STREAMS	SD-H10-1-01 (4-5.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**33U**
EASTERN	INTERMITTENT STREAMS	SD-H10-1-01 (4-5.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
EASTERN	INTERMITTENT STREAMS	SD-H10-1-01 (4-5.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**33U**
EASTERN	INTERMITTENT STREAMS	SD-H11-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
EASTERN	INTERMITTENT STREAMS	SD-H11-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**52UJ**
EASTERN	INTERMITTENT STREAMS	SD-H11-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**52UJ**
EASTERN	INTERMITTENT STREAMS	SD-H11-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**52UJ**
EASTERN	INTERMITTENT STREAMS	SD-H11-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
EASTERN	INTERMITTENT STREAMS	SD-H11-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
EASTERN	INTERMITTENT STREAMS	SD-H11-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**44U**
EASTERN	INTERMITTENT STREAMS	SD-H11-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
EASTERN	INTERMITTENT STREAMS	SD-H11-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**44U**
EASTERN	INTERMITTENT STREAMS	SD-H12-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**210U**
EASTERN	INTERMITTENT STREAMS	SD-H12-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**57U**
EASTERN	INTERMITTENT STREAMS	SD-H12-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**57U**
EASTERN	INTERMITTENT STREAMS	SD-H12-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**57U**
EASTERN	INTERMITTENT STREAMS	SD-H12-1-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**57U**
EASTERN	INTERMITTENT STREAMS	SD-H6-1-01 (2-3 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**33U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
EASTERN	INTERMITTENT STREAMS	SD-H6-1-01 (2-3 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
EASTERN	INTERMITTENT STREAMS	SD-H8-1-01 (2.5-3 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
EASTERN	INTERMITTENT STREAMS	SD-H8-1-01 (2-3 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
EASTERN	INTERMITTENT STREAMS	SD-H9-1-01 (4.5-5 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
EASTERN	INTERMITTENT STREAMS	SD-H9-1-01 (4-5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
EASTERN	INTERMITTENT STREAMS	SD-I7-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
EASTERN	INTERMITTENT STREAMS	SD-I7-1-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**41U**
EASTERN	INTERMITTENT STREAMS	SD-I7-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**41U**
EASTERN	INTERMITTENT STREAMS	SD-I7-1-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**41U**
EASTERN	INTERMITTENT STREAMS	SD-I7-1-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**41U**
EASTERN	INTERMITTENT STREAMS	SD-I8-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
EASTERN	INTERMITTENT STREAMS	SD-I8-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**41UJ**
EASTERN	INTERMITTENT STREAMS	SD-I8-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**41UJ**
EASTERN	INTERMITTENT STREAMS	SD-I8-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**41UJ**
EASTERN	INTERMITTENT STREAMS	SD-I8-1-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**41UJ**
EASTERN	INTERMITTENT STREAMS	SD-J10-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
EASTERN	INTERMITTENT STREAMS	SD-J10-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**83U**
EASTERN	INTERMITTENT STREAMS	SD-J10-1-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**83U**
EASTERN	INTERMITTENT STREAMS	SD-J10-1-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**83U**
EASTERN	INTERMITTENT STREAMS	SD-J10-1-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**83U**
EASTERN	INTERMITTENT STREAMS	SD-J10-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
EASTERN	INTERMITTENT STREAMS	SD-J10-2-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**38U**
EASTERN	INTERMITTENT STREAMS	SD-J10-2-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**38U**
EASTERN	INTERMITTENT STREAMS	SD-J10-2-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**38U**
EASTERN	INTERMITTENT STREAMS	SD-J10-2-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**38U**
EASTERN	STREAMS	SD-G12-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
EASTERN	STREAMS	SD-G12-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
EASTERN	STREAMS	SD-G12-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**44U**
EASTERN	STREAMS	SD-G12-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
EASTERN	STREAMS	SD-H12-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**200U**
EASTERN	STREAMS	SD-H12-2-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**45U**
EASTERN	STREAMS	SD-H12-2-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**45U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
EASTERN	STREAMS	SD-H12-2-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**45U**
EASTERN	STREAMS	SD-H12-2-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**45U**
EASTERN	STREAMS	SD-H12-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
EASTERN	STREAMS	SD-H12-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**46U**
EASTERN	STREAMS	SD-H12-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**46U**
EASTERN	STREAMS	SD-H12-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**46U**
EASTERN	STREAMS	SD-H12-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**46U**
EASTERN	STREAMS	SD-H7-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
EASTERN	STREAMS	SD-H7-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**45U**
EASTERN	STREAMS	SD-H7-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**45U**
EASTERN	STREAMS	SD-H7-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**45U**
EASTERN	STREAMS	SD-H7-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**45U**
EASTERN	STREAMS	SD-H7-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
EASTERN	STREAMS	SD-H7-2-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**43U**
EASTERN	STREAMS	SD-H7-2-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**43U**
EASTERN	STREAMS	SD-H7-2-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**43U**
EASTERN	STREAMS	SD-H8-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
EASTERN	STREAMS	SD-H8-4-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
EASTERN	STREAMS	SD-H8-4-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**44U**
EASTERN	STREAMS	SD-H8-4-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
EASTERN	STREAMS	SD-I10-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**220U**
EASTERN	STREAMS	SD-I10-2-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
EASTERN	STREAMS	SD-I10-2-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
EASTERN	STREAMS	SD-I10-2-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**44U**
EASTERN	STREAMS	SD-I11-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**200U**
EASTERN	STREAMS	SD-I11-1-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**47U**
EASTERN	STREAMS	SD-I11-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**47U**
EASTERN	STREAMS	SD-I11-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**47U**
EASTERN	STREAMS	SD-I11-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**200U**
EASTERN	STREAMS	SD-I11-2-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**50U**
EASTERN	STREAMS	SD-I11-2-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**50U**
EASTERN	STREAMS	SD-I11-2-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**50U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
EASTERN	STREAMS	SD-I11-2-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**50U**
EASTERN	STREAMS	SD-I5-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
EASTERN	STREAMS	SD-I5-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**42U**
EASTERN	STREAMS	SD-I5-1-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**42U**
EASTERN	STREAMS	SD-I5-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**42U**
EASTERN	STREAMS	SD-I5-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**42U**
EASTERN	STREAMS	SD-I5-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
EASTERN	STREAMS	SD-I5-2-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
EASTERN	STREAMS	SD-I5-2-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
EASTERN	STREAMS	SD-I5-2-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**44U**
EASTERN	STREAMS	SD-I5-2-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**44U**
EASTERN	STREAMS	SD-I6-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**220U**
EASTERN	STREAMS	SD-I6-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**52U**
EASTERN	STREAMS	SD-I6-1-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**52U**
EASTERN	STREAMS	SD-I6-1-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**52U**
EASTERN	STREAMS	SD-I6-1-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**52U**
EASTERN	WET AREAS	SD-F13-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
EASTERN	WET AREAS	SD-F13-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**46U**
EASTERN	WET AREAS	SD-F13-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**46U**
EASTERN	WET AREAS	SD-F14-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
EASTERN	WET AREAS	SD-F14-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**46U**
EASTERN	WET AREAS	SD-F14-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**46U**
EASTERN	WET AREAS	SD-F14-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**46U**
EASTERN	WET AREAS	SD-F14-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**210UJ**
EASTERN	WET AREAS	SD-F14-2-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**50U**
EASTERN	WET AREAS	SD-F14-2-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**50U**
EASTERN	WET AREAS	SD-G12-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**230U**
EASTERN	WET AREAS	SD-G12-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**58U**
EASTERN	WET AREAS	SD-G12-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**58U**
EASTERN	WET AREAS	SD-G12-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**58U**
WESTERN	INTERMITTENT STREAMS	SD-B13-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
WESTERN	INTERMITTENT STREAMS	SD-B13-1-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**40U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
WESTERN	INTERMITTENT STREAMS	SD-B13-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**40U**
WESTERN	INTERMITTENT STREAMS	SD-B13-1-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**40U**
WESTERN	INTERMITTENT STREAMS	SD-B13-1-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**40U**
WESTERN	INTERMITTENT STREAMS	SD-B13-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
WESTERN	INTERMITTENT STREAMS	SD-B13-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**38U**
WESTERN	INTERMITTENT STREAMS	SD-B13-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**38U**
WESTERN	INTERMITTENT STREAMS	SD-B13-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**38U**
WESTERN	INTERMITTENT STREAMS	SD-B13-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**38U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	ANTHRACENE	UG/KG	220	6400	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	FLUORENE	UG/KG	190	2767	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	BENZO(a)ANTHRACENE	UG/KG	320	25598	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-3-01 (0-0.5 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**330U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	2767	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	BENZO(a)ANTHRACENE	UG/KG	320	25598	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	BENZO(a)PYRENE	UG/KG	370	24906	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	23177	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	CHRYSENE	UG/KG	340	7956	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**390U**
WESTERN	INTERMITTENT STREAMS	SD-B13-4-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	6400	**390U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**45U**
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**45U**
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**45U**
WESTERN	INTERMITTENT STREAMS	SD-B14-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**45U**
WESTERN	INTERMITTENT STREAMS	SD-B14-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**320U**
WESTERN	INTERMITTENT STREAMS	SD-B14-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**86U**
WESTERN	INTERMITTENT STREAMS	SD-B14-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**86U**
WESTERN	INTERMITTENT STREAMS	SD-B14-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**86U**
WESTERN	INTERMITTENT STREAMS	SD-B14-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**86U**
WESTERN	INTERMITTENT STREAMS	SD-B14-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**86U**
WESTERN	INTERMITTENT STREAMS	SD-B14-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**260U**
WESTERN	INTERMITTENT STREAMS	SD-B14-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**67U**
WESTERN	INTERMITTENT STREAMS	SD-B14-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**67U**
WESTERN	INTERMITTENT STREAMS	SD-B14-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**67U**
WESTERN	INTERMITTENT STREAMS	SD-B14-4-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**67U**
WESTERN	INTERMITTENT STREAMS	SD-C13-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130U**
WESTERN	INTERMITTENT STREAMS	SD-C13-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**42U**
WESTERN	INTERMITTENT STREAMS	SD-C13-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**42U**
WESTERN	INTERMITTENT STREAMS	SD-C13-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**42U**
WESTERN	INTERMITTENT STREAMS	SD-C13-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**42U**
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130U**
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**40U**
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**40U**
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**40U**
WESTERN	INTERMITTENT STREAMS	SD-C14-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**40U**
WESTERN	INTERMITTENT STREAMS	SD-C14-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
WESTERN	INTERMITTENT STREAMS	SD-C14-2-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**44U**
WESTERN	INTERMITTENT STREAMS	SD-C14-2-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**44U**
WESTERN	INTERMITTENT STREAMS	SD-C14-2-01 (0-1.5 ft. bgs)	NAPHTHALENE	UG/KG	160	36	**44U**
WESTERN	INTERMITTENT STREAMS	SD-C14-2-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
WESTERN	STREAMS	SD-A15-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**180U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
WESTERN	STREAMS	SD-A15-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**42U**
WESTERN	STREAMS	SD-A15-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**42U**
WESTERN	STREAMS	SD-A15-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**42U**
WESTERN	STREAMS	SD-A15-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**42U**
WESTERN	STREAMS	SD-B16-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
WESTERN	STREAMS	SD-B16-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**40U**
WESTERN	STREAMS	SD-B16-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**40U**
WESTERN	STREAMS	SD-B16-1-01 (0-1 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**40U**
WESTERN	STREAMS	SD-E16-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**210U**
WESTERN	STREAMS	SD-E16-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**55U**
WESTERN	STREAMS	SD-E16-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**55U**
WESTERN	STREAMS	SD-E16-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**55U**
WESTERN	WET AREAS	SD-A15-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**980UJ**
WESTERN	WET AREAS	SD-A15-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**980UJ**
WESTERN	WET AREAS	SD-A15-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**980UJ**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	SILVER	MG/KG	1	3.7	**1.1U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	18827	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	8141	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**260U**
WESTERN	WET AREAS	SD-A15-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**260U**
WESTERN	WET AREAS	SD-A15-3-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**1100UJ**
WESTERN	WET AREAS	SD-A15-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**1100UJ**
WESTERN	WET AREAS	SD-A15-3-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**1100UJ**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	68185	**290U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	SILVER	MG/KG	1	3.7	**1.2U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**290U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**290U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	18827	**290U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**290U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	8141	**290U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**290U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**290U**
WESTERN	WET AREAS	SD-A15-3-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**290U**
WESTERN	WET AREAS	SD-B14-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**210U**
WESTERN	WET AREAS	SD-B14-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**60U**
WESTERN	WET AREAS	SD-B14-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**60U**
WESTERN	WET AREAS	SD-B14-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**60U**
WESTERN	WET AREAS	SD-B14-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**60U**
WESTERN	WET AREAS	SD-B15-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**720U**
WESTERN	WET AREAS	SD-B15-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**720U**
WESTERN	WET AREAS	SD-B15-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**190U**
WESTERN	WET AREAS	SD-B15-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**190U**
WESTERN	WET AREAS	SD-B15-1-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**190U**
WESTERN	WET AREAS	SD-B15-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**190U**
WESTERN	WET AREAS	SD-B15-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**190U**
WESTERN	WET AREAS	SD-B15-1-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	8141	**190U**
WESTERN	WET AREAS	SD-B15-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**190U**
WESTERN	WET AREAS	SD-B15-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**920U**
WESTERN	WET AREAS	SD-B15-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**920U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**230U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**230U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	8141	**230U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**230U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**230U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	18827	**230U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**230U**
WESTERN	WET AREAS	SD-B15-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**230U**
WESTERN	WET AREAS	SD-C15-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**390U**
WESTERN	WET AREAS	SD-C15-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**390U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
WESTERN	WET AREAS	SD-C15-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**100U**
WESTERN	WET AREAS	SD-C15-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**100U**
WESTERN	WET AREAS	SD-C15-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**100U**
WESTERN	WET AREAS	SD-C15-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**100U**
WESTERN	WET AREAS	SD-C15-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**580U**
WESTERN	WET AREAS	SD-C15-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**580U**
WESTERN	WET AREAS	SD-C15-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**580U**
WESTERN	WET AREAS	SD-C15-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**160U**
WESTERN	WET AREAS	SD-C15-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**160U**
WESTERN	WET AREAS	SD-C15-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**160U**
WESTERN	WET AREAS	SD-C15-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**160U**
WESTERN	WET AREAS	SD-C15-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**160U**
WESTERN	WET AREAS	SD-D14-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**250U**
WESTERN	WET AREAS	SD-D14-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**69U**
WESTERN	WET AREAS	SD-D14-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**69U**
WESTERN	WET AREAS	SD-D14-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**69U**
WESTERN	WET AREAS	SD-D14-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**69U**
WESTERN	WET AREAS	SD-D14-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**320U**
WESTERN	WET AREAS	SD-D14-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**83U**
WESTERN	WET AREAS	SD-D14-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**83U**
WESTERN	WET AREAS	SD-D14-4-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**83U**
WESTERN	WET AREAS	SD-D14-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**83U**
WESTERN	WET AREAS	SD-D14-5-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**190U**
WESTERN	WET AREAS	SD-D14-5-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**57U**
WESTERN	WET AREAS	SD-D14-5-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**57U**
WESTERN	WET AREAS	SD-D14-5-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**57U**
WESTERN	WET AREAS	SD-D14-6-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
WESTERN	WET AREAS	SD-D14-6-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**46U**
WESTERN	WET AREAS	SD-D14-6-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**46U**
WESTERN	WET AREAS	SD-D14-6-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**46U**
WESTERN	WET AREAS	SD-D14-7-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**190U**
WESTERN	WET AREAS	SD-D14-7-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**47U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
WESTERN	WET AREAS	SD-D14-7-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**47U**
WESTERN	WET AREAS	SD-D14-7-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**47U**
WESTERN	WET AREAS	SD-D14-8-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**190U**
WESTERN	WET AREAS	SD-D14-8-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**55U**
WESTERN	WET AREAS	SD-D14-8-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**55U**
WESTERN	WET AREAS	SD-D14-8-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**55U**
WESTERN	WET AREAS	SD-D15-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**250U**
WESTERN	WET AREAS	SD-D15-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**73U**
WESTERN	WET AREAS	SD-D15-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**73U**
WESTERN	WET AREAS	SD-D15-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**73U**
WESTERN	WET AREAS	SD-D15-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**73U**
WESTERN	WET AREAS	SD-E14-3-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**540UJ**
WESTERN	WET AREAS	SD-E14-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**540UJ**
WESTERN	WET AREAS	SD-E14-3-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**540UJ**
WESTERN	WET AREAS	SD-E14-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**140U**
WESTERN	WET AREAS	SD-E14-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**140U**
WESTERN	WET AREAS	SD-E14-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**140U**
WESTERN	WET AREAS	SD-E14-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**140U**
WESTERN	WET AREAS	SD-E14-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**140U**
WESTERN	WET AREAS	SD-E15-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
WESTERN	WET AREAS	SD-E15-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**45U**
WESTERN	WET AREAS	SD-E15-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**45U**
WESTERN	WET AREAS	SD-E15-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**45U**
WESTERN	WET AREAS	SD-E15-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**300U**
WESTERN	WET AREAS	SD-E15-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**73U**
WESTERN	WET AREAS	SD-E15-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**73U**
WESTERN	WET AREAS	SD-E15-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**73U**
WESTERN	WET AREAS	SD-E15-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**73U**
WESTERN	WET AREAS	SD-E15-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**250U**
WESTERN	WET AREAS	SD-E15-3-01 (0-1.5 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**69U**
WESTERN	WET AREAS	SD-E15-3-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**69U**
WESTERN	WET AREAS	SD-E15-3-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**69U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
WESTERN	WET AREAS	SD-E15-3-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**69U**
WESTERN	WET AREAS	SD-E16-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**180U**
WESTERN	WET AREAS	SD-E16-1-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**58U**
WESTERN	WET AREAS	SD-E16-1-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**58U**
WESTERN	WET AREAS	SD-E16-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**58U**
WESTERN	WET AREAS	SD-E16-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**190U**
WESTERN	WET AREAS	SD-E16-2-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**50U**
WESTERN	WET AREAS	SD-E16-2-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**50U**
WESTERN	WET AREAS	SD-E16-2-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**50U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**470UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**470UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**470UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	124	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**450UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**450UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**450UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**130U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**130U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	124	**130U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**130U**
DUCK POND & TRIBUTARIES	PONDS	SD-L5-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**130U**
DUCK POND & TRIBUTARIES	PONDS	SD-L6-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**290U**
DUCK POND & TRIBUTARIES	PONDS	SD-L6-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**77U**
DUCK POND & TRIBUTARIES	PONDS	SD-L6-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**77U**
DUCK POND & TRIBUTARIES	PONDS	SD-L6-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**77U**
DUCK POND & TRIBUTARIES	PONDS	SD-L6-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**77U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-1-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
DUCK POND & TRIBUTARIES	PONDS	SD-M5-1-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**340UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**340UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**100U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**100U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**280U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**67U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**67U**
DUCK POND & TRIBUTARIES	PONDS	SD-M5-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**67U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**1500U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**1500U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**1500U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0.5-1 ft. bgs)	ETHYLBENZENE	UG/KG	1400	NS	**1500U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	21809	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	CHRYSENE	UG/KG	340	27113	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	78982	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	9431	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	124	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	BENZO(a)ANTHRACENE	UG/KG	320	87234	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-1-01 (0-2 ft. bgs)	BENZO(a)PYRENE	UG/KG	370	84876	**390U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**42U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**42U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**42U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**51U**
DUCK POND & TRIBUTARIES	PONDS	SD-M6-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**51U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
DUCK POND & TRIBUTARIES	PONDS	SD-M6-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**51U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**560U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**560U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**560U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	124	**150U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**150U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**150U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**150U**
DUCK POND & TRIBUTARIES	PONDS	SD-M7-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**150U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-1-01 (0-3 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**41U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-1-01 (0-3 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**41U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-1-01 (0-3 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**41U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120UJ**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**150U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**42U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**42U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**42U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-5-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-5-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**45U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-5-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**45U**
DUCK POND & TRIBUTARIES	PONDS	SD-N5-5-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**45U**
DUCK POND & TRIBUTARIES	STREAMS	SD-J5-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**360U**
DUCK POND & TRIBUTARIES	STREAMS	SD-J5-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**360U**
DUCK POND & TRIBUTARIES	STREAMS	SD-J5-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**93U**
DUCK POND & TRIBUTARIES	STREAMS	SD-J5-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**93U**
DUCK POND & TRIBUTARIES	STREAMS	SD-J5-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**93U**
DUCK POND & TRIBUTARIES	STREAMS	SD-J5-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**93U**
DUCK POND & TRIBUTARIES	STREAMS	SD-J5-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**93U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**850UJ**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**850UJ**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**850UJ**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	ANTHRACENE	UG/KG	220	6593	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	2851	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-K5-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**230U**
DUCK POND & TRIBUTARIES	STREAMS	SD-L5-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**270U**
DUCK POND & TRIBUTARIES	STREAMS	SD-L5-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	11	**69U**
DUCK POND & TRIBUTARIES	STREAMS	SD-L5-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	9	**69U**
DUCK POND & TRIBUTARIES	STREAMS	SD-L5-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**69U**
DUCK POND & TRIBUTARIES	STREAMS	SD-L5-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	37	**69U**
DUCK POND & TRIBUTARIES	STREAMS	SD-L5-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**69U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**860U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**860U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**860U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**210U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**210U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	8141	**210U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**210U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**210U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**210U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-J5-1-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	107	**210U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**160U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**43U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**43U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**43U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-6-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**290U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-6-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	25	**64U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-6-01 (0-1.5 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**64U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-6-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	33	**64U**
DUCK POND & TRIBUTARIES	WET AREAS	SD-N5-6-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**64U**
MISCELLANEOUS PONDS	PONDS	SD-C11-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**140U**
MISCELLANEOUS PONDS	PONDS	SD-C11-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**44U**
MISCELLANEOUS PONDS	PONDS	SD-C11-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**44U**
MISCELLANEOUS PONDS	PONDS	SD-C11-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**44U**
MISCELLANEOUS PONDS	PONDS	SD-D11-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**270U**
MISCELLANEOUS PONDS	PONDS	SD-D11-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**69U**
MISCELLANEOUS PONDS	PONDS	SD-D11-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**69U**
MISCELLANEOUS PONDS	PONDS	SD-D11-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**69U**
MISCELLANEOUS PONDS	PONDS	SD-D11-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**69U**
MISCELLANEOUS PONDS	PONDS	SD-H5-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**
MISCELLANEOUS PONDS	PONDS	SD-H5-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**50U**
MISCELLANEOUS PONDS	PONDS	SD-K11-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**190U**
MISCELLANEOUS PONDS	PONDS	SD-K11-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**45U**
MISCELLANEOUS PONDS	PONDS	SD-K11-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**45U**
MISCELLANEOUS PONDS	PONDS	SD-K4-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
MISCELLANEOUS PONDS	PONDS	SD-K4-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-K5-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-K5-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
MISCELLANEOUS PONDS	PONDS	SD-K5-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**360U**
MISCELLANEOUS PONDS	PONDS	SD-K5-3-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**360U**
MISCELLANEOUS PONDS	PONDS	SD-K5-3-01 (0-4 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**86UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-3-01 (0-4 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**86UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-3-01 (0-4 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**86UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-3-01 (0-4 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**86UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**1200UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**1200UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**1200UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	SILVER	MG/KG	1	3.7	**1.2U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	NAPHTHALENE	UG/KG	160	124	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	BENZO(k)FLUORANTHENE	UG/KG	240	78982	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	ANTHRACENE	UG/KG	220	21809	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-K5-4-01 (0-4 ft. bgs)	FLUORENE	UG/KG	190	9431	**280UJ**
MISCELLANEOUS PONDS	PONDS	SD-M7-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
MISCELLANEOUS PONDS	PONDS	SD-M7-2-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-M7-2-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-1-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**370UJ**
MISCELLANEOUS PONDS	PONDS	SD-N7-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**370UJ**
MISCELLANEOUS PONDS	PONDS	SD-N7-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**97U**
MISCELLANEOUS PONDS	PONDS	SD-N7-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
MISCELLANEOUS PONDS	PONDS	SD-N7-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**130UJ**
MISCELLANEOUS PONDS	PONDS	SD-N7-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170UJ**
MISCELLANEOUS PONDS	PONDS	SD-N7-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-5-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120U**
MISCELLANEOUS PONDS	PONDS	SD-N7-5-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-6-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**190U**
MISCELLANEOUS PONDS	PONDS	SD-N7-6-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**46U**
MISCELLANEOUS PONDS	PONDS	SD-N7-6-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**46U**
MISCELLANEOUS PONDS	PONDS	SD-N7-7-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**120UJ**
MISCELLANEOUS PONDS	PONDS	SD-N7-7-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**33U**
MISCELLANEOUS PONDS	PONDS	SD-N7-7-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**33U**
MISCELLANEOUS PONDS	PONDS	SD-O4-10-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**170U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
MISCELLANEOUS PONDS	PONDS	SD-O4-10-01 (0-1.5 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**50U**
MISCELLANEOUS PONDS	PONDS	SD-O4-10-01 (0-1.5 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**50U**
MISCELLANEOUS PONDS	PONDS	SD-O4-10-01 (0-1.5 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**50U**
MISCELLANEOUS PONDS	PONDS	SD-O4-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**240U**
MISCELLANEOUS PONDS	PONDS	SD-O4-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**56U**
MISCELLANEOUS PONDS	PONDS	SD-O4-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**56U**
MISCELLANEOUS PONDS	PONDS	SD-O4-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**56U**
MISCELLANEOUS PONDS	PONDS	SD-O4-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**330U**
MISCELLANEOUS PONDS	PONDS	SD-O4-2-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**84U**
MISCELLANEOUS PONDS	PONDS	SD-O4-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**84U**
MISCELLANEOUS PONDS	PONDS	SD-O4-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**84U**
MISCELLANEOUS PONDS	PONDS	SD-O4-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**84U**
MISCELLANEOUS PONDS	PONDS	SD-O4-3-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**330U**
MISCELLANEOUS PONDS	PONDS	SD-O4-3-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**91U**
MISCELLANEOUS PONDS	PONDS	SD-O4-3-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**91U**
MISCELLANEOUS PONDS	PONDS	SD-O4-3-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**91U**
MISCELLANEOUS PONDS	PONDS	SD-O4-3-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**91U**
MISCELLANEOUS PONDS	PONDS	SD-O4-4-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**280U**
MISCELLANEOUS PONDS	PONDS	SD-O4-4-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**73U**
MISCELLANEOUS PONDS	PONDS	SD-O4-4-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**73U**
MISCELLANEOUS PONDS	PONDS	SD-O4-4-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**73U**
MISCELLANEOUS PONDS	PONDS	SD-O4-4-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**73U**
MISCELLANEOUS PONDS	PONDS	SD-O4-5-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**210U**
MISCELLANEOUS PONDS	PONDS	SD-O4-5-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**53U**
MISCELLANEOUS PONDS	PONDS	SD-O4-5-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**53U**
MISCELLANEOUS PONDS	PONDS	SD-O4-5-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**53U**
MISCELLANEOUS PONDS	PONDS	SD-O4-6-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**320U**
MISCELLANEOUS PONDS	PONDS	SD-O4-6-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**85U**
MISCELLANEOUS PONDS	PONDS	SD-O4-6-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**85U**
MISCELLANEOUS PONDS	PONDS	SD-O4-6-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**85U**
MISCELLANEOUS PONDS	PONDS	SD-O4-6-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**85U**
MISCELLANEOUS PONDS	PONDS	SD-O4-7-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**400UJ**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
MISCELLANEOUS PONDS	PONDS	SD-O4-7-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**400UJ**
MISCELLANEOUS PONDS	PONDS	SD-O4-7-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**110U**
MISCELLANEOUS PONDS	PONDS	SD-O4-7-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**110U**
MISCELLANEOUS PONDS	PONDS	SD-O4-7-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**110U**
MISCELLANEOUS PONDS	PONDS	SD-O4-7-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**110U**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**760UJ**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**760UJ**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**760UJ**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0-2 ft. bgs)	FLUORENE	UG/KG	190	9431	**190U**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**190U**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0-2 ft. bgs)	NAPHTHALENE	UG/KG	160	124	**190U**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**190U**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0-2 ft. bgs)	BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**190U**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**190U**
MISCELLANEOUS PONDS	PONDS	SD-O4-8-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**190U**
MISCELLANEOUS PONDS	PONDS	SD-O4-9-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**180U**
MISCELLANEOUS PONDS	PONDS	SD-O4-9-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**55U**
MISCELLANEOUS PONDS	PONDS	SD-O4-9-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**55U**
MISCELLANEOUS PONDS	PONDS	SD-O4-9-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**55U**
MISCELLANEOUS PONDS	PONDS	SD-O5-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**200U**
MISCELLANEOUS PONDS	PONDS	SD-O5-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**57U**
MISCELLANEOUS PONDS	PONDS	SD-O5-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**57U**
MISCELLANEOUS PONDS	PONDS	SD-O5-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**57U**
MISCELLANEOUS PONDS	PONDS	SD-O5-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**200U**
MISCELLANEOUS PONDS	PONDS	SD-O5-2-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**59U**
MISCELLANEOUS PONDS	PONDS	SD-O5-2-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**59U**
MISCELLANEOUS PONDS	PONDS	SD-O5-2-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**59U**
MISCELLANEOUS PONDS	PONDS	SD-P4-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**300U**
MISCELLANEOUS PONDS	PONDS	SD-P4-1-01 (0-2 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**64U**
MISCELLANEOUS PONDS	PONDS	SD-P4-1-01 (0-2 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**64U**
MISCELLANEOUS PONDS	PONDS	SD-P4-1-01 (0-2 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**64U**
MISCELLANEOUS PONDS	PONDS	SD-P4-1-01 (0-2 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**64U**

Table 3-3

Sediment Concentrations with Pratical Quantitation Limits Exceeding the FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Surface Water Feature Type	Sample Id With Depth	Constituent	Units	LEL	SEL	Result
MISCELLANEOUS PONDS	PONDS	SD-P4-2-01 (0.5-1 ft. bgs)	TETRACHLOROETHYLENE(PCE	UG/KG	450	NS	**480U**
MISCELLANEOUS PONDS	PONDS	SD-P4-2-01 (0.5-1 ft. bgs)	BENZENE	UG/KG	340	NS	**480U**
MISCELLANEOUS PONDS	PONDS	SD-P4-2-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**480U**
MISCELLANEOUS PONDS	PONDS	SD-P4-2-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**120U**
MISCELLANEOUS PONDS	PONDS	SD-P4-2-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**120U**
MISCELLANEOUS PONDS	PONDS	SD-P4-2-01 (0-1 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**120U**
MISCELLANEOUS PONDS	PONDS	SD-P4-2-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**120U**
MISCELLANEOUS PONDS	PONDS	SD-Q4-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**290U**
MISCELLANEOUS PONDS	PONDS	SD-Q4-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**84U**
MISCELLANEOUS PONDS	PONDS	SD-Q4-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**84U**
MISCELLANEOUS PONDS	PONDS	SD-Q4-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**84U**
MISCELLANEOUS PONDS	PONDS	SD-Q4-1-01 (0-1 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**84U**
MISCELLANEOUS PONDS	PONDS	SD-R4-1-01 (0.5-1 ft. bgs)	XYLENES, TOTAL	UG/KG	120	NS	**260U**
MISCELLANEOUS PONDS	PONDS	SD-R4-1-01 (0-1 ft. bgs)	DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**61U**
MISCELLANEOUS PONDS	PONDS	SD-R4-1-01 (0-1 ft. bgs)	HEXACHLOROBENZENE	UG/KG	20	24000	**61U**
MISCELLANEOUS PONDS	PONDS	SD-R4-1-01 (0-1 ft. bgs)	ACENAPHTHENE	UG/KG	16	29	**61U**
MISCELLANEOUS PONDS	PONDS	SD-R4-1-01 (0-1 ft. bgs)	ACENAPHTHYLENE	UG/KG	44	38	**61U**

VOC = Volatile Organic Constituents
SVOC = Semi-Volatile Organic Constituents
E&E = Explosives and Energetics
FSSG = Freshwater Sediment Screening Guidelines
LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG
U = Indicates that the compound was analyzed for but not detected, number indicates the detection limit
J = Value is less than the reporting limit, but greater than zero
ft. = Feet below ground surface

Table 5-1

List of Surface Water Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

		Source of Criteria Utilized		
Analytical Group	**Analyzed Constituent**	**Human Health SWQC**	**Acute Aquatic Life SWQC**	**Chronic Aquatic Life SWQC**
PP VOCs	1,1,1-TRICHLOROETHANE	NJSWQC	NS	NS
	1,1,2,2-TETRACHLOROETHANE	NJSWQC	NS	NS
	1,1,2-TRICHLOROETHANE	NJSWQC	NS	NS
	1,1-DICHLOROETHANE	NS	NS	NS
	1,1-DICHLOROETHENE	NJSWQC	NS	NS
	1,2-DICHLOROETHANE	NJSWQC	NS	NS
	1,2-DICHLOROPROPANE	NS	NS	NS
	2-CHLOROETHYL VINYL ETHER	NS	NS	NS
	ACROLEIN	NJSWQC	NS	NS
	ACRYLONITRILE	NJSWQC	NS	NS
	AMYL ALCOHOL	NS	NS	NS
	BENZENE	NJSWQC	NS	NS
	BROMODICHLOROMETHANE	NJSWQC	NS	NS
	BROMOFORM	NJSWQC	NS	NS
	BROMOMETHANE	NJSWQC	NS	NS
	CARBON TETRACHLORIDE	NJSWQC	NS	NS
	CHLOROBENZENE	NJSWQC	NS	NS
	CHLOROETHANE	NS	NS	NS
	CHLOROFORM	NJSWQC	NS	NS
	CHLOROMETHANE	NS	NS	NS
	cis-1,2-DICHLOROETHYLENE	NS	NS	NS
	cis-1,3-DICHLOROPROPENE	NS	NS	NS
	DIBROMOCHLOROMETHANE	NJSWQC	NS	NS

Table 5-1

List of Surface Water Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

		Source of Criteria Utilized		
Analytical Group	**Analyzed Constituent**	**Human Health SWQC**	**Acute Aquatic Life SWQC**	**Chronic Aquatic Life SWQC**
PP+A1 VOCs cont'd	DIETHYL ETHER (ETHYL ETHER)	NS	NS	NS
	Di-n-propyl ether (1,1'-oxybis-Propane)	NS	NS	NS
	ETHANOL	NS	NS	NS
	ETHYLBENZENE	NJSWQC	NS	NS
	METHANOL	NS	NS	NS
	METHYLENE CHLORIDE	NJSWQC	NS	NS
	n-BUTYL ETHER	NS	NS	NS
	TETRACHLOROETHYLENE(PCE)	NJSWQC	NS	NS
	TOLUENE	NJSWQC	NS	NS
	trans-1,2-DICHLOROETHENE	NJSWQC	NS	NS
	trans-1,3-DICHLOROPROPENE	NS	NS	NS
	TRICHLOROETHYLENE (TCE)	NJSWQC	NS	NS
	TRICHLOROFLUOROMETHANE	NS	NS	NS
	VINYL CHLORIDE	NJSWQC	NS	NS
	XYLENES, TOTAL	NS	NS	NS
PP SVOCS	1,2,4-TRICHLOROBENZENE	NJSWQC	NS	NS
	1,2-DICHLOROBENZENE	NJSWQC	NS	NS
	1,2-DIPHENYLHYDRAZINE	NJSWQC	NS	NS
	1,3-DICHLOROBENZENE	NJSWQC	NS	NS
	1,4-DICHLOROBENZENE	NJSWQC	NS	NS
	2,4,6-TRICHLOROPHENOL	NJSWQC	NS	NS
	2,4-DICHLOROPHENOL	NJSWQC	NS	NS
	2,4-DIMETHYLPHENOL	NS	NS	NS
	2,4-DINITROPHENOL	NJSWQC	NS	NS

Table 5-1

List of Surface Water Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

		Source of Criteria Utilized		
Analytical Group	**Analyzed Constituent**	**Human Health SWQC**	**Acute Aquatic Life SWQC**	**Chronic Aquatic Life SWQC**
PP SVOCs cont'd	2,4-DINITROTOLUENE	NJSWQC	NS	NS
	2,6-DINITROTOLUENE	NS	NS	NS
	2-CHLORONAPHTHALENE	NS	NS	NS
	2-CHLOROPHENOL	NJSWQC	NS	NS
	2-NITROPHENOL	NS	NS	NS
	3,3'-DICHLOROBENZIDINE	NJSWQC	NS	NS
	4,6-DINITRO-2-METHYLPHENOL	NJSWQC	NS	NS
	4-BROMOPHENYL PHENYL ETHER	NS	NS	NS
	4-CHLORO-3-METHYLPHENOL	NS	NS	NS
	4-CHLOROPHENYL PHENYL ETHER	NS	NS	NS
	4-NITROPHENOL	NS	NS	NS
	ACENAPHTHENE	NS	NS	NS
	ACENAPHTHYLENE	NS	NS	NS
	ANTHRACENE	NJSWQC	NS	NS
	BENZIDINE	NJSWQC	NS	NS
	BENZO(a)ANTHRACENE	NJSWQC	NS	NS
	BENZO(a)PYRENE	NJSWQC	NS	NS
	BENZO(b)FLUORANTHENE	NJSWQC	NS	NS
	BENZO(g,h,i)PERYLENE	NJSWQC	NS	NS
	BENZO(k)FLUORANTHENE	NJSWQC	NS	NS
	BENZYL BUTYL PHTHALATE	NJSWQC	NS	NS
	bis(2-CHLOROETHOXY) METHANE	NS	NS	NS
	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	NJSWQC	NS	NS
	bis(2-CHLOROISOPROPYL) ETHER	NJSWQC	NS	NS

Table 5-1

List of Surface Water Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

		Source of Criteria Utilized		
Analytical Group	**Analyzed Constituent**	**Human Health SWQC**	**Acute Aquatic Life SWQC**	**Chronic Aquatic Life SWQC**
PP SVOCs cont'd	bis(2-ETHYLHEXYL) PHTHALATE	NJSWQC	NS	NS
	CHRYSENE	NJSWQC	NS	NS
	DIBENZ(a,h)ANTHRACENE	NJSWQC	NS	NS
	DIETHYL PHTHALATE	NJSWQC	NS	NS
	DIMETHYL PHTHALATE	NJSWQC	NS	NS
	DI-n-BUTYL PHTHALATE	NJSWQC	NS	NS
	DI-n-OCTYLPHTHALATE	NS	NS	NS
	FLUORANTHENE	NJSWQC	NS	NS
	FLUORENE	NJSWQC	NS	NS
	HEXACHLOROBENZENE	NJSWQC	NS	NS
	HEXACHLOROBUTADIENE	NJSWQC	NS	NS
	HEXACHLOROCYCLOPENTADIENE	NJSWQC	NS	NS
	HEXACHLOROETHANE	NJSWQC	NS	NS
	INDENO(1,2,3-c,d)PYRENE	NJSWQC	NS	NS
	ISOPHORONE	NJSWQC	NS	NS
	NAPHTHALENE	NS	NS	NS
	NITROBENZENE	NJSWQC	NS	NS
	N-NITROSODIMETHYLAMINE	NJSWQC	NS	NS
	N-NITROSODI-n-PROPYLAMINE	NS	NS	NS
	N-NITROSODIPHENYLAMINE	NJSWQC	NS	NS
	PENTACHLOROPHENOL	NS	EPASWQC	EPASWQC
	PHENANTHRENE	NS	NS	NS
	PHENOL	NJSWQC	NS	NS
	PYRENE	NJSWQC	NS	NS

Table 5-1

List of Surface Water Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

			Source of Criteria Utilized		
Analytical Group		**Analyzed Constituent**	**Human Health SWQC**	**Acute Aquatic Life SWQC**	**Chronic Aquatic Life SWQC**
PP METALS	DISSOLVED	ANTIMONY	NS	NS	NS
	DISSOLVED	ARSENIC	NS	EPASWQC	EPASWQC
	DISSOLVED	BERYLLIUM	NS	NS	NS
	DISSOLVED	CADMIUM	NS	EPASWQC	EPASWQC
	DISSOLVED	CHROMIUM, TOTAL	NS	EPASWQC	EPASWQC
	DISSOLVED	COPPER	NS	EPASWQC	EPASWQC
	DISSOLVED	LEAD	NS	NJSWQC	NJSWQC
	DISSOLVED	NICKEL	NS	EPASWQC	EPASWQC
	DISSOLVED	SELENIUM	NS	EPASWQC	EPASWQC
	DISSOLVED	SILVER	NS	EPASWQC	NS
	DISSOLVED	THALLIUM	NS	NS	NS
	DISSOLVED	ZINC	NS	EPASWQC	EPASWQC
	TOTAL	ANTIMONY	NJSWQC	NS	NS
	TOTAL	ARSENIC	NJSWQC	NS	NS
	TOTAL	BERYLLIUM	NS	NS	NS
	TOTAL	CADMIUM	NJSWQC	NS	NS
	TOTAL	CHROMIUM, TOTAL	NJSWQC	NS	NS
	TOTAL	COPPER	NS	NS	NS
	TOTAL	LEAD	NJSWQC	NS	NS
	TOTAL	MERCURY	NJSWQC	NS	NS
	TOTAL	NICKEL	NJSWQC	NS	NS
	TOTAL	SELENIUM	NJSWQC	NS	NS
	TOTAL	SILVER	NJSWQC	NS	NS
	TOTAL	THALLIUM	NJSWQC	NS	NS

Table 5-1

List of Surface Water Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

		Source of Criteria Utilized		
Analytical Group	**Analyzed Constituent**	**Human Health SWQC**	**Acute Aquatic Life SWQC**	**Chronic Aquatic Life SWQC**
PP METALS cont'd	TOTAL ZINC	NS	NS	NS
GENERAL CHEMISTRY	DISSOLVED OXYGEN	NS	NS	NS
	pH	NS	NS	NS
E&E	1,2-DINITROBENZENE	NS	NS	NS
	1,3,5-TRINITROBENZENE	NS	NS	NS
	1,3-DINITROBENZENE	NS	NS	NS
	1,4-DINITROBENZENE	NS	NS	NS
	2,4,6-TRINITROTOLUENE	NS	NS	NS
	2,4-DINITROTOLUENE	NJSWQC	NS	NS
	2,6-DINITROTOLUENE	NS	NS	NS
	2-AMINO-4,6-DINITROTOLUENE	NS	NS	NS
	2-NITROTOLUENE	NS	NS	NS
	3-NITROTOLUENE	NS	NS	NS
	4-AMINO-2,6-DINITROTOLUENE	NS	NS	NS
	4-NITROTOLUENE	NS	NS	NS
	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	NS	NS	NS
	NITROBENZENE	NJSWQC	NS	NS
	NITROCELLULOSE	NS	NS	NS
	NITROGLYCERIN	NS	NS	NS
	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	NS	NS	NS
	PENTAERYTHRITOL TETRANITRATE	NS	NS	NS
	PERCHLORATE	NS	NS	NS
	TETRYL	NS	NS	NS

Table 5-1

List of Surface Water Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Analyzed Constituent	Source of Criteria Utilized: Human Health SWQC	Source of Criteria Utilized: Acute Aquatic Life SWQC	Source of Criteria Utilized: Chronic Aquatic Life SWQC

PP VOCs = Priority Pollutant List Volatile Organic Constituents

PP SVOCs = Priority Pollutant List Semi-Volatile Organic Constituents

PP Metals = Priority Pollutant List Metals

E&E = Energetic and Explosive Constituents

NJSWQC = NJDEP Surface Water Quality Criteria (NJSWQC) as specified in N.J.A.C. 7:9B August 2004

EPASWQC = United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

NS = No Standard

Table 5-2

Surface Water Detected Constituents Without SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group		Constituent	Analytical Methodology	Human Health SWQC	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Number of Surface Water Samples with Detected Constituents
VOC		BROMODICHLOROMETHANE	SW8260B	0.266	NS	NS	1
VOC		CHLOROFORM	SW8260B	5.67	NS	NS	1
VOC		cis-1,2-DICHLOROETHYLENE	SW8260B	NS	NS	NS	4
VOC		DIBROMOCHLOROMETHANE	SW8260B	72.6	NS	NS	1
VOC		TETRACHLOROETHYLENE(PCE)	SW8260B	0.338	NS	NS	4
VOC		TRICHLOROETHYLENE (TCE)	SW8260B	1.09	NS	NS	3
SVOC		BENZO(a)ANTHRACENE	SW8270C	0.0028	NS	NS	1
SVOC		BENZO(a)PYRENE	SW8270C	0.0028	NS	NS	1
SVOC		BENZO(b)FLUORANTHENE	SW8270C	0.031	NS	NS	2
SVOC		BENZO(g,h,i)PERYLENE	SW8270C	0.0028	NS	NS	1
SVOC		BENZO(k)FLUORANTHENE	SW8270C	0.031	NS	NS	1
SVOC		bis(2-ETHYLHEXYL) PHTHALATE	SW8270C	1.76	NS	NS	2
SVOC		CHRYSENE	SW8270C	0.0028	NS	NS	2
SVOC		FLUORANTHENE	SW8270C	310	NS	NS	2
SVOC		INDENO(1,2,3-c,d)PYRENE	SW8270C	NS	NS	NS	1
SVOC		ISOPHORONE	SW8270C	552	NS	NS	1
SVOC		NAPHTHALENE	SW8270C	NS	NS	NS	1
SVOC		PHENANTHRENE	SW8270C	NS	NS	NS	2
SVOC		PYRENE	SW8270C	797	NS	NS	2
METALS	TOTAL	ANTIMONY	SW6010B	12.2	NS	NS	5
METALS	TOTAL	ARSENIC	SW6010B	0.017	NS	NS	11
METALS	TOTAL	BERYLLIUM	SW6010B	NS	NS	NS	2
METALS	TOTAL	CADMIUM	SW6010B	10	NS	NS	7
METALS	TOTAL	CHROMIUM, TOTAL	SW6010B	160	NS	NS	16
METALS	TOTAL	COPPER	SW6010B	NS	NS	NS	33
METALS	TOTAL	LEAD	SW6010B	5	NS	NS	28
METALS	TOTAL	MERCURY	SW7470A	0.144	NS	NS	13
METALS	TOTAL	NICKEL	SW6010B	516	NS	NS	33
METALS	TOTAL	SELENIUM	SW6010B	10	NS	NS	4
METALS	DISSOLVED	SILVER	SW6010A	NS	0.02	NS	1
METALS	TOTAL	SILVER	SW6010B	164	NS	NS	1

Table 5-2

Surface Water Detected Constituents Without SWQC
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Analytical Methodology	Human Health SWQC	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	Number of Surface Water Samples with Detected Constituents
METALS	DISSOLVED THALLIUM	SW6010A	NS	NS	NS	3
METALS	TOTAL THALLIUM	SW6010B	1.7	NS	NS	1
METALS	TOTAL ZINC	SW6010B	NS	NS	NS	86
E&E	2,4,6-TRINITROTOLUENE	SW8330	NS	NS	NS	10
E&E	2,4-DINITROTOLUENE	SW8330	0.11	NS	NS	1
E&E	2,6-DINITROTOLUENE	SW8330	NS	NS	NS	11
E&E	2-AMINO-4,6-DINITROTOLUENE	SW8330	NS	NS	NS	17
E&E	4-AMINO-2,6-DINITROTOLUENE	SW8330	NS	NS	NS	19
E&E	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	SW8330	NS	NS	NS	4
E&E	NITROCELLULOSE	IAAP	NS	NS	NS	1
E&E	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	SW8330	NS	NS	NS	1

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

NS = No Standard

VOC = Volatile Organic Constituent

SVOC = Semi-Volatile Organic Constituent

E&E = Energetic and Explosive Constituent

Table 5-3

Surface Water - Calculated Logarithmic Values for Hardness and Calculated Dissolved Metal Criteria
SW/SD - SI
Kenvil Works Facility, New Jersey

Miscellaneous Ponds Drainage System
Aquatic Life Dissolved Metal Criteria
Calculated Hardness = 38 mg/l
Equation Utilized to calculate Acute Aquatic Life Dissolved Metal Criteria: CMC = WERe^{mA[ln(hardness)]+bA}*Acute Conversion Factor
Equation Utilized to calculate Chronic Aquatic Life Dissolved Metal Criteria: CCC = WERe^{mC[ln(hardness)]+bC}*Chronic Conversion Factor

Constituent	mA	bA	X	e^X	Acute CF	Calculated Acute CF	Acute Value (CMC) (ug/L)	mC	bC	X	e^X	Chronic CF	Calculated Chronic CF	Chronic Value (CCC) (ug/L)	Source
Silver	1.72	-6.52	-4.957751805	0.01	0.85	NA	0.01	NA	NA	NA	NA	NA	NA	NA	EPASWQC
Arsenic	NA	NA	NA	NA	NA	NA	360	NA	NA	NA	NA	NA	NA	190	EPASWQC
Beryllium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cadmium	1.128	-3.828	-0.214786812	0.81	1.136672-[(ln hardness)(0.041838)]	0.98	0.8	0.7852	-3.49	0.115884653	1.12	1.101672-[(ln hardness)(0.04183 8)]	0.95	1.1	EPASWQC
Chromium (for CR+3)	0.819	3.688	5.999655065	403.29	0.316	NA	127.4	0.819	1.561	4.257642065	70.64	0.86	NA	60.8	EPASWQC
Copper	0.9422	-1.464	2.04795288	7.75	0.96	NA	7.4	0.8545	-1.465	1.856474873	6.4	0.96	NA	6.1	EPASWQC
Nickel	0.846	3.3612	5.920973091	372.77	0.998	NA	372	0.846	1.1645	4.062564891	58.12	0.997	NA	57.9	EPASWQC
Lead	NA	NA	NA	NA	NA	NA	3.8	NA	NA	NA	NA	NA	NA	5.4	NJSWQC
Antimony	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Selenium (Expressed as Total)	NA	NA	NA	NA	NA	NA	20	NA	NA	NA	NA	0.922	NA	4.61	EPASWQC
Thallium	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Zinc	0.8473	0.8604	3.811143673	45.2	0.978	NA	44.2	0.8604	0.7614	3.784887692	44.03	0.986	NA	43.4	EPASWQC

CMC = Criterion Maximum Concentration
CCC = Criterion Continous Concentration
CF = Conversion Factor
WER = Water Effects Ratio
Assume WER = 1
NA = Not available or applicable
NJSWQC = NJDEP Surface Water Quality Criteria (NJSWQC) as specified in N.J.A.C. 7:9B August 2004
EPASWQC = The Code of Federal Regulations Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)
Hardness Values were calculated for each drainage system and is discussed in detail in Section 5.0 of the text

Table 5-4

Surface Water - Calculated Logarithmic Values for pH and Calculated Pentachlorophenol Criteria
SW/SD - SI
Kenvil Works Facility, New Jersey

Aquatic Life Criteria Calculations for Pentachlorophenol
Equation Utilized to calculate Acute Aquatic Life Criteria: CMC = exp(1.005(pH) - 4.830)
Equation Utilized to calculate Chronic Aquatic Life Criteria: CCC = exp(1.005(pH) - 5.290)

Western Drainage System

Sample Location	Constituent	Units	Result	Logarithmic Value per Sample
SW-E16-3-01	PH	pH	6.93	0.840733235
SW-E16-2-01	PH	pH	6.99	0.844477176
SW-E15-3-01	PH	pH	7.31	0.863917377
SW-E15-2-01	PH	pH	7.52	0.876217841
SW-E15-1-01	PH	pH	7.38	0.868056362
SW-E16-1-01	PH	pH	0	0
SW-E14-3-01	PH	pH	7.28	0.862131379
SW-D14-4-01	PH	pH	6.36	0.803457116
SW-D14-3-01	PH	pH	6.5	0.812913357
SW-B14-2-01	PH	pH	6.05	0.781755375
SW-C15-1-01	PH	pH	6.32	0.800717078
SW-D14-8-01	PH	pH	7.19	0.85672889
SW-D14-7-01	PH	pH	7.19	0.85672889
SW-C15-2-01	PH	pH	7.42	0.870403905
SW-D15-1-01	PH	pH	7.35	0.866287339
SW-B15-2-01	PH	pH	7.48	0.873901598
SW-B15-1-01	PH	pH	7.32	0.864511081
SW-A15-2-01	PH	pH	7.1	0.851258349
SW-A15-3-01	PH	pH	7.12	0.852479994
SW-B16-1-01	PH	pH	7.11	0.851869601
SW-A15-1-01	PH	pH	7.09	0.850646235
SW-D14-5-01	PH	pH	7.4	0.86923172
SW-D14-6-01	PH	pH	7.36	0.866877814

Average of Logarithmic Values = 0.812404422202534
Log Average = 6.49238733981427

Pentachlorophenol Criteria Calculation (ug/l)

X	e^X	Acute Value SWQC (CMC)	X	e^X	Chronic Value SWQC (CCC)
1.69484928	5.45	**5.45**	1.234849277	3.44	**3.44**

Table 5-4

Surface Water - Calculated Logarithmic Values for pH and Calculated Pentachlorophenol Criteria
SW/SD - SI
Kenvil Works Facility, New Jersey

Aquatic Life Criteria Calculations for Pentachlorophenol
Equation Utilized to calculate Acute Aquatic Life Criteria: CMC = exp(1.005(pH) - 4.830)
Equation Utilized to calculate Chronic Aquatic Life Criteria: CCC = exp(1.005(pH) - 5.290)

Central Drainage System				
Sample Location	Constituent	Units	Result	Logarithmic Value per Sample
SW-F11-1-01	pH	PH	6.95	0.841984805
SW-F11-2-01	pH	PH	6.39	0.805500858
SW-E12-3-01	pH	PH	5.24	0.719331287
SW-D11-1-01	pH	PH	6.74	0.828659897
SW-E11-1-01	pH	PH	6.82	0.833784375
SW-E10-1-01	pH	PH	6.45	0.809559715
SW-E14-2-01	pH	PH	7.42	0.870403905
SW-C9-1-01	pH	PH	6.6	0.819543936
SW-B8-1-01	pH	PH	6.67	0.824125834
SW-D14-2-01	pH	PH	6.61	0.820201459
SW-C12-2-01	pH	PH	6.95	0.841984805
SW-D13-1-01	pH	PH	6.95	0.841984805
SW-D13-2-01	pH	PH	7.03	0.846955325
SW-D13-3-01	pH	PH	7.17	0.855519156
SW-D13-4-01	pH	PH	7.19	0.85672889
SW-D13-5-01	pH	PH	6.46	0.810232518
SW-D13-6-01	pH	PH	7.06	0.848804701
SW-D14-1-01	pH	PH	6.77	0.830588669
SW-E11-4-01	pH	PH	6.32	0.800717078
SW-E14-1-01	pH	PH	7.59	0.880241776
SW-D12-2-01	pH	PH	7.55	0.877946952
SW-D12-4-01	pH	PH	6.74	0.828659897
SW-D12-3-01	pH	PH	6.85	0.835690571
SW-D12-1-01	pH	PH	6.74	0.828659897
SW-E12-1-01	pH	PH	7.17	0.855519156
SW-E12-2-01	pH	PH	7.03	0.846955325
SW-E11-3-01	pH	PH	6.92	0.840106094
SW-E11-2-01	pH	PH	6.62	0.820857989

Average of Logarithmic Values = 0.832901774025691
Log Average = 6.80615404004323

Pentachlorophenol Criteria Calculation (ug/l)					
X	e^X	Acute Value SWQC (CMC)	X	e^X	Chronic Value SWQC (CCC)
2.01018481	7.46	**7.46**	1.55018481	4.71	**4.71**

Table 5-4

Surface Water - Calculated Logarithmic Values for pH and Calculated Pentachlorophenol Criteria
SW/SD - SI
Kenvil Works Facility, New Jersey

Aquatic Life Criteria Calculations for Pentachlorophenol
Equation Utilized to calculate Acute Aquatic Life Criteria: CMC = exp(1.005(pH) - 4.830)
Equation Utilized to calculate Chronic Aquatic Life Criteria: CCC = exp(1.005(pH) - 5.290)

Eastern Drainage System

Sample Location	Constituent	Units	Result	Logarithmic Value per Sample
SW-G12-2-01	PH	pH	7.19	0.85672889
SW-H12-3-01	PH	pH	7.61	0.881384657
SW-H12-2-01	PH	pH	7.87	0.895974732
SW-G12-3-01	PH	pH	7	0.84509804
SW-H12-1-01	PH	pH	6.64	0.822168079
SW-I11-2-01	PH	pH	7.23	0.859138297
SW-F13-1-01	PH	pH	7.39	0.868644438
SW-F14-1-01	PH	pH	7.49	0.874481818
SW-F14-2-01	PH	pH	7.59	0.880241776
SW-G12-1-01	PH	pH	6.98	0.843855423
SW-H11-1-01	PH	pH	6.81	0.833147112
SW-H7-1-01	PH	pH	7.75	0.889301703
SW-H7-2-01	PH	pH	7.68	0.88536122
SW-H8-2-01	PH	pH	7.72	0.8876173
SW-H8-3-01	PH	pH	7.62	0.881954971
SW-H8-4-01	PH	pH	7.68	0.88536122
SW-I10-1-01	PH	pH	6.62	0.820857989
SW-I11-1-01	PH	pH	7.5	0.875061263
SW-I5-1-01	PH	pH	7.56	0.878521796
SW-I5-2-01	PH	pH	7.63	0.882524538
SW-I6-1-01	PH	pH	7.75	0.889301703

Average of Logarithmic Values = 0.868415569797786
Log Average = 7.38610657417491

Pentachlorophenol Criteria Calculation (ug/l)

X	e^X	Acute Value SWQC (CMC)	X	e^X	Chronic Value SWQC (CCC)
2.59303711	13.37	**13.37**	2.133037107	8.44	**8.44**

Table 5-4

Surface Water - Calculated Logarithmic Values for pH and Calculated Pentachlorophenol Criteria
SW/SD - SI
Kenvil Works Facility, New Jersey

Aquatic Life Criteria Calculations for Pentachlorophenol
Equation Utilized to calculate Acute Aquatic Life Criteria: CMC = exp(1.005(pH) - 4.830)
Equation Utilized to calculate Chronic Aquatic Life Criteria: CCC = exp(1.005(pH) - 5.290)

Duck Pond and Tributaries Drainage System				
Sample Location	Constituent	Units	Result	Logarithmic Value per Sample
SW-L5-2-01	PH	pH	6.32	0.800717078
SW-L5-3-01	PH	pH	6.49	0.812244697
SW-J5-2-01	PH	pH	7.17	0.855519156
SW-L5-1-01	PH	pH	7.42	0.870403905
SW-N5-2-01	PH	pH	5.61	0.748962861
SW-M5-1-01	PH	pH	5.34	0.727541257
SW-N5-4-01	PH	pH	4.47	0.650307523
SW-N5-5-01	PH	pH	5.13	0.710117365
SW-N5-1-01	PH	pH	5.28	0.722633923
SW-N5-3-01	PH	pH	5.19	0.715167358
SW-K5-2-01	PH	pH	6.9	0.838849091
SW-M7-1-01	PH	pH	7.11	0.851869601
SW-L6-1-01	PH	pH	7.16	0.854913022
SW-M5-2-01	PH	pH	7.71	0.887054378
SW-M5-3-01	PH	pH	7.53	0.876794976
SW-M6-1-01	PH	pH	7.33	0.865103975
SW-M6-2-01	PH	pH	7.38	0.868056362
SW-M6-3-01	PH	pH	7.17	0.855519156

Average of Logarithmic Values = 0.806209760172157
Log Average = 6.40043896054469

Pentachlorophenol Criteria Calculation (ug/l)					
X	e^X	Acute Value SWQC (CMC)	X	e^X	Chronic Value SWQC (CCC)
1.60244116	4.97	**4.97**	1.142441155	3.13	**3.13**

Table 5-4

Surface Water - Calculated Logarithmic Values for pH and Calculated Pentachlorophenol Criteria
SW/SD - SI
Kenvil Works Facility, New Jersey

Aquatic Life Criteria Calculations for Pentachlorophenol
Equation Utilized to calculate Acute Aquatic Life Criteria: CMC = exp(1.005(pH) - 4.830)
Equation Utilized to calculate Chronic Aquatic Life Criteria: CCC = exp(1.005(pH) - 5.290)

Miscellaneous Ponds Drainage System

Sample Location	Constituent	Units	Result	Logarithmic Value per Sample
SW-O5-2-01	PH	pH	4.28	0.631443769
SW-K11-1-01	PH	pH	7.25	0.860338007
SW-H5-1-01	PH	pH	7.6	0.880813592
SW-P4-1-01	PH	pH	5.7	0.755874856
SW-P4-2-01	PH	pH	4.93	0.692846919
SW-Q4-1-01	PH	pH	4.66	0.668385917
SW-R4-1-01	PH	pH	4.87	0.687528961
SW-N7-6-01	PH	pH	5.65	0.752048448
SW-N7-7-01	PH	pH	6.05	0.781755375
SW-M7-2-01	PH	pH	6.91	0.839478047
SW-K4-1-01	PH	pH	6.86	0.836324116
SW-K5-1-01	PH	pH	6.57	0.81756537
SW-N7-5-01	PH	pH	6.53	0.814913181
SW-N7-2-01	PH	pH	6.6	0.819543936
SW-N7-3-01	PH	pH	6.5	0.812913357
SW-N7-4-01	PH	pH	6.19	0.791690649
SW-N7-1-01	PH	pH	6.61	0.820201459
SW-K5-4-01	PH	pH	6.31	0.800029359
SW-K5-3-01	PH	pH	6.04	0.781036939
SW-O4-1-01	PH	pH	6.31	0.800029359
SW-O4-2-01	PH	pH	5.87	0.768638101
SW-O4-3-01	PH	pH	5.96	0.77524626
SW-O4-4-01	PH	pH	5.9	0.770852012
SW-O4-5-01	PH	pH	5.86	0.767897616
SW-O4-6-01	PH	pH	5.78	0.761927838
SW-O4-9-01	PH	pH	7.22	0.858537198
SW-O4-10-01	PH	pH	5.8	0.763427994
SW-O5-1-01	PH	pH	4.78	0.679427897

Average of Logarithmic Values = 0.778239876061436
Log Average = 6.0012245339272

Pentachlorophenol Criteria Calculation (ug/l)

X	e^X	Acute Value SWQC (CMC)	X	e^X	Chronic Value SWQC (CCC)
1.20123066	3.32	**3.32**	0.741230657	2.1	**2.1**

CMC = Criterion Maximum Concentration
CCC = Criterion Continous Concentration

SWQC = Surface Water Quality Criteria. SWQC values for pentachlorophenol were derived from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Table 5-5

List of Sediment Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Analyzed Constituent	Source of Criteria Utilized
PP VOCS	XYLENES, TOTAL	FSSG
	VINYL CHLORIDE	FSSG
	TRICHLOROFLUOROMETHANE	FSSG
	TRICHLOROETHYLENE (TCE)	FSSG
	trans-1,3-DICHLOROPROPENE	FSSG
	trans-1,2-DICHLOROETHENE	FSSG
	TOLUENE	FSSG
	TETRACHLOROETHYLENE(PCE)	FSSG
	n-BUTYL ETHER	FSSG
	METHYLENE CHLORIDE	FSSG
	METHANOL	FSSG
	ETHYLBENZENE	FSSG
	ETHANOL	FSSG
	Di-n-propyl ether (1,1'-oxybis-Propane)	FSSG
	DIETHYL ETHER (ETHYL ETHER)	FSSG
	DIBROMOCHLOROMETHANE	FSSG
	cis-1,3-DICHLOROPROPENE	FSSG
	cis-1,2-DICHLOROETHYLENE	FSSG
	CHLOROMETHANE	FSSG
	CHLOROFORM	FSSG
	CHLOROETHANE	FSSG
	CHLOROBENZENE	FSSG
	CARBON TETRACHLORIDE	FSSG
	BROMOMETHANE	FSSG
	BROMOFORM	FSSG
	BROMODICHLOROMETHANE	FSSG
	BENZENE	FSSG
	AMYL ALCOHOL	FSSG
	ACRYLONITRILE	FSSG
	ACROLEIN	FSSG
	2-CHLOROETHYL VINYL ETHER	FSSG
	1,2-DICHLOROPROPANE	FSSG
	1,2-DICHLOROETHANE	FSSG
	1,1-DICHLOROETHENE	FSSG
	1,1-DICHLOROETHANE	FSSG
	1,1,2-TRICHLOROETHANE	FSSG
	1,1,2,2-TETRACHLOROETHANE	FSSG
	1,1,1-TRICHLOROETHANE	FSSG

Table 5-5

List of Sediment Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Analyzed Constituent	Source of Criteria Utilized
PP SVOCS	PYRENE	FSSG
	PYRENE	FSSG
	PYRENE	FSSG
	PYRENE	FSSG
	PHENOL	FSSG
	PHENANTHRENE	FSSG
	PHENANTHRENE	FSSG
	PHENANTHRENE	FSSG
	PHENANTHRENE	FSSG
	PENTACHLOROPHENOL	FSSG
	N-NITROSODIPHENYLAMINE	FSSG
	N-NITROSODI-n-PROPYLAMINE	FSSG
	N-NITROSODIMETHYLAMINE	FSSG
	NITROBENZENE	FSSG
	NAPHTHALENE	FSSG
	NAPHTHALENE	FSSG
	NAPHTHALENE	FSSG
	NAPHTHALENE	FSSG
	ISOPHORONE	FSSG
	INDENO(1,2,3-c,d)PYRENE	FSSG
	HEXACHLOROETHANE	FSSG
	HEXACHLOROCYCLOPENTADIENE	FSSG
	HEXACHLOROBUTADIENE	FSSG
	HEXACHLOROBENZENE	FSSG
	FLUORENE	FSSG
	FLUORENE	FSSG
	FLUORENE	FSSG
	FLUORENE	FSSG
	FLUORANTHENE	FSSG
	FLUORANTHENE	FSSG
	FLUORANTHENE	FSSG
	FLUORANTHENE	FSSG
	DI-n-OCTYLPHTHALATE	FSSG
	DI-n-BUTYL PHTHALATE	FSSG
	DIMETHYL PHTHALATE	FSSG
	DIETHYL PHTHALATE	FSSG
	DIBENZ(a,h)ANTHRACENE	FSSG
	DIBENZ(a,h)ANTHRACENE	FSSG
	DIBENZ(a,h)ANTHRACENE	FSSG
	DIBENZ(a,h)ANTHRACENE	FSSG
	CHRYSENE	FSSG
	CHRYSENE	FSSG
PP SVOCs cont'd	CHRYSENE	FSSG

Table 5-5

List of Sediment Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Analyzed Constituent	Source of Criteria Utilized
	CHRYSENE	FSSG
	bis(2-ETHYLHEXYL) PHTHALATE	FSSG
	bis(2-CHLOROISOPROPYL) ETHER	FSSG
	bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	FSSG
	bis(2-CHLOROETHOXY) METHANE	FSSG
	BENZYL BUTYL PHTHALATE	FSSG
	BENZO(k)FLUORANTHENE	FSSG
	BENZO(k)FLUORANTHENE	FSSG
	BENZO(k)FLUORANTHENE	FSSG
	BENZO(k)FLUORANTHENE	FSSG
	BENZO(g,h,i)PERYLENE	FSSG
	BENZO(g,h,i)PERYLENE	FSSG
	BENZO(g,h,i)PERYLENE	FSSG
	BENZO(g,h,i)PERYLENE	FSSG
	BENZO(b)FLUORANTHENE	FSSG
	BENZO(a)PYRENE	FSSG
	BENZO(a)PYRENE	FSSG
	BENZO(a)PYRENE	FSSG
	BENZO(a)PYRENE	FSSG
	BENZO(a)ANTHRACENE	FSSG
	BENZO(a)ANTHRACENE	FSSG
	BENZO(a)ANTHRACENE	FSSG
	BENZO(a)ANTHRACENE	FSSG
	BENZIDINE	FSSG
	ANTHRACENE	FSSG
	ANTHRACENE	FSSG
	ANTHRACENE	FSSG
	ANTHRACENE	FSSG
	ACENAPHTHYLENE	FSSG
	ACENAPHTHYLENE	FSSG
	ACENAPHTHYLENE	FSSG
	ACENAPHTHENE	FSSG
	ACENAPHTHENE	FSSG
	ACENAPHTHENE	FSSG
	4-NITROPHENOL	FSSG
	4-CHLOROPHENYL PHENYL ETHER	FSSG
	4-CHLORO-3-METHYLPHENOL	FSSG
	4-BROMOPHENYL PHENYL ETHER	FSSG
	4,6-DINITRO-2-METHYLPHENOL	FSSG
	3,3'-DICHLOROBENZIDINE	FSSG
	2-NITROPHENOL	FSSG
PP SVOCs cont'd	2-CHLOROPHENOL	FSSG
	2-CHLORONAPHTHALENE	FSSG

Table 5-5

List of Sediment Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Analyzed Constituent	Source of Criteria Utilized
	2,6-DINITROTOLUENE	FSSG
	2,4-DINITROTOLUENE	FSSG
	2,4-DINITROPHENOL	FSSG
	2,4-DIMETHYLPHENOL	FSSG
	2,4-DICHLOROPHENOL	FSSG
	2,4,6-TRICHLOROPHENOL	FSSG
	1,4-DICHLOROBENZENE	FSSG
	1,3-DICHLOROBENZENE	FSSG
	1,2-DIPHENYLHYDRAZINE	FSSG
	1,2-DICHLOROBENZENE	FSSG
	1,2,4-TRICHLOROBENZENE	FSSG
PP METALS	ZINC	FSSG
	THALLIUM	FSSG
	SILVER	FSSG
	SELENIUM	FSSG
	NICKEL	FSSG
	MERCURY	FSSG
	LEAD	FSSG
	COPPER	FSSG
	CHROMIUM, TOTAL	FSSG
	CADMIUM	FSSG
	BERYLLIUM	FSSG
	ARSENIC	FSSG
	ANTIMONY	FSSG

Table 5-5

List of Sediment Constituents Analyzed per Analytical Group
Including Source for Criteria/Standards Utilized
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Analyzed Constituent	Source of Criteria Utilized
GENERAL CHEMISTRY	TOTAL ORGANIC CARBON	FSSG
	SOLIDS, PERCENT	FSSG
	SIEVE, NO. 50, PERCENT PASSING	FSSG
	SIEVE, NO. 30, PERCENT PASSING	FSSG
	SIEVE, NO. 16, PERCENT PASSING	FSSG
	SIEVE, NO. 100, PERCENT PASSING	FSSG
	Sieve, 3/4 inch, Percent Passing	FSSG
	Sieve, 1.5 inch, Percent Passing	FSSG
	SIEVE NO. 4, PERCENT PASSING	FSSG
	SIEVE NO. 200, PERCENT PASSING	FSSG
	MOISTURE, PERCENT	FSSG
E&E	TETRYL	FSSG
	PERCHLORATE	FSSG
	PENTAERYTHRITOL TETRANITRATE	FSSG
	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	FSSG
	NITROGLYCERIN	FSSG
	NITROCELLULOSE	FSSG
	NITROBENZENE	FSSG
	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	FSSG
	4-NITROTOLUENE	FSSG
	4-AMINO-2,6-DINITROTOLUENE	FSSG
	3-NITROTOLUENE	FSSG
	2-NITROTOLUENE	FSSG
	2-AMINO-4,6-DINITROTOLUENE	FSSG
	2,6-DINITROTOLUENE	FSSG
	2,4-DINITROTOLUENE	FSSG
	2,4,6-TRINITROTOLUENE	FSSG
	1,4-DINITROBENZENE	FSSG
	1,3-DINITROBENZENE	FSSG
	1,3,5-TRINITROBENZENE	FSSG
	1,2-DINITROBENZENE	FSSG

PP VOCs = Priority Pollutant List Volatile Organic Constituents
PP SVOCs = Priority Pollutant List Semi-Volatile Organic Constituents
PP Metals = Priority Pollutant List Metals
E&E = Energetic and Explosive Constituents
FSSG = Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL) and/or Severe Effects Level
NS = No Standard

Table 5-6

Sediment - Detected Constituents without FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Analytical Methodology	LEL	SEL	Number of Sediment Samples with Detected Constituents
VOC	TETRACHLOROETHYLENE(PCE)	SW8260B	450	NS	2
SVOC	2,4-DINITROTOLUENE	SW8270C	NS	NS	15
SVOC	2,6-DINITROTOLUENE	SW8270C	NS	NS	9
SVOC	4,6-DINITRO-2-METHYLPHENOL	SW8270C	NS	NS	3
SVOC	BENZO(b)FLUORANTHENE	SW8270C	NS	NS	89
SVOC	BENZYL BUTYL PHTHALATE	SW8270C	NS	NS	1
SVOC	bis(2-ETHYLHEXYL) PHTHALATE	SW8270C	NS	NS	40
SVOC	DIETHYL PHTHALATE	SW8270C	NS	NS	10
SVOC	DIMETHYL PHTHALATE	SW8270C	NS	NS	1
SVOC	DI-n-BUTYL PHTHALATE	SW8270C	NS	NS	25
SVOC	DI-n-OCTYLPHTHALATE	SW8270C	NS	NS	1
SVOC	INDENO(1,2,3-c,d)PYRENE	SW8270C	NS	NS	65
SVOC	NITROBENZENE	SW8270C	NS	NS	4
SVOC	N-NITROSODIPHENYLAMINE	SW8270C	NS	NS	44
METALS	ANTIMONY	SW6010B	NS	NS	42
METALS	BERYLLIUM	SW6010B	NS	NS	143
METALS	METHANOL	SW8015B	NS	NS	3
METALS	SELENIUM	SW6010B	NS	NS	59
METALS	THALLIUM	SW6010B	NS	NS	27
E&E	1,3,5-TRINITROBENZENE	SW8330	NS	NS	1
E&E	2,4,6-TRINITROTOLUENE	SW8330	NS	NS	16
E&E	2,4-DINITROTOLUENE	SW8330	NS	NS	7
E&E	2,6-DINITROTOLUENE	SW8330	NS	NS	3
E&E	2-AMINO-4,6-DINITROTOLUENE	SW8330	NS	NS	6
E&E	4-AMINO-2,6-DINITROTOLUENE	SW8330	NS	NS	7
E&E	HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	SW8330	NS	NS	1
E&E	NITROBENZENE	SW8330	NS	NS	3
E&E	NITROCELLULOSE	IAAP	NS	NS	20

Table 5-6

Sediment - Detected Constituents without FSSG
SW/SD - SI
Kenvil Works Facility, New Jersey

Analytical Group	Constituent	Analytical Methodology	LEL	SEL	Number of Sediment Samples with Detected Constituents
E&E	NITROGLYCERIN	SW8330	NS	NS	3
E&E	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	SW8330	NS	NS	1
E&E	PENTAERYTHRITOL TETRANITRATE	SW8330	NS	NS	1

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
NS = No Standard
VOC = Volatile Organic Constituent
SVOC = Semi-Volatile Organic Constituent
E&E = Energetic and Explosive Constituent

Table 5-7

Sediment - Calculated Logarithmic Values for Total Organic Carbon and Calculated PAH SEL Values
SW/SD - SI
Kenvil Works Facility, New Jersey

Streams Surface Water Feature Type				
Sample Location	**Constituent**	**Result**	**Units**	**Logarithmic Value per Sample**
SD-A15-1-01	TOC	3800	MG/KG	3.579783597
SD-B16-1-01	TOC	4400	MG/KG	3.643452676
SD-B8-1-01	TOC	4800	MG/KG	3.681241237
SD-C9-1-01	TOC	17200	MG/KG	4.235528447
SD-E11-2-01	TOC	10200	MG/KG	4.008600172
SD-E16-3-01	TOC	23400	MG/KG	4.369215857
SD-F11-1-01	TOC	181000	MG/KG	5.257678575
SD-F11-2-01	TOC	14800	MG/KG	4.170261715
SD-G12-2-01	TOC	19300	MG/KG	4.285557309
SD-H12-2-01	TOC	22100	MG/KG	4.344392274
SD-H12-3-01	TOC	11500	MG/KG	4.06069784
SD-H7-1-01	TOC	10400	MG/KG	4.017033339
SD-H7-2-01	TOC	11200	MG/KG	4.049218023
SD-H8-4-01	TOC	13600	MG/KG	4.133538908
SD-I10-2-01	TOC	12200	MG/KG	4.086359831
SD-I11-1-01	TOC	14600	MG/KG	4.164352856
SD-I5-1-01	TOC	14000	MG/KG	4.146128036
SD-I5-2-01	TOC	11200	MG/KG	4.049218023
SD-I6-1-01	TOC	19300	MG/KG	4.285557309
SD-J5-2-01	TOC	79000	MG/KG	4.897627091
SD-K5-2-01	TOC	122000	MG/KG	5.086359831
SD-L5-1-01	TOC	102000	MG/KG	5.008600172

Average of Logarithmic Values = 4.25086600575187
Log Average = 17818 mg/kg

Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-A15-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-A15-2-01 (0.5-1 ft. bgs) 04/05/2001	SW-A15-3-01 (0.5-1 ft. bgs) 04/05/2001	SW-B14-2-01 (0.5-1 ft. bgs) 04/11/2001	SW-B15-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-B15-2-01 (0.5-1 ft. bgs) 04/05/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1J	3J	1U	4J	4J
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000UJ	1000U	1000UJ	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000UJ	1000U	1000UJ	1000U	1000U	1000U
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	**6**	**6**	1U	**6**	**5**
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U

Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-A15-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-A15-2-01 (0.5-1 ft. bgs) 04/05/2001	SW-A15-3-01 (0.5-1 ft. bgs) 04/05/2001	SW-B14-2-01 (0.5-1 ft. bgs) 04/11/2001	SW-B15-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-B15-2-01 (0.5-1 ft. bgs) 04/05/2001
Volatile Organic Constituents								
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1J	1J
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less than the practical quantitation limit, but greater than zero

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-C15-1-01 (0.5-1 ft. bgs) 04/11/2001	SW-C15-2-01 (0.5-1 ft. bgs) 04/04/2001	SW-D14-3-01 (0.5-1 ft. bgs) 04/10/2001	SW-D14-4-01 (0.5-1 ft. bgs) 04/10/2001	SW-D14-5-01 (0.5-1 ft. bgs) 04/11/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1UJ
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1UJ
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1UJ
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1UJ
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1UJ
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1UJ
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1UJ
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2UJ
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40UJ
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4UJ
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1UJ
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1UJ
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1UJ
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2UJ
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1UJ
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1UJ
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2UJ
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1UJ
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2UJ
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1UJ
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1UJ
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000UJ	1000U	1000U	1000U	1000U	1000UJ
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1UJ
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1UJ
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2UJ
n-BUTYL ETHER	UG/L	NS	1000UJ	1000U	1000U	1000U	1000U	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1UJ
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1UJ
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1UJ

Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-C15-1-01 (0.5-1 ft. bgs) 04/11/2001	SW-C15-2-01 (0.5-1 ft. bgs) 04/04/2001	SW-D14-3-01 (0.5-1 ft. bgs) 04/10/2001	SW-D14-4-01 (0.5-1 ft. bgs) 04/10/2001	SW-D14-5-01 (0.5-1 ft. bgs) 04/11/2001
Volatile Organic Constituents								
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1UJ
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1UJ
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2UJ
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1UJ
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1UJ

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

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* = Value obtained from a 1:5 dilution

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ft. bgs = Feet below ground surface

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Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-6-01 (0.5-1 ft. bgs) 04/12/2001	SW-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SW-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SW-D15-1-01 (0.5-1 ft. bgs) 04/04/2001	SW-E14-3-01 (0.5-1 ft. bgs) 04/10/2001	SW-E15-1-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1UJ	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1UJ	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1UJ	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1UJ	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1UJ	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1UJ	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1UJ	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2UJ	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40UJ	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4UJ	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1UJ	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1UJ	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1UJ	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2UJ	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1UJ	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1UJ	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2UJ	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1UJ	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2UJ	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1UJ	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1UJ	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000UJ	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1UJ	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1UJ	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2UJ	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000UJ	1000U	1000U	1000U	1000U	1000U
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1UJ	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1UJ	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1UJ	1U	1U	1U	1U	1U

Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-6-01 (0.5-1 ft. bgs) 04/12/2001	SW-D14-7-01 (0.5-1 ft. bgs) 04/11/2001	SW-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SW-D15-1-01 (0.5-1 ft. bgs) 04/04/2001	SW-E14-3-01 (0.5-1 ft. bgs) 04/10/2001	SW-E15-1-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents								
trans-1,3-DICHLOROPROPENE	UG/L	NS	1UJ	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1UJ	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2UJ	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1UJ	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1UJ	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less than the practical quantitation limit, but greater than zero

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Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E15-2-01 (0.5-1 ft. bgs) 04/10/2001	SW-E15-3-01 (0.5-1 ft. bgs) 04/10/2001	SW-E16-1-01 (0.5-1 ft. bgs) 04/10/2001	SW-E16-2-01 (0.5-1 ft. bgs) 04/10/2001	SW-E16-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	**3J**	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	3J	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	2J	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000U
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U

Table 5-8

Surface Water Analytical Results - Western Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E15-2-01 (0.5-1 ft. bgs) 04/10/2001	SW-E15-3-01 (0.5-1 ft. bgs) 04/10/2001	SW-E16-1-01 (0.5-1 ft. bgs) 04/10/2001	SW-E16-2-01 (0.5-1 ft. bgs) 04/10/2001	SW-E16-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents							
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1J	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less than the practical quantitation limit, but greater than zero

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Table 5-9

Surface Water Analytical Results - Western Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-A15-1-01 (0-1 ft. bgs) 04/05/2001	SW-A15-2-01 (0-1 ft. bgs) 04/05/2001	SW-A15-3-01 (0-1 ft. bgs) 04/05/2001	SW-B14-2-01 (0-0.5 ft. bgs) 04/11/2001	SW-B15-1-01 (0-1 ft. bgs) 04/05/2001	SW-B15-2-01 (0-1 ft. bgs) 04/05/2001	SW-B16-1-01 (0-0.75 ft. bgs) 04/05/2001	SW-C15-1-01 (0-1.5 ft. bgs) 04/11/2001
Semi-Volatile Organic Constituents										
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
2,4-DINITROPHENOL	UG/L	69.7	22U	19U	19U	19U	19U	20U	19U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
2-CHLOROPHENOL	UG/L	122	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
2-NITROPHENOL	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
4-NITROPHENOL	UG/L	NS	11U	9U	9U	10U	9U	10U	9U	10U
ACENAPHTHENE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
ACENAPHTHYLENE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
ANTHRACENE	UG/L	9570	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
BENZIDINE	UG/L	0.00012	22U	19U	19U	19U	19U	20U	19U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U	2U	2U	2U

Table 5-9

Surface Water Analytical Results - Western Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-A15-1-01 (0-1 ft. bgs) 04/05/2001	SW-A15-2-01 (0-1 ft. bgs) 04/05/2001	SW-A15-3-01 (0-1 ft. bgs) 04/05/2001	SW-B14-2-01 (0-0.5 ft. bgs) 04/11/2001	SW-B15-1-01 (0-1 ft. bgs) 04/05/2001	SW-B15-2-01 (0-1 ft. bgs) 04/05/2001	SW-B16-1-01 (0-0.75 ft. bgs) 04/05/2001	SW-C15-1-01 (0-1.5 ft. bgs) 04/11/2001
Semi-Volatile Organic Constituents										
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
FLUORENE	UG/L	1340	1U	0.9U	0.9U	NR	0.9U	1U	0.9U	NR
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
ISOPHORONE	UG/L	552	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
NAPHTHALENE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
NITROBENZENE	UG/L	16	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
PHENOL	UG/L	20900	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U
PYRENE	UG/L	797	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).
Bold = Indicates Concentration Exceeds SWQC
J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

N = Flashpoint not observed, heated to specifi
B = Indicates that the compound was found in
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface
U = Indicates that the compound was analyzec

Table 5-9

Surface Water Analytical Results - Western Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-C15-2-01 (0-1 ft. bgs) 04/04/2001	SW-D14-3-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-4-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-5-01 (0-0.5 ft. bgs) 04/11/2001	SW-D14-6-01 (0-0.5 ft. bgs) 04/12/2001	SW-D14-7-01 (0-1 ft. bgs) 04/11/2001	SW-D14-8-01 (0-1 ft. bgs) 04/11/2001	SW-D15-1-01 (0-1 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents										
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	19U	19U	19U	19U	19U	20U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	9U	10U	9U	9U	9U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
ANTHRACENE	UG/L	9570	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
BENZIDINE	UG/L	0.00012	20U	19U	19U	19U	19U	19U	20U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U	2U	2U	2U

Table 5-9

Surface Water Analytical Results - Western Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-C15-2-01 (0-1 ft. bgs) 04/04/2001	SW-D14-3-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-4-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-5-01 (0-0.5 ft. bgs) 04/11/2001	SW-D14-6-01 (0-0.5 ft. bgs) 04/12/2001	SW-D14-7-01 (0-1 ft. bgs) 04/11/2001	SW-D14-8-01 (0-1 ft. bgs) 04/11/2001	SW-D15-1-01 (0-1 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents										
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
FLUORENE	UG/L	1340	1U	NR	NR	0.9U	0.9U	NR	NR	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
ISOPHORONE	UG/L	552	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
NAPHTHALENE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
NITROBENZENE	UG/L	16	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
PHENOL	UG/L	20900	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U
PYRENE	UG/L	797	1U	0.9U	1U	0.9U	0.9U	0.9U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitatior

Table 5-9

Surface Water Analytical Results - Western Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-3-01 (0-2 ft. bgs) 04/10/2001	SW-E15-1-01 (0-1.5 ft. bgs) 04/10/2001	SW-E15-2-01 (0-1 ft. bgs) 04/10/2001	SW-E15-3-01 (0-1 ft. bgs) 04/10/2001	SW-E16-1-01 (0-0.5 ft. bgs) 04/10/2001	SW-E16-2-01 (0-1 ft. bgs) 04/10/2001	SW-E16-3-01 (0-1 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents									
1,2,4-TRICHLOROBENZENE	UG/L	30.6	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
1,2-DICHLOROBENZENE	UG/L	2520	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
1,3-DICHLOROBENZENE	UG/L	2620	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
1,4-DICHLOROBENZENE	UG/L	343	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
2,4-DIMETHYLPHENOL	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
2,4-DINITROPHENOL	UG/L	69.7	19U	19U	20U	19U	22U	19U	19U
2,4-DINITROTOLUENE	UG/L	0.11	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
2-CHLOROPHENOL	UG/L	122	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
2-NITROPHENOL	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
4-NITROPHENOL	UG/L	NS	9U	9U	10U	9U	11U	9U	9U
ACENAPHTHENE	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
ACENAPHTHYLENE	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
ANTHRACENE	UG/L	9570	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
BENZIDINE	UG/L	0.00012	19U	19U	20U	19U	22U	19U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
BENZO(a)PYRENE	UG/L	0.0028	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
BENZO(b)FLUORANTHENE	UG/L	0.031	0.9U	0.9U	1U	0.9U	**1J**	0.9U	0.9U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
BENZO(k)FLUORANTHENE	UG/L	0.031	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U	2U	2U

Table 5-9

Surface Water Analytical Results - Western Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-3-01 (0-2 ft. bgs) 04/10/2001	SW-E15-1-01 (0-1.5 ft. bgs) 04/10/2001	SW-E15-2-01 (0-1 ft. bgs) 04/10/2001	SW-E15-3-01 (0-1 ft. bgs) 04/10/2001	SW-E16-1-01 (0-0.5 ft. bgs) 04/10/2001	SW-E16-2-01 (0-1 ft. bgs) 04/10/2001	SW-E16-3-01 (0-1 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents									
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	0.9U	0.9U	1U	0.9U	**1J**	0.9U	0.9U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	0.9U	0.9U	1U	0.9U	2J	0.9U	0.9U
FLUORENE	UG/L	1340	NR	NR	NR	NR	NR	NR	NR
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
ISOPHORONE	UG/L	552	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
NAPHTHALENE	UG/L	NS	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
NITROBENZENE	UG/L	16	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	0.9U	0.9U	1U	0.9U	1J	0.9U	0.9U
PHENOL	UG/L	20900	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U
PYRENE	UG/L	797	0.9U	0.9U	1U	0.9U	2J	0.9U	0.9U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

J = Value is less than the practical quantitation limit, but greater than zero

n limit

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Table 5-10

Surface Water Analytical Results - Western Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-A15-1-01 (0-1 ft. bgs) 04/05/2001	SW-A15-2-01 (0-1 ft. bgs) 04/05/2001	SW-A15-3-01 (0-1 ft. bgs) 04/05/2001	SW-B14-2-01 (0-0.5 ft. bgs) 04/11/2001	SW-B15-1-01 (0-1 ft. bgs) 04/05/2001	SW-B15-2-01 (0-1 ft. bgs) 04/05/2001	SW-B16-1-01 (0-0.75 ft. bgs) 04/05/2001	SW-C15-1-01 (0-1.5 ft. bgs) 04/11/2001
Total Metals										
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.94U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	3.5U	5.3U	1.7U	4.6B	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	17.7B	19B	5.4B	15.3U	11B	2.4U	2.4U	9.5U
LEAD	UG/L	5	**13.1B**	**48.2**	8.8U	**14.7B**	**12.9B**	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U	0.026U
NICKEL	UG/L	516	5.2B	10.5B	1.6U	5.6B	5.4B	1.6U	1.6U	2.2B
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	75.4	73.8	15.3B	42	64.2	4B	3.2U	18.7B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-10

Surface Water Analytical Results - Western Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-C15-2-01 (0-1 ft. bgs) 04/04/2001	SW-D14-3-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-4-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-5-01 (0-0.5 ft. bgs) 04/11/2001	SW-D14-6-01 (0-0.5 ft. bgs) 04/12/2001	SW-D14-7-01 (0-1 ft. bgs) 04/11/2001	SW-D14-8-01 (0-1 ft. bgs) 04/11/2001	SW-D15-1-01 (0-1 ft. bgs) 04/04/2001
Total Metals										
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	1.6B	0.64U	0.64U	0.64U	0.64U	0.67U
CADMIUM	UG/L	10	0.64U	1.4B	0.95B	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	2.8B	1.7U	1.7U	1.7U	1.7U	4.9U
COPPER	UG/L	NS	2.4U	17.8U	17.3U	2.4U	2.4U	3.2U	8.9U	15.9B
LEAD	UG/L	5	8.8U	**29.9**	**25.8**	8.8U	8.8U	8.8U	8.8U	**31.5**
MERCURY	UG/L	0.144	0.026U	0.026U	0.028B	0.026U	0.026U	0.026U	0.026U	0.026B
NICKEL	UG/L	516	1.6U	7.1B	9.9B	1.6U	1.6U	1.6U	2B	6.7B
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	**10.9B**	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	3.4B	112	51.8	25.5	11.2B	5.6B	17.3B	84.7

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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N = Flashpoint not observed, heated to specific limit

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* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-10

Surface Water Analytical Results - Western Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-3-01 (0-2 ft. bgs) 04/10/2001	SW-E15-1-01 (0-1.5 ft. bgs) 04/10/2001	SW-E15-2-01 (0-1 ft. bgs) 04/10/2001	SW-E15-3-01 (0-1 ft. bgs) 04/10/2001	SW-E16-1-01 (0-0.5 ft. bgs) 04/10/2001	SW-E16-2-01 (0-1 ft. bgs) 04/10/2001	SW-E16-3-01 (0-1 ft. bgs) 04/10/2001
Total Metals									
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	6.1B	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	**5B**	**3.9B**	**14.7**	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	21.7	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	1B	0.66B	8.6B	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	13.7B	8.5B	31.8	1.7U	1.7U
COPPER	UG/L	NS	12.5U	2.4U	26.8	18.8U	94.2	2.4U	2.4U
LEAD	UG/L	5	**64**	8.8U	**130**	**83.3**	**308**	8.8U	8.8U
MERCURY	UG/L	0.144	0.026U	0.026U	0.026U	0.026U	**7.7**	0.026U	0.026U
NICKEL	UG/L	516	2.3B	1.6U	5.5B	12.5B	91.3	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	7.5B	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	31.5	3.2B	126	80.2	3330	5.5B	6.4B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-11

Surface Water Analytical Results - Western Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-A15-1-01 (0-1 ft. bgs) 04/05/2001	SW-A15-2-01 (0-1 ft. bgs) 04/05/2001	SW-A15-3-01 (0-1 ft. bgs) 04/05/2001	SW-B14-2-01 (0-0.5 ft. bgs) 04/11/2001	SW-B14-2-01 (0-0.5 ft. bgs) 05/09/2001	SW-B15-1-01 (0-1 ft. bgs) 04/05/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.72	NR	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	NR	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.43J	NR	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	3.51	NR	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	8.39	NR	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	NR	0.2U
NITROCELLULOSE	UG/L	NS	500UJ	500UJ	500UJ	NR	500U	500UJ
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	NR	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	4U	NR	4U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	NR	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-11

Surface Water Analytical Results - Western Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B15-2-01 (0-1 ft. bgs) 04/05/2001	SW-B16-1-01 (0-0.75 ft. bgs) 04/05/2001	SW-C15-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-C15-1-01 (0-1.5 ft. bgs) 05/09/2001	SW-C15-2-01 (0-1 ft. bgs) 04/04/2001	SW-D14-3-01 (0-0.5 ft. bgs) 04/10/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	5.9	NR	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	NR	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	1.11J	NR	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	3.71	NR	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	5.56	NR	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	NR	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500UJ	500UJ	NR	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	NR	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	NR	4U	4U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	NR	0.2U	0.2U

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Table 5-11

Surface Water Analytical Results - Western Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-4-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-5-01 (0-0.5 ft. bgs) 04/11/2001	SW-D14-5-01 (0-0.5 ft. bgs) 05/09/2001	SW-D14-6-01 (0-0.5 ft. bgs) 04/12/2001	SW-D14-7-01 (0-1 ft. bgs) 04/11/2001	SW-D14-7-01 (0-1 ft. bgs) 05/09/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	3.11	NR
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	NR	0.2U	0.2U	NR
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.41J	NR
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.33J	0.2U	NR	0.2U	0.67	NR
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.26J	NR	0.2U	0.2U	NR
NITROBENZENE	UG/L	16	0.2U	0.2U	NR	0.2U	0.2U	NR
NITROCELLULOSE	UG/L	NS	500U	NR	500U	500U	NR	500U
NITROGLYCERIN	UG/L	NS	120U	120U	NR	120U	120U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	NR	4U	4U	NR
TETRYL	UG/L	NS	0.2U	0.2U	NR	0.2U	0.2U	NR

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-11

Surface Water Analytical Results - Western Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-8-01 (0-1 ft. bgs) 04/11/2001	SW-D14-8-01 (0-1 ft. bgs) 05/09/2001	SW-D15-1-01 (0-1 ft. bgs) 04/04/2001	SW-E14-3-01 (0-2 ft. bgs) 04/10/2001	SW-E15-1-01 (0-1.5 ft. bgs) 04/10/2001	SW-E15-2-01 (0-1 ft. bgs) 04/10/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	1.85	NR	0.2U	0.2U	0.4J	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	NR	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	1.72	NR	0.2U	0.66	0.62	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	2.77	NR	0.2U	1	1.05	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	NR	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	NR	500U	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	NR	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	NR	0.2U	0.4U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	NR	4U	4U	4U	4U
TETRYL	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-11

Surface Water Analytical Results - Western Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E15-3-01 (0-1 ft. bgs) 04/10/2001	SW-E16-1-01 (0-0.5 ft. bgs) 04/10/2001	SW-E16-2-01 (0-1 ft. bgs) 04/10/2001	SW-E16-3-01 (0-1 ft. bgs) 04/10/2001
Energetic and Explosive Compounds						
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.86	0.91
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.3J
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.69	0.73
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	1.21	1.31
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	4U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-12

Surface Water Analytical Results - Western Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-A15-1-01 (0-1 ft. bgs) 04/05/2001	SW-A15-2-01 (0-1 ft. bgs) 04/05/2001	SW-A15-3-01 (0-1 ft. bgs) 04/05/2001	SW-B14-2-01 (0-0.5 ft. bgs) 04/11/2001	SW-B15-1-01 (0-1 ft. bgs) 04/05/2001	SW-B15-2-01 (0-1 ft. bgs) 04/05/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	4.92	5.03	4.75	11.67	6.82	7.2
pH	PH	NS	7.09	7.1	7.12	6.05	7.32	7.48

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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R = Rejected based on data validation

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ft. bgs = Feet below ground surface

Table 5-12

Surface Water Analytical Results - Western Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B16-1-01 (0-0.75 ft. bgs) 04/05/2001	SW-C15-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-C15-2-01 (0-1 ft. bgs) 04/04/2001	SW-D14-3-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-4-01 (0-0.5 ft. bgs) 04/10/2001	SW-D14-5-01 (0-0.5 ft. bgs) 04/11/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	4.96	11.17	8.15	11.73	10.7	10.5
pH	PH	NS	7.11	6.32	7.42	6.5	6.36	7.4

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-12

Surface Water Analytical Results - Western Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-6-01 (0-0.5 ft. bgs) 04/12/2001	SW-D14-7-01 (0-1 ft. bgs) 04/11/2001	SW-D14-8-01 (0-1 ft. bgs) 04/11/2001	SW-D15-1-01 (0-1 ft. bgs) 04/04/2001	SW-E14-3-01 (0-2 ft. bgs) 04/10/2001	SW-E15-1-01 (0-1.5 ft. bgs) 04/10/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	11.46	10.2	10.46	5.6	10.9	11.87
pH	PH	NS	7.36	7.19	7.19	7.35	7.28	7.38

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-12

Surface Water Analytical Results - Western Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E15-2-01 (0-1 ft. bgs) 04/10/2001	SW-E15-3-01 (0-1 ft. bgs) 04/10/2001	SW-E16-1-01 (0-0.5 ft. bgs) 04/10/2001	SW-E16-2-01 (0-1 ft. bgs) 04/10/2001	SW-E16-3-01 (0-1 ft. bgs) 04/10/2001
General Chemistry							
DISSOLVED OXYGEN	MG/L	NS	13.89	11.92	0	12.57	13
pH	PH	NS	7.52	7.31	0	6.99	6.93

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-13

Surface Water Analytical Results - Western Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-A15-1-01 (0-1 ft. bgs) 04/05/01	SW-A15-2-01 (0-1 ft. bgs) 04/05/01	SW-A15-3-01 (0-1 ft. bgs) 04/05/01	SW-B14-2-01 (0-0.5 ft. bgs) 04/11/01	SW-B15-1-01 (0-1 ft. bgs) 04/05/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.9	2.6	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	342.4	163.2	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	23.2	17.2	11.7B	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	1,032.5	160.8	3.4B	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.05	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	122.9	122.6	40	3.6B	4B	4.8B	3.2U
Semi-Volatile Organic Constituents								
PENTACHLOROPHENOL	UG/L	5.45	3.44	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NS = No Standard
ft. bgs = Feet below ground surface

Table 5-13

Surface Water Analytical Results - Western Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-B15-2-01 (0-1 ft. bgs) 04/05/01	SW-B16-1-01 (0-0.75 ft. bgs) 04/05/01	SW-C15-1-01 (0-1.5 ft. bgs) 04/11/01	SW-C15-2-01 (0-1 ft. bgs) 04/04/01	SW-D14-3-01 (0-0.5 ft. bgs) 04/10/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.9	2.6	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	342.4	163.2	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	23.2	17.2	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	1,032.5	160.8	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.05	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	9U	8.8U	8.8U
ZINC	UG/L	122.9	122.6	3.5B	3.2U	6.1B	3.2U	5.9B
Semi-Volatile Organic Constituents								
PENTACHLOROPHENOL	UG/L	5.45	3.44	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of itation limit Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicat
J = Value is less than the practical quantitation limit, but greater than zero
Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-13

Surface Water Analytical Results - Western Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-D14-4-01 (0-0.5 ft. bgs) 04/10/01	SW-D14-5-01 (0-0.5 ft. bgs) 04/11/01	SW-D14-6-01 (0-0.5 ft. bgs) 04/12/01	SW-D14-7-01 (0-1 ft. bgs) 04/11/01	SW-D14-8-01 (0-1 ft. bgs) 04/11/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.9	2.6	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	342.4	163.2	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	23.2	17.2	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	1,032.5	160.8	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.05	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	9.5U
ZINC	UG/L	122.9	122.6	4.7B	5.4B	4.9B	6.9B	4.8B
Semi-Volatile Organic Constituents								
PENTACHLOROPHENOL	UG/L	5.45	3.44	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

tes the pratical quantitation limit

U = Indicates that the compound was analyzed for but not det
J = Value is less than the practical quantitation limit, but great
Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated l
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-13

Surface Water Analytical Results - Western Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-D15-1-01 (0-1 ft. bgs) 04/04/01	SW-E14-3-01 (0-2 ft. bgs) 04/10/01	SW-E15-1-01 (0-1.5 ft. bgs) 04/10/01	SW-E15-2-01 (0-1 ft. bgs) 04/10/01	SW-E15-3-01 (0-1 ft. bgs) 04/10/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.9	2.6	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	342.4	163.2	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	23.2	17.2	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	1,032.5	160.8	2B	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.05	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	9U	11U	8.8U
ZINC	UG/L	122.9	122.6	6.6B	3.2U	3.8B	3.2U	3.2U
Semi-Volatile Organic Constituents								
PENTACHLOROPHENOL	UG/L	5.45	3.44	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

tected, number indicates the pratical quantitation limit

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blank.

U = Indicates that the compound was an

J = Value is less than the practical quant

Bold = Indicates Concentration Exceeds

N = Flashpoint not observed, heated to s

B = Indicates that the compound was fou

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-13

Surface Water Analytical Results - Western Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-E16-1-01 (0-0.5 ft. bgs) 04/10/01	SW-E16-2-01 (0-1 ft. bgs) 04/10/01	SW-E16-3-01 (0-1 ft. bgs) 04/10/01
Dissolved Metals						
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.9	2.6	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	342.4	163.2	1.7U	1.7U	1.7U
COPPER	UG/L	23.2	17.2	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U
NICKEL	UG/L	1,032.5	160.8	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U
SILVER	UG/L	0.05	NS	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U
ZINC	UG/L	122.9	122.6	4.4B	3.7B	5.1B
Semi-Volatile Organic Constituents						
PENTACHLOROPHENOL	UG/L	5.45	3.44	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

alyzed for but not detected, number indicates the pratical quantitation limit
itation limit, but greater than zero
SWQC
specific limit
und in the associated blank.

Table 5-14

Sediment Analytical Results - Western Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-B13-2-01 (0.5-1 ft. bgs) 05/01/2001	SD-B13-3-01 (0.5-1 ft. bgs) 05/01/2001	SD-B13-4-01 (0.5-1 ft. bgs) 05/01/2001	SD-B14-1-01 (0.5-1 ft. bgs) 04/12/2001	SD-B14-3-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
1,1-DICHLOROETHANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
1,1-DICHLOROETHENE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
1,2-DICHLOROETHANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	290U	280U	240U	270U	290U	640U
ACROLEIN	UG/KG	NS	NS	2900U	2800R	2400R	2700R	2900R	6400R
ACRYLONITRILE	UG/KG	NS	NS	590U	570U	480U	540U	580U	1300U
AMYL ALCOHOL	UG/KG	NS	NS	12000U	11000U	10000U	12000U	13000U	26000U
BENZENE	UG/KG	340	NS	150U	140U	120U	130U	140U	320U
BROMODICHLOROMETHANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
BROMOFORM	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
BROMOMETHANE	UG/KG	NS	NS	290U	280U	240U	270U	290U	640U
CARBON TETRACHLORIDE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
CHLOROBENZENE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
CHLOROETHANE	UG/KG	NS	NS	290U	280U	240U	270U	290U	640U
CHLOROFORM	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
CHLOROMETHANE	UG/KG	NS	NS	290U	280U	240U	270U	290U	640U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	12000U	11000U	10000U	12000U	13000UJ	26000UJ
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	12000U	11000U	10000U	12000U	13000U	26000U
ETHANOL	UG/KG	NS	NS	12000U	11000U	10000U	12000U	13000U	26000U
ETHYLBENZENE	UG/KG	1400	NS	150U	140U	120U	130U	140U	320U

Table 5-14

Sediment Analytical Results - Western Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-B13-2-01 (0.5-1 ft. bgs) 05/01/2001	SD-B13-3-01 (0.5-1 ft. bgs) 05/01/2001	SD-B13-4-01 (0.5-1 ft. bgs) 05/01/2001	SD-B14-1-01 (0.5-1 ft. bgs) 04/12/2001	SD-B14-3-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents									
METHANOL	UG/KG	NS	NS	12000U	11000U	10000U	12000U	13000U	26000U
METHYLENE CHLORIDE	UG/KG	NS	NS	290U	280U	240U	270U	290U	640U
n-BUTYL ETHER	UG/KG	NS	NS	12000U	11000U	10000U	12000U	13000UJ	26000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	150U	140U	120U	130U	140U	320U
TOLUENE	UG/KG	2500	NS	150U	140U	120U	130U	140U	320U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	150U	140U	120U	130U	140U	320U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	290U	280U	240U	270U	290U	640U
VINYL CHLORIDE	UG/KG	NS	NS	150U	140U	120U	130U	140U	320U
XYLENES, TOTAL	UG/KG	120	NS	150U	140U	120U	130U	140U	320U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-14

Sediment Analytical Results - Western Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-4-01 (0.5-1 ft. bgs) 04/12/2001	SD-C13-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-C14-1-01 (0.5-1 ft. bgs) 04/12/2001	SD-C14-2-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	260U	130U	130U	170U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	260U	130U	130U	170U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	260U	130U	130U	170U
1,1-DICHLOROETHANE	UG/KG	NS	NS	260U	130U	130U	170U
1,1-DICHLOROETHENE	UG/KG	NS	NS	260U	130U	130U	170U
1,2-DICHLOROETHANE	UG/KG	NS	NS	260U	130U	130U	170U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	260U	130U	130U	170U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	510U	270U	260U	340U
ACROLEIN	UG/KG	NS	NS	5100R	2700R	2600R	3400R
ACRYLONITRILE	UG/KG	NS	NS	1000U	540U	520U	670U
AMYL ALCOHOL	UG/KG	NS	NS	20000U	13000U	12000U	13000U
BENZENE	UG/KG	340	NS	260U	130U	130U	170U
BROMODICHLOROMETHANE	UG/KG	NS	NS	260U	130U	130U	170U
BROMOFORM	UG/KG	NS	NS	260U	130U	130U	170U
BROMOMETHANE	UG/KG	NS	NS	510U	270U	260U	340U
CARBON TETRACHLORIDE	UG/KG	NS	NS	260U	130U	130U	170U
CHLOROBENZENE	UG/KG	NS	NS	260U	130U	130U	170U
CHLOROETHANE	UG/KG	NS	NS	510U	270U	260U	340U
CHLOROFORM	UG/KG	NS	NS	260U	130U	130U	170U
CHLOROMETHANE	UG/KG	NS	NS	510U	270U	260U	340U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	260U	130U	130U	170U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	260U	130U	130U	170U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	20000UJ	13000U	12000UJ	13000UJ
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	260U	130U	130U	170U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	20000U	13000U	12000U	13000U
ETHANOL	UG/KG	NS	NS	20000U	13000U	12000U	13000U
ETHYLBENZENE	UG/KG	1400	NS	260U	130U	130U	170U

Table 5-14

Sediment Analytical Results - Western Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-4-01 (0.5-1 ft. bgs) 04/12/2001	SD-C13-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-C14-1-01 (0.5-1 ft. bgs) 04/12/2001	SD-C14-2-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents							
METHANOL	UG/KG	NS	NS	20000U	13000U	12000U	13000U
METHYLENE CHLORIDE	UG/KG	NS	NS	510U	270U	260U	340U
n-BUTYL ETHER	UG/KG	NS	NS	20000UJ	13000U	12000UJ	13000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	260U	130U	130U	170U
TOLUENE	UG/KG	2500	NS	260U	130U	130U	170U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	260U	130U	130U	170U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	260U	130U	130U	170U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	260U	130U	130U	170U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	510U	270U	260U	340U
VINYL CHLORIDE	UG/KG	NS	NS	260U	130U	130U	170U
XYLENES, TOTAL	UG/KG	120	NS	260U	130U	130U	170U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0-1.5 ft. bgs) 05/01/2001	SD-B13-2-01 (0-2 ft. bgs) 05/01/2001	SD-B13-3-01 (0-0.5 ft. bgs) 05/01/2001	SD-B13-4-01 (0-2 ft. bgs) 05/01/2001	SD-B14-1-01 (0-2 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	40U	38U	330U	390U	45U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	40U	38U	330U	390U	45U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	40U	38U	330U	390U	45U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	40U	38U	330U	390U	45U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	40U	38U	330U	390U	45U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	80U	77U	670U	790U	91U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	80U	77U	670U	790U	91U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	80U	77U	670U	790U	91U
2,4-DINITROPHENOL	UG/KG	NS	NS	800U	770U	6700U	7900U	910U
2,4-DINITROTOLUENE	UG/KG	NS	NS	160J	1000	27000	33000	840
2,6-DINITROTOLUENE	UG/KG	NS	NS	40U	1700	29000	900J	350J
2-CHLORONAPHTHALENE	UG/KG	NS	NS	40U	38U	330U	390U	45U
2-CHLOROPHENOL	UG/KG	NS	NS	40U	38U	330U	390U	45U
2-NITROPHENOL	UG/KG	NS	NS	80U	77U	670U	790U	91U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	80U	77U	670U	790U	91U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	200U	260J	1700U	2800J	500J
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	80U	77U	670U	790U	91U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	80U	77U	670U	790U	91U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	40U	38U	330U	390U	45U
4-NITROPHENOL	UG/KG	NS	NS	200U	200U	1700U	2000U	230U
ACENAPHTHENE	UG/KG	16	9	40U	38U	330U	390U	45U
ACENAPHTHYLENE	UG/KG	44	11	40U	38U	330U	390U	45U
ANTHRACENE	UG/KG	220	6400	40U	38U	330U	390U	45U
BENZIDINE	UG/KG	NS	NS	800U	770U	6700U	7900U	910U
BENZO(a)ANTHRACENE	UG/KG	320	25598	40U	38U	330U	390U	45U
BENZO(a)PYRENE	UG/KG	370	24906	40U	38U	330U	390U	47J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	40U	38U	330U	390U	85J
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	40U	38U	330U	390U	45U

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0-1.5 ft. bgs) 05/01/2001	SD-B13-2-01 (0-2 ft. bgs) 05/01/2001	SD-B13-3-01 (0-0.5 ft. bgs) 05/01/2001	SD-B13-4-01 (0-2 ft. bgs) 05/01/2001	SD-B14-1-01 (0-2 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents								
BENZO(k)FLUORANTHENE	UG/KG	240	23177	40U	38U	330U	390U	45U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	80U	77U	670U	790U	91U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	80U	77U	670U	790U	91U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	40U	38U	330U	390U	45U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	40U	38U	330U	390U	45U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	120J	77U	670U	790U	91U
CHRYSENE	UG/KG	340	7956	40U	38U	330U	390U	75J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	80U	77U	670U	790U	91U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	80U	77U	670U	790U	91U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	40U	38U	330U	390U	45U
DIETHYL PHTHALATE	UG/KG	NS	NS	80U	77U	670U	790U	91U
DIMETHYL PHTHALATE	UG/KG	NS	NS	80U	77U	670U	790U	91U
FLUORANTHENE	UG/KG	750	17642	40U	38U	420J	390U	130J
FLUORENE	UG/KG	190	2767	40U	38U	330U	390U	45U
HEXACHLOROBENZENE	UG/KG	20	24000	40U	38U	330U	390U	45U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	80U	77U	670U	790U	91U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	200U	200U	1700U	2000U	230U
HEXACHLOROETHANE	UG/KG	NS	NS	40U	38U	330U	390U	45U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	40U	38U	330U	390U	45U
ISOPHORONE	UG/KG	NS	NS	40U	38U	330U	390U	45U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	40U	38U	330U	390U	45U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	200U	77U	670U	790U	91U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	40U	38U	330U	390U	45U
NAPHTHALENE	UG/KG	160	36	40U	38U	330U	390U	45U
NITROBENZENE	UG/KG	NS	NS	40U	38U	3800	390U	45U
PENTACHLOROPHENOL	UG/KG	NS	NS	200U	200U	1700U	2000U	230U
PHENANTHRENE	UG/KG	560	16431	40U	38U	530J	390U	72J
PHENOL	UG/KG	NS	NS	80U	77U	670U	790U	91U

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0-1.5 ft. bgs) 05/01/2001	SD-B13-2-01 (0-2 ft. bgs) 05/01/2001	SD-B13-3-01 (0-0.5 ft. bgs) 05/01/2001	SD-B13-4-01 (0-2 ft. bgs) 05/01/2001	SD-B14-1-01 (0-2 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents								
PYRENE	UG/KG	490	14702	40U	38U	330U	390U	100J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-3-01 (0-2 ft. bgs) 04/12/2001	SD-B14-4-01 (0-2 ft. bgs) 04/12/2001	SD-C13-1-01 (0-2 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	86U	67U	42U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	86U	67U	42U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	86U	67U	42U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	86U	67U	42U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	86U	67U	42U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	180U	140U	85U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	180U	140U	85U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	180U	140U	85U
2,4-DINITROPHENOL	UG/KG	NS	NS	1800U	1400U	850U
2,4-DINITROTOLUENE	UG/KG	NS	NS	180U	140U	85U
2,6-DINITROTOLUENE	UG/KG	NS	NS	86U	67U	42U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	86U	67U	42U
2-CHLOROPHENOL	UG/KG	NS	NS	86U	67U	42U
2-NITROPHENOL	UG/KG	NS	NS	180U	140U	85U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	180U	140U	85U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	450U	350U	220U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	180U	140U	85U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	180U	140U	85U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	86U	67U	42U
4-NITROPHENOL	UG/KG	NS	NS	450U	350U	220U
ACENAPHTHENE	UG/KG	16	9	86U	67U	42U
ACENAPHTHYLENE	UG/KG	44	11	86U	67U	42U
ANTHRACENE	UG/KG	220	6400	86U	67U	42U
BENZIDINE	UG/KG	NS	NS	1800U	1400U	850U
BENZO(a)ANTHRACENE	UG/KG	320	25598	86U	67U	42U
BENZO(a)PYRENE	UG/KG	370	24906	86U	67U	42U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	86U	67U	42U
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	86U	67U	42U

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-3-01 (0-2 ft. bgs) 04/12/2001	SD-B14-4-01 (0-2 ft. bgs) 04/12/2001	SD-C13-1-01 (0-2 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents						
BENZO(k)FLUORANTHENE	UG/KG	240	23177	86U	67U	42U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	180U	140U	85U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	180U	140U	85U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	86U	67U	42U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	86U	67U	42U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	180U	140U	85U
CHRYSENE	UG/KG	340	7956	86U	67U	42U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	180U	140U	85U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	180U	140U	85U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	86U	67U	42U
DIETHYL PHTHALATE	UG/KG	NS	NS	180U	140U	85U
DIMETHYL PHTHALATE	UG/KG	NS	NS	180U	140U	85U
FLUORANTHENE	UG/KG	750	17642	86U	100J	42U
FLUORENE	UG/KG	190	2767	86U	67U	42U
HEXACHLOROBENZENE	UG/KG	20	24000	86U	67U	42U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	180U	140U	85U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	450U	350U	220U
HEXACHLOROETHANE	UG/KG	NS	NS	86U	67U	42U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	86U	67U	42U
ISOPHORONE	UG/KG	NS	NS	86U	67U	42U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	86U	67U	42U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	180U	140U	85U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	86U	67U	42U
NAPHTHALENE	UG/KG	160	36	86U	75J	42U
NITROBENZENE	UG/KG	NS	NS	86U	67U	42U
PENTACHLOROPHENOL	UG/KG	NS	NS	450U	350U	220U
PHENANTHRENE	UG/KG	560	16431	86U	67U	42U
PHENOL	UG/KG	NS	NS	180U	140U	85U

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-3-01 (0-2 ft. bgs) 04/12/2001	SD-B14-4-01 (0-2 ft. bgs) 04/12/2001	SD-C13-1-01 (0-2 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents						
PYRENE	UG/KG	490	14702	86U	92J	42U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
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E = Indicates that the concentration exceeded the calibration range of the instrument
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ft. bgs = Feet below ground surface

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C14-1-01 (0-2 ft. bgs) 04/12/2001	SD-C14-2-01 (0-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents					
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	40U	44U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	40U	44U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	40U	44U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	40U	44U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	40U	44U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	80U	89U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	80U	89U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	80U	89U
2,4-DINITROPHENOL	UG/KG	NS	NS	800U	890U
2,4-DINITROTOLUENE	UG/KG	NS	NS	510	250J
2,6-DINITROTOLUENE	UG/KG	NS	NS	130J	44U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	40U	44U
2-CHLOROPHENOL	UG/KG	NS	NS	40U	44U
2-NITROPHENOL	UG/KG	NS	NS	80U	89U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	80U	89U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	200U	230U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	80U	89U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	80U	89U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	40U	44U
4-NITROPHENOL	UG/KG	NS	NS	200U	230U
ACENAPHTHENE	UG/KG	16	9	40U	44U
ACENAPHTHYLENE	UG/KG	44	11	40U	44U
ANTHRACENE	UG/KG	220	6400	40U	44U
BENZIDINE	UG/KG	NS	NS	800U	890U
BENZO(a)ANTHRACENE	UG/KG	320	25598	40U	44U
BENZO(a)PYRENE	UG/KG	370	24906	40U	44U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	40U	44U
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	40U	44U

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C14-1-01 (0-2 ft. bgs) 04/12/2001	SD-C14-2-01 (0-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents					
BENZO(k)FLUORANTHENE	UG/KG	240	23177	40U	44U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	80U	89U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	80U	89U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	40U	44U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	40U	44U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	80U	89U
CHRYSENE	UG/KG	340	7956	40U	44U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	80U	89U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	80U	89U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	40U	44U
DIETHYL PHTHALATE	UG/KG	NS	NS	80U	89U
DIMETHYL PHTHALATE	UG/KG	NS	NS	80U	89U
FLUORANTHENE	UG/KG	750	17642	40U	53J
FLUORENE	UG/KG	190	2767	40U	44U
HEXACHLOROBENZENE	UG/KG	20	24000	40U	44U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	80U	89U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	200U	230U
HEXACHLOROETHANE	UG/KG	NS	NS	40U	44U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	40U	44U
ISOPHORONE	UG/KG	NS	NS	40U	44U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	40U	44U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	80U	89U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	40U	44U
NAPHTHALENE	UG/KG	160	36	40U	44U
NITROBENZENE	UG/KG	NS	NS	40U	44U
PENTACHLOROPHENOL	UG/KG	NS	NS	200U	230U
PHENANTHRENE	UG/KG	560	16431	40U	44U
PHENOL	UG/KG	NS	NS	80U	89U

Table 5-15

Sediment Analytical Results - Western Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C14-1-01 (0-2 ft. bgs) 04/12/2001	SD-C14-2-01 (0-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents					
PYRENE	UG/KG	490	14702	40U	44U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
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R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-16

Sediment Analytical Results - Western Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0-1.5 ft. bgs) 05/01/2001	SD-B13-2-01 (0-2 ft. bgs) 05/01/2001	SD-B13-3-01 (0-0.5 ft. bgs) 05/01/2001	SD-B13-4-01 (0-2 ft. bgs) 05/01/2001	SD-B14-1-01 (0-2 ft. bgs) 04/12/2001	SD-B14-3-01 (0-2 ft. bgs) 04/12/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	0.76J	1J	0.94J	1.1J	0.84U	1.7U
ARSENIC	MG/KG	6	33	5.7	4.3	4.9	**7.9**	**6.8J**	1.5J
BERYLLIUM	MG/KG	NS	NS	0.65	0.89	0.21B	0.34B	0.74	0.87B
CADMIUM	MG/KG	0.6	10	0.064U	0.063U	0.055U	0.063U	0.071U	0.15B
CHROMIUM, TOTAL	MG/KG	26	110	21.9J	19.5	7.3	14.7	19.5	24.7
COPPER	MG/KG	16	110	**21.7J**	**17.5**	9.3	**46.3**	**46.1**	10.2B
LEAD	MG/KG	31	250	**44.4**	12.4	**3260**	**48.5**	**163**	24.4B
MERCURY	MG/KG	0.2	2	0.03B	0.052B	0.13	0.064B	0.1J	0.092J
NICKEL	MG/KG	16	75	11.8	10.1	3B	9.4	11.3	7.4B
SELENIUM	MG/KG	NS	NS	2.1	0.55U	0.48U	0.55U	1.7	1.3U
SILVER	MG/KG	1	4	0.16U	0.19B	0.61B	0.18B	0.18U	0.37U
THALLIUM	MG/KG	NS	NS	2B	0.97U	0.85U	0.98U	1.5B	2.2U
ZINC	MG/KG	120	820	62.6N	92J	21.9J	93.7J	80.1	54.1

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-16

Sediment Analytical Results - Western Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-4-01 (0-2 ft. bgs) 04/12/2001	SD-C13-1-01 (0-2 ft. bgs) 05/01/2001	SD-C14-1-01 (0-2 ft. bgs) 04/12/2001	SD-C14-2-01 (0-1.5 ft. bgs) 04/12/2001
Total Metals							
ANTIMONY	MG/KG	NS	NS	1.3U	0.81J	0.85B	0.92B
ARSENIC	MG/KG	6	33	1.9J	2.4	3.9J	5.4J
BERYLLIUM	MG/KG	NS	NS	0.88B	0.67	0.66	0.72
CADMIUM	MG/KG	0.6	10	0.2B	0.069U	0.064U	0.11B
CHROMIUM, TOTAL	MG/KG	26	110	13.1	13.5	18	20.7
COPPER	MG/KG	16	110	14.7	10.8	15.1	**19.5**
LEAD	MG/KG	31	250	**44.4**	**48.6**	23.1	**69.2**
MERCURY	MG/KG	0.2	2	0.08J	0.042B	0.072J	0.14J
NICKEL	MG/KG	16	75	9.4B	9.1	9	11.7
SELENIUM	MG/KG	NS	NS	0.98U	0.6U	1.3	1.1B
SILVER	MG/KG	1	4	0.28U	0.18U	0.16U	0.18U
THALLIUM	MG/KG	NS	NS	1.7U	1.1U	1.3B	1.1U
ZINC	MG/KG	120	820	47.5	57.4J	59.3	**163**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

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B = Indicates that the compound was found in the associated blank.

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ft. bgs = Feet below ground surface

Table 5-17

Sediment Analytical Results - Western Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0-1.5 ft. bgs) 05/01/2001	SD-B13-2-01 (0-2 ft. bgs) 05/01/2001	SD-B13-3-01 (0-0.5 ft. bgs) 05/01/2001	SD-B13-4-01 (0-2 ft. bgs) 05/01/2001	SD-B14-1-01 (0-2 ft. bgs) 04/12/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	120U	11000U	1000000U	48000	140U
1,3-DINITROBENZENE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	660J	91000	21000000	152000	6540J
2,4-DINITROTOLUENE	UG/KG	NS	NS	240R	11000U	1000000U	107000	850R
2,6-DINITROTOLUENE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	4740R
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	330J	11000U	1000000U	12000U	140U
2-NITROTOLUENE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U
3-NITROTOLUENE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	450	11000U	1000000U	12000U	530
4-NITROTOLUENE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U
NITROBENZENE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U
NITROCELLULOSE	MG/KG	NS	NS	72UJ	134J	8000J	5000J	103J
NITROGLYCERIN	UG/KG	NS	NS	2400U	230000U	20000000U	240000U	2700U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2400U	230000U	20000000U	240000U	2700U
TETRYL	UG/KG	NS	NS	120U	11000U	1000000U	12000U	140U

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ft. bgs = Feet below ground surface

Table 5-17

Sediment Analytical Results - Western Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-3-01 (0-2 ft. bgs) 04/12/2001	SD-B14-4-01 (0-2 ft. bgs) 04/12/2001	SD-C13-1-01 (0-2 ft. bgs) 05/01/2001	SD-C14-1-01 (0-2 ft. bgs) 04/12/2001	SD-C14-2-01 (0-1.5 ft. bgs) 04/12/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	260U	200U	130U	120U	130U
1,3-DINITROBENZENE	UG/KG	NS	NS	260U	200U	130U	120U	130U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	260U	200U	190J	480J	700J
2,4-DINITROTOLUENE	UG/KG	NS	NS	260U	200U	130U	280R	300R
2,6-DINITROTOLUENE	UG/KG	NS	NS	260U	200U	130U	2580R	130U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	260U	200U	130U	1120J	730
2-NITROTOLUENE	UG/KG	NS	NS	260U	200U	130U	120U	130U
3-NITROTOLUENE	UG/KG	NS	NS	260U	200U	130U	120U	130U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	260U	200U	130U	1280	500J
4-NITROTOLUENE	UG/KG	NS	NS	260U	200U	130U	120U	130U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	260U	200U	130U	120U	130U
NITROBENZENE	UG/KG	NS	NS	260U	200U	130U	120U	130U
NITROCELLULOSE	MG/KG	NS	NS	160U	120UJ	77UJ	72U	80UJ
NITROGLYCERIN	UG/KG	NS	NS	5200U	4100U	2600U	2400U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	260U	200U	130U	120U	130U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	5200U	4100U	2600U	2400U	2700U
TETRYL	UG/KG	NS	NS	260U	200U	130U	120U	130U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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ft. bgs = Feet below ground surface

Table 5-18

Sediment Analytical Results - Western Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B13-1-01 (0-1.5 ft. bgs) 05/01/2001	SD-B13-2-01 (0-2 ft. bgs) 05/01/2001	SD-B13-3-01 (0-0.5 ft. bgs) 05/01/2001	SD-B13-4-01 (0-2 ft. bgs) 05/01/2001	SD-B14-1-01 (0-2 ft. bgs) 04/12/2001	SD-B14-3-01 (0-2 ft. bgs) 04/12/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	16.7	12.9	NR	15.4	26	61.8
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.6	1.1	1.8	0.7J	0.9J	5.2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	91.4	69	75.4	62.1	77.8	91.7
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	94.1	96.5	96.5	86.4	99.7
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.4	2.5	4.9	2.6	3.2	11.8
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	48.3	27.3	43.9	38.5	39.9	54.8
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	26.4	12.7	25.8	21.4	14	35.9
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	12.4	5.6	12.2	8	7.5	23
TOTAL ORGANIC CARBON	MG/KG	NS	NS	10400	7900	22900	9720	38800J	98000J

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-18

Sediment Analytical Results - Western Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B14-4-01 (0-2 ft. bgs) 04/12/2001	SD-C13-1-01 (0-2 ft. bgs) 05/01/2001	SD-C14-1-01 (0-2 ft. bgs) 04/12/2001	SD-C14-2-01 (0-1.5 ft. bgs) 04/12/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	50.8	21.6	16.6	24.8
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.3	2.5	1.2	1.5
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	76.1	74.6	79.7	64.1
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	99.7	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	94.4	95.7	100	94.7
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3.5	6.1	3.8	4
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	44	42.4	34.6	31
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	17.2	28.7	20.9	18.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	9	14.6	9.7	9.1
TOTAL ORGANIC CARBON	MG/KG	NS	NS	45200J	5400	20700J	39400J

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ft. bgs = Feet below ground surface

Table 5-19

Sediment Analytical Results - Western Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	180U	150U	210U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	180U	150U	210U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	180U	150U	210U
1,1-DICHLOROETHANE	UG/KG	NS	NS	180U	150U	210U
1,1-DICHLOROETHENE	UG/KG	NS	NS	180U	150U	210U
1,2-DICHLOROETHANE	UG/KG	NS	NS	180U	150U	210U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	180U	150U	210U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	360U	290U	420U
ACROLEIN	UG/KG	NS	NS	3600U	2900U	4200U
ACRYLONITRILE	UG/KG	NS	NS	720U	580U	850U
AMYL ALCOHOL	UG/KG	NS	NS	13000U	12000U	17000U
BENZENE	UG/KG	340	NS	180U	150U	210U
BROMODICHLOROMETHANE	UG/KG	NS	NS	180U	150U	210U
BROMOFORM	UG/KG	NS	NS	180U	150U	210U
BROMOMETHANE	UG/KG	NS	NS	360U	290U	420U
CARBON TETRACHLORIDE	UG/KG	NS	NS	180U	150U	210U
CHLOROBENZENE	UG/KG	NS	NS	180U	150U	210U
CHLOROETHANE	UG/KG	NS	NS	360U	290U	420U
CHLOROFORM	UG/KG	NS	NS	180U	150U	210U
CHLOROMETHANE	UG/KG	NS	NS	360U	290U	420U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	180U	150U	210U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	180U	150U	210U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000UJ	12000UJ	17000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	180U	150U	210U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000UJ	12000UJ	17000U
ETHANOL	UG/KG	NS	NS	13000U	12000U	17000U
ETHYLBENZENE	UG/KG	1400	NS	180U	150U	210U

Table 5-19

Sediment Analytical Results - Western Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B16-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents						
METHANOL	UG/KG	NS	NS	13000U	12000U	17000U
METHYLENE CHLORIDE	UG/KG	NS	NS	360U	290U	420U
n-BUTYL ETHER	UG/KG	NS	NS	13000UJ	12000UJ	17000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	180U	150U	210U
TOLUENE	UG/KG	2500	NS	180U	150U	210U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	180U	150U	210U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	180U	150U	210U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	180U	150U	210U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	360U	290U	420U
VINYL CHLORIDE	UG/KG	NS	NS	180U	150U	210U
XYLENES, TOTAL	UG/KG	120	NS	180U	150U	210U

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ft. bgs = Feet below ground surface

Table 5-20

Sediment Analytical Results - Western Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	42U	40U	55U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	42U	40U	55U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	42U	40U	55U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	42U	40U	55U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	42U	40U	55U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	86U	81U	110U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	86U	81U	110U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	86U	81U	110U
2,4-DINITROPHENOL	UG/KG	NS	NS	860U	810U	1100U
2,4-DINITROTOLUENE	UG/KG	NS	NS	86U	81U	110U
2,6-DINITROTOLUENE	UG/KG	NS	NS	42U	40U	55U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	42U	40U	55U
2-CHLOROPHENOL	UG/KG	NS	NS	42U	40U	55U
2-NITROPHENOL	UG/KG	NS	NS	86U	81U	110U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	86U	81U	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	210U	280U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	86U	81U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	86U	81U	110U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	42U	40U	55U
4-NITROPHENOL	UG/KG	NS	NS	220UJ	210UJ	280U
ACENAPHTHENE	UG/KG	16	9	42U	40U	55U
ACENAPHTHYLENE	UG/KG	44	11	42U	**48J**	**58J**
ANTHRACENE	UG/KG	220	6593	42U	170J	69J
BENZIDINE	UG/KG	NS	NS	860UJ	810UJ	1100U
BENZO(a)ANTHRACENE	UG/KG	320	26371	140J	**480**	280J
BENZO(a)PYRENE	UG/KG	370	25658	170J	**500**	**390J**
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	230J	570	470J
BENZO(g,h,i)PERYLENE	UG/KG	170	5702	150J	**280J**	**340J**
BENZO(k)FLUORANTHENE	UG/KG	240	23876	100J	230J	190J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	86U	81U	110U

Table 5-20

Sediment Analytical Results - Western Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	86U	81U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	42U	40U	55U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	42UJ	40UJ	55U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	160J	460	110U
CHRYSENE	UG/KG	340	8196	210J	**600**	**350J**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	86U	81U	170J
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	86U	81U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	42U	**87J**	**90J**
DIETHYL PHTHALATE	UG/KG	NS	NS	86U	81U	110U
DIMETHYL PHTHALATE	UG/KG	NS	NS	86U	81U	110U
FLUORANTHENE	UG/KG	750	18174	340J	**1100**	530J
FLUORENE	UG/KG	190	2851	42U	46J	55U
HEXACHLOROBENZENE	UG/KG	20	24000	42U	40U	55U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	86U	81U	110U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	220U	210U	280U
HEXACHLOROETHANE	UG/KG	NS	NS	42U	40U	55U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	150J	310J	320J
ISOPHORONE	UG/KG	NS	NS	42U	40U	55U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	42U	40U	55U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	86U	81U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	42U	40U	170J
NAPHTHALENE	UG/KG	160	37	42U	40U	55U
NITROBENZENE	UG/KG	NS	NS	42U	40U	55U
PENTACHLOROPHENOL	UG/KG	NS	NS	220U	210U	280U
PHENANTHRENE	UG/KG	560	16927	170J	480	270J
PHENOL	UG/KG	NS	NS	86U	81U	110U

Table 5-20

Sediment Analytical Results - Western Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
PYRENE	UG/KG	490	15145	310J	**1100**	**690**

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Table 5-21

Sediment Analytical Results - Western Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0-2 ft. bgs) 04/10/2001
Total Metals						
ANTIMONY	MG/KG	NS	NS	0.83U	0.78U	1.1UJ
ARSENIC	MG/KG	6	33	3.3	0.71B	**6.4**
BERYLLIUM	MG/KG	NS	NS	0.83	0.35B	1.1
CADMIUM	MG/KG	0.6	10	0.071U	0.066U	0.52B
CHROMIUM, TOTAL	MG/KG	26	110	19	10.8	**51.1**
COPPER	MG/KG	16	110	14.5	11	**25.1**
LEAD	MG/KG	31	250	11.8B*	**84.6***	**203N**
MERCURY	MG/KG	0.2	2	0.0038BN	**0.37N**	**1.2***
NICKEL	MG/KG	16	75	11.1	6.7	9.7
SELENIUM	MG/KG	NS	NS	0.62U	0.57U	0.79U
SILVER	MG/KG	1	4	0.18U	0.17U	0.23U
THALLIUM	MG/KG	NS	NS	1.1U	1U	1.4U
ZINC	MG/KG	120	820	51.7N	63.9N	**158**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-22

Sediment Analytical Results - Western Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0-2 ft. bgs) 04/10/2001
Energetic and Explosive Compounds						
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	170U
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	130U	120U	170U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	120U	170U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	170U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
2,4-DINITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
2-NITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
3-NITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
4-NITROTOLUENE	UG/KG	NS	NS	130U	120U	170U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	130U	120U	170U
NITROBENZENE	UG/KG	NS	NS	130U	120U	170U
NITROCELLULOSE	MG/KG	NS	NS	77U	72U	100U
NITROGLYCERIN	UG/KG	NS	NS	2600UJ	2400U	3300U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	130U	120U	170U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2600U	2400U	3300U
TETRYL	UG/KG	NS	NS	130U	120U	170U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-23

Sediment Analytical Results - Western Drainage System - Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B16-1-01 (0-1 ft. bgs) 04/05/2001	SD-E16-3-01 (0-2 ft. bgs) 04/10/2001
General Chemistry						
MOISTURE, PERCENT	%W/W	NS	NS	22	17.1	40
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.3	1.1	1.4
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	85.9	63.3	76.2
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	NR	NR	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	NR	NR	96.2
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.5	4.6	3.7
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	44	45.1	40.8
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	26.6	24.7	22.1
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.8	12.2	9.7
TOTAL ORGANIC CARBON	MG/KG	NS	NS	3800	4400	23400

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-A15-3-01 (0.5-1 ft. bgs) 04/05/2001	SD-B14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-B15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-C15-1-01 (0.5-1 ft. bgs) 04/11/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
1,1-DICHLOROETHANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
1,1-DICHLOROETHENE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
1,2-DICHLOROETHANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	2000UJ	2200UJ	410U	1400U	1800U	770U
ACROLEIN	UG/KG	NS	NS	20000UJ	22000UJ	4100U	14000U	19000U	7700U
ACRYLONITRILE	UG/KG	NS	NS	4000UJ	4400UJ	830U	2900U	3700U	1500U
AMYL ALCOHOL	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U
BENZENE	UG/KG	340	NS	980UJ	1100UJ	210U	720U	920U	390U
BROMODICHLOROMETHANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
BROMOFORM	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
BROMOMETHANE	UG/KG	NS	NS	2000UJ	2200UJ	410U	1400U	1800U	770U
CARBON TETRACHLORIDE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
CHLOROBENZENE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
CHLOROETHANE	UG/KG	NS	NS	2000UJ	2200UJ	410U	1400U	1800U	770U
CHLOROFORM	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
CHLOROMETHANE	UG/KG	NS	NS	2000UJ	2200UJ	410U	1400U	1800U	770U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	80000UJ	88000UJ	18000UJ	56000UJ	68000UJ	31000UJ
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	80000UJ	88000UJ	18000UJ	56000UJ	68000UJ	31000UJ

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-A15-3-01 (0.5-1 ft. bgs) 04/05/2001	SD-B14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-B15-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-B15-2-01 (0.5-1 ft. bgs) 04/05/2001	SD-C15-1-01 (0.5-1 ft. bgs) 04/11/2001
Volatile Organic Constituents									
ETHANOL	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U
ETHYLBENZENE	UG/KG	1400	NS	980UJ	1100UJ	210U	720U	920U	390U
METHANOL	UG/KG	NS	NS	80000U	88000U	18000U	56000U	68000U	31000U
METHYLENE CHLORIDE	UG/KG	NS	NS	2000UJ	2200UJ	410U	1400U	1800U	770U
n-BUTYL ETHER	UG/KG	NS	NS	80000UJ	88000UJ	18000UJ	56000UJ	68000UJ	31000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	980UJ	1100UJ	210U	**1300J**	**1700J**	390U
TOLUENE	UG/KG	2500	NS	980UJ	1100UJ	210U	720U	920U	390U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	980UJ	1100UJ	210U	720U	920U	390U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	2000UJ	2200UJ	410U	1400U	1800U	770U
VINYL CHLORIDE	UG/KG	NS	NS	980UJ	1100UJ	210U	720U	920U	390U
XYLENES, TOTAL	UG/KG	120	NS	980UJ	1100UJ	210U	720U	920U	390U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-2-01 (0.5-1 ft. bgs) 04/04/2001	SD-D14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-4-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-5-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
1,1-DICHLOROETHANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
1,1-DICHLOROETHENE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
1,2-DICHLOROETHANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	1200U	490U	650U	380U	310U	370U
ACROLEIN	UG/KG	NS	NS	12000U	5000U	6500U	3800R	3100R	3700U
ACRYLONITRILE	UG/KG	NS	NS	2300U	990U	1300U	760U	620U	740U
AMYL ALCOHOL	UG/KG	NS	NS	47000U	21000U	25000U	17000U	14000U	14000U
BENZENE	UG/KG	340	NS	580U	250U	320U	190U	160U	190U
BROMODICHLOROMETHANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
BROMOFORM	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
BROMOMETHANE	UG/KG	NS	NS	1200U	490U	650U	380U	310U	370U
CARBON TETRACHLORIDE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
CHLOROBENZENE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
CHLOROETHANE	UG/KG	NS	NS	1200U	490U	650U	380U	310U	370U
CHLOROFORM	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
CHLOROMETHANE	UG/KG	NS	NS	1200U	490U	650U	380U	310U	370U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	47000UJ	21000UJ	25000UJ	17000U	14000UJ	14000UJ
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	47000UJ	21000UJ	25000UJ	17000U	14000U	14000UJ

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-2-01 (0.5-1 ft. bgs) 04/04/2001	SD-D14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-4-01 (0.5-1 ft. bgs) 04/10/2001	SD-D14-5-01 (0.5-1 ft. bgs) 04/11/2001	SD-D14-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-7-01 (0.5-1 ft. bgs) 04/11/2001
Volatile Organic Constituents									
ETHANOL	UG/KG	NS	NS	47000U	21000U	25000U	17000U	14000U	14000U
ETHYLBENZENE	UG/KG	1400	NS	580U	250U	320U	190U	160U	190U
METHANOL	UG/KG	NS	NS	47000U	21000U	25000U	17000U	14000U	14000U
METHYLENE CHLORIDE	UG/KG	NS	NS	1200U	490U	650U	380U	310U	370U
n-BUTYL ETHER	UG/KG	NS	NS	47000UJ	21000UJ	25000UJ	17000U	14000UJ	14000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	580U	250U	320U	190U	160U	190U
TOLUENE	UG/KG	2500	NS	580U	250U	320U	190U	160U	190U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	580U	250U	320U	190U	160U	190U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	1200U	490U	650U	380U	310U	370U
VINYL CHLORIDE	UG/KG	NS	NS	580U	250U	320U	190U	160U	190U
XYLENES, TOTAL	UG/KG	120	NS	580U	250U	320U	190U	160U	190U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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from a 1:5 dilution

on data validation

e concentration exceeded the calibration range of the instrument

ground surface

B = Indicates that the compound was fou

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration excee

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0.5-1 ft. bgs) 04/04/2001	SD-E14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-2-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
1,1-DICHLOROETHANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
1,1-DICHLOROETHENE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
1,2-DICHLOROETHANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	380U	510U	1100UJ	290U	610U	510U
ACROLEIN	UG/KG	NS	NS	3800U	5100U	11000UJ	2900U	6100U	5100U
ACRYLONITRILE	UG/KG	NS	NS	770U	1000U	2200UJ	580U	1200U	1000U
AMYL ALCOHOL	UG/KG	NS	NS	17000U	22000U	43000U	14000U	22000U	21000U
BENZENE	UG/KG	340	NS	190U	250U	540UJ	150U	300U	250U
BROMODICHLOROMETHANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
BROMOFORM	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
BROMOMETHANE	UG/KG	NS	NS	380U	510U	1100UJ	290U	610U	510U
CARBON TETRACHLORIDE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
CHLOROBENZENE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
CHLOROETHANE	UG/KG	NS	NS	380U	510U	1100UJ	290U	610U	510U
CHLOROFORM	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
CHLOROMETHANE	UG/KG	NS	NS	380U	510U	1100UJ	290U	610U	510U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	17000UJ	22000UJ	43000U	14000U	22000U	21000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	17000UJ	22000UJ	43000U	14000U	22000U	21000U

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-8-01 (0.5-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0.5-1 ft. bgs) 04/04/2001	SD-E14-3-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-2-01 (0.5-1 ft. bgs) 04/10/2001	SD-E15-3-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents									
ETHANOL	UG/KG	NS	NS	17000U	22000U	43000U	14000U	22000U	21000U
ETHYLBENZENE	UG/KG	1400	NS	190U	250U	540UJ	150U	300U	250U
METHANOL	UG/KG	NS	NS	17000U	22000U	52000J	14000U	22000U	21000U
METHYLENE CHLORIDE	UG/KG	NS	NS	380U	510U	1100UJ	290U	610U	510U
n-BUTYL ETHER	UG/KG	NS	NS	17000UJ	22000UJ	43000U	14000U	22000U	21000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	190U	250U	540UJ	150U	300U	250U
TOLUENE	UG/KG	2500	NS	190U	250U	540UJ	150U	300U	250U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	190U	250U	540UJ	150U	300U	250U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	380U	510U	1100UJ	290U	610U	510U
VINYL CHLORIDE	UG/KG	NS	NS	190U	250U	540UJ	150U	300U	250U
XYLENES, TOTAL	UG/KG	120	NS	190U	250U	540UJ	150U	300U	250U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

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B = Indicates that the compound was found in the associated b

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration ra

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E16-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E16-2-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents					
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	180U	190U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	180U	190U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	180U	190U
1,1-DICHLOROETHANE	UG/KG	NS	NS	180U	190U
1,1-DICHLOROETHENE	UG/KG	NS	NS	180U	190U
1,2-DICHLOROETHANE	UG/KG	NS	NS	180U	190U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	180U	190U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	370U	370U
ACROLEIN	UG/KG	NS	NS	3700U	3700U
ACRYLONITRILE	UG/KG	NS	NS	740U	740U
AMYL ALCOHOL	UG/KG	NS	NS	18000U	15000U
BENZENE	UG/KG	340	NS	180U	190U
BROMODICHLOROMETHANE	UG/KG	NS	NS	180U	190U
BROMOFORM	UG/KG	NS	NS	180U	190U
BROMOMETHANE	UG/KG	NS	NS	370U	370U
CARBON TETRACHLORIDE	UG/KG	NS	NS	180U	190U
CHLOROBENZENE	UG/KG	NS	NS	180U	190U
CHLOROETHANE	UG/KG	NS	NS	370U	370U
CHLOROFORM	UG/KG	NS	NS	180U	190U
CHLOROMETHANE	UG/KG	NS	NS	370U	370U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	180U	190U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	180U	190U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	18000U	15000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	180U	190U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	18000U	15000U

Table 5-24

Sediment Analytical Results - Western Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E16-1-01 (0.5-1 ft. bgs) 04/10/2001	SD-E16-2-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents					
ETHANOL	UG/KG	NS	NS	18000U	15000U
ETHYLBENZENE	UG/KG	1400	NS	180U	190U
METHANOL	UG/KG	NS	NS	18000U	15000U
METHYLENE CHLORIDE	UG/KG	NS	NS	370U	370U
n-BUTYL ETHER	UG/KG	NS	NS	18000U	15000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	180U	190U
TOLUENE	UG/KG	2500	NS	180U	190U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	180U	190U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	180U	190U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	180U	190U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	370U	370U
VINYL CHLORIDE	UG/KG	NS	NS	180U	190U
XYLENES, TOTAL	UG/KG	120	NS	180U	190U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

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Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0-2 ft. bgs) 04/05/2001	SD-A15-3-01 (0-2 ft. bgs) 04/05/2001	SD-B14-2-01 (0-2 ft. bgs) 04/11/2001	SD-B15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B15-2-01 (0-2 ft. bgs) 04/05/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	260U	290U	60U	190U	230U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U
2,4-DINITROPHENOL	UG/KG	NS	NS	5400U	5900U	1200U	3800U	4600U
2,4-DINITROTOLUENE	UG/KG	NS	NS	540U	590U	120U	380U	460U
2,6-DINITROTOLUENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
2-CHLOROPHENOL	UG/KG	NS	NS	260U	290U	60U	190U	230U
2-NITROPHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	540U	590U	120U	380U	460U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	1400U	1500U	310U	960U	1200U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	540U	590U	120U	380U	460U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	260U	290U	60U	190U	230U
4-NITROPHENOL	UG/KG	NS	NS	1400UJ	1500UJ	310U	960UJ	1200UJ
ACENAPHTHENE	UG/KG	16	25	260U	290U	60U	190U	230U
ACENAPHTHYLENE	UG/KG	44	33	260U	290U	60U	190U	230U
ANTHRACENE	UG/KG	220	18827	260U	290U	60U	190U	230U
BENZIDINE	UG/KG	NS	NS	5400UJ	5900UJ	1200U	3800UJ	4600UJ
BENZO(a)ANTHRACENE	UG/KG	320	75308	260U	290U	60U	190U	230U
BENZO(a)PYRENE	UG/KG	370	73273	260U	290U	60U	190U	230U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0-2 ft. bgs) 04/05/2001	SD-A15-3-01 (0-2 ft. bgs) 04/05/2001	SD-B14-2-01 (0-2 ft. bgs) 04/11/2001	SD-B15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B15-2-01 (0-2 ft. bgs) 04/05/2001
Semi-Volatile Organic Constituents								
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	260U	290U	60U	190U	230U
BENZO(k)FLUORANTHENE	UG/KG	240	68185	260U	290U	60U	190U	230U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	540U	590U	120U	380U	460U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	260U	290U	60U	190U	230U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	260UJ	290UJ	60U	190UJ	230UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U
CHRYSENE	UG/KG	340	23407	260U	290U	60U	190U	230U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	260U	290U	60U	190U	230U
DIETHYL PHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U
DIMETHYL PHTHALATE	UG/KG	NS	NS	540U	590U	120U	380U	460U
FLUORANTHENE	UG/KG	750	51902	260U	290U	60U	190U	230U
FLUORENE	UG/KG	190	8141	260U	290U	60U	190U	230U
HEXACHLOROBENZENE	UG/KG	20	24000	260U	290U	60U	190U	230U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	540U	590U	120U	380U	460U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	1400U	1500U	310U	960U	1200U
HEXACHLOROETHANE	UG/KG	NS	NS	260U	290U	60U	190U	230U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
ISOPHORONE	UG/KG	NS	NS	260U	290U	60U	190U	230U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	260U	290U	60U	190U	230U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	540U	590U	120U	380U	460U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	260U	290U	60U	190U	230U
NAPHTHALENE	UG/KG	160	107	260U	290U	60U	190U	230U
NITROBENZENE	UG/KG	NS	NS	260U	290U	60U	190U	230U
PENTACHLOROPHENOL	UG/KG	NS	NS	1400U	1500U	310U	960U	1200U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0-2 ft. bgs) 04/05/2001	SD-A15-3-01 (0-2 ft. bgs) 04/05/2001	SD-B14-2-01 (0-2 ft. bgs) 04/11/2001	SD-B15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B15-2-01 (0-2 ft. bgs) 04/05/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	48340	260U	290U	60U	190U	230U
PHENOL	UG/KG	NS	NS	540U	590U	120U	380U	460U
PYRENE	UG/KG	490	43251	260U	290U	60U	190U	230U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

B = Indicates that the compound was found in the associated blank.

E = Indicates that the concentration exceeded the calibration range of the instrument

N = Flashpoint not observed, heated to specific limit

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-1-01 (0-2 ft. bgs) 04/11/2001	SD-C15-2-01 (0-2 ft. bgs) 04/04/2001	SD-D14-3-01 (0-2 ft. bgs) 04/10/2001	SD-D14-4-01 (0-2 ft. bgs) 04/10/2001	SD-D14-5-01 (0-1.5 ft. bgs) 04/11/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	100U	160U	69U	83U	57U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	100U	160U	69U	83U	57U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	100U	160U	69U	83U	57U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	100U	160U	69U	83U	57U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	100U	160U	69U	83U	57U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	210U	320U	140U	170U	120U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	210U	320U	140U	170U	120U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	210U	320U	140U	170U	120U
2,4-DINITROPHENOL	UG/KG	NS	NS	2100U	3200U	1400U	1700U	1200U
2,4-DINITROTOLUENE	UG/KG	NS	NS	210U	320U	140U	170U	120U
2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	160U	69U	83U	57U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	100U	160U	69U	83U	57U
2-CHLOROPHENOL	UG/KG	NS	NS	100U	160U	69U	83U	57U
2-NITROPHENOL	UG/KG	NS	NS	210U	320U	140U	170U	120U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	210U	320U	140U	170U	120U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	520U	800U	360U	430U	290U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	210U	320U	140U	170U	120U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	210U	320U	140U	170U	120U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	100U	160U	69U	83U	57U
4-NITROPHENOL	UG/KG	NS	NS	520U	800UJ	360U	430U	290U
ACENAPHTHENE	UG/KG	16	25	100U	160U	69U	83U	57U
ACENAPHTHYLENE	UG/KG	44	33	100U	160U	69U	83U	57U
ANTHRACENE	UG/KG	220	18827	120J	160U	69U	83U	57U
BENZIDINE	UG/KG	NS	NS	2100U	3200UJ	1400U	1700UJ	1200U
BENZO(a)ANTHRACENE	UG/KG	320	75308	**370J**	**480J**	86J	83U	57U
BENZO(a)PYRENE	UG/KG	370	73273	**410J**	**560J**	69U	83U	57U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-1-01 (0-2 ft. bgs) 04/11/2001	SD-C15-2-01 (0-2 ft. bgs) 04/04/2001	SD-D14-3-01 (0-2 ft. bgs) 04/10/2001	SD-D14-4-01 (0-2 ft. bgs) 04/10/2001	SD-D14-5-01 (0-1.5 ft. bgs) 04/11/2001
Semi-Volatile Organic Constituents								
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	510J	710J	94J	83U	57U
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**210J**	**350J**	69U	83U	57U
BENZO(k)FLUORANTHENE	UG/KG	240	68185	210J	**290J**	69U	83U	57U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	210U	320U	140U	170U	120U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	210U	320U	140U	170U	120U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	100U	160U	69U	83U	57U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	100U	160UJ	69U	83U	57U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	220J	600J	140U	170U	120U
CHRYSENE	UG/KG	340	23407	**380J**	**690J**	94J	83U	57U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	210U	320U	140U	170U	120U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	210U	320U	140U	170U	120U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	100U	160U	69U	83U	57U
DIETHYL PHTHALATE	UG/KG	NS	NS	210U	320U	140U	170U	120U
DIMETHYL PHTHALATE	UG/KG	NS	NS	210U	320U	140U	170U	120U
FLUORANTHENE	UG/KG	750	51902	**780J**	**1000J**	180J	83U	57U
FLUORENE	UG/KG	190	8141	100U	160U	69U	83U	57U
HEXACHLOROBENZENE	UG/KG	20	24000	100U	160U	69U	83U	57U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	210U	320U	140U	170U	120U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	520U	800U	360U	430U	290U
HEXACHLOROETHANE	UG/KG	NS	NS	100U	160U	69U	83U	57U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	250J	360J	69U	83U	57U
ISOPHORONE	UG/KG	NS	NS	100U	160U	69U	83U	57U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	100U	160U	69U	83U	57U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	210U	320U	140U	170U	120U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	100U	160U	69U	83U	57U
NAPHTHALENE	UG/KG	160	107	100U	160U	69U	83U	57U
NITROBENZENE	UG/KG	NS	NS	100U	160U	69U	83U	57U
PENTACHLOROPHENOL	UG/KG	NS	NS	520U	800U	360U	430U	290U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-1-01 (0-2 ft. bgs) 04/11/2001	SD-C15-2-01 (0-2 ft. bgs) 04/04/2001	SD-D14-3-01 (0-2 ft. bgs) 04/10/2001	SD-D14-4-01 (0-2 ft. bgs) 04/10/2001	SD-D14-5-01 (0-1.5 ft. bgs) 04/11/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	48340	400J	500J	80J	83U	57U
PHENOL	UG/KG	NS	NS	210U	320U	140U	170U	120U
PYRENE	UG/KG	490	43251	**810J**	**960J**	170J	83U	57U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

B = Indicates that the compound was found in the associated blank.

E = Indicates that the concentration exceeded the calibration range of the instrument

N = Flashpoint not observed, heated to specific limit

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-6-01 (0-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0-2 ft. bgs) 04/04/2001	SD-E14-3-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	46U	47U	55U	73U	140U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	46U	47U	55U	73U	140U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	46U	47U	55U	73U	140U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	46U	47U	55U	73U	140U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	46U	47U	55U	73U	140U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	93U	95U	110U	150U	290U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	93U	95U	110U	150U	290U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	93U	95U	110U	150U	290U
2,4-DINITROPHENOL	UG/KG	NS	NS	930U	950U	1100U	1500U	2900U
2,4-DINITROTOLUENE	UG/KG	NS	NS	93U	95U	110U	150U	290U
2,6-DINITROTOLUENE	UG/KG	NS	NS	46U	47U	55U	73U	140U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	46U	47U	55U	73U	140U
2-CHLOROPHENOL	UG/KG	NS	NS	46U	47U	55U	73U	140U
2-NITROPHENOL	UG/KG	NS	NS	93U	95U	110U	150U	290U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	93U	95U	110U	150U	290U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	240U	240U	280U	380U	720U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	93U	95U	110U	150U	290U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	93U	95U	110U	150U	290U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	46U	47U	55U	73U	140U
4-NITROPHENOL	UG/KG	NS	NS	240U	240U	280U	380UJ	720U
ACENAPHTHENE	UG/KG	16	25	46U	47U	55U	73U	140U
ACENAPHTHYLENE	UG/KG	44	33	46U	47U	55U	73U	140U
ANTHRACENE	UG/KG	220	18827	46U	47U	55U	73U	140U
BENZIDINE	UG/KG	NS	NS	930U	950U	1100U	1500UJ	2900U
BENZO(a)ANTHRACENE	UG/KG	320	75308	46U	47U	78J	73U	140U
BENZO(a)PYRENE	UG/KG	370	73273	46U	47U	91J	73U	140U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-6-01 (0-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0-2 ft. bgs) 04/04/2001	SD-E14-3-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents								
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	46U	47U	120J	73U	140U
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	46U	47U	55U	73U	140U
BENZO(k)FLUORANTHENE	UG/KG	240	68185	46U	47U	55U	73U	140U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	93U	95U	110U	150U	290U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	93U	95U	110U	150U	290U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	46U	47U	55U	73U	140U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	46U	47U	55U	73UJ	140U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	93U	95U	110U	150U	290U
CHRYSENE	UG/KG	340	23407	46U	47U	94J	73U	140U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	93U	95U	110U	150U	760J
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	93U	95U	110U	150U	290U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	46U	47U	55U	73U	140U
DIETHYL PHTHALATE	UG/KG	NS	NS	93U	95U	110U	150U	290U
DIMETHYL PHTHALATE	UG/KG	NS	NS	93U	95U	110U	150U	290U
FLUORANTHENE	UG/KG	750	51902	46U	47U	160J	110J	170J
FLUORENE	UG/KG	190	8141	46U	47U	55U	73U	140U
HEXACHLOROBENZENE	UG/KG	20	24000	46U	47U	55U	73U	140U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	93U	95U	110U	150U	290U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	240U	240U	280U	380U	720U
HEXACHLOROETHANE	UG/KG	NS	NS	46U	47U	55U	73U	140U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	46U	47U	57J	73U	140U
ISOPHORONE	UG/KG	NS	NS	46U	47U	55U	73U	140U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	46U	47U	55U	73U	140U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	93U	95U	110U	150U	290U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	46U	47U	55U	73U	150J
NAPHTHALENE	UG/KG	160	107	46U	47U	55U	73U	140U
NITROBENZENE	UG/KG	NS	NS	46U	47U	55U	73U	140U
PENTACHLOROPHENOL	UG/KG	NS	NS	240U	240U	280U	380U	720U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-6-01 (0-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0-2 ft. bgs) 04/04/2001	SD-E14-3-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	48340	46U	47U	90J	73U	140U
PHENOL	UG/KG	NS	NS	93U	95U	110U	150U	290U
PYRENE	UG/KG	490	43251	46U	47U	170J	97J	140U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

B = Indicates that the compound was found in the associated blank.

E = Indicates that the concentration exceeded the calibration range of the instrument

N = Flashpoint not observed, heated to specific limit

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E15-1-01 (0-2 ft. bgs) 04/10/2001	SD-E15-2-01 (0-2 ft. bgs) 04/10/2001	SD-E15-3-01 (0-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	45U	73U	69U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	45U	73U	69U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	45U	73U	69U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	45U	73U	69U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	45U	73U	69U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	91U	150U	140U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	91U	150U	140U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	91U	150U	140U
2,4-DINITROPHENOL	UG/KG	NS	NS	910U	1500U	1400U
2,4-DINITROTOLUENE	UG/KG	NS	NS	91U	150U	140U
2,6-DINITROTOLUENE	UG/KG	NS	NS	45U	73U	69U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	45U	73U	69U
2-CHLOROPHENOL	UG/KG	NS	NS	45U	73U	69U
2-NITROPHENOL	UG/KG	NS	NS	91U	150U	140U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	91U	150U	140U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	230U	370U	360U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	91U	150U	140U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	91U	150U	140U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	45U	73U	69U
4-NITROPHENOL	UG/KG	NS	NS	230U	370U	360U
ACENAPHTHENE	UG/KG	16	25	45U	73U	69U
ACENAPHTHYLENE	UG/KG	44	33	45U	73U	69U
ANTHRACENE	UG/KG	220	18827	45U	73U	69U
BENZIDINE	UG/KG	NS	NS	910U	1500U	1400U
BENZO(a)ANTHRACENE	UG/KG	320	75308	60J	73U	93J
BENZO(a)PYRENE	UG/KG	370	73273	62J	73U	110J

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E15-1-01 (0-2 ft. bgs) 04/10/2001	SD-E15-2-01 (0-2 ft. bgs) 04/10/2001	SD-E15-3-01 (0-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	91J	73U	160J
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	45U	73U	79J
BENZO(k)FLUORANTHENE	UG/KG	240	68185	45U	73U	69U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	91U	150U	140U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	91U	150U	140U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	45U	73U	69U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	45U	73U	69U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	91U	150U	140U
CHRYSENE	UG/KG	340	23407	76J	73U	120J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	91U	150U	140U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	91U	150U	140U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	45U	73U	69U
DIETHYL PHTHALATE	UG/KG	NS	NS	91U	150U	140U
DIMETHYL PHTHALATE	UG/KG	NS	NS	91U	150U	140U
FLUORANTHENE	UG/KG	750	51902	150J	73U	220J
FLUORENE	UG/KG	190	8141	45U	73U	69U
HEXACHLOROBENZENE	UG/KG	20	24000	45U	73U	69U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	91U	150U	140U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	230U	370U	360U
HEXACHLOROETHANE	UG/KG	NS	NS	45U	73U	69U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	45U	73U	78J
ISOPHORONE	UG/KG	NS	NS	45U	73U	69U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	45U	73U	69U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	91U	150U	140U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	390J	73U	69U
NAPHTHALENE	UG/KG	160	107	45U	73U	69U
NITROBENZENE	UG/KG	NS	NS	45U	73U	69U
PENTACHLOROPHENOL	UG/KG	NS	NS	230U	370U	360U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E15-1-01 (0-2 ft. bgs) 04/10/2001	SD-E15-2-01 (0-2 ft. bgs) 04/10/2001	SD-E15-3-01 (0-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents						
PHENANTHRENE	UG/KG	560	48340	120J	73U	130J
PHENOL	UG/KG	NS	NS	91U	150U	140U
PYRENE	UG/KG	490	43251	170J	73U	260J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

B = Indicates that the compound was found in the associated blank.

E = Indicates that the concentration exceeded the calibration range of the instrument

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E16-1-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (0-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents					
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	58U	50U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	58U	50U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	58U	50U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	58U	50U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	58U	50U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	120U	100U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	120U	100U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	120U	100U
2,4-DINITROPHENOL	UG/KG	NS	NS	1200U	1000U
2,4-DINITROTOLUENE	UG/KG	NS	NS	120U	100U
2,6-DINITROTOLUENE	UG/KG	NS	NS	58U	50U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	58U	50U
2-CHLOROPHENOL	UG/KG	NS	NS	58U	50U
2-NITROPHENOL	UG/KG	NS	NS	120U	100U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	120U	100U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	300U	260U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	120U	100U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	120U	100U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	58U	50U
4-NITROPHENOL	UG/KG	NS	NS	300U	260U
ACENAPHTHENE	UG/KG	16	25	58U	50U
ACENAPHTHYLENE	UG/KG	44	33	58U	50U
ANTHRACENE	UG/KG	220	18827	58U	50U
BENZIDINE	UG/KG	NS	NS	1200U	1000U
BENZO(a)ANTHRACENE	UG/KG	320	75308	58U	50U
BENZO(a)PYRENE	UG/KG	370	73273	58U	50U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E16-1-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (0-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents					
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	58U	50U
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	58U	50U
BENZO(k)FLUORANTHENE	UG/KG	240	68185	58U	50U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	120U	100U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	120U	100U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	58U	50U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	58U	50U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	120U	100U
CHRYSENE	UG/KG	340	23407	58U	50U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	120U	100U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	120U	100U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	58U	50U
DIETHYL PHTHALATE	UG/KG	NS	NS	120U	100U
DIMETHYL PHTHALATE	UG/KG	NS	NS	120U	100U
FLUORANTHENE	UG/KG	750	51902	63J	50U
FLUORENE	UG/KG	190	8141	58U	50U
HEXACHLOROBENZENE	UG/KG	20	24000	58U	50U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	120U	100U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	300U	260U
HEXACHLOROETHANE	UG/KG	NS	NS	58U	50U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	58U	50U
ISOPHORONE	UG/KG	NS	NS	58U	50U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	58U	50U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	120U	100U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	58U	50U
NAPHTHALENE	UG/KG	160	107	58U	50U
NITROBENZENE	UG/KG	NS	NS	58U	50U
PENTACHLOROPHENOL	UG/KG	NS	NS	300U	260U

Table 5-25

Sediment Analytical Results - Western Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E16-1-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (0-1.5 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents					
PHENANTHRENE	UG/KG	560	48340	58U	50U
PHENOL	UG/KG	NS	NS	120U	100U
PYRENE	UG/KG	490	43251	66J	50U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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J = Value is less than the practical quantitation limit, but greater than zero

B = Indicates that the compound was found in the associated blank.

E = Indicates that the concentration exceeded the calibration range of the instrument

N = Flashpoint not observed, heated to specific limit

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-26

Sediment Analytical Results - Western Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0-2 ft. bgs) 04/05/2001	SD-A15-3-01 (0-2 ft. bgs) 04/05/2001	SD-B14-2-01 (0-2 ft. bgs) 04/11/2001	SD-B15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B15-2-01 (0-2 ft. bgs) 04/05/2001	SD-C15-1-01 (0-2 ft. bgs) 04/11/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	5.2U	5.6U	1.2UJ	3.7U	4.4U	2UJ
ARSENIC	MG/KG	6	33	4.2B	3.3U	1.5B	2.1U	2.6U	2.8B
BERYLLIUM	MG/KG	NS	NS	0.55B	0.64B	0.82B	1.6B	0.48B	1.5B
CADMIUM	MG/KG	0.6	10	**0.68B**	**0.69B**	0.14B	**0.87B**	0.41B	**0.75B**
CHROMIUM, TOTAL	MG/KG	26	110	22.6B	14.5B	22.8	**66.8**	**43.2**	17.3
COPPER	MG/KG	16	110	11.9B	**16.9B**	**19.4**	**23.6**	11.4B	12.3B
LEAD	MG/KG	31	250	23.9B*	22.5B*	8.4BN	9.6B*	12.2B*	**40.4N**
MERCURY	MG/KG	0.2	2	0.11BN	0.12BN	0.015B*	0.054BN	0.018BN	0.099B*
NICKEL	MG/KG	16	75	4.7B	5.4B	11.1	13.6B	4.3B	10B
SELENIUM	MG/KG	NS	NS	15.5	6.3B	0.87U	8	10.5	1.5U
SILVER	MG/KG	1	4	1.1U	1.2U	0.25U	0.79U	0.95U	0.43U
THALLIUM	MG/KG	NS	NS	6.8U	7.4U	1.5U	4.8U	5.8U	2.6U
ZINC	MG/KG	120	820	45.8BN	95.9N	68.3	52BN	45.5BN	75.7

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-26

Sediment Analytical Results - Western Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-2-01 (0-2 ft. bgs) 04/04/2001	SD-D14-3-01 (0-2 ft. bgs) 04/10/2001	SD-D14-4-01 (0-2 ft. bgs) 04/10/2001	SD-D14-5-01 (0-1.5 ft. bgs) 04/11/2001	SD-D14-6-01 (0-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0-1 ft. bgs) 04/11/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	3U	1.3UJ	1.6UJ	1.1U	0.89U	0.91UJ
ARSENIC	MG/KG	6	33	1.8U	1.7B	2B	0.63J	0.69J	1B
BERYLLIUM	MG/KG	NS	NS	0.92B	0.61B	1.2B	0.28B	0.43B	0.83
CADMIUM	MG/KG	0.6	10	**0.66B**	**0.69B**	0.47B	0.092U	0.075U	0.11B
CHROMIUM, TOTAL	MG/KG	26	110	23.8	13.4	16.3	18.9	12.7	18.8
COPPER	MG/KG	16	110	**21.7**	**17.9**	**25.4**	4.2B	14.4	12.2
LEAD	MG/KG	31	250	**50.5***	**41.4N**	30.6N	2.9B	11.8B	4.7BN
MERCURY	MG/KG	0.2	2	0.13BN	0.14B*	**2.3***	0.0043J	0.055J	0.0035U_*
NICKEL	MG/KG	16	75	9B	9.1B	10.7B	4.5B	6.1B	8.5
SELENIUM	MG/KG	NS	NS	2.7B	1U	1.2U	0.8U	0.66U	0.67U
SILVER	MG/KG	1	4	0.65U	0.3B	0.35U	0.23U	0.19U	0.31B
THALLIUM	MG/KG	NS	NS	4U	1.8U	2.1U	1.4U	1.2U	1.2U
ZINC	MG/KG	120	820	82.9N	**139**	50	51.5	47.3	52.9

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ft. bgs = Feet below ground surface

Table 5-26

Sediment Analytical Results - Western Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-8-01 (0-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0-2 ft. bgs) 04/04/2001	SD-E14-3-01 (0-2 ft. bgs) 04/10/2001	SD-E15-1-01 (0-2 ft. bgs) 04/10/2001	SD-E15-2-01 (0-2 ft. bgs) 04/10/2001	SD-E15-3-01 (0-1.5 ft. bgs) 04/10/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	1.1UJ	1.4U	2.8UJ	0.88UJ	1.4UJ	1.4UJ
ARSENIC	MG/KG	6	33	1.8	3.8	**21.7**	1.1B	1.2B	1.9B
BERYLLIUM	MG/KG	NS	NS	0.6B	0.8B	1.9B	0.2B	0.25B	0.36B
CADMIUM	MG/KG	0.6	10	0.18B	0.23B	**0.64B**	0.074U	0.12U	0.21B
CHROMIUM, TOTAL	MG/KG	26	110	15.1	10.7	24.4	9.4	23.2	19.8
COPPER	MG/KG	16	110	7.2	14.1	**41.8**	3.9B	4.8B	9.8
LEAD	MG/KG	31	250	12.7BN	24.5*	**715N**	**73.3N**	8.7BN	**63N**
MERCURY	MG/KG	0.2	2	0.097B*	0.051BN	**3.7***	**0.21***	0.033B*	**0.51***
NICKEL	MG/KG	16	75	5.4B	7.9B	12.9B	2B	2.5B	4.5B
SELENIUM	MG/KG	NS	NS	0.79U	1U	2.4B	0.65U	1.1B	1U
SILVER	MG/KG	1	4	0.23U	0.3U	0.6U	0.19U	0.31U	0.29U
THALLIUM	MG/KG	NS	NS	1.4U	1.8U	3.6U	1.1U	1.9U	1.8U
ZINC	MG/KG	120	820	41.2	69.9N	**158**	32.6	18.9B	56.7

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Table 5-26

Sediment Analytical Results - Western Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E16-1-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (0-1.5 ft. bgs) 04/10/2001
Total Metals					
ANTIMONY	MG/KG	NS	NS	1.1UJ	0.96UJ
ARSENIC	MG/KG	6	33	0.67U	0.74B
BERYLLIUM	MG/KG	NS	NS	0.4B	0.19B
CADMIUM	MG/KG	0.6	10	0.11B	0.081U
CHROMIUM, TOTAL	MG/KG	26	110	6.4B	14.7
COPPER	MG/KG	16	110	11.2	3B
LEAD	MG/KG	31	250	9.6BN	6.9BN
MERCURY	MG/KG	0.2	2	0.039B*	0.01B*
NICKEL	MG/KG	16	75	5B	2.6B
SELENIUM	MG/KG	NS	NS	0.84U	0.71U
SILVER	MG/KG	1	4	0.25U	0.21U
THALLIUM	MG/KG	NS	NS	1.5U	1.3U
ZINC	MG/KG	120	820	51.3	24.6

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Table 5-27

Sediment Analytical Results - Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0-2 ft. bgs) 04/05/2001	SD-A15-3-01 (0-2 ft. bgs) 04/05/2001	SD-B14-2-01 (0-2 ft. bgs) 04/11/2001	SD-B15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B15-2-01 (0-2 ft. bgs) 04/05/2001
Explosive and Energetic Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
1,3-DINITROBENZENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
2,4-DINITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
2,6-DINITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
2-NITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
3-NITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
4-NITROTOLUENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	800U	880U	180U	560U	680U
NITROBENZENE	UG/KG	NS	NS	800U	880U	180U	560U	680U
NITROCELLULOSE	MG/KG	NS	NS	480U	530U	110U	340U	410U
NITROGLYCERIN	UG/KG	NS	NS	16000U	18000U	3600U	11000U	14000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	800U	880U	180U	560U	680U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	16000U	18000U	3600U	11000U	14000U
TETRYL	UG/KG	NS	NS	800U	880U	180U	560U	680U

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Table 5-27

Sediment Analytical Results - Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-1-01 (0-2 ft. bgs) 04/11/2001	SD-C15-2-01 (0-2 ft. bgs) 04/04/2001	SD-D14-3-01 (0-2 ft. bgs) 04/10/2001	SD-D14-4-01 (0-2 ft. bgs) 04/10/2001	SD-D14-5-01 (0-1.5 ft. bgs) 04/11/2001
Explosive and Energetic Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
1,3-DINITROBENZENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
2,4-DINITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
2,6-DINITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
2-NITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
3-NITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
4-NITROTOLUENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	310U	470U	210U	250U	170U
NITROBENZENE	UG/KG	NS	NS	310U	470U	210U	250U	170U
NITROCELLULOSE	MG/KG	NS	NS	190U	280U	130U	150U	100U
NITROGLYCERIN	UG/KG	NS	NS	6200U	9400U	4200U	5000U	3400U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	310U	470U	210U	250U	170U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	6200U	9400U	4200U	5000U	3400U
TETRYL	UG/KG	NS	NS	310U	470U	210U	250U	170U

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Table 5-27

Sediment Analytical Results - Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-6-01 (0-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0-2 ft. bgs) 04/04/2001	SD-E14-3-01 (0-2 ft. bgs) 04/10/2001
Explosive and Energetic Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
1,3-DINITROBENZENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	200J	140U	170U	220U	430U
2,4-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
2-NITROTOLUENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
3-NITROTOLUENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
4-NITROTOLUENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	140U	140U	170U	220U	430U
NITROBENZENE	UG/KG	NS	NS	140U	140U	170U	220U	430U
NITROCELLULOSE	MG/KG	NS	NS	83UJ	85U	100U	130U	260U
NITROGLYCERIN	UG/KG	NS	NS	2800U	2800U	3300U	4400U	8500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	140U	140U	170U	220U	430U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2800U	2800U	3300U	4400U	8500U
TETRYL	UG/KG	NS	NS	140U	140U	170U	220U	430U

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Table 5-27

Sediment Analytical Results - Western Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E15-1-01 (0-2 ft. bgs) 04/10/2001	SD-E15-2-01 (0-2 ft. bgs) 04/10/2001	SD-E15-3-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-1-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (0-1.5 ft. bgs) 04/10/2001
Explosive and Energetic Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
1,3-DINITROBENZENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
1,4-DINITROBENZENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
2,4-DINITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
2-NITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
3-NITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
4-NITROTOLUENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	140U	220U	210U	180U	150U
NITROBENZENE	UG/KG	NS	NS	140U	220U	210U	180U	150U
NITROCELLULOSE	MG/KG	NS	NS	82U	130U	130U	110U	90U
NITROGLYCERIN	UG/KG	NS	NS	2700U	4400U	4200U	3500U	3000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	140U	220U	210U	180U	150U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2700U	4400U	4200U	3500U	3000U
TETRYL	UG/KG	NS	NS	140U	220U	210U	180U	150U

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Table 5-28

Sediment Analytical Results - Western Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-A15-2-01 (0-2 ft. bgs) 04/05/2001	SD-A15-3-01 (0-2 ft. bgs) 04/05/2001	SD-B14-2-01 (0-2 ft. bgs) 04/11/2001	SD-B15-1-01 (0-2 ft. bgs) 04/05/2001	SD-B15-2-01 (0-2 ft. bgs) 04/05/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	87.5	88.7	44.7	82.2	85.4
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1	1.7	1	2.8	3
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	75.4	96.1	84.2	92.7	96.7
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	NR	NR	100	NR	NR
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	NR	NR	99.6	NR	NR
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	2.5	4.3	3.3	7.5	8.1
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	16.4	28.9	46.9	35.2	44.4
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	9.2	16.2	26.4	22.6	27.7
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	5	8.9	9.1	14.2	16.8
TOTAL ORGANIC CARBON	MG/KG	NS	NS	567000	546000	31400J	168000	209000

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Table 5-28

Sediment Analytical Results - Western Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C15-1-01 (0-2 ft. bgs) 04/11/2001	SD-C15-2-01 (0-2 ft. bgs) 04/04/2001	SD-D14-3-01 (0-2 ft. bgs) 04/10/2001	SD-D14-4-01 (0-2 ft. bgs) 04/10/2001	SD-D14-5-01 (0-1.5 ft. bgs) 04/11/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	67.6	78.8	52.3	60.2	41.8
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1	1.2	1.5	1	1.4
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	59.4	85.6	84.5	69.8	80.8
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	NR	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	92.1	NR	99.5	94.8	99.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3.5	3.4	5.1	2.5	6.1
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	33.5	30.7	52.6	37.9	55.6
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	18.3	16.2	31.7	19.7	36.8
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	8.5	7.7	13.6	7.1	17.3
TOTAL ORGANIC CARBON	MG/KG	NS	NS	78300J	209000	44200J	45200J	17000

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-28

Sediment Analytical Results - Western Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D14-6-01 (0-1.5 ft. bgs) 04/12/2001	SD-D14-7-01 (0-1 ft. bgs) 04/11/2001	SD-D14-8-01 (0-1 ft. bgs) 04/11/2001	SD-D15-1-01 (0-2 ft. bgs) 04/04/2001	SD-E14-3-01 (0-2 ft. bgs) 04/10/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	27.8	29.4	40.2	54.9	76.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	0.9J	1	1.3	1	4.1
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	75.7	83.2	80.7	74.9	93.8
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	NR	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.9	100	98.2	NR	98.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3	4	4.2	3.3	12.1
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	43.6	47.4	53.6	44.4	59.7
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	17.9	25.6	32.4	25.2	37.9
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	9.1	10.7	12.9	10.2	25.4
TOTAL ORGANIC CARBON	MG/KG	NS	NS	5600J	8100J	15600J	58800	256000J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-28

Sediment Analytical Results - Western Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E15-1-01 (0-2 ft. bgs) 04/10/2001	SD-E15-2-01 (0-2 ft. bgs) 04/10/2001	SD-E15-3-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-1-01 (0-1.5 ft. bgs) 04/10/2001	SD-E16-2-01 (0-1.5 ft. bgs) 04/10/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	26.5	54.6	52.2	43	33.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.7	3.1	2.6	1.9	0.6J
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	97.2	98.7	92.6	91.1	78.4
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	100	99.7	100	96.3
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.8	8	7.8	5.3	2.5
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	68.3	71.3	68.1	46.2	43.4
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	42.2	43.3	44.4	28.4	23.9
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	19.7	19.3	22.5	12.8	8.9
TOTAL ORGANIC CARBON	MG/KG	NS	NS	7200	67000	35700	26400	25900

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SW-C12-1-01 (0.5-1 ft. bgs) 05/02/2001	SW-C12-2-01 (0.5-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0.5-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0.5-1 ft. bgs) 04/17/2001	SW-D12-1-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2UJ	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000UJ	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000UJ	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SW-C12-1-01 (0.5-1 ft. bgs) 05/02/2001	SW-C12-2-01 (0.5-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0.5-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0.5-1 ft. bgs) 04/17/2001	SW-D12-1-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents								
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-2-01 (0.5-1 ft. bgs) 04/16/2001	SW-D12-3-01 (0.5-1 ft. bgs) 04/16/2001	SW-D12-4-01 (0.5-1 ft. bgs) 04/16/2001	SW-D13-1-01 (0.5-1 ft. bgs) 04/13/2001	SW-D13-2-01 (0.5-1 ft. bgs) 04/13/2001	SW-D13-3-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000UJ	1000UJ	1000UJ
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000UJ	1000UJ	1000UJ	1000U	1000U	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-2-01 (0.5-1 ft. bgs) 04/16/2001	SW-D12-3-01 (0.5-1 ft. bgs) 04/16/2001	SW-D12-4-01 (0.5-1 ft. bgs) 04/16/2001	SW-D13-1-01 (0.5-1 ft. bgs) 04/13/2001	SW-D13-2-01 (0.5-1 ft. bgs) 04/13/2001	SW-D13-3-01 (0.5-1 ft. bgs) 04/12/2001
Volatile Organic Constituents								
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D13-4-01 (0.5-1 ft. bgs) 04/12/2001	SW-D13-5-01 (0.5-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0.5-1 ft. bgs) 04/12/2001	SW-D14-1-01 (0.5-1 ft. bgs) 04/12/2001	SW-D14-2-01 (0.5-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0.5-1 ft. bgs) 04/17/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000UJ	1000UJ	1000UJ	1000UJ	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000UJ	1000U	1000UJ	1000UJ	1000U	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D13-4-01 (0.5-1 ft. bgs) 04/12/2001	SW-D13-5-01 (0.5-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0.5-1 ft. bgs) 04/12/2001	SW-D14-1-01 (0.5-1 ft. bgs) 04/12/2001	SW-D14-2-01 (0.5-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0.5-1 ft. bgs) 04/17/2001
Volatile Organic Constituents								
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SW-E11-2-01 (0.5-1 ft. bgs) 04/17/2001	SW-E11-3-01 (0.5-1 ft. bgs) 04/17/2001	SW-E11-4-01 (0.5-1 ft. bgs) 04/17/2001	SW-E12-1-01 (0.5-1 ft. bgs) 04/16/2001	SW-E12-2-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2UJ	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000UJ	1000UJ	1000UJ	1000UJ	1000UJ	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SW-E11-2-01 (0.5-1 ft. bgs) 04/17/2001	SW-E11-3-01 (0.5-1 ft. bgs) 04/17/2001	SW-E11-4-01 (0.5-1 ft. bgs) 04/17/2001	SW-E12-1-01 (0.5-1 ft. bgs) 04/16/2001	SW-E12-2-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents								
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E12-3-01 (0.5-1 ft. bgs) 04/17/2001	SW-E14-1-01 (0.5-1 ft. bgs) 04/11/2001	SW-E14-2-01 (0.5-1 ft. bgs) 04/10/2001	SW-F10-1-01 (0.5-1 ft. bgs) 05/01/2001	SW-F11-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-F11-2-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1UJ	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1UJ	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1UJ	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1UJ	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1UJ	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1UJ	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1UJ	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2UJ	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40UJ	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4UJ	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1UJ	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1UJ	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1UJ	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2UJ	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1UJ	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1UJ	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2UJ	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1UJ	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2UJ	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1UJ	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1UJ	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1UJ	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1UJ	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2UJ	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000UJ	1000UJ	1000U	1000U	1000UJ	1000U
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1UJ	1U	1U	1U	1U

Table 5-29

Surface Water Analytical Results - Central Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E12-3-01 (0.5-1 ft. bgs) 04/17/2001	SW-E14-1-01 (0.5-1 ft. bgs) 04/11/2001	SW-E14-2-01 (0.5-1 ft. bgs) 04/10/2001	SW-F10-1-01 (0.5-1 ft. bgs) 05/01/2001	SW-F11-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-F11-2-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents								
TOLUENE	UG/L	7440	1U	1UJ	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1UJ	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1UJ	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1UJ	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2UJ	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1UJ	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1UJ	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0-1 ft. bgs) 04/25/2001	SW-C12-1-01 (0-0.5 ft. bgs) 05/02/2001	SW-C12-2-01 (0-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0-1 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	0.9U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	0.9U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	0.9U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	0.9U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	0.9U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	0.9U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	20U	19U	19U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	0.9U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	0.9U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	0.9U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1UJ	1U	0.9U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	9U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	0.9U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	0.9U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	0.9U	1U
BENZIDINE	UG/L	0.00012	20U	20UJ	19U	19U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	0.9U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	0.9U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0-1 ft. bgs) 04/25/2001	SW-C12-1-01 (0-0.5 ft. bgs) 05/02/2001	SW-C12-2-01 (0-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0-1 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	0.9U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1UJ	1U	0.9U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1UJ	0.9U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	0.9U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	0.9U	1U
FLUORENE	UG/L	1340	1U	1U	1U	0.9U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	0.9U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	0.9U	1U
ISOPHORONE	UG/L	552	1U	1UJ	1U	0.9U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1UJ	1U	0.9U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	0.9U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U	1U
NITROBENZENE	UG/L	16	1U	1UJ	1U	0.9U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	0.9U	1U
PHENOL	UG/L	20900	1U	1U	1U	0.9U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0-1 ft. bgs) 04/25/2001	SW-C12-1-01 (0-0.5 ft. bgs) 05/02/2001	SW-C12-2-01 (0-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0-1 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	1U	1U	0.9U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

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J = Value is less than the practical quantitation limit, but greater than zero

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-1-01 (0-1 ft. bgs) 04/16/2001	SW-D12-2-01 (0-0.5 ft. bgs) 04/16/2001	SW-D12-3-01 (0-1 ft. bgs) 04/16/2001	SW-D12-4-01 (0-1 ft. bgs) 04/16/2001	SW-D13-1-01 (0-1 ft. bgs) 04/13/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	21U	19U	19U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	11U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	20U	21U	19U	19U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-1-01 (0-1 ft. bgs) 04/16/2001	SW-D12-2-01 (0-0.5 ft. bgs) 04/16/2001	SW-D12-3-01 (0-1 ft. bgs) 04/16/2001	SW-D12-4-01 (0-1 ft. bgs) 04/16/2001	SW-D13-1-01 (0-1 ft. bgs) 04/13/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	1U	1UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	15U	15U	15U	15U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-1-01 (0-1 ft. bgs) 04/16/2001	SW-D12-2-01 (0-0.5 ft. bgs) 04/16/2001	SW-D12-3-01 (0-1 ft. bgs) 04/16/2001	SW-D12-4-01 (0-1 ft. bgs) 04/16/2001	SW-D13-1-01 (0-1 ft. bgs) 04/13/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D13-2-01 (0-0.5 ft. bgs) 04/13/2001	SW-D13-3-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-4-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-5-01 (0-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	0.9U	1U	0.9U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	0.9U	1U	0.9U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	0.9U	1U	0.9U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	0.9U	1U	0.9U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	0.9U	1U	0.9U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	0.9U	1U	0.9U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U	0.9U
2,4-DINITROPHENOL	UG/L	69.7	19U	19U	19U	21U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	0.9U	1U	0.9U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U	0.9U
2-CHLOROPHENOL	UG/L	122	1U	1U	0.9U	1U	0.9U
2-NITROPHENOL	UG/L	NS	1U	1U	0.9U	1U	0.9U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U	0.9U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	0.9U	1U	0.9U
4-NITROPHENOL	UG/L	NS	10U	10U	9U	10U	9U
ACENAPHTHENE	UG/L	NS	1U	1U	0.9U	1U	0.9U
ACENAPHTHYLENE	UG/L	NS	1U	1U	0.9U	1U	0.9U
ANTHRACENE	UG/L	9570	1U	1U	0.9U	1U	0.9U
BENZIDINE	UG/L	0.00012	19U	19U	19U	21U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	**2J**	1U	0.9U	1U	0.9U
BENZO(a)PYRENE	UG/L	0.0028	**2J**	1U	0.9U	1U	0.9U
BENZO(b)FLUORANTHENE	UG/L	0.031	**3J**	1U	0.9U	1U	0.9U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	**2J**	1U	0.9U	1U	0.9U
BENZO(k)FLUORANTHENE	UG/L	0.031	**1J**	1U	0.9U	1U	0.9U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D13-2-01 (0-0.5 ft. bgs) 04/13/2001	SW-D13-3-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-4-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-5-01 (0-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	0.9U	1U	0.9U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1UJ	1U	0.9U	1UJ	0.9U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1UJ	0.9UJ	1U	0.9UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	**2J**	2U	2U
CHRYSENE	UG/L	0.0028	**2J**	1U	0.9U	1U	0.9U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	0.9U	1U	0.9U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	3J	1U	0.9U	1U	0.9U
FLUORENE	UG/L	1340	1U	1U	0.9U	1U	0.9U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	0.9U	1U	0.9U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	2J	1U	0.9U	1U	0.9U
ISOPHORONE	UG/L	552	1U	1U	0.9U	1U	0.9U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	0.9U	1U	0.9U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	0.9U	1U	0.9U
NAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U	0.9U
NITROBENZENE	UG/L	16	1U	1U	0.9U	1U	0.9U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	2J	1U	0.9U	1U	0.9U
PHENOL	UG/L	20900	1U	1U	0.9U	1U	0.9U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D13-2-01 (0-0.5 ft. bgs) 04/13/2001	SW-D13-3-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-4-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-5-01 (0-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0-1.5 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	3J	1U	0.9U	1U	0.9U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

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B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-1-01 (0-1 ft. bgs) 04/12/2001	SW-D14-2-01 (0-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-2-01 (0-1 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	0.9U	1UJ	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	0.9U	1UJ	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	0.9U	1UJ	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	0.9U	1UJ	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	0.9U	1UJ	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2UJ	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	0.9U	1UJ	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	0.9U	1UJ	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	19U	19U	20UJ	19U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	0.9U	1UJ	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2UJ	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	0.9U	1UJ	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	0.9U	1UJ	1U	1U
2-NITROPHENOL	UG/L	NS	1U	0.9U	1UJ	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3UJ	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5UJ	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2UJ	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	0.9U	1UJ	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	0.9U	1UJ	1U	1U
4-NITROPHENOL	UG/L	NS	10U	9U	10UJ	10U	10U
ACENAPHTHENE	UG/L	NS	1U	0.9U	1UJ	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	0.9U	1UJ	1U	1U
ANTHRACENE	UG/L	9570	1U	0.9U	1UJ	1U	1U
BENZIDINE	UG/L	0.00012	19U	19U	20UJ	19U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	0.9U	1UJ	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	0.9U	1UJ	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	0.9U	1UJ	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	0.9U	1UJ	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	0.9U	1UJ	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-1-01 (0-1 ft. bgs) 04/12/2001	SW-D14-2-01 (0-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-2-01 (0-1 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2UJ	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	0.9U	1UJ	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	0.9U	1UJ	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	0.9U	1UJ	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2UJ	2U	2U
CHRYSENE	UG/L	0.0028	1U	0.9U	1UJ	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2UJ	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2UJ	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	0.9U	1UJ	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2UJ	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2UJ	2U	2U
FLUORANTHENE	UG/L	310	1U	0.9U	1UJ	1U	1U
FLUORENE	UG/L	1340	1U	0.9U	1UJ	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2UJ	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2UJ	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5UJ	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	0.9U	1UJ	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	0.9U	1UJ	1U	1U
ISOPHORONE	UG/L	552	1U	0.9U	1UJ	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	0.9U	1UJ	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2UJ	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	0.9U	1UJ	1U	1U
NAPHTHALENE	UG/L	NS	1U	0.9U	1UJ	1U	1U
NITROBENZENE	UG/L	16	1U	0.9U	1UJ	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3UJ	3U	15U
PHENANTHRENE	UG/L	NS	1U	0.9U	1UJ	1U	1U
PHENOL	UG/L	20900	1U	0.9U	1UJ	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-1-01 (0-1 ft. bgs) 04/12/2001	SW-D14-2-01 (0-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-2-01 (0-1 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	0.9U	1UJ	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-3-01 (0-0.5 ft. bgs) 04/17/2001	SW-E11-4-01 (0-2 ft. bgs) 04/17/2001	SW-E12-1-01 (0-0.5 ft. bgs) 04/16/2001	SW-E12-2-01 (0-1 ft. bgs) 04/16/2001	SW-E12-3-01 (0-0.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	0.9U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	0.9U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	0.9U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	0.9U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	0.9U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	0.9U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	20U	19U	19U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	0.9U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	0.9U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	0.9U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	0.9U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	9U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	0.9U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	0.9U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	0.9U	1U	1U
BENZIDINE	UG/L	0.00012	20U	20U	19U	19U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	0.9U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	0.9U	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-3-01 (0-0.5 ft. bgs) 04/17/2001	SW-E11-4-01 (0-2 ft. bgs) 04/17/2001	SW-E12-1-01 (0-0.5 ft. bgs) 04/16/2001	SW-E12-2-01 (0-1 ft. bgs) 04/16/2001	SW-E12-3-01 (0-0.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	0.9U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	0.9U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	0.9U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	0.9U	1U	1U
FLUORENE	UG/L	1340	1U	1U	0.9U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	0.9U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	0.9U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	0.9U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	0.9U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	0.9U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	0.9U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	15U	15U	15U	15U	15U
PHENANTHRENE	UG/L	NS	1U	1U	0.9U	1U	1U
PHENOL	UG/L	20900	1U	1U	0.9U	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-3-01 (0-0.5 ft. bgs) 04/17/2001	SW-E11-4-01 (0-2 ft. bgs) 04/17/2001	SW-E12-1-01 (0-0.5 ft. bgs) 04/16/2001	SW-E12-2-01 (0-1 ft. bgs) 04/16/2001	SW-E12-3-01 (0-0.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	1U	0.9U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-E14-2-01 (0-1 ft. bgs) 04/10/2001	SW-F10-1-01 (0-0.5 ft. bgs) 05/01/2001	SW-F11-1-01 (0-1 ft. bgs) 04/18/2001	SW-F11-2-01 (0-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	0.9U	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	0.9U	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	0.9U	1U	1UJ	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	0.9U	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	0.9U	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	0.9U	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	0.9U	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	19U	19U	20U	19U	19U
2,4-DINITROTOLUENE	UG/L	0.11	0.9U	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	0.9U	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	0.9U	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	0.9U	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	0.9U	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	0.9U	1U	1UJ	1U	1U
4-NITROPHENOL	UG/L	NS	9U	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	0.9U	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	0.9U	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	0.9U	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	19U	19U	20U	19U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	0.9U	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	0.9U	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	0.9U	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	0.9U	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	0.9U	1U	1U	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-E14-2-01 (0-1 ft. bgs) 04/10/2001	SW-F10-1-01 (0-0.5 ft. bgs) 05/01/2001	SW-F11-1-01 (0-1 ft. bgs) 04/18/2001	SW-F11-2-01 (0-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	0.9U	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	0.9U	1U	1UJ	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	0.9U	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	0.9U	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	0.9U	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	0.9U	1U	1U	1U	1U
FLUORENE	UG/L	1340	0.9U	NR	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	0.9U	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	0.9U	1U	1U	1U	1U
ISOPHORONE	UG/L	552	0.9U	1U	1UJ	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	0.9U	1U	1UJ	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	0.9U	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	0.9U	1U	1U	1U	1U
NITROBENZENE	UG/L	16	0.9U	1U	1UJ	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	0.9U	1U	1U	1U	1U
PHENOL	UG/L	20900	0.9U	1U	1U	1U	1U

Table 5-30

Surface Water Analytical Results - Central Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-E14-2-01 (0-1 ft. bgs) 04/10/2001	SW-F10-1-01 (0-0.5 ft. bgs) 05/01/2001	SW-F11-1-01 (0-1 ft. bgs) 04/18/2001	SW-F11-2-01 (0-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	0.9U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-31

Surface Water Analytical Results - Central Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0-1 ft. bgs) 04/25/2001	SW-C12-1-01 (0-0.5 ft. bgs) 05/02/2001	SW-C12-2-01 (0-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0-1 ft. bgs) 04/17/2001	SW-D12-1-01 (0-1 ft. bgs) 04/16/2001	SW-D12-2-01 (0-0.5 ft. bgs) 04/16/2001	SW-D12-3-01 (0-1 ft. bgs) 04/16/2001
Total Metals										
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	**4.4B**	3.7U	9.7U	3.7U	3.7U	**52.4**	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	2B	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U	10.8B	1.7U
COPPER	UG/L	NS	2.4U	2.5B	2.4U	6.7U	2.4U	4.7U	32.4	2.4U
LEAD	UG/L	5	8.8U	**11.7B**	**16B**	8.8U	**57.8**	8.8U	**304**	8.8U
MERCURY	UG/L	0.144	0.026UN*	0.026U	0.028B	0.026UN*	0.026U	0.075U	0.16U	0.048U
NICKEL	UG/L	516	1.6UN*	1.6U	1.6U	1.6UN*	1.6U	1.6U	7.1B	1.6U
SELENIUM	UG/L	10	5.5B	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	25.5U	16.9B	14.5B	16U	26.2U	5U	135	18.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-31

Surface Water Analytical Results - Central Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-4-01 (0-1 ft. bgs) 04/16/2001	SW-D13-1-01 (0-1 ft. bgs) 04/13/2001	SW-D13-2-01 (0-0.5 ft. bgs) 04/13/2001	SW-D13-3-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-4-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-5-01 (0-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0-1.5 ft. bgs) 04/12/2001	SW-D14-1-01 (0-1 ft. bgs) 04/12/2001
Total Metals										
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	**33.7**	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.84B	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	7.2B	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	2.4U	2.4U	49	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	5	**11.2B**	8.8U	**221**	8.8U	8.8U	8.8U	8.8U	**23**
MERCURY	UG/L	0.144	0.1U	0.064B	**0.2B**	0.026U	0.032U	0.093B	0.026U	0.026U
NICKEL	UG/L	516	1.6U	1.6U	17.4B	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	21.7U	11.5B	234	10.1B	10.9B	7.1B	10.2B	22.6B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-31

Surface Water Analytical Results - Central Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D14-2-01 (0-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-2-01 (0-1 ft. bgs) 04/17/2001	SW-E11-3-01 (0-0.5 ft. bgs) 04/17/2001	SW-E11-4-01 (0-2 ft. bgs) 04/17/2001	SW-E12-1-01 (0-0.5 ft. bgs) 04/16/2001	SW-E12-2-01 (0-1 ft. bgs) 04/16/2001
Total Metals										
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	**5.8B**	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	1.7U	5.2B	1.7U	1.7U	1.7U
COPPER	UG/L	NS	2.4U	2.4U	2.4U	6.7U	21.8B	2.4U	5.3U	3.4U
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U	**113**	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.026UN*	0.045U	0.083U	0.048U	0.032U	0.026U	0.039U	0.026U
NICKEL	UG/L	516	1.6UN*	1.6U	1.6U	1.6U	5.1B	1.6U	1.6U	1.8B
SELENIUM	UG/L	10	4.3U	5.7B	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	8.4U	28	48	24U	156	30.4	10U	39.5

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-31

Surface Water Analytical Results - Central Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E12-3-01 (0-0.5 ft. bgs) 04/17/2001	SW-E14-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-E14-2-01 (0-1 ft. bgs) 04/10/2001	SW-F10-1-01 (0-0.5 ft. bgs) 05/01/2001	SW-F11-1-01 (0-1 ft. bgs) 04/18/2001	SW-F11-2-01 (0-1 ft. bgs) 04/18/2001
Total Metals								
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	12B	5.9U
ARSENIC	UG/L	0.017	**14.6**	3.7U	3.7U	3.7U	**4.1B**	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	2B	1.7U	1.7U	1.7U	1.7U	1.8B
COPPER	UG/L	NS	18.2B	2.4U	9.2U	2.9B	5.1B	2.8B
LEAD	UG/L	5	**42.4**	8.8U	**21.5**	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.077U	0.029U	0.026U	0.026U	0.026U	0.026U
NICKEL	UG/L	516	4.8B	1.6U	1.6U	1.6U	3.4U	5U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	55.7	3.5B	18.4B	89.1	35U	50.4U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0-1 ft. bgs) 04/25/2001	SW-C12-1-01 (0-0.5 ft. bgs) 05/02/2001	SW-C12-2-01 (0-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0-1 ft. bgs) 04/17/2001	SW-D11-1-01 (0-1 ft. bgs) 05/09/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
1,4-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	**0.36J**	NR
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	2.07J	NR
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.57J	5.34	0.2U	0.2U	NR
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	1.19	8.97	0.2U	0.2U	NR
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.2U	NR
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500U	NR	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	4U	4U	NR
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

Bold = Indicates Concentration Exceeds SWQC

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J = Value is less than the practical quantitation limit, but greater than zero

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-1-01 (0-1 ft. bgs) 04/16/2001	SW-D12-1-01 (0-1 ft. bgs) 05/09/2001	SW-D12-2-01 (0-0.5 ft. bgs) 04/16/2001	SW-D12-2-01 (0-0.5 ft. bgs) 05/09/2001	SW-D12-3-01 (0-1 ft. bgs) 04/16/2001	SW-D12-3-01 (0-1 ft. bgs) 05/09/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
1,3-DINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
1,4-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	NR	0.2U	NR	0.2U	NR
2,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.78J	NR
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
2-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
3-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
4-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
NITROBENZENE	UG/L	16	0.2U	NR	0.2U	NR	0.2U	NR
NITROCELLULOSE	UG/L	NS	NR	500U	NR	500U	NR	500U
NITROGLYCERIN	UG/L	NS	200U	NR	120U	NR	120U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	NR	4U	NR	4U	NR
TETRYL	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

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J = Value is less than the practical quantitation limit, but greater than zero

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-4-01 (0-1 ft. bgs) 04/16/2001	SW-D12-4-01 (0-1 ft. bgs) 05/09/2001	SW-D13-1-01 (0-1 ft. bgs) 04/13/2001	SW-D13-2-01 (0-0.5 ft. bgs) 04/13/2001	SW-D13-3-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-4-01 (0-1.5 ft. bgs) 04/12/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
1,4-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	NR	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.82J	NR	0.2U	0.2U	0.95	0.84
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	4.38	0.2U	0.2U	0.52J
2-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	7.3	0.2U	0.2U	0.74
4-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	NR	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	NR	500U	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	NR	120U	120U	120U	200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	NR	4U	4U	4U	4U
TETRYL	UG/L	NS	0.2U	NR	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

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Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D13-5-01 (0-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0-1.5 ft. bgs) 04/12/2001	SW-D14-1-01 (0-1 ft. bgs) 04/12/2001	SW-D14-2-01 (0-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0-1 ft. bgs) 04/17/2001	SW-E10-1-01 (0-1 ft. bgs) 05/09/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	0.2U	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
1,4-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	0.2U	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.63	0.2U	0.2U	NR
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	0.2U	NR
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.83	0.2U	0.25J	0.2U	NR
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.54J	4.14	0.2U	0.2U	NR
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.73J	3.84	0.2U	0.2U	NR
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.79	0.2U	0.2U	NR
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.2U	NR
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500U	NR	500UJ
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	2.67J	0.2U	0.3U	NR
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	4U	4U	NR
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	NR

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-1-01 (0-1 ft. bgs) 05/09/2001	SW-E11-2-01 (0-1 ft. bgs) 04/17/2001	SW-E11-2-01 (0-1 ft. bgs) 05/09/2001	SW-E11-3-01 (0-0.5 ft. bgs) 04/17/2001	SW-E11-3-01 (0-0.5 ft. bgs) 05/09/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
1,3-DINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
1,4-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	NR	0.2U	NR	0.2U	NR
2,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
2-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
3-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
4-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
NITROBENZENE	UG/L	16	0.2U	NR	0.2U	NR	0.2U	NR
NITROCELLULOSE	UG/L	NS	NR	690J	NR	500U	NR	500U
NITROGLYCERIN	UG/L	NS	120U	NR	350U	NR	400U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	NR	4U	NR	4U	NR
TETRYL	UG/L	NS	0.2U	NR	0.2U	NR	0.2U	NR

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-4-01 (0-2 ft. bgs) 04/17/2001	SW-E12-1-01 (0-0.5 ft. bgs) 04/16/2001	SW-E12-1-01 (0-0.5 ft. bgs) 05/09/2001	SW-E12-2-01 (0-1 ft. bgs) 04/16/2001	SW-E12-2-01 (0-1 ft. bgs) 05/09/2001	SW-E12-3-01 (0-0.5 ft. bgs) 04/17/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
1,4-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	NR	0.2U	NR	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	NR	0.2U	NR	0.2U
NITROCELLULOSE	UG/L	NS	500U	NR	500U	NR	500U	NR
NITROGLYCERIN	UG/L	NS	200U	300U	NR	120U	NR	200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	NR	4U	NR	4U
TETRYL	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

J = Value is less than the practical quantitation limit, but greater than zero

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-E14-1-01 (0-1.5 ft. bgs) 05/09/2001	SW-E14-2-01 (0-1 ft. bgs) 04/10/2001	SW-F10-1-01 (0-0.5 ft. bgs) 05/01/2001	SW-F11-1-01 (0-0.5 ft. bgs) 05/09/2001	SW-F11-1-01 (0-1 ft. bgs) 04/18/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U
1,4-DINITROBENZENE	UG/L	NS	NR	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.25J	NR	0.2U	0.2U	NR	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	NR	0.2U	0.2U	NR	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.24J	NR	0.2U	0.2U	NR	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.69	NR	0.73	0.2U	NR	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.8	NR	1.07	0.2U	NR	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U
NITROBENZENE	UG/L	16	0.2U	NR	0.2U	0.2U	NR	0.2U
NITROCELLULOSE	UG/L	NS	NR	500UJ	500U	500U	500U	NR
NITROGLYCERIN	UG/L	NS	120U	NR	120U	120U	NR	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	NR	4U	4U	NR	4U
TETRYL	UG/L	NS	0.2U	NR	0.2U	0.2U	NR	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

J = Value is less than the practical quantitation limit, but greater than zero

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ft. bgs = Feet below ground surface

Table 5-32

Surface Water Analytical Results - Central Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F11-2-01 (0-1 ft. bgs) 04/18/2001
Energetic and Explosive Compounds			
1,2-DINITROBENZENE	UG/L	NS	NR
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U
1,4-DINITROBENZENE	UG/L	NS	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U
NITROBENZENE	UG/L	16	0.2U
NITROCELLULOSE	UG/L	NS	500U
NITROGLYCERIN	UG/L	NS	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U
TETRYL	UG/L	NS	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B)

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* = Value obtained from a 1:5 dilution

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-33

Surface Water Analytical Results - Central Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-B8-1-01 (0-1 ft. bgs) 04/25/2001	SW-C12-2-01 (0-1 ft. bgs) 04/13/2001	SW-C9-1-01 (0-1 ft. bgs) 04/25/2001	SW-D11-1-01 (0-1 ft. bgs) 04/17/2001	SW-D12-1-01 (0-1 ft. bgs) 04/16/2001	SW-D12-2-01 (0-0.5 ft. bgs) 04/16/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	11.53	11.53	11.22	9.81	9.81	12.52
pH	PH	NS	6.67	6.95	6.6	6.74	6.74	7.55

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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J = Value is less than the practical quantitation limit, but greater than zero

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

N = Flashpoint not observed, heated to specific limit

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-33

Surface Water Analytical Results - Central Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D12-3-01 (0-1 ft. bgs) 04/16/2001	SW-D12-4-01 (0-1 ft. bgs) 04/16/2001	SW-D13-1-01 (0-1 ft. bgs) 04/13/2001	SW-D13-2-01 (0-0.5 ft. bgs) 04/13/2001	SW-D13-3-01 (0-1.5 ft. bgs) 04/12/2001	SW-D13-4-01 (0-1.5 ft. bgs) 04/12/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	11.05	9.81	10.97	11.33	10.34	10.69
pH	PH	NS	6.85	6.74	6.95	7.03	7.17	7.19

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-33

Surface Water Analytical Results - Central Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-D13-5-01 (0-1 ft. bgs) 04/13/2001	SW-D13-6-01 (0-1.5 ft. bgs) 04/12/2001	SW-D14-1-01 (0-1 ft. bgs) 04/12/2001	SW-D14-2-01 (0-1 ft. bgs) 04/26/2001	SW-E10-1-01 (0-1 ft. bgs) 04/17/2001	SW-E11-1-01 (0-1 ft. bgs) 04/17/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	12.06	10.88	10.34	12.04	10.13	10.11
pH	PH	NS	6.46	7.06	6.77	6.61	6.45	6.82

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-33

Surface Water Analytical Results - Central Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E11-2-01 (0-1 ft. bgs) 04/17/2001	SW-E11-3-01 (0-0.5 ft. bgs) 04/17/2001	SW-E11-4-01 (0-2 ft. bgs) 04/17/2001	SW-E12-1-01 (0-0.5 ft. bgs) 04/16/2001	SW-E12-2-01 (0-1 ft. bgs) 04/16/2001	SW-E12-3-01 (0-0.5 ft. bgs) 04/17/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	10.82	11.34	10.36	10.64	9.99	9.99
pH	PH	NS	6.62	6.92	6.32	7.17	7.03	5.24

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-33

Surface Water Analytical Results - Central Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-E14-1-01 (0-1.5 ft. bgs) 04/11/2001	SW-E14-2-01 (0-1 ft. bgs) 04/10/2001	SW-F11-1-01 (0-1 ft. bgs) 04/18/2001	SW-F11-2-01 (0-1 ft. bgs) 04/18/2001
General Chemistry						
DISSOLVED OXYGEN	MG/L	NS	10.62	10.52	9.57	9.53
pH	PH	NS	7.59	7.42	6.95	6.39

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-34

Surface Water Analytical Results - Central Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-B8-1-01 (0-1 ft. bgs) 04/25/01	SW-C12-1-01 (0-0.5 ft. bgs) 05/02/01	SW-C12-2-01 (0-1 ft. bgs) 04/13/01	SW-C9-1-01 (0-1 ft. bgs) 04/25/01	SW-D11-1-01 (0-1 ft. bgs) 04/17/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.9B	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.3	1.5	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	190.3	90.7	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	11.8	9.3	2.4U	2.4U	2.4U	2.4U	2.5B
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	562.9	87.7	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	10B	8.8U	8.8U	8.8U
ZINC	UG/L	66.9	66.2	13.1B	20.1B	9.6B	6.3B	25.7
Semi-Volatile Organic Consitituents								
PENTACHLOROPHENOL	UG/L	7.46	4.71	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-34

Surface Water Analytical Results - Central Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-D12-1-01 (0-1 ft. bgs) 04/16/01	SW-D12-2-01 (0-0.5 ft. bgs) 04/16/01	SW-D12-3-01 (0-1 ft. bgs) 04/16/01	SW-D12-4-01 (0-1 ft. bgs) 04/16/01	SW-D13-1-01 (0-1 ft. bgs) 04/13/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.3	1.5	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	190.3	90.7	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	11.8	9.3	2.5B	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	562.9	87.7	1.6U	1.6U	1.6U	1.6U	1.7B
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.4B
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	66.9	66.2	3.2U	12.3B	11.1B	11.8B	12.8B
Semi-Volatile Organic Consitituents								
PENTACHLOROPHENOL	UG/L	7.46	4.71	15U	15U	15U	15U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-34

Surface Water Analytical Results - Central Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-D13-2-01 (0-0.5 ft. bgs) 04/13/01	SW-D13-3-01 (0-1.5 ft. bgs) 04/12/01	SW-D13-4-01 (0-1.5 ft. bgs) 04/12/01	SW-D13-5-01 (0-1 ft. bgs) 04/13/01	SW-D13-6-01 (0-1.5 ft. bgs) 04/12/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.3	1.5	0.64U	0.64U	0.64U	1.6U	0.64U
CHROMIUM, TOTAL	UG/L	190.3	90.7	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	11.8	9.3	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	**17.5B**	8.8U
NICKEL	UG/L	562.9	87.7	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	**2.1B**	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	66.9	66.2	3.2U	9.3B	9.8B	3.2U	8.8B
Semi-Volatile Organic Consitituents								
PENTACHLOROPHENOL	UG/L	7.46	4.71	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-34

Surface Water Analytical Results - Central Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-D14-1-01 (0-1 ft. bgs) 04/12/01	SW-D14-2-01 (0-1 ft. bgs) 04/26/01	SW-E10-1-01 (0-1 ft. bgs) 04/17/01	SW-E11-1-01 (0-1 ft. bgs) 04/17/01	SW-E11-2-01 (0-1 ft. bgs) 04/17/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	4.4B
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.3	1.5	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	190.3	90.7	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	11.8	9.3	2.4U	2.4U	2.4U	3.2B	2.5B
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	562.9	87.7	1.6U	1.6U	2.5B	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	66.9	66.2	3.2U	8.9B	27.9	44.3	21.1B
Semi-Volatile Organic Consitituents								
PENTACHLOROPHENOL	UG/L	7.46	4.71	3U	3U	3UJ	3U	15U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-34

Surface Water Analytical Results - Central Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-E11-3-01 (0-0.5 ft. bgs) 04/17/01	SW-E11-4-01 (0-2 ft. bgs) 04/17/01	SW-E12-1-01 (0-0.5 ft. bgs) 04/16/01	SW-E12-2-01 (0-1 ft. bgs) 04/16/01	SW-E12-3-01 (0-0.5 ft. bgs) 04/17/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.3	1.5	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	190.3	90.7	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	11.8	9.3	2.4U	2.4U	2.5B	2.8B	2.7B
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	562.9	87.7	1.6U	1.6U	1.6U	1.6U	2.1B
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	66.9	66.2	8.9B	24.7B	5.6B	10.2B	25.9
Semi-Volatile Organic Consitituents								
PENTACHLOROPHENOL	UG/L	7.46	4.71	15U	15U	15U	15U	15U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-34

Surface Water Analytical Results - Central Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-E14-1-01 (0-1.5 ft. bgs) 04/11/01	SW-E14-2-01 (0-1 ft. bgs) 04/10/01	SW-F10-1-01 (0-0.5 ft. bgs) 05/01/01	SW-F11-1-01 (0-1 ft. bgs) 04/18/01	SW-F11-2-01 (0-1 ft. bgs) 04/18/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.3	1.5	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	190.3	90.7	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	11.8	9.3	2.4U	2.4U	3.2B	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	562.9	87.7	1.6U	1.6U	1.7B	2.3B	3.3B
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	66.9	66.2	6.4B	4.5B	**89.6**	31.4	37.7
Semi-Volatile Organic Consitituents								
PENTACHLOROPHENOL	UG/L	7.46	4.71	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-C10-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-C10-3-01 (0.5-1 ft. bgs) 05/02/2001	SD-C10-4-01 (0.5-1 ft. bgs) 05/02/2001	SD-C11-1-01 (0.5-1 ft. bgs) 05/01/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
1,1-DICHLOROETHANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
1,1-DICHLOROETHENE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
1,2-DICHLOROETHANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
1,2-DICHLOROPROPANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	230U	270U	440UJ	300U	480UJ
ACROLEIN	UG/KG	NS	NS	2300U	2700U	4400UJ	3000U	4800R
ACRYLONITRILE	UG/KG	NS	NS	460U	540U	870UJ	610U	960UJ
AMYL ALCOHOL	UG/KG	NS	NS	10000U	11000U	12000U	13000U	15000U
BENZENE	UG/KG	340	NS	120U	140U	220UJ	150U	240UJ
BROMODICHLOROMETHANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
BROMOFORM	UG/KG	NS	NS	230U	140U	220UJ	150U	240UJ
BROMOMETHANE	UG/KG	NS	NS	230U	270U	440UJ	300U	480UJ
CARBON TETRACHLORIDE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
CHLOROBENZENE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
CHLOROETHANE	UG/KG	NS	NS	230U	270U	440UJ	300U	480UJ
CHLOROFORM	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
CHLOROMETHANE	UG/KG	NS	NS	230U	270U	440UJ	300U	480UJ
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	10000U	11000U	12000U	13000U	15000U

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-C10-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-C10-3-01 (0.5-1 ft. bgs) 05/02/2001	SD-C10-4-01 (0.5-1 ft. bgs) 05/02/2001	SD-C11-1-01 (0.5-1 ft. bgs) 05/01/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	10000U	11000U	12000U	13000U	15000U
ETHANOL	UG/KG	NS	NS	10000U	11000U	12000U	13000U	15000U
ETHYLBENZENE	UG/KG	1400	NS	120U	140U	220UJ	150U	240UJ
METHANOL	UG/KG	NS	NS	10000U	11000U	12000U	13000U	15000U
METHYLENE CHLORIDE	UG/KG	NS	NS	230U	270U	440UJ	300U	480UJ
n-BUTYL ETHER	UG/KG	NS	NS	10000U	11000U	12000U	13000U	15000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	120U	140U	220UJ	150U	240UJ
TOLUENE	UG/KG	2500	NS	120U	140U	220UJ	150U	240UJ
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	120U	140U	220UJ	150U	240UJ
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	230U	270U	440UJ	300U	480UJ
VINYL CHLORIDE	UG/KG	NS	NS	120U	140U	220UJ	150U	240UJ
XYLENES, TOTAL	UG/KG	120	NS	120U	140U	220UJ	150U	240UJ

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-C11-3-01 (0.5-1 ft. bgs) 05/02/2001	SD-D10-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-E12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-F10-1-01 (0.5-1 ft. bgs) 05/01/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
1,1-DICHLOROETHANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
1,1-DICHLOROETHENE	UG/KG	NS	NS	200U	140U	130U	200U	170U
1,2-DICHLOROETHANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	400U	270U	260U	400U	340U
ACROLEIN	UG/KG	NS	NS	4000U	2700U	2600U	4000U	3400R
ACRYLONITRILE	UG/KG	NS	NS	800U	540U	510U	790U	670U
AMYL ALCOHOL	UG/KG	NS	NS	18000U	13000U	11000U	17000U	14000U
BENZENE	UG/KG	340	NS	200U	140U	130U	200U	170U
BROMODICHLOROMETHANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
BROMOFORM	UG/KG	NS	NS	200U	140U	130U	200U	170U
BROMOMETHANE	UG/KG	NS	NS	400U	270U	260U	400U	340U
CARBON TETRACHLORIDE	UG/KG	NS	NS	200U	140U	130U	200U	170U
CHLOROBENZENE	UG/KG	NS	NS	200U	140U	130U	200U	170U
CHLOROETHANE	UG/KG	NS	NS	400U	270U	260U	400U	340U
CHLOROFORM	UG/KG	NS	NS	200U	140U	130U	200U	170U
CHLOROMETHANE	UG/KG	NS	NS	400U	270U	260U	400U	340U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	200U	140U	130U	200U	170U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	200U	140U	130U	200U	170U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	18000U	13000U	11000U	17000UJ	14000U

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-C11-3-01 (0.5-1 ft. bgs) 05/02/2001	SD-D10-1-01 (0.5-1 ft. bgs) 05/01/2001	SD-E12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-F10-1-01 (0.5-1 ft. bgs) 05/01/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	200U	140U	130U	200U	170U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	18000U	13000U	11000U	17000U	14000U
ETHANOL	UG/KG	NS	NS	18000U	13000U	11000U	17000U	14000U
ETHYLBENZENE	UG/KG	1400	NS	200U	140U	130U	200U	170U
METHANOL	UG/KG	NS	NS	18000U	13000U	11000U	17000U	14000U
METHYLENE CHLORIDE	UG/KG	NS	NS	400U	270U	260U	400U	340U
n-BUTYL ETHER	UG/KG	NS	NS	18000U	13000U	11000U	17000UJ	14000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	200U	140U	130U	200U	170U
TOLUENE	UG/KG	2500	NS	200U	140U	130U	200U	170U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	200U	140U	130U	200U	170U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	200U	140U	130U	200U	170U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	200U	140U	130U	200U	170U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	400U	270U	260U	400U	340U
VINYL CHLORIDE	UG/KG	NS	NS	200U	140U	130U	200U	170U
XYLENES, TOTAL	UG/KG	120	NS	200U	140U	130U	200U	170U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F10-2-01 (0.5-1 ft. bgs) 05/01/2001	SD-F12-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-F8-1-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	160U	190U	130U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	160U	190U	130U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	160U	190U	130U
1,1-DICHLOROETHANE	UG/KG	NS	NS	160U	190U	130U
1,1-DICHLOROETHENE	UG/KG	NS	NS	160U	190U	130U
1,2-DICHLOROETHANE	UG/KG	NS	NS	160U	190U	130U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	160U	190U	130U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	310U	380U	250U
ACROLEIN	UG/KG	NS	NS	3100R	3800R	2500U
ACRYLONITRILE	UG/KG	NS	NS	630U	770U	500U
AMYL ALCOHOL	UG/KG	NS	NS	14000U	16000U	10000U
BENZENE	UG/KG	340	NS	160U	190U	130U
BROMODICHLOROMETHANE	UG/KG	NS	NS	160U	190U	130U
BROMOFORM	UG/KG	NS	NS	160U	190U	250U
BROMOMETHANE	UG/KG	NS	NS	310U	380U	250U
CARBON TETRACHLORIDE	UG/KG	NS	NS	160U	190U	130U
CHLOROBENZENE	UG/KG	NS	NS	160U	190U	130U
CHLOROETHANE	UG/KG	NS	NS	310U	380U	250U
CHLOROFORM	UG/KG	NS	NS	160U	190U	130U
CHLOROMETHANE	UG/KG	NS	NS	310U	380U	250U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	160U	190U	130U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	160U	190U	130U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	14000U	16000U	10000U

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F10-2-01 (0.5-1 ft. bgs) 05/01/2001	SD-F12-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-F8-1-01 (0.5-1 ft. bgs) 04/25/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	160U	190U	130U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	14000U	16000U	10000U
ETHANOL	UG/KG	NS	NS	14000U	16000U	10000U
ETHYLBENZENE	UG/KG	1400	NS	160U	190U	130U
METHANOL	UG/KG	NS	NS	14000U	16000U	10000U
METHYLENE CHLORIDE	UG/KG	NS	NS	310U	380U	250U
n-BUTYL ETHER	UG/KG	NS	NS	14000U	16000UJ	10000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	160U	190U	130U
TOLUENE	UG/KG	2500	NS	160U	190U	130U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	160U	190U	130U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	160U	190U	130U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	160U	190U	130U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	310U	380U	250U
VINYL CHLORIDE	UG/KG	NS	NS	160U	190U	130U
XYLENES, TOTAL	UG/KG	120	NS	160U	190U	130U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-2-01 (1-1.5 ft. bgs) 04/25/2001	SD-F9-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-F9-2-01 (0.5-1 ft. bgs) 05/01/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	120U	130U	160U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	120U	130U	160U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	120U	130U	160U
1,1-DICHLOROETHANE	UG/KG	NS	NS	120U	130U	160U
1,1-DICHLOROETHENE	UG/KG	NS	NS	120U	130U	160U
1,2-DICHLOROETHANE	UG/KG	NS	NS	120U	130U	160U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	120U	130U	160U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	240U	250U	320U
ACROLEIN	UG/KG	NS	NS	2400U	2500U	3200U
ACRYLONITRILE	UG/KG	NS	NS	470U	510U	630U
AMYL ALCOHOL	UG/KG	NS	NS	10000U	10000U	13000U
BENZENE	UG/KG	340	NS	120U	130U	160U
BROMODICHLOROMETHANE	UG/KG	NS	NS	120U	130U	160U
BROMOFORM	UG/KG	NS	NS	240U	250U	160U
BROMOMETHANE	UG/KG	NS	NS	240U	250U	320U
CARBON TETRACHLORIDE	UG/KG	NS	NS	120U	130U	160U
CHLOROBENZENE	UG/KG	NS	NS	120U	130U	160U
CHLOROETHANE	UG/KG	NS	NS	240U	250U	320U
CHLOROFORM	UG/KG	NS	NS	120U	130U	160U
CHLOROMETHANE	UG/KG	NS	NS	240U	250U	320U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	120U	130U	160U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	120U	130U	160U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	10000U	10000U	13000U

Table 5-35

Sediment Analytical Results - Central Drainage System - Intermittent Streams -VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-2-01 (1-1.5 ft. bgs) 04/25/2001	SD-F9-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-F9-2-01 (0.5-1 ft. bgs) 05/01/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	120U	130U	160U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	10000U	10000U	13000U
ETHANOL	UG/KG	NS	NS	10000U	10000U	13000U
ETHYLBENZENE	UG/KG	1400	NS	120U	130U	160U
METHANOL	UG/KG	NS	NS	10000U	10000U	13000U
METHYLENE CHLORIDE	UG/KG	NS	NS	240U	250U	320U
n-BUTYL ETHER	UG/KG	NS	NS	10000U	10000U	13000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	120U	130U	160U
TOLUENE	UG/KG	2500	NS	120U	130U	160U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	120U	130U	160U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	120U	130U	160U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	120U	130U	160U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	240U	250U	320U
VINYL CHLORIDE	UG/KG	NS	NS	120U	130U	160U
XYLENES, TOTAL	UG/KG	120	NS	120U	130U	160U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0-2 ft. bgs) 04/25/2001	SD-C10-2-01 (0-2.5 ft. bgs) 05/02/2001	SD-C10-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-C10-4-01 (0-2 ft. bgs) 05/02/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	33U	36U	40U	44U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	33U	36U	40U	44U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	36U	40U	44U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	33U	36U	40U	44U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	33U	36U	40U	44U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	67U	74U	82U	89U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	67U	74U	82U	89U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	67U	74U	82U	89U
2,4-DINITROPHENOL	UG/KG	NS	NS	670UJ	740U	820U	890U
2,4-DINITROTOLUENE	UG/KG	NS	NS	67U	100J	82U	89U
2,6-DINITROTOLUENE	UG/KG	NS	NS	33U	36U	40U	44U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	33U	36U	40U	44U
2-CHLOROPHENOL	UG/KG	NS	NS	33U	36U	40U	44U
2-NITROPHENOL	UG/KG	NS	NS	67U	74U	82U	89U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	67U	74U	82U	89U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	190U	210U	230U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	67U	74U	82U	89U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	74U	82U	89U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	33U	36U	40U	44U
4-NITROPHENOL	UG/KG	NS	NS	170U	190U	210U	230U
ACENAPHTHENE	UG/KG	16	9	33U	36U	40U	44U
ACENAPHTHYLENE	UG/KG	44	11	33U	36U	40U	44U
ANTHRACENE	UG/KG	220	6400	33U	36U	180J	44U
BENZIDINE	UG/KG	NS	NS	670U	740U	820U	890U
BENZO(a)ANTHRACENE	UG/KG	320	25598	33U	36U	**670**	44U
BENZO(a)PYRENE	UG/KG	370	24906	33U	36U	**380J**	44U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	45J	36U	770	57J
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	33U	36U	**310J**	44U

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0-2 ft. bgs) 04/25/2001	SD-C10-2-01 (0-2.5 ft. bgs) 05/02/2001	SD-C10-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-C10-4-01 (0-2 ft. bgs) 05/02/2001
Semi-Volatile Organic Constituents							
BENZO(k)FLUORANTHENE	UG/KG	240	23177	33U	36U	**280J**	44U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	67U	74U	82U	89U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	67U	74U	82U	89U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	33U	36U	40U	44U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	33U	36U	40U	44U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	76J	74U	190J	350J
CHRYSENE	UG/KG	340	7956	33U	36U	**760**	46J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	67U	74U	82U	89U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	67U	74U	82U	89U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	33U	36U	**99J**	44U
DIETHYL PHTHALATE	UG/KG	NS	NS	67U	74U	82U	89U
DIMETHYL PHTHALATE	UG/KG	NS	NS	67U	74U	82U	89U
FLUORANTHENE	UG/KG	750	17642	41J	36U	**1500**	110J
FLUORENE	UG/KG	190	2767	33U	36U	40U	44U
HEXACHLOROBENZENE	UG/KG	20	24000	33U	36U	40U	44U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	67U	74U	82U	89U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	170U	190U	210U	230U
HEXACHLOROETHANE	UG/KG	NS	NS	33U	36U	40U	44U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	33U	36U	390J	44U
ISOPHORONE	UG/KG	NS	NS	33U	36U	40U	44U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	36U	40U	44U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	190U	210U	230U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	33U	36U	40U	44U
NAPHTHALENE	UG/KG	160	36	33U	36U	40U	44U
NITROBENZENE	UG/KG	NS	NS	33U	36U	40U	44U
PENTACHLOROPHENOL	UG/KG	NS	NS	170U	190U	210U	230U
PHENANTHRENE	UG/KG	560	16431	33U	36U	**1200**	47J
PHENOL	UG/KG	NS	NS	67U	74U	82U	89U

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0-2 ft. bgs) 04/25/2001	SD-C10-2-01 (0-2.5 ft. bgs) 05/02/2001	SD-C10-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-C10-4-01 (0-2 ft. bgs) 05/02/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/KG	490	14702	40J	36U	**1400**	44U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-1-01 (0-2 ft. bgs) 05/01/2001	SD-C11-2-01 (0-2 ft. bgs) 05/02/2001	SD-C11-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-D10-1-01 (0-1 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	48U	58U	42U	37U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	48U	58U	42U	37U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	48U	58U	42U	37U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	48U	58U	42U	37U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	48U	58U	42U	37U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	97U	120U	85U	75U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	97U	120U	85U	75U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	97U	120U	85U	75U
2,4-DINITROPHENOL	UG/KG	NS	NS	970U	1200U	850U	750U
2,4-DINITROTOLUENE	UG/KG	NS	NS	97U	3800J	150J	75U
2,6-DINITROTOLUENE	UG/KG	NS	NS	48U	720	42U	37U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	48U	58U	42U	37U
2-CHLOROPHENOL	UG/KG	NS	NS	48U	58U	42U	37U
2-NITROPHENOL	UG/KG	NS	NS	97U	120U	85U	75U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	97U	120U	85U	75U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	250U	300U	210U	190U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	97U	120U	85U	75U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	97U	120U	85U	75U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	48U	58U	42U	37U
4-NITROPHENOL	UG/KG	NS	NS	250U	300U	210U	190U
ACENAPHTHENE	UG/KG	16	9	48U	58U	42U	**610**
ACENAPHTHYLENE	UG/KG	44	11	48U	58U	42U	**720**
ANTHRACENE	UG/KG	220	6400	48U	84J	42U	**2500**
BENZIDINE	UG/KG	NS	NS	970U	1200U	850U	750U
BENZO(a)ANTHRACENE	UG/KG	320	25598	48U	**410J**	42U	**2900**
BENZO(a)PYRENE	UG/KG	370	24906	48U	280J	42U	**2500**
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	48U	690	50J	4300
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	48U	**260J**	42U	**1300**

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-1-01 (0-2 ft. bgs) 05/01/2001	SD-C11-2-01 (0-2 ft. bgs) 05/02/2001	SD-C11-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-D10-1-01 (0-1 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents							
BENZO(k)FLUORANTHENE	UG/KG	240	23177	48U	**240J**	42U	**1900**
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	97U	120U	85U	75U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	97U	120U	85U	75U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	48U	58U	42U	37U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	48U	58U	42U	37U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	97U	120U	85U	420
CHRYSENE	UG/KG	340	7956	48U	**690**	55J	**4400**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	97U	120U	85U	75U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	97U	120U	85U	75U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	48U	**110J**	42U	**500**
DIETHYL PHTHALATE	UG/KG	NS	NS	97U	120U	85U	75U
DIMETHYL PHTHALATE	UG/KG	NS	NS	97U	120U	85U	75U
FLUORANTHENE	UG/KG	750	17642	48U	**1200**	46J	**6200**
FLUORENE	UG/KG	190	2767	48U	64J	42U	**1000**
HEXACHLOROBENZENE	UG/KG	20	24000	48U	58U	42U	37U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	97U	120U	85U	75U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	250U	300U	210U	190U
HEXACHLOROETHANE	UG/KG	NS	NS	48U	58U	42U	37U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	48U	350J	42U	1700
ISOPHORONE	UG/KG	NS	NS	48U	58U	42U	37U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	48U	58U	42U	37U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	97U	300U	85U	190U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	48U	58U	42U	55J
NAPHTHALENE	UG/KG	160	36	48U	58U	42U	**62J**
NITROBENZENE	UG/KG	NS	NS	48U	1200J	42U	37U
PENTACHLOROPHENOL	UG/KG	NS	NS	250U	300U	210U	190U
PHENANTHRENE	UG/KG	560	16431	48U	**790**	44J	**4000**
PHENOL	UG/KG	NS	NS	97U	120U	85U	75U

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-1-01 (0-2 ft. bgs) 05/01/2001	SD-C11-2-01 (0-2 ft. bgs) 05/02/2001	SD-C11-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-D10-1-01 (0-1 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/KG	490	14702	48U	**850**	42U	**5300**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-3-01 (0-2 ft. bgs) 04/17/2001	SD-F10-1-01 (0-2 ft. bgs) 05/01/2001	SD-F10-2-01 (0-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (0-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	57U	46U	450U	54U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	57U	46U	450U	54U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	57U	46U	450U	54U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	57U	46U	450U	54U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	57U	46U	450U	54U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	120U	94U	910U	110U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	120U	94U	910U	110U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	120U	94U	910U	110U
2,4-DINITROPHENOL	UG/KG	NS	NS	1200U	940U	9100U	1100U
2,4-DINITROTOLUENE	UG/KG	NS	NS	120U	94U	910U	110U
2,6-DINITROTOLUENE	UG/KG	NS	NS	57U	46U	450U	54U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	57U	46U	450U	54U
2-CHLOROPHENOL	UG/KG	NS	NS	57U	46U	450U	54U
2-NITROPHENOL	UG/KG	NS	NS	120U	94U	910U	110U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	120U	94U	910U	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	290U	240U	2300U	280U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	120U	94U	910U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	120U	94U	910U	110U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	57U	46U	450U	54U
4-NITROPHENOL	UG/KG	NS	NS	290U	240U	2300U	280U
ACENAPHTHENE	UG/KG	16	9	57U	46U	450U	54U
ACENAPHTHYLENE	UG/KG	44	11	57U	46U	450U	54U
ANTHRACENE	UG/KG	220	6400	57U	46U	450U	54U
BENZIDINE	UG/KG	NS	NS	1200U	940U	9100U	1100U
BENZO(a)ANTHRACENE	UG/KG	320	25598	170J	46U	450U	54U
BENZO(a)PYRENE	UG/KG	370	24906	150J	46U	450UJ	54U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	410J	63J	640J	82J
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	120J	46U	450UJ	54U

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-3-01 (0-2 ft. bgs) 04/17/2001	SD-F10-1-01 (0-2 ft. bgs) 05/01/2001	SD-F10-2-01 (0-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (0-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
BENZO(k)FLUORANTHENE	UG/KG	240	23177	160J	46U	450UJ	54U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	120U	94U	910U	110U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	120U	94U	910U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	57U	46U	450U	54U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	57U	46U	450U	54U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	120U	94U	910U	110U
CHRYSENE	UG/KG	340	7956	290J	57J	450U	65J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	120U	94U	910U	110U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	120U	94U	910UJ	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	57U	46U	450UJ	54U
DIETHYL PHTHALATE	UG/KG	NS	NS	120U	94U	910U	110U
DIMETHYL PHTHALATE	UG/KG	NS	NS	120U	94U	910U	110U
FLUORANTHENE	UG/KG	750	17642	260J	92J	450U	97J
FLUORENE	UG/KG	190	2767	57U	46U	450U	54U
HEXACHLOROBENZENE	UG/KG	20	24000	57U	46U	450U	54U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	120U	94U	910U	110U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	290U	240U	2300U	280U
HEXACHLOROETHANE	UG/KG	NS	NS	57U	46U	450U	54U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	140J	46U	450UJ	54U
ISOPHORONE	UG/KG	NS	NS	57U	46U	450U	54U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	57U	46U	450U	54U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	120U	240U	2300U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	57U	530	14000	54U
NAPHTHALENE	UG/KG	160	36	57U	46U	450U	54U
NITROBENZENE	UG/KG	NS	NS	57U	46U	450U	54U
PENTACHLOROPHENOL	UG/KG	NS	NS	860U	240U	2300U	820U
PHENANTHRENE	UG/KG	560	16431	80J	60J	450U	69J
PHENOL	UG/KG	NS	NS	120U	94U	910U	110U

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-3-01 (0-2 ft. bgs) 04/17/2001	SD-F10-1-01 (0-2 ft. bgs) 05/01/2001	SD-F10-2-01 (0-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (0-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/KG	490	14702	290J	74J	450U	110J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-1-01 (0-2 ft. bgs) 04/25/2001	SD-F8-2-01 (1-3 ft. bgs) 04/25/2001	SD-F9-1-01 (0-1.5 ft. bgs) 04/25/2001	SD-F9-2-01 (0-1.5 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	44U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	44U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	33U	33U	44U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	44U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	44U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	67U	67U	67U	89U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	67U	67U	67U	89U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	67U	67U	67U	89U
2,4-DINITROPHENOL	UG/KG	NS	NS	670UJ	670UJ	670UJ	890U
2,4-DINITROTOLUENE	UG/KG	NS	NS	67U	67U	8500	89U
2,6-DINITROTOLUENE	UG/KG	NS	NS	33U	33U	350	44U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	33U	33U	33U	44U
2-CHLOROPHENOL	UG/KG	NS	NS	33U	33U	33U	44U
2-NITROPHENOL	UG/KG	NS	NS	67U	67U	67U	89U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	67U	67U	67U	89U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	170U	170U	230U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	67U	67U	67U	89U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	67U	67U	89U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	33U	33U	33U	44U
4-NITROPHENOL	UG/KG	NS	NS	170U	170U	170U	230U
ACENAPHTHENE	UG/KG	16	9	33U	33U	**42J**	44U
ACENAPHTHYLENE	UG/KG	44	11	33U	33U	**38J**	44U
ANTHRACENE	UG/KG	220	6400	33U	33U	150J	44U
BENZIDINE	UG/KG	NS	NS	670U	670U	670U	890U
BENZO(a)ANTHRACENE	UG/KG	320	25598	33U	33U	**460**	70J
BENZO(a)PYRENE	UG/KG	370	24906	33U	33U	**490**	85J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	67J	33U	720	250J
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	33U	33U	**330J**	130J

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-1-01 (0-2 ft. bgs) 04/25/2001	SD-F8-2-01 (1-3 ft. bgs) 04/25/2001	SD-F9-1-01 (0-1.5 ft. bgs) 04/25/2001	SD-F9-2-01 (0-1.5 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents							
BENZO(k)FLUORANTHENE	UG/KG	240	23177	33U	33U	**300J**	110J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	67U	67U	67U	89U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	67U	67U	67U	89U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	33U	33U	33U	44U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	33U	33U	33U	44U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	87J	83J	100J	120J
CHRYSENE	UG/KG	340	7956	48J	33U	**550**	150J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	67U	67U	140J	1500
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	67U	67U	67U	89U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	33U	33U	**99J**	44U
DIETHYL PHTHALATE	UG/KG	NS	NS	1500	530	380	140J
DIMETHYL PHTHALATE	UG/KG	NS	NS	67U	67U	67U	89U
FLUORANTHENE	UG/KG	750	17642	52J	33U	**870**	260J
FLUORENE	UG/KG	190	2767	33U	33U	42J	44U
HEXACHLOROBENZENE	UG/KG	20	24000	33U	33U	33U	44U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	67U	67U	67U	89U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	170U	170U	170U	230U
HEXACHLOROETHANE	UG/KG	NS	NS	33U	33U	33U	44U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	33U	33U	370	100J
ISOPHORONE	UG/KG	NS	NS	33U	33U	33U	44U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	33U	33U	44U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	67U	67U	230U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	530	690	490	300J
NAPHTHALENE	UG/KG	160	36	33U	33U	33U	44U
NITROBENZENE	UG/KG	NS	NS	33U	33U	33U	44U
PENTACHLOROPHENOL	UG/KG	NS	NS	170U	170U	170U	230U
PHENANTHRENE	UG/KG	560	16431	33U	33U	**560**	120J
PHENOL	UG/KG	NS	NS	67U	67U	67U	89U

Table 5-36

Sediment Analytical Results - Central Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-1-01 (0-2 ft. bgs) 04/25/2001	SD-F8-2-01 (1-3 ft. bgs) 04/25/2001	SD-F9-1-01 (0-1.5 ft. bgs) 04/25/2001	SD-F9-2-01 (0-1.5 ft. bgs) 05/01/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/KG	490	14702	52J	33U	**910**	230J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-37

Sediment Analytical Results - Central Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0-2 ft. bgs) 04/25/2001	SD-C10-2-01 (0-2.5 ft. bgs) 05/02/2001	SD-C10-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-C10-4-01 (0-2 ft. bgs) 05/02/2001	SD-C11-1-01 (0-2 ft. bgs) 05/01/2001	SD-C11-2-01 (0-2 ft. bgs) 05/02/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	0.77UJ	0.71J	2.6J	0.86J	0.94J	1.9J
ARSENIC	MG/KG	6	33	5.7	3.8	**7.9**	4.3	**9.5**	**61.2**
BERYLLIUM	MG/KG	NS	NS	0.47B	0.56	0.045B	0.069B	0.12B	0.16B
CADMIUM	MG/KG	0.6	10	0.065U	0.06U	0.065U	0.073U	0.14B	0.097U
CHROMIUM, TOTAL	MG/KG	26	110	18.2	17.9J	6.9J	6.4J	4.9B	15.9J
COPPER	MG/KG	16	110	**26.7**	**18.9J**	12J	3.3J	2.5B	**17.1J**
LEAD	MG/KG	31	250	**840J**	**57**	**5490**	**2290**	**1220**	**2570**
MERCURY	MG/KG	0.2	2	**0.35**	0.01B	0.1B	0.11B	0.05B	**0.53**
NICKEL	MG/KG	16	75	10.9	10.2	2.9B	2.6B	1.7B	6.6B
SELENIUM	MG/KG	NS	NS	1.4	1.1	0.64B	0.64U	0.69U	0.95B
SILVER	MG/KG	1	4	0.16U	0.15U	0.17U	0.19U	0.22B	0.25U
THALLIUM	MG/KG	NS	NS	1U	0.93U	1U	1.1U	1.2U	1.5U
ZINC	MG/KG	120	820	32.5J	33.3N	14.5N	13.8N	15.5J	42.7N

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

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B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-37

Sediment Analytical Results - Central Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-D10-1-01 (0-1 ft. bgs) 05/01/2001	SD-E12-3-01 (0-2 ft. bgs) 04/17/2001	SD-F10-1-01 (0-2 ft. bgs) 05/01/2001	SD-F10-2-01 (0-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (0-2 ft. bgs) 04/17/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	0.82J	0.72J	1.1U	0.91J	1.2J	5.3U
ARSENIC	MG/KG	6	33	**30.2**	3.6	**20.4J**	3.7	**9.4**	**8.2J**
BERYLLIUM	MG/KG	NS	NS	0.76	0.24B	0.49B	0.7	0.55B	0.89B
CADMIUM	MG/KG	0.6	10	0.07U	0.061U	0.095U	0.18B	0.45B	0.45U
CHROMIUM, TOTAL	MG/KG	26	110	14.3J	13.1J	8.8	15.7	12.4	13.9B
COPPER	MG/KG	16	110	**37.5J**	**16.4J**	**19.8**	**16.8**	**123**	**24.3B**
LEAD	MG/KG	31	250	**334**	**62.8**	**54.8**	16	**81.5**	**51.3B**
MERCURY	MG/KG	0.2	2	0.031B	0.057B	0.11J	0.16	**0.87**	0.17J
NICKEL	MG/KG	16	75	9.4	7.2	8.4B	8.9	9.8	11.4B
SELENIUM	MG/KG	NS	NS	1.1B	0.66B	0.83U	0.67U	0.98B	4.1B
SILVER	MG/KG	1	4	0.18U	0.15U	0.24U	0.2U	0.23B	1.1U
THALLIUM	MG/KG	NS	NS	2.5B	0.97B	1.5U	1.2U	1.2U	6.9U
ZINC	MG/KG	120	820	71N	46.7N	40.1	105J	**245J**	**127**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-37

Sediment Analytical Results - Central Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-1-01 (0-2 ft. bgs) 04/25/2001	SD-F8-2-01 (1-3 ft. bgs) 04/25/2001	SD-F9-1-01 (0-1.5 ft. bgs) 04/25/2001	SD-F9-2-01 (0-1.5 ft. bgs) 05/01/2001
Total Metals							
ANTIMONY	MG/KG	NS	NS	0.8UJ	0.7UJ	0.79UJ	0.87J
ARSENIC	MG/KG	6	33	**7.6**	4.3	**10.6**	4.2
BERYLLIUM	MG/KG	NS	NS	0.65	0.67	0.63	0.66B
CADMIUM	MG/KG	0.6	10	0.068U	0.059U	0.067U	0.073U
CHROMIUM, TOTAL	MG/KG	26	110	21.3	9.3	22.2	25.5J
COPPER	MG/KG	16	110	**62**	15.8	**331**	**58.5J**
LEAD	MG/KG	31	250	24.1J	9.2J	**150J**	**32.9**
MERCURY	MG/KG	0.2	2	0.04B	0.007B	0.17	0.16
NICKEL	MG/KG	16	75	13	7.7	14.2	15
SELENIUM	MG/KG	NS	NS	0.88B	0.52U	0.58U	1.1B
SILVER	MG/KG	1	4	0.17U	0.15U	0.17U	0.19U
THALLIUM	MG/KG	NS	NS	1U	0.91U	1U	1.2B
ZINC	MG/KG	120	820	60.4J	**138J**	94.3J	**250J**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-38

Sediment Analytical Results - Central Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0-2 ft. bgs) 04/25/2001	SD-C10-2-01 (0-2.5 ft. bgs) 05/02/2001	SD-C10-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-C10-4-01 (0-2 ft. bgs) 05/02/2001	SD-C11-1-01 (0-2 ft. bgs) 05/01/2001	SD-C11-2-01 (0-2 ft. bgs) 05/02/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U
1,3-DINITROBENZENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	99U	540	120U	130U	150U	8670J
2,4-DINITROTOLUENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	5820J
2,6-DINITROTOLUENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	970J
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	99U	280J	120U	130U	150U	3790J
2-NITROTOLUENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U
3-NITROTOLUENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	99U	300J	120U	130U	150U	2490J
4-NITROTOLUENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U
NITROBENZENE	UG/KG	NS	NS	99U	110U	120U	130U	150U	11100J
NITROCELLULOSE	MG/KG	NS	NS	60U	66UJ	74UJ	80UJ	87UJ	110UJ
NITROGLYCERIN	UG/KG	NS	NS	2000U	2200U	2500U	2700U	2900U	3500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	2200U	2500U	2700U	2900U	3500U
TETRYL	UG/KG	NS	NS	99U	110U	120U	130U	150U	180U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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Table 5-38

Sediment Analytical Results - Central Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-D10-1-01 (0-1 ft. bgs) 05/01/2001	SD-E12-3-01 (0-2 ft. bgs) 04/17/2001	SD-F10-1-01 (0-2 ft. bgs) 05/01/2001	SD-F10-2-01 (0-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (0-2 ft. bgs) 04/17/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
2,4-DINITROTOLUENE	UG/KG	NS	NS	160J	110U	170U	140U	140U	160U
2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
2-NITROTOLUENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
3-NITROTOLUENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
4-NITROTOLUENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	130U	110U	170U	140U	560	160U
NITROBENZENE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
NITROCELLULOSE	MG/KG	NS	NS	76UJ	67UJ	100U	84UJ	2200UJ	98U
NITROGLYCERIN	UG/KG	NS	NS	2500U	2200U	3400U	2800U	50400	3300U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2500U	2200U	3400U	2800U	2700U	3300U
TETRYL	UG/KG	NS	NS	130U	110U	170U	140U	140U	160U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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Table 5-38

Sediment Analytical Results - Central Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-1-01 (0-2 ft. bgs) 04/25/2001	SD-F8-2-01 (1-3 ft. bgs) 04/25/2001	SD-F9-1-01 (0-1.5 ft. bgs) 04/25/2001	SD-F9-2-01 (0-1.5 ft. bgs) 05/01/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	99U	99U	99U	130U
1,3-DINITROBENZENE	UG/KG	NS	NS	99U	99U	99U	130U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	138J	99U	99U	130U
2,4-DINITROTOLUENE	UG/KG	NS	NS	99U	99U	290J	130U
2,6-DINITROTOLUENE	UG/KG	NS	NS	99U	99U	99U	130U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	99U	99U	99U	130U
2-NITROTOLUENE	UG/KG	NS	NS	99U	99U	99U	130U
3-NITROTOLUENE	UG/KG	NS	NS	99U	99U	99U	130U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	99U	99U	99U	130U
4-NITROTOLUENE	UG/KG	NS	NS	99U	99U	99U	130U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	99U	99U	99U	130U
NITROBENZENE	UG/KG	NS	NS	99U	99U	99U	130U
NITROCELLULOSE	MG/KG	NS	NS	60U	700	176J	300J
NITROGLYCERIN	UG/KG	NS	NS	2000U	2000U	2000U	2700U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	99U	99U	99U	130U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	2000U	2000U	2700U
TETRYL	UG/KG	NS	NS	99U	99U	99U	130U

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Table 5-39

Sediment Analytical Results - Central Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C10-1-01 (0-2 ft. bgs) 04/25/2001	SD-C10-2-01 (0-2.5 ft. bgs) 05/02/2001	SD-C10-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-C10-4-01 (0-2 ft. bgs) 05/02/2001	SD-C11-1-01 (0-2 ft. bgs) 05/01/2001	SD-C11-2-01 (0-2 ft. bgs) 05/02/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	15.1	9.07	18.4	24.6	31.2	43.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.2	1.8	2.4	2.4	2.8	2.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	88.3	75.7	82.7	92.5	78.2	85.6
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	99.9	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	92.8	95.1	100	96.4	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.5	5.7	6.4	7.9	8.4	6.7
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	54.8	41.2	60.8	65.8	52.7	46
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	31.5	23	33	41.5	39.4	25.6
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.8	11.8	15.8	18.7	22.3	13.2
TOTAL ORGANIC CARBON	MG/KG	NS	NS	9700	810	5600	4800	7000	37000

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Table 5-39

Sediment Analytical Results - Central Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-3-01 (0-1.5 ft. bgs) 05/02/2001	SD-D10-1-01 (0-1 ft. bgs) 05/01/2001	SD-E12-3-01 (0-2 ft. bgs) 04/17/2001	SD-F10-1-01 (0-2 ft. bgs) 05/01/2001	SD-F10-2-01 (0-1.5 ft. bgs) 05/01/2001	SD-F12-1-01 (0-2 ft. bgs) 04/17/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	20.9	10.1	42J	28.5	26.4	39J
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.4	1.5	2.9	3	2.7	6.2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	92.3	73.9	89.4	76.2	78.8	89.6
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	98.3	100	93.5	100	99.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	4.9	4.7	8.4	7.8	7.9	13.1
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	55.7	47.7	56.9	51.5	56	63.3
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	27.7	29.2	40.7	33.4	38.4	42
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	11.7	12.9	21.8	17	20.1	25.4
TOTAL ORGANIC CARBON	MG/KG	NS	NS	116000J	9500	42000J	22700	32000	36400J

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Table 5-39

Sediment Analytical Results - Central Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F8-1-01 (0-2 ft. bgs) 04/25/2001	SD-F8-2-01 (1-3 ft. bgs) 04/25/2001	SD-F9-1-01 (0-1.5 ft. bgs) 04/25/2001	SD-F9-2-01 (0-1.5 ft. bgs) 05/01/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	19.6	7.86	18.2	25
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	0.9J	2.1	2.7	4.3
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	97.9	91.3	93.8	87.3
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	93.4	99.9	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	4.2	9	6.7	9.8
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	55.1	60	53	53.8
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	31.6	41.7	30.4	32.6
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	13	23.4	15.1	18.4
TOTAL ORGANIC CARBON	MG/KG	NS	NS	20300	2100	15900	28200

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Table 5-40

Sediment Analytical Results - Central Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-F11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-F11-2-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
1,1-DICHLOROETHANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
1,1-DICHLOROETHENE	UG/KG	NS	NS	110U	130U	160U	320U	180U
1,2-DICHLOROETHANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	220U	270U	320U	640U	360U
ACROLEIN	UG/KG	NS	NS	2200U	2700U	3200R	6400R	3600R
ACRYLONITRILE	UG/KG	NS	NS	440U	540U	630U	1300U	730U
AMYL ALCOHOL	UG/KG	NS	NS	10000U	10000U	14000U	22000U	14000U
BENZENE	UG/KG	340	NS	110U	130U	160U	320U	180U
BROMODICHLOROMETHANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
BROMOFORM	UG/KG	NS	NS	220U	270U	160U	320U	180U
BROMOMETHANE	UG/KG	NS	NS	220U	270U	320U	640U	360U
CARBON TETRACHLORIDE	UG/KG	NS	NS	110U	130U	160U	320U	180U
CHLOROBENZENE	UG/KG	NS	NS	110U	130U	160U	320U	180U
CHLOROETHANE	UG/KG	NS	NS	220U	270U	320U	640U	360U
CHLOROFORM	UG/KG	NS	NS	110U	130U	160U	320U	180U
CHLOROMETHANE	UG/KG	NS	NS	220U	270U	320U	640U	360U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	110U	130U	160U	320U	180U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	110U	130U	160U	320U	180U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	10000U	10000U	14000U	22000U	14000U

Table 5-40

Sediment Analytical Results - Central Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-F11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-F11-2-01 (0.5-1 ft. bgs) 04/18/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	110U	130U	160U	320U	180U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	10000U	10000U	14000U	22000U	14000U
ETHANOL	UG/KG	NS	NS	10000U	10000U	14000U	22000U	14000U
ETHYLBENZENE	UG/KG	1400	NS	110U	130U	160U	320U	180U
METHANOL	UG/KG	NS	NS	10000U	10000U	14000U	22000U	14000U
METHYLENE CHLORIDE	UG/KG	NS	NS	220U	270U	320U	640U	360U
n-BUTYL ETHER	UG/KG	NS	NS	10000U	10000U	14000UJ	22000U	14000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	110U	130U	160U	320U	180U
TOLUENE	UG/KG	2500	NS	110U	130U	160U	320U	180U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	110U	130U	160U	320U	180U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	110U	130U	160U	320U	180U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	110U	130U	160U	320U	180U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	220U	270U	320U	640U	360U
VINYL CHLORIDE	UG/KG	NS	NS	110U	130U	160U	320U	180U
XYLENES, TOTAL	UG/KG	120	NS	110U	130U	160U	320U	180U

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ft. bgs = Feet below ground surface

Table 5-41

Sediment Analytical Results - Central Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0-2 ft. bgs) 04/17/2001	SD-F11-1-01 (0-2 ft. bgs) 04/18/2001	SD-F11-2-01 (0-2 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	33U	33U	47U	370U	47U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	47U	370U	47U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	33U	47U	370U	47U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	47U	370U	47U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	47U	370U	47U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	67U	67U	95U	720U	96U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	67U	67U	95U	720U	96U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	67U	67U	95U	720U	96U
2,4-DINITROPHENOL	UG/KG	NS	NS	670U	670UJ	950U	7200U	960U
2,4-DINITROTOLUENE	UG/KG	NS	NS	67U	67U	95U	720U	96U
2,6-DINITROTOLUENE	UG/KG	NS	NS	33U	33U	47U	370U	47U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	33U	33U	47U	370U	47U
2-CHLOROPHENOL	UG/KG	NS	NS	33U	33U	47U	370U	47U
2-NITROPHENOL	UG/KG	NS	NS	67U	67U	95U	720U	96U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	67U	67U	95U	720U	96U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	170U	240U	1800U	240U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	67U	67U	95U	720U	96U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	67U	95U	720U	96U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	33U	33U	47U	370U	47U
4-NITROPHENOL	UG/KG	NS	NS	170U	170U	240U	1800U	240U
ACENAPHTHENE	UG/KG	16	9	33U	33U	47U	370U	47U
ACENAPHTHYLENE	UG/KG	44	11	33U	33U	47U	370U	47U
ANTHRACENE	UG/KG	220	6593	130J	33U	47U	370U	47U
BENZIDINE	UG/KG	NS	NS	670U	670U	950U	7200U	960U
BENZO(a)ANTHRACENE	UG/KG	320	26371	**450**	120J	47U	**920J**	47U
BENZO(a)PYRENE	UG/KG	370	25658	**430**	150J	47U	**1000J**	51J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	500	210J	47U	1500J	77J
BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**290J**	110J	47U	**840J**	47U
BENZO(k)FLUORANTHENE	UG/KG	240	23876	**250J**	76J	47U	**600J**	47U

Table 5-41

Sediment Analytical Results - Central Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0-2 ft. bgs) 04/17/2001	SD-F11-1-01 (0-2 ft. bgs) 04/18/2001	SD-F11-2-01 (0-2 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents								
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	200J	67U	95U	720U	96U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	67U	67U	95U	720U	96U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	33U	33U	47U	370U	47U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	33U	33U	47U	370U	47U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	540	320J	150J	720U	96U
CHRYSENE	UG/KG	340	8196	**520**	170J	47U	**1100J**	57J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	180J	67U	95U	720U	96U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	86J	67U	95U	720U	96U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**97J**	33U	47U	370U	47U
DIETHYL PHTHALATE	UG/KG	NS	NS	67U	67U	95U	720U	96U
DIMETHYL PHTHALATE	UG/KG	NS	NS	67U	67U	95U	720U	96U
FLUORANTHENE	UG/KG	750	18174	**980**	240J	47U	**1600J**	82J
FLUORENE	UG/KG	190	2851	33U	33U	47U	370U	47U
HEXACHLOROBENZENE	UG/KG	20	24000	33U	33U	47U	370U	47U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	67U	67U	95U	720U	96U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	170U	170U	240U	1800U	240U
HEXACHLOROETHANE	UG/KG	NS	NS	33U	33U	47U	370U	47U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	330	110J	47U	910J	47U
ISOPHORONE	UG/KG	NS	NS	33U	33U	47U	370U	47U

Table 5-41

Sediment Analytical Results - Central Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0-2 ft. bgs) 04/17/2001	SD-F11-1-01 (0-2 ft. bgs) 04/18/2001	SD-F11-2-01 (0-2 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents								
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	33U	47U	370U	47U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	67U	95U	720U	96U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	33U	33U	47U	370U	51J
NAPHTHALENE	UG/KG	160	37	33U	33U	47U	370U	47U
NITROBENZENE	UG/KG	NS	NS	33U	33U	47U	370U	47U
PENTACHLOROPHENOL	UG/KG	NS	NS	170U	170U	710U	1800U	240U
PHENANTHRENE	UG/KG	560	16927	400	140J	47U	**660J**	50J
PHENOL	UG/KG	NS	NS	67U	67U	95U	720U	96U
PYRENE	UG/KG	490	15145	**730**	280J	47U	**1800J**	84J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-42

Sediment Analytical Results - Central Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0-2 ft. bgs) 04/17/2001	SD-F11-1-01 (0-2 ft. bgs) 04/18/2001	SD-F11-2-01 (0-2 ft. bgs) 04/18/2001
Total Metals								
ANTIMONY	MG/KG	NS	NS	0.85UJ	0.91UJ	0.91UJ	1.4U	0.92U
ARSENIC	MG/KG	6	33	1.9	2.7	3.8	**8.4J**	5J
BERYLLIUM	MG/KG	NS	NS	0.49B	0.52B	0.42U	1.3	0.81
CADMIUM	MG/KG	0.6	10	0.072U	0.077U	0.077U	0.61U	0.078UN
CHROMIUM, TOTAL	MG/KG	26	110	**27.5**	14.6	14	13.4N*	14.4N*
COPPER	MG/KG	16	110	**44.3**	**18.1**	9.1	**17J**	12.2J
LEAD	MG/KG	31	250	**49.4J**	**68.8J**	9.8B*	**34.1**	13.8B
MERCURY	MG/KG	0.2	2	0.014B	0.029B	0.01BN	**2.5J**	**0.31J**
NICKEL	MG/KG	16	75	**17.2**	8.8	6.5B	**22.6**	7.9
SELENIUM	MG/KG	NS	NS	0.63U	0.67U	0.69U	1.1U	0.68U
SILVER	MG/KG	1	4	0.18U	0.2U	0.2U	0.31U	0.2U
THALLIUM	MG/KG	NS	NS	1.1U	1.2U	1.2U	1.9U	1.5B
ZINC	MG/KG	120	820	**153J**	80.5J	41.5	**189N***	53.9N*

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N = Flashpoint not observed, heated to specific limit

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E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-43

Sediment Analytical Results - Central Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0-2 ft. bgs) 04/17/2001	SD-F11-1-01 (0-2 ft. bgs) 04/18/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	98U	99U	140U	220U
1,3-DINITROBENZENE	UG/KG	NS	NS	98U	99U	140U	220U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
2,4-DINITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
2,6-DINITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
2-NITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
3-NITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
4-NITROTOLUENE	UG/KG	NS	NS	98U	99U	140U	220U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	98U	99U	140U	220U
NITROBENZENE	UG/KG	NS	NS	98U	99U	140U	220U
NITROCELLULOSE	MG/KG	NS	NS	60U	60U	85UJ	130U
NITROGLYCERIN	UG/KG	NS	NS	2000U	2000U	2800U	4400U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	98U	99U	140U	220U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	2000U	2800U	4400UJ
TETRYL	UG/KG	NS	NS	98U	99U	140U	220U

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SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-43

Sediment Analytical Results - Central Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F11-2-01 (0-2 ft. bgs) 04/18/2001
Energetic and Explosive Compounds				
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	140U
1,3-DINITROBENZENE	UG/KG	NS	NS	140U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	140U
2,4-DINITROTOLUENE	UG/KG	NS	NS	140U
2,6-DINITROTOLUENE	UG/KG	NS	NS	140U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	140U
2-NITROTOLUENE	UG/KG	NS	NS	140U
3-NITROTOLUENE	UG/KG	NS	NS	140U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	140U
4-NITROTOLUENE	UG/KG	NS	NS	140U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	140U
NITROBENZENE	UG/KG	NS	NS	140U
NITROCELLULOSE	MG/KG	NS	NS	86U
NITROGLYCERIN	UG/KG	NS	NS	2900U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	140U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2900U
TETRYL	UG/KG	NS	NS	140U

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SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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Table 5-44

Sediment Analytical Results - Central Drainage System - Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-B8-1-01 (0-1 ft. bgs) 04/25/2001	SD-C9-1-01 (0-1 ft. bgs) 04/25/2001	SD-E11-2-01 (0-2 ft. bgs) 04/17/2001	SD-F11-1-01 (0-2 ft. bgs) 04/18/2001	SD-F11-2-01 (0-2 ft. bgs) 04/18/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	23.3	28.7	29.3	54.3	30.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.1	2.1	2.3	1	0.7J
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	74.5	68.4	76.4	95.3	65.4
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	99.2	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	97.1	87.8	94.5	100	93.2
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3.1	4.5	5.8	4.3	3.2
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	44.4	33.8	51.9	56.8	45.5
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	25.3	17.6	28.9	33.2	25.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	9.7	8.9	14.6	14.5	9.6
TOTAL ORGANIC CARBON	MG/KG	NS	NS	4800	17200J	10200	181000	14800

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E = Indicates that the concentration exceeded the calibration range of the instrument.

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ft. bgs = Feet below ground surface

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0.5-1 ft. bgs) 05/02/2001	SD-C12-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-D12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-2-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-3-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
1,1-DICHLOROETHANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
1,1-DICHLOROETHENE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
1,2-DICHLOROETHANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	340U	1100UJ	490U	450U	530U	530U
ACROLEIN	UG/KG	NS	NS	3400R	11000R	4900R	4500R	5300R	5300R
ACRYLONITRILE	UG/KG	NS	NS	680U	2200UJ	970U	910U	1100U	1100U
AMYL ALCOHOL	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U
BENZENE	UG/KG	340	NS	170U	540UJ	240U	230U	270U	270U
BROMODICHLOROMETHANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
BROMOFORM	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
BROMOMETHANE	UG/KG	NS	NS	340U	1100UJ	490U	450U	530U	530U
CARBON TETRACHLORIDE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
CHLOROBENZENE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
CHLOROETHANE	UG/KG	NS	NS	340U	1100UJ	490U	450U	530U	530U
CHLOROFORM	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
CHLOROMETHANE	UG/KG	NS	NS	340U	1100UJ	490U	450U	530U	530U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	15000U	46000UJ	19000U	19000U	19000UJ	22000U

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0.5-1 ft. bgs) 05/02/2001	SD-C12-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-D12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-2-01 (0.5-1 ft. bgs) 04/16/2001	SD-D12-3-01 (0.5-1 ft. bgs) 04/16/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U
ETHANOL	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U
ETHYLBENZENE	UG/KG	1400	NS	170U	540UJ	240U	230U	270U	270U
METHANOL	UG/KG	NS	NS	15000U	46000U	19000U	19000U	19000U	22000U
METHYLENE CHLORIDE	UG/KG	NS	NS	340U	1100UJ	490U	450U	530U	530U
n-BUTYL ETHER	UG/KG	NS	NS	15000U	46000UJ	19000UJ	19000UJ	19000UJ	22000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	170U	540UJ	240U	230U	270U	270U
TOLUENE	UG/KG	2500	NS	170U	540UJ	240U	230U	270U	270U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	170U	540UJ	240U	230U	270U	270U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	340U	1100UJ	490U	450U	530U	530U
VINYL CHLORIDE	UG/KG	NS	NS	170U	540UJ	240U	230U	270U	270U
XYLENES, TOTAL	UG/KG	120	NS	170U	540UJ	240U	230U	270U	270U

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E = Indicates that the concentration exceeded the calibration range of the instrument

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ft. bgs = Feet below ground surface

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-4-01 (0.5-1 ft. bgs) 04/16/2001	SD-D13-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-3-01 (0.5-1 ft. bgs) 04/12/2001	SD-D13-4-01 (0.5-1 ft. bgs) 04/12/2001	SD-D13-5-01 (0.5-1 ft. bgs) 04/13/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
1,1-DICHLOROETHANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
1,1-DICHLOROETHENE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
1,2-DICHLOROETHANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
1,2-DICHLOROPROPANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	670U	320U	810UJ	810U	510U	520UJ
ACROLEIN	UG/KG	NS	NS	6700R	3200R	8100R	8100R	5100R	5200R
ACRYLONITRILE	UG/KG	NS	NS	1300U	640U	1600UJ	1600U	1000U	1000UJ
AMYL ALCOHOL	UG/KG	NS	NS	19000U	16000U	29000U	29000U	20000U	25000U
BENZENE	UG/KG	340	NS	330U	160U	410UJ	410U	250U	260UJ
BROMODICHLOROMETHANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
BROMOFORM	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
BROMOMETHANE	UG/KG	NS	NS	670U	320U	810UJ	810U	510U	520UJ
CARBON TETRACHLORIDE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
CHLOROBENZENE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
CHLOROETHANE	UG/KG	NS	NS	670U	320U	810UJ	810U	510U	520UJ
CHLOROFORM	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
CHLOROMETHANE	UG/KG	NS	NS	670U	320U	810UJ	810U	510U	520UJ
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	19000U	16000U	29000UJ	29000UJ	20000UJ	25000UJ

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-4-01 (0.5-1 ft. bgs) 04/16/2001	SD-D13-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-2-01 (0.5-1 ft. bgs) 04/13/2001	SD-D13-3-01 (0.5-1 ft. bgs) 04/12/2001	SD-D13-4-01 (0.5-1 ft. bgs) 04/12/2001	SD-D13-5-01 (0.5-1 ft. bgs) 04/13/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	19000U	16000U	29000U	29000U	20000U	25000U
ETHANOL	UG/KG	NS	NS	19000U	16000U	29000U	29000U	20000U	25000U
ETHYLBENZENE	UG/KG	1400	NS	330U	160U	410UJ	410U	250U	260UJ
METHANOL	UG/KG	NS	NS	19000U	16000U	29000U	29000U	20000U	25000U
METHYLENE CHLORIDE	UG/KG	NS	NS	670U	320U	810UJ	810U	510U	520UJ
n-BUTYL ETHER	UG/KG	NS	NS	19000UJ	16000U	29000UJ	29000UJ	20000UJ	25000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	330U	160U	410UJ	410U	250U	260UJ
TOLUENE	UG/KG	2500	NS	330U	160U	410UJ	410U	250U	260UJ
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	330U	160U	410UJ	410U	250U	260UJ
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	670U	320U	810UJ	810U	510U	520UJ
VINYL CHLORIDE	UG/KG	NS	NS	330U	160U	410UJ	410U	250U	260UJ
XYLENES, TOTAL	UG/KG	120	NS	330U	160U	410UJ	410U	250U	260UJ

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-1-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-E10-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0.5-1 ft. bgs) 04/17/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	460U	230U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
1,1-DICHLOROETHANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
1,1-DICHLOROETHENE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
1,2-DICHLOROETHANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	580U	1100UJ	2300UJ	410U	460U	470U
ACROLEIN	UG/KG	NS	NS	5800R	11000R	23000R	4100R	460R	4700R
ACRYLONITRILE	UG/KG	NS	NS	1200U	2200UJ	4600UJ	820U	460U	930U
AMYL ALCOHOL	UG/KG	NS	NS	19000U	38000U	96000U	17000U	18000U	20000U
BENZENE	UG/KG	340	NS	290U	550UJ	1200UJ	210U	230U	230U
BROMODICHLOROMETHANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
BROMOFORM	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	460U	230U
BROMOMETHANE	UG/KG	NS	NS	580U	1100UJ	2300UJ	410U	460U	470U
CARBON TETRACHLORIDE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
CHLOROBENZENE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	460U	230U
CHLOROETHANE	UG/KG	NS	NS	580U	1100UJ	2300UJ	410U	460U	470U
CHLOROFORM	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
CHLOROMETHANE	UG/KG	NS	NS	580U	1100UJ	2300UJ	410U	460U	470U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	460U	230U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	19000UJ	38000UJ	96000U	17000U	18000U	20000U

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-6-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-1-01 (0.5-1 ft. bgs) 04/12/2001	SD-D14-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-E10-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-1-01 (0.5-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0.5-1 ft. bgs) 04/17/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	460U	230U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	19000U	38000U	96000U	17000U	18000U	20000U
ETHANOL	UG/KG	NS	NS	19000U	38000U	96000U	17000U	18000U	20000U
ETHYLBENZENE	UG/KG	1400	NS	290U	550UJ	1200UJ	210U	460U	230U
METHANOL	UG/KG	NS	NS	19000U	38000U	96000U	17000U	18000U	24000J
METHYLENE CHLORIDE	UG/KG	NS	NS	580U	1100UJ	2300UJ	410U	460U	470U
n-BUTYL ETHER	UG/KG	NS	NS	19000UJ	38000UJ	96000U	17000UJ	18000UJ	20000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	290U	550UJ	1200UJ	210U	230U	230U
TOLUENE	UG/KG	2500	NS	290U	550UJ	1200UJ	210U	230U	230U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	460U	230U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	290U	550UJ	1200UJ	210U	230U	230U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	580U	1100UJ	2300UJ	410U	460U	470U
VINYL CHLORIDE	UG/KG	NS	NS	290U	550UJ	1200UJ	210U	230U	230U
XYLENES, TOTAL	UG/KG	120	NS	290U	550UJ	1200UJ	210U	460U	230U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E11-4-01 (0.5-1 ft. bgs) 04/17/2001	SD-E12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-E12-2-01 (0.5-1 ft. bgs) 04/16/2001	SD-E14-1-01 (0.5-1 ft. bgs) 04/11/2001	SD-E14-2-01 (0.5-1 ft. bgs) 04/10/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
1,1-DICHLOROETHANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
1,1-DICHLOROETHENE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
1,2-DICHLOROETHANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	420U	310U	610U	1100UJ	1500U
ACROLEIN	UG/KG	NS	NS	4200R	3100R	6100R	11000R	15000U
ACRYLONITRILE	UG/KG	NS	NS	840U	610U	1200U	2300UJ	3100U
AMYL ALCOHOL	UG/KG	NS	NS	19000U	14000U	24000U	45000U	57000U
BENZENE	UG/KG	340	NS	210U	150U	300U	580UJ	770U
BROMODICHLOROMETHANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
BROMOFORM	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
BROMOMETHANE	UG/KG	NS	NS	420U	310U	610U	1100UJ	1500U
CARBON TETRACHLORIDE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
CHLOROBENZENE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
CHLOROETHANE	UG/KG	NS	NS	420U	310U	610U	1100UJ	1500U
CHLOROFORM	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
CHLOROMETHANE	UG/KG	NS	NS	420U	310U	610U	1100UJ	1500U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	19000UJ	14000U	24000U	45000UJ	57000UJ

Table 5-45

Sediment Analytical Results - Central Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E11-4-01 (0.5-1 ft. bgs) 04/17/2001	SD-E12-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-E12-2-01 (0.5-1 ft. bgs) 04/16/2001	SD-E14-1-01 (0.5-1 ft. bgs) 04/11/2001	SD-E14-2-01 (0.5-1 ft. bgs) 04/10/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	19000U	14000U	24000U	45000U	57000UJ
ETHANOL	UG/KG	NS	NS	19000U	14000U	24000U	45000U	57000U
ETHYLBENZENE	UG/KG	1400	NS	210U	150U	300U	580UJ	770U
METHANOL	UG/KG	NS	NS	19000U	14000U	24000U	65000J	57000U
METHYLENE CHLORIDE	UG/KG	NS	NS	420U	310U	610U	1100UJ	1500U
n-BUTYL ETHER	UG/KG	NS	NS	19000UJ	14000UJ	24000UJ	45000UJ	57000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	210U	150U	300U	580UJ	770U
TOLUENE	UG/KG	2500	NS	210U	150U	300U	580UJ	770U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	210U	150U	300U	580UJ	770U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	420U	310U	610U	1100UJ	1500U
VINYL CHLORIDE	UG/KG	NS	NS	210U	150U	300U	580UJ	770U
XYLENES, TOTAL	UG/KG	120	NS	210U	150U	300U	580UJ	770U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0-2 ft. bgs) 05/02/2001	SD-C12-2-01 (0-2 ft. bgs) 04/13/2001	SD-D11-1-01 (0-2 ft. bgs) 04/17/2001	SD-D12-1-01 (0-2 ft. bgs) 04/16/2001	SD-D12-2-01 (0-2 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
2,4-DINITROPHENOL	UG/KG	NS	NS	1000UJ	3100U	1300U	1200U	1300U
2,4-DINITROTOLUENE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
2,6-DINITROTOLUENE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
2-CHLOROPHENOL	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
2-NITROPHENOL	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	260UJ	790U	330U	320U	320U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
4-NITROPHENOL	UG/KG	NS	NS	260UJ	790U	330U	320U	320U
ACENAPHTHENE	UG/KG	16	25	50UJ	150U	64U	61U	**120J**
ACENAPHTHYLENE	UG/KG	44	33	**63J**	150U	64U	61U	**280J**
ANTHRACENE	UG/KG	220	18827	120J	150U	64U	61U	**840**
BENZIDINE	UG/KG	NS	NS	1000UJ	3100UJ	1300U	1200U	1300U
BENZO(a)ANTHRACENE	UG/KG	320	75308	**460J**	150U	64U	61U	**3300**
BENZO(a)PYRENE	UG/KG	370	73273	**580J**	150U	64U	61U	**2900**
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	970J	150U	64U	78J	3500
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**610J**	150U	64U	61U	**1900**

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0-2 ft. bgs) 05/02/2001	SD-C12-2-01 (0-2 ft. bgs) 04/13/2001	SD-D11-1-01 (0-2 ft. bgs) 04/17/2001	SD-D12-1-01 (0-2 ft. bgs) 04/16/2001	SD-D12-2-01 (0-2 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents								
BENZO(k)FLUORANTHENE	UG/KG	240	68185	**360J**	150U	64U	61U	**1300**
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	400J	310U	130U	130J	5300
CHRYSENE	UG/KG	340	23407	**660J**	150U	64U	61U	**3200**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	100UJ	310U	130U	140J	130U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**200J**	150U	64U	61U	**610J**
DIETHYL PHTHALATE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
DIMETHYL PHTHALATE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
FLUORANTHENE	UG/KG	750	51902	**1000J**	200J	64U	69J	**4600**
FLUORENE	UG/KG	190	8141	50UJ	150U	64U	61U	**340J**
HEXACHLOROBENZENE	UG/KG	20	24000	50UJ	150U	64U	61U	63U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	100UJ	310U	130U	120U	130U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	260UJ	790U	330U	320U	320U
HEXACHLOROETHANE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	560J	150U	64U	61U	2000
ISOPHORONE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	50UJ	150U	64U	61U	63U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	260UJ	310U	130U	120U	130U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	50UJ	150U	64U	87J	100J
NAPHTHALENE	UG/KG	160	107	50UJ	150U	64U	61U	100J
NITROBENZENE	UG/KG	NS	NS	60J	150U	64U	61U	63U
PENTACHLOROPHENOL	UG/KG	NS	NS	260UJ	790U	330U	930U	950U
PHENANTHRENE	UG/KG	560	48340	390J	150U	64U	61U	**2400**
PHENOL	UG/KG	NS	NS	100UJ	310U	130U	120U	130U

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0-2 ft. bgs) 05/02/2001	SD-C12-2-01 (0-2 ft. bgs) 04/13/2001	SD-D11-1-01 (0-2 ft. bgs) 04/17/2001	SD-D12-1-01 (0-2 ft. bgs) 04/16/2001	SD-D12-2-01 (0-2 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents								
PYRENE	UG/KG	490	43251	**970J**	150U	64U	82J	**6700**

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Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
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B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-3-01 (0-2 ft. bgs) 04/16/2001	SD-D12-4-01 (0-2 ft. bgs) 04/16/2001	SD-D13-1-01 (0-2 ft. bgs) 04/13/2001	SD-D13-2-01 (0-2 ft. bgs) 04/13/2001	SD-D13-3-01 (0-2 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	74U	64U	53U	96U	97U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	74U	64U	53U	96U	97U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	74U	64U	53U	96U	97U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	74U	64U	53U	96U	97U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	74U	64U	53U	96U	97U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	150U	130U	110U	190U	200U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	150U	130U	110U	190U	200U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	150U	130U	110U	190U	200U
2,4-DINITROPHENOL	UG/KG	NS	NS	1500U	1300U	1100U	1900U	2000U
2,4-DINITROTOLUENE	UG/KG	NS	NS	150U	130U	110U	190U	200U
2,6-DINITROTOLUENE	UG/KG	NS	NS	74U	64U	53U	96U	97U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	74U	64U	53U	96U	97U
2-CHLOROPHENOL	UG/KG	NS	NS	74U	64U	53U	96U	97U
2-NITROPHENOL	UG/KG	NS	NS	150U	130U	110U	190U	200U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	150U	130U	110U	190U	200U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	380U	330U	270U	490U	500U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	150U	130U	110U	190U	200U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	150U	130U	110U	190U	200U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	74U	64U	53U	96U	97U
4-NITROPHENOL	UG/KG	NS	NS	380U	330U	270U	490U	500U
ACENAPHTHENE	UG/KG	16	25	74U	64U	53U	96U	97U
ACENAPHTHYLENE	UG/KG	44	33	74U	64U	53U	96U	97U
ANTHRACENE	UG/KG	220	18827	74U	64U	210J	96U	97U
BENZIDINE	UG/KG	NS	NS	1500U	1300U	1100U	1900U	2000U
BENZO(a)ANTHRACENE	UG/KG	320	75308	76J	110J	**530**	96U	190J
BENZO(a)PYRENE	UG/KG	370	73273	110J	120J	**510J**	96U	180J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	150J	330J	640	110J	270J
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	83J	**170J**	**360J**	96U	110J

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-3-01 (0-2 ft. bgs) 04/16/2001	SD-D12-4-01 (0-2 ft. bgs) 04/16/2001	SD-D13-1-01 (0-2 ft. bgs) 04/13/2001	SD-D13-2-01 (0-2 ft. bgs) 04/13/2001	SD-D13-3-01 (0-2 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents								
BENZO(k)FLUORANTHENE	UG/KG	240	68185	74U	120J	**280J**	96U	100J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	150U	130U	110U	190U	200U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	150U	130U	110U	190U	200U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	74U	64U	53U	96U	97U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	74U	64U	53U	96U	97U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	160J	260J	110U	190U	200U
CHRYSENE	UG/KG	340	23407	100J	160J	**620**	96U	240J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	590J	3200	110U	190U	300J
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	150U	130U	110U	190U	200U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	74U	**81J**	**110J**	96U	97U
DIETHYL PHTHALATE	UG/KG	NS	NS	150U	130U	110U	190U	200U
DIMETHYL PHTHALATE	UG/KG	NS	NS	150U	130U	2200	190U	200U
FLUORANTHENE	UG/KG	750	51902	160J	230J	**1100**	210J	410J
FLUORENE	UG/KG	190	8141	74U	69J	67J	96U	97U
HEXACHLOROBENZENE	UG/KG	20	24000	74U	64U	53U	96U	97U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	150U	130U	110U	190U	200U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	380U	330U	270U	490U	500U
HEXACHLOROETHANE	UG/KG	NS	NS	74U	64U	53U	96U	97U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	81J	200J	380J	96U	120J
ISOPHORONE	UG/KG	NS	NS	74U	64U	53U	96U	97U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	74U	64U	53U	96U	97U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	150U	130U	110U	190U	200U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	320J	720	53U	96U	190J
NAPHTHALENE	UG/KG	160	107	74U	64U	53U	96U	97U
NITROBENZENE	UG/KG	NS	NS	74U	64U	190J	96U	97U
PENTACHLOROPHENOL	UG/KG	NS	NS	1100U	980U	270U	490U	500U
PHENANTHRENE	UG/KG	560	48340	90J	120J	**670**	96U	180J
PHENOL	UG/KG	NS	NS	150U	130U	110U	190U	200U

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-3-01 (0-2 ft. bgs) 04/16/2001	SD-D12-4-01 (0-2 ft. bgs) 04/16/2001	SD-D13-1-01 (0-2 ft. bgs) 04/13/2001	SD-D13-2-01 (0-2 ft. bgs) 04/13/2001	SD-D13-3-01 (0-2 ft. bgs) 04/12/2001
Semi-Volatile Organic Constituents								
PYRENE	UG/KG	490	43251	190J	230J	**990**	160J	360J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-4-01 (0-2 ft. bgs) 04/12/2001	SD-D13-5-01 (0-2 ft. bgs) 04/13/2001	SD-D13-6-01 (0-2 ft. bgs) 04/12/2001	SD-D14-1-01 (0-2 ft. bgs) 04/12/2001	SD-D14-2-01 (0-2 ft. bgs) 04/26/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	66U	83U	64U	120U	320U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	66U	83U	64U	120U	320U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	66U	83U	64U	120U	320U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	66U	83U	64U	120U	320U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	66U	83U	64U	120U	320U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	130U	170U	130U	250U	640U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	130U	170U	130U	250U	640U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	130U	170U	130U	250U	640U
2,4-DINITROPHENOL	UG/KG	NS	NS	1300U	1700U	1300U	2500U	6400U
2,4-DINITROTOLUENE	UG/KG	NS	NS	180J	170U	130U	250U	640U
2,6-DINITROTOLUENE	UG/KG	NS	NS	66U	83U	64U	120U	320U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	66U	83U	64U	120U	320U
2-CHLOROPHENOL	UG/KG	NS	NS	66U	83U	64U	120U	320U
2-NITROPHENOL	UG/KG	NS	NS	130U	170U	130U	250U	640U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	130U	170U	130U	250U	640U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	340U	430U	330U	640U	1600U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	130U	170U	130U	250U	640U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	130U	170U	130U	250U	640U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	66U	83U	64U	120U	320U
4-NITROPHENOL	UG/KG	NS	NS	340U	430U	330U	640U	1600U
ACENAPHTHENE	UG/KG	16	25	66U	83U	64U	120U	320U
ACENAPHTHYLENE	UG/KG	44	33	66U	**320J**	64U	120U	320U
ANTHRACENE	UG/KG	220	18827	97J	**510J**	64U	120U	320U
BENZIDINE	UG/KG	NS	NS	1300U	1700U	1300U	2500U	6400U
BENZO(a)ANTHRACENE	UG/KG	320	75308	**400J**	**2000**	64U	120U	320U
BENZO(a)PYRENE	UG/KG	370	73273	350J	**1400**	64U	120U	320U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	570J	2500	83J	120U	320U
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**220J**	**610J**	64U	120U	320U

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-4-01 (0-2 ft. bgs) 04/12/2001	SD-D13-5-01 (0-2 ft. bgs) 04/13/2001	SD-D13-6-01 (0-2 ft. bgs) 04/12/2001	SD-D14-1-01 (0-2 ft. bgs) 04/12/2001	SD-D14-2-01 (0-2 ft. bgs) 04/26/2001
Semi-Volatile Organic Constituents								
BENZO(k)FLUORANTHENE	UG/KG	240	68185	220J	**1000**	64U	120U	320U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	130U	170U	130U	250U	640U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	130U	170U	130U	250U	640U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	66U	83U	64U	120U	320U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	66U	83U	64U	120U	320UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	130U	170U	130U	250U	640U
CHRYSENE	UG/KG	340	23407	**500J**	**2100**	74J	120U	320U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	390J	170U	130U	250U	1200J
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	130U	170U	130U	250U	640U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	66U	**290J**	64U	120U	320U
DIETHYL PHTHALATE	UG/KG	NS	NS	130U	170U	130U	250U	640U
DIMETHYL PHTHALATE	UG/KG	NS	NS	130U	170U	130U	250U	640U
FLUORANTHENE	UG/KG	750	51902	**950**	**1400**	110J	150J	440J
FLUORENE	UG/KG	190	8141	66U	83U	64U	120U	320U
HEXACHLOROBENZENE	UG/KG	20	24000	66U	83U	64U	120U	320U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	130U	170U	130U	250U	640U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	340U	430U	330U	640U	1600U
HEXACHLOROETHANE	UG/KG	NS	NS	66U	83U	64U	120U	320U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	260J	770J	64U	120U	320U
ISOPHORONE	UG/KG	NS	NS	66U	83U	64U	120U	320U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	66U	83U	64U	120U	320UJ
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	130U	170U	130U	250U	640U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	180J	83U	64U	120U	520J
NAPHTHALENE	UG/KG	160	107	66U	83U	64U	120U	320U
NITROBENZENE	UG/KG	NS	NS	66U	83U	64U	120U	320U
PENTACHLOROPHENOL	UG/KG	NS	NS	340U	430U	330U	640U	1600U
PHENANTHRENE	UG/KG	560	48340	490J	180J	64U	120U	320U
PHENOL	UG/KG	NS	NS	130U	170U	130U	250U	640U

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-4-01 (0-2 ft. bgs) 04/12/2001	SD-D13-5-01 (0-2 ft. bgs) 04/13/2001	SD-D13-6-01 (0-2 ft. bgs) 04/12/2001	SD-D14-1-01 (0-2 ft. bgs) 04/12/2001	SD-D14-2-01 (0-2 ft. bgs) 04/26/2001
Semi-Volatile Organic Constituents								
PYRENE	UG/KG	490	43251	**760**	**1600**	93J	120U	320U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E10-1-01 (0-1.5 ft. bgs) 04/17/2001	SD-E11-1-01 (0-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0-2 ft. bgs) 04/17/2001	SD-E11-4-01 (0-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	55U	60U	66U	62U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	55U	60U	66U	62U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	55U	60U	66U	62U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	55U	60U	66U	62U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	55U	60U	66U	62U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	110U	120U	130U	130U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	110U	120U	130U	130U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	110U	120U	130U	130U
2,4-DINITROPHENOL	UG/KG	NS	NS	1100U	1200U	1300U	1300U
2,4-DINITROTOLUENE	UG/KG	NS	NS	110U	120U	130U	130U
2,6-DINITROTOLUENE	UG/KG	NS	NS	55U	60U	66U	62U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	55U	60U	66U	62U
2-CHLOROPHENOL	UG/KG	NS	NS	55U	60U	66U	62U
2-NITROPHENOL	UG/KG	NS	NS	110U	120U	130U	130U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	110UJ	120U	130U	130U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	280U	310U	340U	320U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	110U	120U	130U	130U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	110U	120U	130U	130U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	55U	60U	66U	62U
4-NITROPHENOL	UG/KG	NS	NS	280U	310U	340U	320U
ACENAPHTHENE	UG/KG	16	25	55U	60U	66U	62U
ACENAPHTHYLENE	UG/KG	44	33	55U	60U	66U	**66J**
ANTHRACENE	UG/KG	220	18827	55U	150J	66U	65J
BENZIDINE	UG/KG	NS	NS	1100UJ	1200U	1300U	1300U
BENZO(a)ANTHRACENE	UG/KG	320	75308	120J	230J	66U	260J
BENZO(a)PYRENE	UG/KG	370	73273	110J	240J	66U	340J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	190J	390J	66U	490J
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	110J	**180J**	66U	**320J**

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E10-1-01 (0-1.5 ft. bgs) 04/17/2001	SD-E11-1-01 (0-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0-2 ft. bgs) 04/17/2001	SD-E11-4-01 (0-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
BENZO(k)FLUORANTHENE	UG/KG	240	68185	78J	160J	66U	210J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	110U	120U	130U	130U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	110U	120U	130U	130U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	55U	60U	66U	62U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	55U	60U	66U	62U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	130J	130J	150J	130U
CHRYSENE	UG/KG	340	23407	150J	230J	66U	**370J**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	1500	850	130U	130U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	110U	120U	130U	130U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	55U	60U	66U	**93J**
DIETHYL PHTHALATE	UG/KG	NS	NS	340J	120U	200J	130U
DIMETHYL PHTHALATE	UG/KG	NS	NS	110U	120U	130U	130U
FLUORANTHENE	UG/KG	750	51902	230J	540J	66U	490J
FLUORENE	UG/KG	190	8141	55U	60U	66U	62U
HEXACHLOROBENZENE	UG/KG	20	24000	55U	60U	66U	62U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	110U	120U	130U	130U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	280U	310U	340U	320U
HEXACHLOROETHANE	UG/KG	NS	NS	55U	60U	66U	62U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	95J	190J	66U	340J
ISOPHORONE	UG/KG	NS	NS	55U	60U	66U	62U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	55U	60U	66U	62U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	110U	120U	130U	130U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	1200J	290J	66U	62U
NAPHTHALENE	UG/KG	160	107	55U	60U	66U	62U
NITROBENZENE	UG/KG	NS	NS	55U	60U	66U	62U
PENTACHLOROPHENOL	UG/KG	NS	NS	830U	310U	1000U	950U
PHENANTHRENE	UG/KG	560	48340	170J	360J	66U	240J
PHENOL	UG/KG	NS	NS	110U	120U	130U	130U

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E10-1-01 (0-1.5 ft. bgs) 04/17/2001	SD-E11-1-01 (0-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0-2 ft. bgs) 04/17/2001	SD-E11-4-01 (0-2 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/KG	490	43251	260J	**490J**	66U	**600J**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-1-01 (0-2 ft. bgs) 04/16/2001	SD-E12-2-01 (0-2 ft. bgs) 04/16/2001	SD-E14-1-01 (0-2 ft. bgs) 04/11/2001	SD-E14-2-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	48U	80U	150U	190U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	48U	80U	150U	190U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	48U	80U	150U	190U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	48U	80U	150U	190U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	48U	80U	150U	190U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	97U	160U	300U	390U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	97U	160U	300U	390U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	97U	160U	300U	390U
2,4-DINITROPHENOL	UG/KG	NS	NS	970U	1600U	3000U	3900U
2,4-DINITROTOLUENE	UG/KG	NS	NS	97U	160U	300U	390U
2,6-DINITROTOLUENE	UG/KG	NS	NS	48U	80U	150U	190U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	48U	80U	150U	190U
2-CHLOROPHENOL	UG/KG	NS	NS	48U	80U	150U	190U
2-NITROPHENOL	UG/KG	NS	NS	97U	160U	300U	390U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	97U	160U	300U	390U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	240U	410U	760U	980U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	97U	160U	300U	390U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	97U	160U	300U	390U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	48U	80U	150U	190U
4-NITROPHENOL	UG/KG	NS	NS	240U	410U	760U	980U
ACENAPHTHENE	UG/KG	16	25	48U	**99J**	150U	190U
ACENAPHTHYLENE	UG/KG	44	33	48U	**520J**	150U	190U
ANTHRACENE	UG/KG	220	18827	48U	**580J**	150U	190U
BENZIDINE	UG/KG	NS	NS	970U	1600U	3000U	3900U
BENZO(a)ANTHRACENE	UG/KG	320	75308	48U	**1800**	**350J**	190U
BENZO(a)PYRENE	UG/KG	370	73273	48U	**2200**	300J	190U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	59J	3100	470J	190U
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	48U	**2000**	**220J**	190U

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-1-01 (0-2 ft. bgs) 04/16/2001	SD-E12-2-01 (0-2 ft. bgs) 04/16/2001	SD-E14-1-01 (0-2 ft. bgs) 04/11/2001	SD-E14-2-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents							
BENZO(k)FLUORANTHENE	UG/KG	240	68185	48U	**1200**	180J	190U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	97U	160U	300U	390U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	97U	160U	300U	390U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	48U	80U	150U	190U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	48U	80U	150U	190U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	97U	4300	300U	390U
CHRYSENE	UG/KG	340	23407	48U	**2400**	**450J**	190U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	97U	160U	4600	390U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	97U	160U	300U	390U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	48U	**540J**	150U	190U
DIETHYL PHTHALATE	UG/KG	NS	NS	97U	160U	300U	390U
DIMETHYL PHTHALATE	UG/KG	NS	NS	97U	160U	300U	390U
FLUORANTHENE	UG/KG	750	51902	56J	**3700**	700J	190U
FLUORENE	UG/KG	190	8141	48U	**230J**	150U	190U
HEXACHLOROBENZENE	UG/KG	20	24000	48U	80U	150U	190U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	97U	160U	300U	390U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	240U	410U	760U	980U
HEXACHLOROETHANE	UG/KG	NS	NS	48U	80U	150U	190U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	48U	2100	230J	190U
ISOPHORONE	UG/KG	NS	NS	48U	80U	150U	190U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	48U	80U	150U	190U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	97U	160U	300U	390U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	48U	80U	690J	190U
NAPHTHALENE	UG/KG	160	107	48U	**180J**	150U	190U
NITROBENZENE	UG/KG	NS	NS	48U	80U	150U	190U
PENTACHLOROPHENOL	UG/KG	NS	NS	720U	1200U	760U	980U
PHENANTHRENE	UG/KG	560	48340	48U	**2200**	270J	190U
PHENOL	UG/KG	NS	NS	97U	160U	300U	390U

Table 5-46

Sediment Analytical Results - Central Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-1-01 (0-2 ft. bgs) 04/16/2001	SD-E12-2-01 (0-2 ft. bgs) 04/16/2001	SD-E14-1-01 (0-2 ft. bgs) 04/11/2001	SD-E14-2-01 (0-2 ft. bgs) 04/10/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/KG	490	43251	62J	**4600**	**690J**	190U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-47

Sediment Analytical Results - Central Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0-2 ft. bgs) 05/02/2001	SD-C12-2-01 (0-2 ft. bgs) 04/13/2001	SD-D11-1-01 (0-2 ft. bgs) 04/17/2001	SD-D12-1-01 (0-2 ft. bgs) 04/16/2001	SD-D12-2-01 (0-2 ft. bgs) 04/16/2001	SD-D12-3-01 (0-2 ft. bgs) 04/16/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	0.96J	3UJ	1.3UJ	1.2UJ	1.2UJ	1.5UJ
ARSENIC	MG/KG	6	33	**15.4**	5.6	0.83B	5.5	3.7	**8.2**
BERYLLIUM	MG/KG	NS	NS	0.29B	0.99U	0.63U	0.44U	0.5U	0.75U
CADMIUM	MG/KG	0.6	10	0.23B	0.25U	0.12B	0.23B	0.19B	0.48B
CHROMIUM, TOTAL	MG/KG	26	110	9.3	16.5B	23	20.8	17.8	14.6
COPPER	MG/KG	16	110	11.6	12B	**17.4**	11.4	10	**74.1**
LEAD	MG/KG	31	250	**657**	**159***	**36.1***	**67.7***	**123***	**681***
MERCURY	MG/KG	0.2	2	**0.74**	0.19BN	0.025BN	0.063BN	**0.27N**	**0.52N**
NICKEL	MG/KG	16	75	4.6B	5.7B	5.9B	6.7B	4.4B	10.7B
SELENIUM	MG/KG	NS	NS	0.71U	3.8U	2.4U	1.1U	1.2U	1.4U
SILVER	MG/KG	1	4	0.21B	0.64U	0.27U	0.26U	0.26U	0.31U
THALLIUM	MG/KG	NS	NS	1.3U	3.9U	1.7U	1.6U	1.6U	1.9U
ZINC	MG/KG	120	820	63.9J	17.9B	70.6	81.5	36.1	**164**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

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R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-47

Sediment Analytical Results - Central Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-4-01 (0-2 ft. bgs) 04/16/2001	SD-D13-1-01 (0-2 ft. bgs) 04/13/2001	SD-D13-2-01 (0-2 ft. bgs) 04/13/2001	SD-D13-3-01 (0-2 ft. bgs) 04/12/2001	SD-D13-4-01 (0-2 ft. bgs) 04/12/2001	SD-D13-5-01 (0-2 ft. bgs) 04/13/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	1.3UJ	1.5J	1.9UJ	1.9U	1.3U	1.6UJ
ARSENIC	MG/KG	6	33	**6.7**	**13.6**	2.8B	**22J**	**12.2J**	5.9
BERYLLIUM	MG/KG	NS	NS	0.63U	0.32B	0.46U	0.72B	1.1	0.49U
CADMIUM	MG/KG	0.6	10	**0.82B**	0.087U	**0.61B**	0.18B	0.32B	0.14U
CHROMIUM, TOTAL	MG/KG	26	110	17.7	11.1	**27.7**	15.3	12.4	11
COPPER	MG/KG	16	110	**70.1**	13.8	**22.6**	**20.7**	**56.1**	**20**
LEAD	MG/KG	31	250	**480***	**741***	**45.3***	**363**	**605**	22B*
MERCURY	MG/KG	0.2	2	**0.54N**	**2.5N**	**0.25BN**	**0.74J**	**0.81J**	0.11BN
NICKEL	MG/KG	16	75	11	4.7B	9.6B	7.8B	13.7	9.7B
SELENIUM	MG/KG	NS	NS	1.6U	1.5U	3.5U	1.9B	1.1B	1.5U
SILVER	MG/KG	1	4	0.27U	0.22U	0.4U	0.4U	0.27U	0.34U
THALLIUM	MG/KG	NS	NS	1.6U	1.3U	2.4U	2.4U	1.7U	2.1U
ZINC	MG/KG	120	820	**205**	37.5	47.7	111	**157**	67

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ft. bgs = Feet below ground surface

Table 5-47

Sediment Analytical Results - Central Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-6-01 (0-2 ft. bgs) 04/12/2001	SD-D14-1-01 (0-2 ft. bgs) 04/12/2001	SD-D14-2-01 (0-2 ft. bgs) 04/26/2001	SD-E10-1-01 (0-1.5 ft. bgs) 04/17/2001	SD-E11-1-01 (0-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0-2 ft. bgs) 04/17/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	1.3B	2.4U	6.2J	1.2J	1.2UJ	1.3UJ
ARSENIC	MG/KG	6	33	**10J**	**28.2J**	**11.1**	**8.9**	4.5	2.1
BERYLLIUM	MG/KG	NS	NS	0.69B	0.59B	0.48B	0.58U	0.56U	0.99U
CADMIUM	MG/KG	0.6	10	0.15B	0.38B	**0.86B**	0.091U	0.099U	0.25B
CHROMIUM, TOTAL	MG/KG	26	110	11	15.1	11.8B	13.5	7.8	15.4
COPPER	MG/KG	16	110	**30.2**	**29.3**	**26.5B**	**59.2**	**26.3**	**23.3**
LEAD	MG/KG	31	250	**197**	**728**	**306**	**365J**	**138***	**31.9***
MERCURY	MG/KG	0.2	2	**0.44J**	**0.4J**	**0.41B**	**0.5N**	**0.28N**	**0.2N**
NICKEL	MG/KG	16	75	12.2	7.9B	11.2B	10.7	5.1B	7.9B
SELENIUM	MG/KG	NS	NS	2	2.7B	6.5B	1.8U	1.1U	1.2U
SILVER	MG/KG	1	4	0.26U	0.52U	1.3U	0.23U	0.25U	0.28U
THALLIUM	MG/KG	NS	NS	1.6U	3.1U	8.1U	1.6B	1.5U	1.7U
ZINC	MG/KG	120	820	86.2	99.7	114J	94.9	89.7	70.4

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ft. bgs = Feet below ground surface

Table 5-47

Sediment Analytical Results - Central Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E11-4-01 (0-2 ft. bgs) 04/17/2001	SD-E12-1-01 (0-2 ft. bgs) 04/16/2001	SD-E12-2-01 (0-2 ft. bgs) 04/16/2001	SD-E14-1-01 (0-2 ft. bgs) 04/11/2001	SD-E14-2-01 (0-2 ft. bgs) 04/10/2001
Total Metals								
ANTIMONY	MG/KG	NS	NS	1.2U	0.92UJ	7.7UJ	2.8U	3.7UJ
ARSENIC	MG/KG	6	33	**8.6***	**6.8**	**29.5**	**24.5J**	**6.9**
BERYLLIUM	MG/KG	NS	NS	1.5	0.61U	3.8B	1.3B	0.9B
CADMIUM	MG/KG	0.6	10	0.37B	0.078U	1.3U	**1.5B**	**0.69B**
CHROMIUM, TOTAL	MG/KG	26	110	12.1	16.3	17.9B	**34.4**	**53.1**
COPPER	MG/KG	16	110	**29.9**	12.5	**79.3**	**125**	**32.4**
LEAD	MG/KG	31	250	**531**	19.6*	**180***	**1010**	**192N**
MERCURY	MG/KG	0.2	2	**0.43N***	0.021BN	**1.8N**	**1.9J**	**0.32B***
NICKEL	MG/KG	16	75	13.8	7.6	**31.8B**	**25.9**	13.3B
SELENIUM	MG/KG	NS	NS	1.6B	0.68U	5.7U	4.5	4.3B
SILVER	MG/KG	1	4	0.26U	0.2U	1.7U	0.61U	0.8U
THALLIUM	MG/KG	NS	NS	1.6U	1.2U	10.1U	4.6B	4.8U
ZINC	MG/KG	120	820	**151**	63.8	**368**	**536**	71.1

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R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-48

Sediment Analytical Results - Central Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0-2 ft. bgs) 05/02/2001	SD-C12-2-01 (0-2 ft. bgs) 04/13/2001	SD-D11-1-01 (0-2 ft. bgs) 04/17/2001	SD-D12-1-01 (0-2 ft. bgs) 04/16/2001	SD-D12-2-01 (0-2 ft. bgs) 04/16/2001	SD-D12-3-01 (0-2 ft. bgs) 04/16/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
1,3-DINITROBENZENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	400J	680R	190U	190U	190U	220U
2,4-DINITROTOLUENE	UG/KG	NS	NS	260J	51000	190U	190U	190U	220U
2,6-DINITROTOLUENE	UG/KG	NS	NS	150U	4900	190U	190U	190U	220U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	360J	460U	190U	190U	190U	220U
2-NITROTOLUENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
3-NITROTOLUENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	220J	460U	190U	190U	190U	220U
4-NITROTOLUENE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
NITROBENZENE	UG/KG	NS	NS	300J	460U	190U	190U	190U	220U
NITROCELLULOSE	MG/KG	NS	NS	400J	280UJ	120UJ	110U	110U	500
NITROGLYCERIN	UG/KG	NS	NS	3000U	9300U	3900U	3700U	3800U	4500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	453000	9300U	3900U	3700U	3800U	4500U
TETRYL	UG/KG	NS	NS	150U	460U	190U	190U	190U	220U

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SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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Table 5-48

Sediment Analytical Results - Central Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-4-01 (0-2 ft. bgs) 04/16/2001	SD-D13-1-01 (0-2 ft. bgs) 04/13/2001	SD-D13-2-01 (0-2 ft. bgs) 04/13/2001	SD-D13-3-01 (0-2 ft. bgs) 04/12/2001	SD-D13-4-01 (0-2 ft. bgs) 04/12/2001	SD-D13-5-01 (0-2 ft. bgs) 04/13/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
1,3-DINITROBENZENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	200U	280J	290U	290U	270J	250U
2,4-DINITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
2,6-DINITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
2-NITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
3-NITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
4-NITROTOLUENE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
NITROBENZENE	UG/KG	NS	NS	200U	180J	290U	290U	200U	250U
NITROCELLULOSE	MG/KG	NS	NS	900	96UJ	170UJ	180UJ	400	150UJ
NITROGLYCERIN	UG/KG	NS	NS	3900U	3200U	5800U	5900U	4000U	5000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3900U	3200U	5800U	5900U	4000U	5000U
TETRYL	UG/KG	NS	NS	200U	160U	290U	290U	200U	250U

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ft. bgs = Feet below ground surface

Table 5-48

Sediment Analytical Results - Central Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-6-01 (0-2 ft. bgs) 04/12/2001	SD-D14-1-01 (0-2 ft. bgs) 04/12/2001	SD-D14-2-01 (0-2 ft. bgs) 04/26/2001	SD-E10-1-01 (0-1.5 ft. bgs) 04/17/2001	SD-E11-1-01 (0-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0-2 ft. bgs) 04/17/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
1,3-DINITROBENZENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
2,4-DINITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
2,6-DINITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
2-NITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
3-NITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
4-NITROTOLUENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
NITROBENZENE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
NITROCELLULOSE	MG/KG	NS	NS	120UJ	230U	580U	248J	400J	120UJ
NITROGLYCERIN	UG/KG	NS	NS	3900U	7500U	19000U	3300U	3600U	4000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3900U	7500U	19000U	3300U	3600U	4000U
TETRYL	UG/KG	NS	NS	190U	380U	950U	170U	180U	200U

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Table 5-48

Sediment Analytical Results - Central Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E11-4-01 (0-2 ft. bgs) 04/17/2001
Energetic and Explosive Compounds				
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	190U
1,3-DINITROBENZENE	UG/KG	NS	NS	190U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	190U
2,4-DINITROTOLUENE	UG/KG	NS	NS	190U
2,6-DINITROTOLUENE	UG/KG	NS	NS	190U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	190U
2-NITROTOLUENE	UG/KG	NS	NS	190U
3-NITROTOLUENE	UG/KG	NS	NS	190U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	190U
4-NITROTOLUENE	UG/KG	NS	NS	190U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	190U
NITROBENZENE	UG/KG	NS	NS	190U
NITROCELLULOSE	MG/KG	NS	NS	110U
NITROGLYCERIN	UG/KG	NS	NS	3800U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	190U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3800U
TETRYL	UG/KG	NS	NS	190U

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Table 5-48

Sediment Analytical Results - Central Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-1-01 (0-2 ft. bgs) 04/16/2001	SD-E12-2-01 (0-2 ft. bgs) 04/16/2001	SD-E14-1-01 (0-2 ft. bgs) 04/11/2001	SD-E14-2-01 (0-2 ft. bgs) 04/10/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	140U	240U	450U	570U
1,3-DINITROBENZENE	UG/KG	NS	NS	140U	240U	450U	570U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
2,4-DINITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
2-NITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
3-NITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
4-NITROTOLUENE	UG/KG	NS	NS	140U	240U	450U	570U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	140U	240U	450U	570U
NITROBENZENE	UG/KG	NS	NS	140U	240U	450U	570U
NITROCELLULOSE	MG/KG	NS	NS	86U	150U	370UJ	340U
NITROGLYCERIN	UG/KG	NS	NS	2900U	4900U	8900U	11000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	140U	240U	450U	570U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2900U	4900U	8900U	11000U
TETRYL	UG/KG	NS	NS	140U	240U	450U	570U

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Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C12-1-01 (0-2 ft. bgs) 05/02/2001	SD-C12-1-01 (0.5-1 ft. bgs) 05/02/2001	SD-D11-1-01 (0-2 ft. bgs) 04/17/2001	SD-D12-1-01 (0-2 ft. bgs) 04/16/2001	SD-D12-2-01 (0-2 ft. bgs) 04/16/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	34.3	34.3	48.6	46.2	47.2
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.8	NR	4.1	2.5	2.2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	86.1	NR	93.7	90.7	90.3
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	NR	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.9	NR	100	99.7	99.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.2	NR	12.5	7.4	7.4
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	58.7	NR	75.9	66.4	61.6
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	34.3	NR	54.8	41.4	34.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	14	NR	30.6	22.1	18
TOTAL ORGANIC CARBON	MG/KG	NS	NS	16300	NR	28100	24100	22000

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Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D12-3-01 (0-2 ft. bgs) 04/16/2001	SD-D12-4-01 (0-2 ft. bgs) 04/16/2001	SD-D13-1-01 (0-2 ft. bgs) 04/13/2001	SD-D13-2-01 (0-2 ft. bgs) 04/13/2001	SD-D13-3-01 (0-2 ft. bgs) 04/12/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	55.2	48.8	37.7	65.5	66.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	4.1	5.2	1.2	4.6	3.4
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	93.3	96.8	90.8	93.3	98.5
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.3	99.6	100	99.7	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	11.7	16.5	3.7	14.1	14.6
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	76.9	79.4	57.7	66.8	76.3
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	51.3	66.3	27.6	52.3	61.7
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	28	39.6	10.7	35.4	39.7
TOTAL ORGANIC CARBON	MG/KG	NS	NS	45100	56500	17000	121000	83000J

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Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-D13-4-01 (0-2 ft. bgs) 04/12/2001	SD-D13-5-01 (0-2 ft. bgs) 04/13/2001	SD-D13-6-01 (0-2 ft. bgs) 04/12/2001	SD-D14-1-01 (0-2 ft. bgs) 04/12/2001	SD-D14-2-01 (0-2 ft. bgs) 04/26/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	50.3	60.2	48.4	73.4	89.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.3	0.5J	0.7J	1.6	3.6
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	92.3	32.2	53.9	89	94.2
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	94.2	100	99.4	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	98.6	91.3	96.3	99	98.3
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	8.9	1.6	2	5.1	7.8
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	77.3	13.2	26.7	46.8	34.9
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	47.5	7.3	17.2	23.6	22.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	24.8	3.8	5.5	12.5	14.1
TOTAL ORGANIC CARBON	MG/KG	NS	NS	54800J	111000	15100J	336000J	569000

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Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E10-1-01 (0-1.5 ft. bgs) 04/17/2001	SD-E11-1-01 (0-1 ft. bgs) 04/17/2001	SD-E11-3-01 (0-2 ft. bgs) 04/17/2001	SD-E11-4-01 (0-2 ft. bgs) 04/17/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	39.6	44.7	50	47.1J
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.6	3.3	1.9	0.5U
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	82	97.6	91.8	96.4
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	91.5	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	86.4	100	100	99.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	6.8	11.8	6.3	2.2
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	55.2	87.2	60.5	78
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	41.4	71.2	39.7	33.9
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	19.7	40.3	18.9	10.4
TOTAL ORGANIC CARBON	MG/KG	NS	NS	14600	32900	38600	71200J

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ft. bgs = Feet below ground surface

Table 5-49

Sediment Analytical Results - Central Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-E12-1-01 (0-2 ft. bgs) 04/16/2001	SD-E12-2-01 (0-2 ft. bgs) 04/16/2001	SD-E14-1-01 (0-2 ft. bgs) 04/11/2001	SD-E14-2-01 (0-2 ft. bgs) 04/10/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	30.6	59	77.6	82.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.6	5.2	5.7	3.6
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	96.1	90.6	96.1	74.2
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	96.7
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.7	99.7	100	95.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	9.5	12.5	14.9	7.8
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	74.6	65.6	69.9	34.5
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	52.2	43.9	48.2	22
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	24.7	27.1	29.6	13.6
TOTAL ORGANIC CARBON	MG/KG	NS	NS	8000	120000	105000J	316000

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Table 5-50

Surface Water Analytical Results - Eastern Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SW-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SW-F14-2-01 (0.5-1 ft. bgs) 04/11/2001	SW-G12-1-01 (0.5-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0.5-1 ft. bgs) 04/17/2001	SW-G12-3-01 (0.5-1 ft. bgs) 04/18/2001	SW-H11-1-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2UJ	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000UJ	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000UJ	1000UJ	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000UJ	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000UJ	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U	2U

Table 5-50

Surface Water Analytical Results - Eastern Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SW-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SW-F14-2-01 (0.5-1 ft. bgs) 04/11/2001	SW-G12-1-01 (0.5-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0.5-1 ft. bgs) 04/17/2001	SW-G12-3-01 (0.5-1 ft. bgs) 04/18/2001	SW-H11-1-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents									
n-BUTYL ETHER	UG/L	NS	1000UJ	1000U	1000UJ	1000UJ	1000UJ	1000UJ	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
J = Value is less than the practical quantitation limit, but greater than zero
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-50

Surface Water Analytical Results - Eastern Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H12-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SW-H12-3-01 (0.5-1 ft. bgs) 04/17/2001	SW-H7-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-H8-2-01 (0.5-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2UJ	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U	2U

Table 5-50

Surface Water Analytical Results - Eastern Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H12-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SW-H12-3-01 (0.5-1 ft. bgs) 04/17/2001	SW-H7-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-H8-2-01 (0.5-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents									
n-BUTYL ETHER	UG/L	NS	1000UJ	1000UJ	1000UJ	1000U	1000UJ	1000UJ	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
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R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-50

Surface Water Analytical Results - Eastern Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H8-4-01 (0.5-1 ft. bgs) 04/18/2001	SW-I10-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-I11-2-01 (0.5-1 ft. bgs) 04/18/2001	SW-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-I6-1-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40UJ	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U	2U

Table 5-50

Surface Water Analytical Results - Eastern Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H8-4-01 (0.5-1 ft. bgs) 04/18/2001	SW-I10-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SW-I11-2-01 (0.5-1 ft. bgs) 04/18/2001	SW-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-I6-1-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents									
n-BUTYL ETHER	UG/L	NS	1000UJ	1000UJ	1000UJ	1000UJ	1000U	1000U	1000U
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0-1.5 ft. bgs) 04/16/2001	SW-F14-1-01 (0-1.5 ft. bgs) 04/13/2001	SW-F14-2-01 (0-2 ft. bgs) 04/11/2001	SW-G12-1-01 (0-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	0.9U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	0.9U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	0.9U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	0.9U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	0.9U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	0.9U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	19U	19U	19U	20U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	0.9U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	0.9U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	0.9U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	0.9U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	9U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	0.9U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	0.9U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	0.9U	1U	1U
BENZIDINE	UG/L	0.00012	19U	19U	19U	20U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	0.9U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	0.9U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0-1.5 ft. bgs) 04/16/2001	SW-F14-1-01 (0-1.5 ft. bgs) 04/13/2001	SW-F14-2-01 (0-2 ft. bgs) 04/11/2001	SW-G12-1-01 (0-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	0.9U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	0.9U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1UJ	0.9U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	0.9U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	0.9U	1U	1U
FLUORENE	UG/L	1340	1U	1U	0.9U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	0.9U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	0.9U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	0.9U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	0.9U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	0.9U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	0.9U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	0.9U	1U	1U
PHENOL	UG/L	20900	1U	1U	0.9U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0-1.5 ft. bgs) 04/16/2001	SW-F14-1-01 (0-1.5 ft. bgs) 04/13/2001	SW-F14-2-01 (0-2 ft. bgs) 04/11/2001	SW-G12-1-01 (0-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	1U	0.9U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
J = Value is less than the practical quantitation limit, but greater than zero
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-G12-3-01 (0-1 ft. bgs) 04/18/2001	SW-H11-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0-1.5 ft. bgs) 04/17/2001	SW-H12-3-01 (0-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	19U	20U	19U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	20U	19U	20U	19U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-G12-3-01 (0-1 ft. bgs) 04/18/2001	SW-H11-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0-1.5 ft. bgs) 04/17/2001	SW-H12-3-01 (0-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-G12-3-01 (0-1 ft. bgs) 04/18/2001	SW-H11-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0-1.5 ft. bgs) 04/17/2001	SW-H12-3-01 (0-1.5 ft. bgs) 04/17/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

itation limit

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
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B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H7-1-01 (0-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0-1 ft. bgs) 04/19/2001	SW-H8-2-01 (0-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0-1 ft. bgs) 04/18/2001	SW-H8-4-01 (0-1.5 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	20U	21U	19U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	20U	20U	21U	19U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H7-1-01 (0-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0-1 ft. bgs) 04/19/2001	SW-H8-2-01 (0-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0-1 ft. bgs) 04/18/2001	SW-H8-4-01 (0-1.5 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H7-1-01 (0-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0-1 ft. bgs) 04/19/2001	SW-H8-2-01 (0-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0-1 ft. bgs) 04/18/2001	SW-H8-4-01 (0-1.5 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Bold = Indicates Concentration Exceeds SWQC
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B = Indicates that the compound was found in the associated b
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I10-1-01 (0-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0-2 ft. bgs) 04/18/2001	SW-I11-2-01 (0-1 ft. bgs) 04/18/2001	SW-I5-1-01 (0-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0-1 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	21U	19U	20U	19U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	21U	19U	20U	19U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I10-1-01 (0-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0-2 ft. bgs) 04/18/2001	SW-I11-2-01 (0-1 ft. bgs) 04/18/2001	SW-I5-1-01 (0-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0-1 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	1U	1U

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I10-1-01 (0-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0-2 ft. bgs) 04/18/2001	SW-I11-2-01 (0-1 ft. bgs) 04/18/2001	SW-I5-1-01 (0-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0-1 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
PYRENE	UG/L	797	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Bold = Indicates Concentration Exceeds

N = Flashpoint not observed, heated to s

J = Value is less than the practical quanti

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I6-1-01 (0-1 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents			
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1UJ
1,2-DICHLOROBENZENE	UG/L	2520	1UJ
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1UJ
1,3-DICHLOROBENZENE	UG/L	2620	1UJ
1,4-DICHLOROBENZENE	UG/L	343	1UJ
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2UJ
2,4-DICHLOROPHENOL	UG/L	92.7	1UJ
2,4-DIMETHYLPHENOL	UG/L	NS	1UJ
2,4-DINITROPHENOL	UG/L	69.7	19UJ
2,4-DINITROTOLUENE	UG/L	0.11	1UJ
2,6-DINITROTOLUENE	UG/L	NS	2UJ
2-CHLORONAPHTHALENE	UG/L	NS	1UJ
2-CHLOROPHENOL	UG/L	122	1UJ
2-NITROPHENOL	UG/L	NS	1UJ
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3UJ
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5UJ
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2UJ
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1UJ
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1UJ
4-NITROPHENOL	UG/L	NS	10UJ
ACENAPHTHENE	UG/L	NS	1UJ
ACENAPHTHYLENE	UG/L	NS	1UJ
ANTHRACENE	UG/L	9570	1UJ
BENZIDINE	UG/L	0.00012	19UJ
BENZO(a)ANTHRACENE	UG/L	0.0028	1UJ
BENZO(a)PYRENE	UG/L	0.0028	1UJ
BENZO(b)FLUORANTHENE	UG/L	0.031	1UJ
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1UJ
BENZO(k)FLUORANTHENE	UG/L	0.031	1UJ

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I6-1-01 (0-1 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents			
BENZYL BUTYL PHTHALATE	UG/L	239	2UJ
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1UJ
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1UJ
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2UJ
CHRYSENE	UG/L	0.0028	1UJ
DI-n-BUTYL PHTHALATE	UG/L	3530	2UJ
DI-n-OCTYLPHTHALATE	UG/L	NS	2UJ
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1UJ
DIETHYL PHTHALATE	UG/L	21200	2UJ
DIMETHYL PHTHALATE	UG/L	313000	2UJ
FLUORANTHENE	UG/L	310	1UJ
FLUORENE	UG/L	1340	1UJ
HEXACHLOROBENZENE	UG/L	0.00075	2UJ
HEXACHLOROBUTADIENE	UG/L	6.94	2UJ
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5UJ
HEXACHLOROETHANE	UG/L	2.73	1UJ
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1UJ
ISOPHORONE	UG/L	552	1UJ
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1UJ
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2UJ
N-NITROSODIPHENYLAMINE	UG/L	4.95	1UJ
NAPHTHALENE	UG/L	NS	1UJ
NITROBENZENE	UG/L	16	1UJ
PENTACHLOROPHENOL	UG/L	0.282	3UJ
PHENANTHRENE	UG/L	NS	1UJ
PHENOL	UG/L	20900	1UJ

Table 5-51

Surface Water Analytical Results - Eastern Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I6-1-01 (0-1 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents			
PYRENE	UG/L	797	1UJ

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

SWQC
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Table 5-52

Surface Water Analytical Results - Eastern Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0-1.5 ft. bgs) 04/16/2001	SW-F14-1-01 (0-1.5 ft. bgs) 04/13/2001	SW-F14-2-01 (0-2 ft. bgs) 04/11/2001	SW-G12-1-01 (0-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0-1.5 ft. bgs) 04/17/2001	SW-G12-3-01 (0-1 ft. bgs) 04/18/2001
Total Metals								
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	3.4B	1.7U	1.7U
COPPER	UG/L	NS	2.4U	2.4U	2.4U	2.4U	2.4U	2.8U
LEAD	UG/L	5	8.8U	8.8U	8.8U	**51.9**	8.8U	**24.7**
MERCURY	UG/L	0.144	0.026U	0.026U	0.026U	0.026U	0.055U	0.031U
NICKEL	UG/L	516	1.6U	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	5.4B	5.2B	6.8B	31.9	4.3U	20U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

J = Value is less than the practical quantitation limit, but greater than zero

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-52

Surface Water Analytical Results - Eastern Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H11-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0-1.5 ft. bgs) 04/17/2001	SW-H12-3-01 (0-1.5 ft. bgs) 04/17/2001	SW-H7-1-01 (0-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0-1 ft. bgs) 04/19/2001
Total Metals								
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	6.3B
ARSENIC	UG/L	0.017	**6B**	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	2.5B	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	7.4B	9.2U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	5	**137**	**10.9B**	8.8U	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.026U	0.079U	0.053U	0.099U	0.026U	0.026U
NICKEL	UG/L	516	2.5U	1.9B	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.6B	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	13.7U	63.7	8.3U	4.2U	3.2U	3.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-52

Surface Water Analytical Results - Eastern Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H8-2-01 (0-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0-1 ft. bgs) 04/18/2001	SW-H8-4-01 (0-1.5 ft. bgs) 04/18/2001	SW-I10-1-01 (0-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0-2 ft. bgs) 04/18/2001	SW-I11-2-01 (0-1 ft. bgs) 04/18/2001
Total Metals								
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	7B	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	2.8B	1.7U	1.7U	1.9B	1.7U	1.7U
COPPER	UG/L	NS	4.4B	2.4U	2.4U	2.5B	2.8B	2.4U
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U	**8.9B**	8.8U
MERCURY	UG/L	0.144	0.026U	0.026U	0.026U	0.026U	0.026U	0.08U
NICKEL	UG/L	516	1.9U	1.6U	1.7U	1.6U	2U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	24.2U	3.2U	3.2U	3.2U	4.8U	11.4U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-52

Surface Water Analytical Results - Eastern Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I5-1-01 (0-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0-1 ft. bgs) 04/19/2001	SW-I6-1-01 (0-1 ft. bgs) 04/19/2001
Total Metals					
ANTIMONY	UG/L	12.2	5.9U	5.9U	7.5B
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.9B
COPPER	UG/L	NS	2.4U	2.4U	2.4U
LEAD	UG/L	5	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.026U	0.026U	0.026U
NICKEL	UG/L	516	1.6U	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U
ZINC	UG/L	NS	5.6B	5.5U	5.3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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N = Flashpoint not observed, heated to specific limit

J = Value is less than the practical quantitation limit, but greater than zero

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-53

Surface Water Analytical Results - Eastern Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0-1.5 ft. bgs) 04/16/2001	SW-F14-1-01 (0-1.5 ft. bgs) 04/13/2001	SW-F14-1-01 (0-2 ft. bgs) 05/09/2001	SW-F14-2-01 (0-2 ft. bgs) 04/11/2001	SW-F14-2-01 (0-2 ft. bgs) 05/09/2001	SW-G12-1-01 (0-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0-1.5 ft. bgs) 04/17/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	NR	NR	500U	500U	NR
NITROGLYCERIN	UG/L	NS	120U	NR	120U	120U	NR	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	NR	4U	NR	4U	4U
TETRYL	UG/L	NS	0.2U	0.2U	NR	0.2U	NR	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
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U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

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R = Rejected based
* = Value obtained
NR = Not Reporte
NS = No Standard
ft. bgs = Feet belov

Table 5-53

Surface Water Analytical Results - Eastern Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-G12-2-01 (0-1.5 ft. bgs) 05/09/2001	SW-G12-3-01 (0-1 ft. bgs) 04/18/2001	SW-G12-3-01 (0-1 ft. bgs) 05/09/2001	SW-H11-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0-1 ft. bgs) 05/09/2001	SW-H12-2-01 (0-1.5 ft. bgs) 04/17/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/L	NS	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
1,3-DINITROBENZENE	UG/L	NS	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	NR	0.2U	NR	0.38J	0.2U	NR	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
2,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	NR	1.29	0.2U	NR	0.2U
2-NITROTOLUENE	UG/L	NS	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
3-NITROTOLUENE	UG/L	NS	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	NR	0.53J	NR	3.19	0.2U	NR	0.2U
4-NITROTOLUENE	UG/L	NS	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	NR	0.82J	NR	1.59	0.2U	NR	0.2U
NITROBENZENE	UG/L	16	NR	0.2U	NR	0.2U	0.2U	NR	0.2U
NITROCELLULOSE	UG/L	NS	500U	NR	500U	500U	NR	500U	NR
NITROGLYCERIN	UG/L	NS	NR	120U	NR	120U	120U	NR	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	NR	0.2U	NR	0.3U	0.2U	NR	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	NR	4U	NR	4U	4U	NR	4U
TETRYL	UG/L	NS	NR	0.2U	NR	0.2U	0.2U	NR	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-53

Surface Water Analytical Results - Eastern Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H12-3-01 (0-1 ft. bgs) 05/09/2001	SW-H12-3-01 (0-1.5 ft. bgs) 04/17/2001	SW-H7-1-01 (0-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0-1 ft. bgs) 04/19/2001	SW-H8-2-01 (0-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0-1 ft. bgs) 05/09/2001
Energetic and Explosive Compounds									
1,3,5-TRINITROBENZENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
1,3-DINITROBENZENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
2,4,6-TRINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
2,4-DINITROTOLUENE	UG/L	0.11	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
2,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
2-NITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
3-NITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
4-NITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
NITROBENZENE	UG/L	16	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
NITROCELLULOSE	UG/L	NS	500U	NR	500U	500U	500U	NR	500U
NITROGLYCERIN	UG/L	NS	NR	120U	120U	120U	120U	120U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	NR	4U	4U	4U	4U	4U	NR
TETRYL	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U	0.2U	NR

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-53

Surface Water Analytical Results - Eastern Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H8-4-01 (0-1.5 ft. bgs) 04/18/2001	SW-I10-1-01 (0-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0-2 ft. bgs) 04/18/2001
Energetic and Explosive Compounds					
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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d blank.

Table 5-53

Surface Water Analytical Results - Eastern Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I11-2-01 (0-0.5 ft. bgs) 05/09/2001	SW-I11-2-01 (0-1 ft. bgs) 04/18/2001	SW-I5-1-01 (0-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0-1 ft. bgs) 04/19/2001	SW-I6-1-01 (0-1 ft. bgs) 04/19/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	NR	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	NR	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	NR	500U	500U	500U
NITROGLYCERIN	UG/L	NS	NR	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	NR	4U	4U	4U	4U
TETRYL	UG/L	NS	NR	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
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* = Value obtained from a 1:5 dilution
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NS = No Standard
ft. bgs = Feet below ground surface

Table 5-54

Surface Water Analytical Results - Eastern Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-F13-1-01 (0-1.5 ft. bgs) 04/16/2001	SW-F14-1-01 (0-1.5 ft. bgs) 04/13/2001	SW-F14-2-01 (0-2 ft. bgs) 04/11/2001	SW-G12-1-01 (0-1 ft. bgs) 04/16/2001	SW-G12-2-01 (0-1.5 ft. bgs) 04/17/2001	SW-G12-3-01 (0-1 ft. bgs) 04/18/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	11.76	10.7	10.87	11.92	9.67	11.21
pH	PH	NS	7.39	7.49	7.59	6.98	7.19	7

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NS = No Standard
ft. bgs = Feet below ground surface

Table 5-54

Surface Water Analytical Results - Eastern Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H11-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-1-01 (0-1 ft. bgs) 04/18/2001	SW-H12-2-01 (0-1.5 ft. bgs) 04/17/2001	SW-H12-3-01 (0-1.5 ft. bgs) 04/17/2001	SW-H7-1-01 (0-1 ft. bgs) 04/19/2001	SW-H7-2-01 (0-1 ft. bgs) 04/19/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	10.36	11.95	9.71	9.47	11.69	10.6
pH	PH	NS	6.81	6.64	7.87	7.61	7.75	7.68

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-54

Surface Water Analytical Results - Eastern Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H8-2-01 (0-1 ft. bgs) 04/18/2001	SW-H8-3-01 (0-1 ft. bgs) 04/18/2001	SW-H8-4-01 (0-1.5 ft. bgs) 04/18/2001	SW-I10-1-01 (0-1 ft. bgs) 04/18/2001	SW-I11-1-01 (0-2 ft. bgs) 04/18/2001	SW-I11-2-01 (0-1 ft. bgs) 04/18/2001
General Chemistry								
DISSOLVED OXYGEN	MG/L	NS	9.26	9.93	9.35	9.88	10.88	11.06
pH	PH	NS	7.72	7.62	7.68	6.62	7.5	7.23

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-54

Surface Water Analytical Results - Eastern Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-I5-1-01 (0-1 ft. bgs) 04/19/2001	SW-I5-2-01 (0-1 ft. bgs) 04/19/2001	SW-I6-1-01 (0-1 ft. bgs) 04/19/2001
General Chemistry					
DISSOLVED OXYGEN	MG/L	NS	11.88	11.44	11.69
pH	PH	NS	7.56	7.63	7.75

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-55

Surface Water Analytical Results - Eastern Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-F13-1-01 (0-1.5 ft. bgs) 04/16/01	SW-F14-1-01 (0-1.5 ft. bgs) 04/13/01	SW-F14-2-01 (0-2 ft. bgs) 04/11/01	SW-G12-1-01 (0-1 ft. bgs) 04/16/01	SW-G12-2-01 (0-1.5 ft. bgs) 04/17/01	SW-G12-3-01 (0-1 ft. bgs) 04/18/01
Dissolved Metals									
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.5	2.3	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	302.1	144	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	20.1	15.1	2.4U	2.4U	2.4U	2.4U	3.4B	3.8B
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	907.3	141.3	1.6U	9.2B	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	**5.2B**	4.3U	4.5B	4.3U	4.3U
SILVER	UG/L	0.03	NS	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	11.6B	8.8U	8.8U
ZINC	UG/L	108.	107.5	5B	4B	3.4B	12B	3.2U	15.1B
Semi-Volatile Organic Constituents									
PENTACHLOROPHENOL	UG/L	13.37	8.44	3U	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-55

Surface Water Analytical Results - Eastern Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-H11-1-01 (0-1 ft. bgs) 04/18/01	SW-H12-1-01 (0-1 ft. bgs) 04/18/01	SW-H12-2-01 (0-1.5 ft. bgs) 04/17/01	SW-H12-3-01 (0-1.5 ft. bgs) 04/17/01	SW-H7-1-01 (0-1 ft. bgs) 04/19/01	SW-H7-2-01 (0-1 ft. bgs) 04/19/01
Dissolved Metals									
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.5	2.3	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	302.1	144	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	20.1	15.1	2.4U	3B	3.5B	3.2B	2.4U	3.2B
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	907.3	141.3	1.6U	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.03	NS	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	108.	107.5	5B	31.4	3.2U	3.2U	3.8B	9.5B
Semi-Volatile Organic Constituents									
PENTACHLOROPHENOL	UG/L	13.37	8.44	3U	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
J = Value is less than the practical quantitation limit, but greater than zero
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-55

Surface Water Analytical Results - Eastern Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-H8-2-01 (0-1 ft. bgs) 04/18/01	SW-H8-3-01 (0-1 ft. bgs) 04/18/01	SW-H8-4-01 (0-1.5 ft. bgs) 04/18/01	SW-I10-1-01 (0-1 ft. bgs) 04/18/01	SW-I11-1-01 (0-2 ft. bgs) 04/18/01	SW-I11-2-01 (0-1 ft. bgs) 04/18/01
Dissolved Metals									
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.5	2.3	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	302.1	144	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	20.1	15.1	2.4U	2.4U	2.4U	2.4U	2.4U	3.7B
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	907.3	141.3	1.6U	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.03	NS	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	108.	107.5	3.2U	3.6B	3.2U	3.4B	4.1B	3.8B
Semi-Volatile Organic Constituents									
PENTACHLOROPHENOL	UG/L	13.37	8.44	3U	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
J = Value is less than the practical quantitation limit, but greater than zero
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-55

Surface Water Analytical Results - Eastern Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-I5-1-01 (0-1 ft. bgs) 04/19/01	SW-I5-2-01 (0-1 ft. bgs) 04/19/01	SW-I6-1-01 (0-1 ft. bgs) 04/19/01
Dissolved Metals						
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U
CADMIUM	UG/L	2.5	2.3	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	302.1	144	1.7U	1.7U	1.7U
COPPER	UG/L	20.1	15.1	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U
NICKEL	UG/L	907.3	141.3	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U
SILVER	UG/L	0.03	NS	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U
ZINC	UG/L	108.	107.5	5.6B	7.2B	3.6B
Semi-Volatile Organic Constituents						
PENTACHLOROPHENOL	UG/L	13.37	8.44	3U	3U	3UJ

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
J = Value is less than the practical quantitation limit, but greater than zero
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-56

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0.5-1 ft. bgs) 04/18/2001	SD-H10-1-01 (4.5-5 ft. bgs) 04/24/2001	SD-H11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-H11-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-H6-1-01 (2.5-3 ft. bgs) 04/24/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
1,1-DICHLOROETHANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
1,1-DICHLOROETHENE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
1,2-DICHLOROETHANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	490U	240U	340U	340U	420U	210U
ACROLEIN	UG/KG	NS	NS	4900R	2400U	3400R	3400R	4200R	2100U
ACRYLONITRILE	UG/KG	NS	NS	970U	490U	670U	680U	830U	430U
AMYL ALCOHOL	UG/KG	NS	NS	16000U	10000U	16000U	13000U	17000U	10000U
BENZENE	UG/KG	340	NS	240U	120U	170U	170U	210U	110U
BROMODICHLOROMETHANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
BROMOFORM	UG/KG	NS	NS	240U	240U	170U	170U	210U	210U
BROMOMETHANE	UG/KG	NS	NS	490U	240UJ	340U	340U	420U	210UJ
CARBON TETRACHLORIDE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
CHLOROBENZENE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
CHLOROETHANE	UG/KG	NS	NS	490U	240U	340U	340U	420U	210U
CHLOROFORM	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
CHLOROMETHANE	UG/KG	NS	NS	490U	240U	340U	340U	420U	210U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	16000U	10000U	16000U	13000U	17000U	10000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	16000U	10000U	16000U	13000U	17000U	10000U

Table 5-56

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0.5-1 ft. bgs) 04/18/2001	SD-H10-1-01 (4.5-5 ft. bgs) 04/24/2001	SD-H11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-H11-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-H12-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-H6-1-01 (2.5-3 ft. bgs) 04/24/2001
Volatile Organic Constituents									
ETHANOL	UG/KG	NS	NS	16000U	10000U	16000U	13000U	17000U	10000U
ETHYLBENZENE	UG/KG	1400	NS	240U	120U	170U	170U	210U	110U
METHANOL	UG/KG	NS	NS	16000U	10000U	16000U	13000U	17000U	10000U
METHYLENE CHLORIDE	UG/KG	NS	NS	490U	240U	340U	340U	420U	210U
n-BUTYL ETHER	UG/KG	NS	NS	16000UJ	10000U	16000U	13000UJ	17000UJ	10000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	240U	120U	170U	170U	210U	110U
TOLUENE	UG/KG	2500	NS	240U	120U	170U	170U	210U	110U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	240U	120U	170U	170U	210U	110U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	490U	240U	340U	340U	420U	210U
VINYL CHLORIDE	UG/KG	NS	NS	240U	120U	170U	170U	210U	110U
XYLENES, TOTAL	UG/KG	120	NS	240U	120U	170U	170U	210U	110U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-56

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H8-1-01 (2.5-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4.5-5 ft. bgs) 04/24/2001	SD-I7-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I8-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0.5-1 ft. bgs) 04/20/2001	SD-J10-2-01 (0.5-1 ft. bgs) 04/20/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
1,1-DICHLOROETHANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
1,1-DICHLOROETHENE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
1,2-DICHLOROETHANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	310U	240U	330U	290U	290U	310U
ACROLEIN	UG/KG	NS	NS	3100U	2400U	3300R	2900R	2900U	3100U
ACRYLONITRILE	UG/KG	NS	NS	610U	490U	660U	580U	590U	630U
AMYL ALCOHOL	UG/KG	NS	NS	10000U	10000U	12000U	12000U	12000U	12000U
BENZENE	UG/KG	340	NS	150U	120U	170U	140U	150U	160U
BROMODICHLOROMETHANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
BROMOFORM	UG/KG	NS	NS	310U	240U	170U	140U	150U	160U
BROMOMETHANE	UG/KG	NS	NS	310UJ	240UJ	330U	290U	290U	310U
CARBON TETRACHLORIDE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
CHLOROBENZENE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
CHLOROETHANE	UG/KG	NS	NS	310U	240U	330U	290U	290U	310U
CHLOROFORM	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
CHLOROMETHANE	UG/KG	NS	NS	310U	240U	330U	290U	290U	310U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	10000U	10000U	12000U	12000U	12000U	12000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	10000U	10000U	12000U	12000U	12000U	12000U

Table 5-56

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H8-1-01 (2.5-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4.5-5 ft. bgs) 04/24/2001	SD-I7-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I8-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0.5-1 ft. bgs) 04/20/2001	SD-J10-2-01 (0.5-1 ft. bgs) 04/20/2001
Volatile Organic Constituents									
ETHANOL	UG/KG	NS	NS	10000U	10000U	12000U	12000U	12000U	12000U
ETHYLBENZENE	UG/KG	1400	NS	150U	120U	170U	140U	150U	160U
METHANOL	UG/KG	NS	NS	10000U	10000U	12000U	12000U	12000U	12000U
METHYLENE CHLORIDE	UG/KG	NS	NS	310U	240U	330U	290U	290U	310U
n-BUTYL ETHER	UG/KG	NS	NS	10000U	10000U	12000U	12000U	12000U	12000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	150U	120U	170U	140U	150U	160U
TOLUENE	UG/KG	2500	NS	150U	120U	170U	140U	150U	160U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	150U	120U	170U	140U	150U	160U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	310U	240U	330U	290U	290U	310U
VINYL CHLORIDE	UG/KG	NS	NS	150U	120U	170U	140U	150U	160U
XYLENES, TOTAL	UG/KG	120	NS	150U	120U	170U	140U	150U	160U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0-2 ft. bgs) 04/18/2001	SD-H10-1-01 (4-5.5 ft. bgs) 04/24/2001	SD-H11-1-01 (0-2 ft. bgs) 04/18/2001	SD-H11-2-01 (0-2 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	52U	33U	52UJ	44U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	52U	33U	52UJ	44U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	52U	33U	52UJ	44U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	52U	33U	52UJ	44U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	52U	33U	52UJ	44U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	110U	67U	100UJ	89U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	110U	67U	100UJ	89U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	110U	67U	100UJ	89U
2,4-DINITROPHENOL	UG/KG	NS	NS	1100U	670UJ	1000UJ	890U
2,4-DINITROTOLUENE	UG/KG	NS	NS	110U	67U	100UJ	89U
2,6-DINITROTOLUENE	UG/KG	NS	NS	52U	33U	52UJ	44U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	52U	33U	52UJ	44U
2-CHLOROPHENOL	UG/KG	NS	NS	52U	33U	52UJ	44U
2-NITROPHENOL	UG/KG	NS	NS	110U	67U	100UJ	89U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	110U	67U	100UJ	89U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	270U	170U	270UJ	220U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	110U	67U	100UJ	89U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	110U	67U	100UJ	89U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	52U	33U	52UJ	44U
4-NITROPHENOL	UG/KG	NS	NS	270U	170U	270UJ	220U
ACENAPHTHENE	UG/KG	16	9	52U	33U	52UJ	44U
ACENAPHTHYLENE	UG/KG	44	11	52U	33U	**81J**	44U
ANTHRACENE	UG/KG	220	6400	52U	33U	94J	44U
BENZIDINE	UG/KG	NS	NS	1100U	670U	1000UJ	890U

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0-2 ft. bgs) 04/18/2001	SD-H10-1-01 (4-5.5 ft. bgs) 04/24/2001	SD-H11-1-01 (0-2 ft. bgs) 04/18/2001	SD-H11-2-01 (0-2 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
BENZO(a)ANTHRACENE	UG/KG	320	25598	170J	33U	170J	120J
BENZO(a)PYRENE	UG/KG	370	24906	210J	33U	180J	120J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	340J	33U	490J	320J
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	**170J**	33U	**240J**	96J
BENZO(k)FLUORANTHENE	UG/KG	240	23177	130J	33U	200J	130J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	110U	67U	100UJ	89U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	110U	67U	100UJ	89U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	52U	33U	52UJ	44U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	52U	33U	52UJ	44U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	110U	67U	100UJ	89U
CHRYSENE	UG/KG	340	7956	**380J**	33U	320J	240J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	110U	67U	100UJ	89U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	110U	67U	100UJ	89U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	**110J**	33U	**100J**	44U
DIETHYL PHTHALATE	UG/KG	NS	NS	110U	67U	100UJ	89U
DIMETHYL PHTHALATE	UG/KG	NS	NS	110U	67U	100UJ	89U
FLUORANTHENE	UG/KG	750	17642	230J	33U	320J	240J
FLUORENE	UG/KG	190	2767	52U	33U	52UJ	44U
HEXACHLOROBENZENE	UG/KG	20	24000	52U	33U	52UJ	44U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	110U	67U	100UJ	89U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	270U	170U	270UJ	220U
HEXACHLOROETHANE	UG/KG	NS	NS	52U	33U	52UJ	44U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	170J	33U	260J	120J
ISOPHORONE	UG/KG	NS	NS	52U	33U	52UJ	44U

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0-2 ft. bgs) 04/18/2001	SD-H10-1-01 (4-5.5 ft. bgs) 04/24/2001	SD-H11-1-01 (0-2 ft. bgs) 04/18/2001	SD-H11-2-01 (0-2 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	52U	33U	52UJ	44U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	110U	67U	100UJ	89U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	52U	33U	52UJ	44U
NAPHTHALENE	UG/KG	160	36	52U	33U	52UJ	44U
NITROBENZENE	UG/KG	NS	NS	52U	33U	52UJ	44U
PENTACHLOROPHENOL	UG/KG	NS	NS	270U	170U	270UJ	220U
PHENANTHRENE	UG/KG	560	16431	97J	33U	140J	93J
PHENOL	UG/KG	NS	NS	110U	67U	100UJ	89U
PYRENE	UG/KG	490	14702	190J	33U	250J	210J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H12-1-01 (0-1 ft. bgs) 04/18/2001	SD-H6-1-01 (2-3 ft. bgs) 04/24/2001	SD-H8-1-01 (2-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4-5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	57U	33U	33U	33U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	57U	33U	33U	33U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	57U	33U	33U	33U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	57U	33U	33U	33U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	57U	33U	33U	33U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	120U	67U	67U	67U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	120U	67U	67U	67U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	120U	67U	67U	67U
2,4-DINITROPHENOL	UG/KG	NS	NS	1200U	670UJ	670UJ	670UJ
2,4-DINITROTOLUENE	UG/KG	NS	NS	120U	67U	67U	67U
2,6-DINITROTOLUENE	UG/KG	NS	NS	57U	33U	33U	33U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	57U	33U	33U	33U
2-CHLOROPHENOL	UG/KG	NS	NS	57U	33U	33U	33U
2-NITROPHENOL	UG/KG	NS	NS	120U	67U	67U	67U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	120U	67U	67U	67U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	290U	170U	170U	170U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	120U	67U	67U	67U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	120U	67U	67U	67U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	57U	33U	33U	33U
4-NITROPHENOL	UG/KG	NS	NS	290U	170U	170U	170U
ACENAPHTHENE	UG/KG	16	9	57U	33U	**83J**	**340**
ACENAPHTHYLENE	UG/KG	44	11	57U	**140J**	**410**	**2300**
ANTHRACENE	UG/KG	220	6400	57U	170J	**510**	**2600**
BENZIDINE	UG/KG	NS	NS	1200U	670U	670U	670U

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H12-1-01 (0-1 ft. bgs) 04/18/2001	SD-H6-1-01 (2-3 ft. bgs) 04/24/2001	SD-H8-1-01 (2-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4-5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents							
BENZO(a)ANTHRACENE	UG/KG	320	25598	130J	**640**	**1900**	**9900**
BENZO(a)PYRENE	UG/KG	370	24906	120J	**680**	**2000**	**9700**
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	250J	840	2400	11000
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	130J	**400**	**1200**	**6700**
BENZO(k)FLUORANTHENE	UG/KG	240	23177	100J	**340**	**1000**	**4400**
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	120U	67U	67U	67U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	120U	67U	67U	67U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	57U	33U	33U	33U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	57U	33U	33U	33U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	120U	84J	190J	450
CHRYSENE	UG/KG	340	7956	190J	**780**	**2400**	**12000**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	120U	67U	73J	260J
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	120U	67U	67U	67U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	57U	**120J**	**370**	**1700**
DIETHYL PHTHALATE	UG/KG	NS	NS	120U	67U	270J	86J
DIMETHYL PHTHALATE	UG/KG	NS	NS	120U	67U	67U	67U
FLUORANTHENE	UG/KG	750	17642	200J	**1300**	**3900**	**19000**
FLUORENE	UG/KG	190	2767	57U	59J	**210J**	**1100**
HEXACHLOROBENZENE	UG/KG	20	24000	57U	33U	33U	33U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	120U	67U	67U	67U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	290U	170U	170U	170U
HEXACHLOROETHANE	UG/KG	NS	NS	57U	33U	33U	33U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	150J	460	1300	6800
ISOPHORONE	UG/KG	NS	NS	57U	33U	33U	33U

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H12-1-01 (0-1 ft. bgs) 04/18/2001	SD-H6-1-01 (2-3 ft. bgs) 04/24/2001	SD-H8-1-01 (2-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4-5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents							
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	57U	33U	33U	33U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	120U	67U	67U	67U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	57U	33U	230J	430
NAPHTHALENE	UG/KG	160	36	57U	33U	**65J**	**280J**
NITROBENZENE	UG/KG	NS	NS	57U	33U	33U	33U
PENTACHLOROPHENOL	UG/KG	NS	NS	290U	170U	170U	170U
PHENANTHRENE	UG/KG	560	16431	76J	**640**	**2400**	**11000**
PHENOL	UG/KG	NS	NS	120U	67U	67U	67U
PYRENE	UG/KG	490	14702	170J	**1500**	**4600**	**21000**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I7-1-01 (0-1.5 ft. bgs) 04/19/2001	SD-I8-1-01 (0-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0-1.5 ft. bgs) 04/20/2001	SD-J10-2-01 (0-1 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	41U	41UJ	83U	38U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	41U	41UJ	83U	38U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	41U	41UJ	83U	38U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	41U	41UJ	83U	38U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	41U	41UJ	83U	38U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	83U	83UJ	160U	78U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	83U	83UJ	160U	78U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	83U	83UJ	160U	78U
2,4-DINITROPHENOL	UG/KG	NS	NS	830U	830UJ	1600UJ	780UJ
2,4-DINITROTOLUENE	UG/KG	NS	NS	83U	83UJ	7700	78U
2,6-DINITROTOLUENE	UG/KG	NS	NS	41U	41UJ	210J	38U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	41U	41UJ	83U	38U
2-CHLOROPHENOL	UG/KG	NS	NS	41U	41UJ	83U	38U
2-NITROPHENOL	UG/KG	NS	NS	83U	83UJ	160U	78U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	83U	83UJ	160U	78U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	210U	210UJ	410U	200U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	83U	83UJ	160U	78U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	83U	83UJ	160U	78U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	41U	41UJ	83U	38U
4-NITROPHENOL	UG/KG	NS	NS	210U	210UJ	410U	200U
ACENAPHTHENE	UG/KG	16	9	41U	41UJ	83U	38U
ACENAPHTHYLENE	UG/KG	44	11	41U	41UJ	83U	38U
ANTHRACENE	UG/KG	220	6400	41U	41UJ	93J	38U
BENZIDINE	UG/KG	NS	NS	830U	830UJ	1600U	780U

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I7-1-01 (0-1.5 ft. bgs) 04/19/2001	SD-I8-1-01 (0-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0-1.5 ft. bgs) 04/20/2001	SD-J10-2-01 (0-1 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents							
BENZO(a)ANTHRACENE	UG/KG	320	25598	41U	41UJ	270J	92J
BENZO(a)PYRENE	UG/KG	370	24906	41U	41UJ	350J	110J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	41U	75J	1200	150J
BENZO(g,h,i)PERYLENE	UG/KG	170	5535	41U	41UJ	**180J**	74J
BENZO(k)FLUORANTHENE	UG/KG	240	23177	41U	41UJ	**430J**	54J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	83U	83UJ	160U	78U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	83U	83UJ	160U	78U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	41U	41UJ	83U	38U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	41U	41UJ	83U	38U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	83U	100J	160U	78U
CHRYSENE	UG/KG	340	7956	41U	49J	**580J**	140J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	83U	1200J	160U	180J
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	83U	83UJ	160U	78U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2248	41U	41UJ	**99J**	38U
DIETHYL PHTHALATE	UG/KG	NS	NS	83U	770J	160U	78U
DIMETHYL PHTHALATE	UG/KG	NS	NS	83U	83UJ	160U	78U
FLUORANTHENE	UG/KG	750	17642	41U	50J	510J	190J
FLUORENE	UG/KG	190	2767	41U	41UJ	83U	38U
HEXACHLOROBENZENE	UG/KG	20	24000	41U	41UJ	83U	38U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	83U	83UJ	160U	78U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	210U	210UJ	410U	200U
HEXACHLOROETHANE	UG/KG	NS	NS	41U	41UJ	83U	38U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	41U	41UJ	230J	73J
ISOPHORONE	UG/KG	NS	NS	41U	41UJ	83U	38U

Table 5-57

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I7-1-01 (0-1.5 ft. bgs) 04/19/2001	SD-I8-1-01 (0-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0-1.5 ft. bgs) 04/20/2001	SD-J10-2-01 (0-1 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents							
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	41U	41UJ	83U	38U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	83U	83UJ	160U	78U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	41U	650J	83U	38U
NAPHTHALENE	UG/KG	160	36	41U	41UJ	83U	38U
NITROBENZENE	UG/KG	NS	NS	41U	41UJ	83U	38U
PENTACHLOROPHENOL	UG/KG	NS	NS	210U	210UJ	410U	200U
PHENANTHRENE	UG/KG	560	16431	41U	41UJ	160J	110J
PHENOL	UG/KG	NS	NS	83U	83UJ	160U	78U
PYRENE	UG/KG	490	14702	41U	45J	**510J**	260J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-58

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0-2 ft. bgs) 04/18/2001	SD-H10-1-01 (4-5.5 ft. bgs) 04/24/2001	SD-H11-1-01 (0-2 ft. bgs) 04/18/2001	SD-H11-2-01 (0-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0-1 ft. bgs) 04/18/2001	SD-H6-1-01 (2-3 ft. bgs) 04/24/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	1U	0.78UJ	1U	0.83U	1.2B	0.74UJ
ARSENIC	MG/KG	6	33	**18.9J**	2.3	**16.2J**	**15.9J**	**10J**	5.1
BERYLLIUM	MG/KG	NS	NS	0.42B	0.58B	0.38B	0.31B	0.53B	0.64
CADMIUM	MG/KG	0.6	10	0.085UN	0.066U	0.085UN	0.071UN	0.095UN	0.062U
CHROMIUM, TOTAL	MG/KG	26	110	24.4N*	14.9	15.5N*	16N*	12.4N*	14.8
COPPER	MG/KG	16	110	**34.3J**	11.3	**70.4J**	**23J**	**28.9J**	**21.9**
LEAD	MG/KG	31	250	**1620**	6.7J	**1810**	**67.5**	**310**	**38J**
MERCURY	MG/KG	0.2	2	**0.86J**	0.023B	**0.29J**	**0.6J**	**0.49J**	0.14
NICKEL	MG/KG	16	75	11.9	7.1	10.4	7.8	6.3B	11.2
SELENIUM	MG/KG	NS	NS	0.74U	0.58U	0.74U	0.62U	1.1B	0.73B
SILVER	MG/KG	1	4	0.24B	0.17U	0.22U	0.18U	0.24U	0.19B
THALLIUM	MG/KG	NS	NS	1.4B	1U	1.5B	2.5B	1.5U	0.96U
ZINC	MG/KG	120	820	58.5N*	58.4J	**153N***	45.9N*	51.7N*	89.3J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-58

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H8-1-01 (2-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4-5 ft. bgs) 04/24/2001	SD-I7-1-01 (0-1.5 ft. bgs) 04/19/2001	SD-I8-1-01 (0-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0-1.5 ft. bgs) 04/20/2001	SD-J10-2-01 (0-1 ft. bgs) 04/20/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	0.78UJ	2.7J	0.8U	0.8U	0.65UJ	0.65UJ
ARSENIC	MG/KG	6	33	4	4.6	**6.1J**	**8J**	**14.1**	3.7
BERYLLIUM	MG/KG	NS	NS	0.49B	0.59B	0.84	0.63	0.61	0.51
CADMIUM	MG/KG	0.6	10	**0.61B**	0.53B	0.068UN	0.068UN	0.055U	0.055U
CHROMIUM, TOTAL	MG/KG	26	110	**384**	**2150**	20.8N*	**161N***	14.1	12.1
COPPER	MG/KG	16	110	**28.5**	**28.8**	12.9J	**38.7J**	**58.4N***	10.7N*
LEAD	MG/KG	31	250	**137J**	**135J**	9.9B	**578**	**39.2***	12.6*
MERCURY	MG/KG	0.2	2	**44.8**	**47.7**	0.048J	0.11J	0.091B	0.032B
NICKEL	MG/KG	16	75	9	12.4	11	11.1	9.1	9
SELENIUM	MG/KG	NS	NS	0.66B	0.63U	0.59U	0.59U	1.2	0.48U
SILVER	MG/KG	1	4	**2.3B**	**2.2B**	0.17U	0.17U	0.14U	0.14U
THALLIUM	MG/KG	NS	NS	1U	1.1U	2.8B	2B	0.85U	0.85U
ZINC	MG/KG	120	820	102J	**135J**	41.7N*	97.3N*	104*	49.3*

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-59

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0-2 ft. bgs) 04/18/2001	SD-H10-1-01 (4-5.5 ft. bgs) 04/24/2001	SD-H11-1-01 (0-2 ft. bgs) 04/18/2001	SD-H11-2-01 (0-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0-1 ft. bgs) 04/18/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
1,3-DINITROBENZENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
2,4-DINITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
2,6-DINITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
2-NITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
3-NITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
4-NITROTOLUENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	160U	100U	160U	130U	170U
NITROBENZENE	UG/KG	NS	NS	160U	100U	160U	130U	170U
NITROCELLULOSE	MG/KG	NS	NS	94U	60U	124J	79U	100U
NITROGLYCERIN	UG/KG	NS	NS	3100U	2000U	3100U	2600U	3500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	160U	100U	160U	130U	170U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3100U	2000U	73400R	2600U	3500U
TETRYL	UG/KG	NS	NS	160U	100U	160U	130U	170U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-59

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H6-1-01 (2-3 ft. bgs) 04/24/2001	SD-H8-1-01 (2-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4-5 ft. bgs) 04/24/2001	SD-I7-1-01 (0-1.5 ft. bgs) 04/19/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	100U	100U	100U	120U
1,3-DINITROBENZENE	UG/KG	NS	NS	100U	100U	100U	120U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
2,4-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
2-NITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
3-NITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
4-NITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	120U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	100U	100U	100U	120U
NITROBENZENE	UG/KG	NS	NS	100U	100U	100U	120U
NITROCELLULOSE	MG/KG	NS	NS	60U	600	60U	74U
NITROGLYCERIN	UG/KG	NS	NS	2000U	2000U	2000U	2500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	100U	100U	100U	120U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	2000U	2000U	2500U
TETRYL	UG/KG	NS	NS	100U	100U	100U	120U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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ft. bgs = Feet below ground surface

Table 5-59

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I8-1-01 (0-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0-1.5 ft. bgs) 04/20/2001	SD-J10-2-01 (0-1 ft. bgs) 04/20/2001
Energetic and Explosive Compounds						
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	120U	120U	120U
1,3-DINITROBENZENE	UG/KG	NS	NS	120U	120U	120U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	6920	120U	120U
2,4-DINITROTOLUENE	UG/KG	NS	NS	140R	11600J	120U
2,6-DINITROTOLUENE	UG/KG	NS	NS	120U	250J	120U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	120U	120U	120U
2-NITROTOLUENE	UG/KG	NS	NS	120U	120U	120U
3-NITROTOLUENE	UG/KG	NS	NS	120U	120U	120U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	120U	120U	120U
4-NITROTOLUENE	UG/KG	NS	NS	120U	120U	120U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	120U	120U	120U
NITROBENZENE	UG/KG	NS	NS	120U	120U	120U
NITROCELLULOSE	MG/KG	NS	NS	500J	1300	70U
NITROGLYCERIN	UG/KG	NS	NS	5000U	2500U	2300U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	120U	120U	120U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2500U	2500U	2300U
TETRYL	UG/KG	NS	NS	120U	250U	120U

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ft. bgs = Feet below ground surface

Table 5-60

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-3-01 (0-2 ft. bgs) 04/18/2001	SD-H10-1-01 (4-5.5 ft. bgs) 04/24/2001	SD-H11-1-01 (0-2 ft. bgs) 04/18/2001	SD-H11-2-01 (0-2 ft. bgs) 04/18/2001	SD-H12-1-01 (0-1 ft. bgs) 04/18/2001	SD-H6-1-01 (2-3 ft. bgs) 04/24/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	36.3	17.1	36.1	24.4	42.1	12.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.9	2.4	2.4	4.3	4.9	1.8
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	63.5	83.6	51.5	91.3	82.4	76.5
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	84	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	96.2	94.7	77.7	100	87.9	98
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.3	4.5	5.6	11	12.5	4.5
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	40.1	56.7	29.5	62.1	61.5	44.3
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	28.1	26.2	19	42.3	45.9	25.6
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.8	9.2	11.8	23.6	28.2	11.3
TOTAL ORGANIC CARBON	MG/KG	NS	NS	43800	270J	22800	36000	54900	18800

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Table 5-60

Sediment Analytical Results - Eastern Drainage System - Intermittent Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H8-1-01 (2-3 ft. bgs) 04/24/2001	SD-H9-1-01 (4-5 ft. bgs) 04/24/2001	SD-I7-1-01 (0-1.5 ft. bgs) 04/19/2001	SD-I8-1-01 (0-1 ft. bgs) 04/19/2001	SD-J10-1-01 (0-1.5 ft. bgs) 04/20/2001	SD-J10-2-01 (0-1 ft. bgs) 04/20/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	18.5	24.2	19.4	19.2	19.3	14
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.4	14.6	1.2	5.5	1.3	1.3
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	78.4	96.3	98.8	77.6	59.3	83.7
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	89.5	100	100	99.9	87.2	99.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.9	25.8	4.7	11.6	4.4	2.7
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	54	70.5	63.4	55.4	22.4	33.1
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	35	53.6	25.7	35.5	14.8	14.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	18.3	38.9	12	21.2	9.3	6.1
TOTAL ORGANIC CARBON	MG/KG	NS	NS	44400	58400	12100	19200	50300	20500

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NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-H7-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
1,1-DICHLOROETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
1,1-DICHLOROETHENE	UG/KG	NS	NS	150U	200U	160U	170U	160U
1,2-DICHLOROETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	290U	410U	310U	340U	330U
ACROLEIN	UG/KG	NS	NS	2900R	4100R	3100R	3400R	3200R
ACRYLONITRILE	UG/KG	NS	NS	590U	820U	630U	670U	650U
AMYL ALCOHOL	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U
BENZENE	UG/KG	340	NS	150U	200U	160U	170U	160U
BROMODICHLOROMETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
BROMOFORM	UG/KG	NS	NS	150U	200U	160U	170U	160U
BROMOMETHANE	UG/KG	NS	NS	290U	410U	310U	340U	330U
CARBON TETRACHLORIDE	UG/KG	NS	NS	150U	200U	160U	170U	160U
CHLOROBENZENE	UG/KG	NS	NS	150U	200U	160U	170U	160U
CHLOROETHANE	UG/KG	NS	NS	290U	410U	310U	340U	330U
CHLOROFORM	UG/KG	NS	NS	150U	200U	160U	170U	160U
CHLOROMETHANE	UG/KG	NS	NS	290U	410U	310U	340U	330U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	150U	200U	160U	170U	160U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	200U	160U	170U	160U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000UJ

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-2-01 (0.5-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0.5-1 ft. bgs) 04/17/2001	SD-H7-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-H7-2-01 (0.5-1 ft. bgs) 04/19/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	150U	200U	160U	170U	160U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U
ETHANOL	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U
ETHYLBENZENE	UG/KG	1400	NS	150U	200U	160U	170U	160U
METHANOL	UG/KG	NS	NS	13000U	14000U	14000U	14000U	13000U
METHYLENE CHLORIDE	UG/KG	NS	NS	290U	410U	310U	340U	330U
n-BUTYL ETHER	UG/KG	NS	NS	13000UJ	14000UJ	14000U	14000U	13000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	150U	200U	160U	170U	160U
TOLUENE	UG/KG	2500	NS	150U	200U	160U	170U	160U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	150U	200U	160U	170U	160U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	150U	200U	160U	170U	160U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	150U	200U	160U	170U	160U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	290U	410U	310U	340U	330U
VINYL CHLORIDE	UG/KG	NS	NS	150U	200U	160U	170U	160U
XYLENES, TOTAL	UG/KG	120	NS	150U	200U	160U	170U	160U

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ft. bgs = Feet below ground surface

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H8-4-01 (0.5-1 ft. bgs) 04/18/2001	SD-I10-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	160U	220U	200U	200U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	160U	220U	200U	200U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	160U	220U	200U	200U
1,1-DICHLOROETHANE	UG/KG	NS	NS	160U	220U	200U	200U
1,1-DICHLOROETHENE	UG/KG	NS	NS	160U	220U	200U	200U
1,2-DICHLOROETHANE	UG/KG	NS	NS	160U	220U	200U	200U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	160U	220U	200U	200U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	330U	440U	400U	400U
ACROLEIN	UG/KG	NS	NS	3300R	4400R	4000R	4000R
ACRYLONITRILE	UG/KG	NS	NS	650U	890U	790U	800U
AMYL ALCOHOL	UG/KG	NS	NS	13000U	13000U	14000U	15000U
BENZENE	UG/KG	340	NS	160U	220U	200U	200U
BROMODICHLOROMETHANE	UG/KG	NS	NS	160U	220U	200U	200U
BROMOFORM	UG/KG	NS	NS	160U	220U	200U	200U
BROMOMETHANE	UG/KG	NS	NS	330U	440U	400U	400U
CARBON TETRACHLORIDE	UG/KG	NS	NS	160U	220U	200U	200U
CHLOROBENZENE	UG/KG	NS	NS	160U	220U	200U	200U
CHLOROETHANE	UG/KG	NS	NS	330U	440U	400U	400U
CHLOROFORM	UG/KG	NS	NS	160U	220U	200U	200U
CHLOROMETHANE	UG/KG	NS	NS	330U	440U	400U	400U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	160U	220U	200U	200U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	160U	220U	200U	200U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	13000U	14000U	15000U

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H8-4-01 (0.5-1 ft. bgs) 04/18/2001	SD-I10-2-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-1-01 (0.5-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0.5-1 ft. bgs) 04/18/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	160U	220U	200U	200U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	13000U	14000U	15000U
ETHANOL	UG/KG	NS	NS	13000U	13000U	14000U	15000U
ETHYLBENZENE	UG/KG	1400	NS	160U	220U	200U	200U
METHANOL	UG/KG	NS	NS	13000U	13000U	14000U	15000U
METHYLENE CHLORIDE	UG/KG	NS	NS	330U	440U	400U	400U
n-BUTYL ETHER	UG/KG	NS	NS	13000U	13000U	14000UJ	15000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	160U	220U	200U	200U
TOLUENE	UG/KG	2500	NS	160U	220U	200U	200U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	160U	220U	200U	200U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	160U	220U	200U	200U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	160U	220U	200U	200U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	330U	440U	400U	400U
VINYL CHLORIDE	UG/KG	NS	NS	160U	220U	200U	200U
XYLENES, TOTAL	UG/KG	120	NS	160U	220U	200U	200U

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrumen

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	140U	150U	220U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	140U	150U	220U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	140U	150U	220U
1,1-DICHLOROETHANE	UG/KG	NS	NS	140U	150U	220U
1,1-DICHLOROETHENE	UG/KG	NS	NS	140U	150U	220U
1,2-DICHLOROETHANE	UG/KG	NS	NS	140U	150U	220U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	140U	150U	220U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	280U	290U	450U
ACROLEIN	UG/KG	NS	NS	2800R	3000R	4500R
ACRYLONITRILE	UG/KG	NS	NS	570U	590U	890U
AMYL ALCOHOL	UG/KG	NS	NS	13000U	13000U	16000U
BENZENE	UG/KG	340	NS	140U	150U	220U
BROMODICHLOROMETHANE	UG/KG	NS	NS	140U	150U	220U
BROMOFORM	UG/KG	NS	NS	140U	150U	220U
BROMOMETHANE	UG/KG	NS	NS	280U	290U	450U
CARBON TETRACHLORIDE	UG/KG	NS	NS	140U	150U	220U
CHLOROBENZENE	UG/KG	NS	NS	140U	150U	220U
CHLOROETHANE	UG/KG	NS	NS	280U	290U	450U
CHLOROFORM	UG/KG	NS	NS	140U	150U	220U
CHLOROMETHANE	UG/KG	NS	NS	280U	290U	450U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	140U	150U	220U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	150U	220U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	13000U	16000U

Table 5-61

Sediment Analytical Results - Eastern Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0.5-1 ft. bgs) 04/19/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	140U	150U	220U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	13000U	16000U
ETHANOL	UG/KG	NS	NS	13000U	13000U	16000U
ETHYLBENZENE	UG/KG	1400	NS	140U	150U	220U
METHANOL	UG/KG	NS	NS	13000U	13000U	16000U
METHYLENE CHLORIDE	UG/KG	NS	NS	280U	290U	450U
n-BUTYL ETHER	UG/KG	NS	NS	13000U	13000U	16000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	140U	150U	220U
TOLUENE	UG/KG	2500	NS	140U	150U	220U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	140U	150U	220U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	150U	220U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	140U	150U	220U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	280U	290U	450U
VINYL CHLORIDE	UG/KG	NS	NS	140U	150U	220U
XYLENES, TOTAL	UG/KG	120	NS	140U	150U	220U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrume

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0-2 ft. bgs) 04/17/2001	SD-H7-1-01 (0-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	44U	45U	46U	45U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	44U	45U	46U	45U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	44U	45U	46U	45U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	44U	45U	46U	45U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	44U	45U	46U	45U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	89U	91U	93U	91U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	89U	91U	93U	91U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	89U	91U	93U	91U
2,4-DINITROPHENOL	UG/KG	NS	NS	890U	910U	930U	910U
2,4-DINITROTOLUENE	UG/KG	NS	NS	89U	91U	93U	91U
2,6-DINITROTOLUENE	UG/KG	NS	NS	44U	45U	46U	45U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	44U	45U	46U	45U
2-CHLOROPHENOL	UG/KG	NS	NS	44U	45U	46U	45U
2-NITROPHENOL	UG/KG	NS	NS	89U	91U	93U	91U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	89U	91U	93U	91U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	230U	240U	230U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	89U	91U	93U	91U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	89U	91U	93U	91U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	44U	45U	46U	45U
4-NITROPHENOL	UG/KG	NS	NS	220U	230U	240U	230U
ACENAPHTHENE	UG/KG	16	9	44U	45U	46U	45U
ACENAPHTHYLENE	UG/KG	44	11	**51J**	45U	46U	45U
ANTHRACENE	UG/KG	220	6593	56J	45U	46U	45U
BENZIDINE	UG/KG	NS	NS	890U	910U	930U	910U
BENZO(a)ANTHRACENE	UG/KG	320	26371	200J	91J	180J	45U
BENZO(a)PYRENE	UG/KG	370	25658	210J	110J	150J	45U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	280J	170J	230J	45U

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0-2 ft. bgs) 04/17/2001	SD-H7-1-01 (0-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
BENZO(g,h,i)PERYLENE	UG/KG	170	5702	140J	83J	92J	45U
BENZO(k)FLUORANTHENE	UG/KG	240	23876	110J	70J	82J	45U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	89U	91U	93U	91U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	44U	45U	46U	45U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	44U	45U	46U	45U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U
CHRYSENE	UG/KG	340	8196	240J	140J	180J	45U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	44U	45U	46U	45U
DIETHYL PHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U
DIMETHYL PHTHALATE	UG/KG	NS	NS	89U	91U	93U	91U
FLUORANTHENE	UG/KG	750	18174	460	200J	400J	45U
FLUORENE	UG/KG	190	2851	44U	45U	46U	45U
HEXACHLOROBENZENE	UG/KG	20	24000	44U	45U	46U	45U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	89U	91U	93U	91U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	220U	230U	240U	230U
HEXACHLOROETHANE	UG/KG	NS	NS	44U	45U	46U	45U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	150J	82J	110J	45U
ISOPHORONE	UG/KG	NS	NS	44U	45U	46U	45U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	44U	45U	46U	45U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	89U	91U	93U	91U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	480	330J	100J	45U
NAPHTHALENE	UG/KG	160	37	44U	45U	46U	45U
NITROBENZENE	UG/KG	NS	NS	44U	45U	46U	45U
PENTACHLOROPHENOL	UG/KG	NS	NS	220U	230U	240U	230U

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0-2 ft. bgs) 04/17/2001	SD-H7-1-01 (0-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
PHENANTHRENE	UG/KG	560	16927	310J	100J	120J	45U
PHENOL	UG/KG	NS	NS	89U	91U	93U	91U
PYRENE	UG/KG	490	15145	**510**	210J	370J	45U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H7-2-01 (0-1 ft. bgs) 04/19/2001	SD-H8-4-01 (0-1.5 ft. bgs) 04/18/2001	SD-I10-2-01 (0-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	43U	44U	44U	47U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	43U	44U	44U	47U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	43U	44U	44U	47U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	43U	44U	44U	47U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	43U	44U	44U	47U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	88U	89U	90U	95U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	88U	89U	90U	95U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	88U	89U	90U	95U
2,4-DINITROPHENOL	UG/KG	NS	NS	880U	890U	900U	950U
2,4-DINITROTOLUENE	UG/KG	NS	NS	88U	89U	90U	95U
2,6-DINITROTOLUENE	UG/KG	NS	NS	43U	44U	44U	47U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	43U	44U	44U	47U
2-CHLOROPHENOL	UG/KG	NS	NS	43U	44U	44U	47U
2-NITROPHENOL	UG/KG	NS	NS	88U	89U	90U	95U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	88U	89U	90U	95U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	230U	230U	240U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	88U	89U	90U	95U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	88U	89U	90U	95U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	43U	44U	44U	47U
4-NITROPHENOL	UG/KG	NS	NS	220U	230U	230U	240U
ACENAPHTHENE	UG/KG	16	9	43U	44U	44U	47U
ACENAPHTHYLENE	UG/KG	44	11	**180J**	**84J**	**48J**	**140J**
ANTHRACENE	UG/KG	220	6593	210J	110J	51J	210J
BENZIDINE	UG/KG	NS	NS	880U	890U	900U	950U
BENZO(a)ANTHRACENE	UG/KG	320	26371	**680**	310J	150J	**670**
BENZO(a)PYRENE	UG/KG	370	25658	**700**	320J	160J	**610**
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	790	390J	220J	860

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H7-2-01 (0-1 ft. bgs) 04/19/2001	SD-H8-4-01 (0-1.5 ft. bgs) 04/18/2001	SD-I10-2-01 (0-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
BENZO(g,h,i)PERYLENE	UG/KG	170	5702	**460**	**240J**	130J	**470**
BENZO(k)FLUORANTHENE	UG/KG	240	23876	**350J**	140J	90J	**320J**
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	88U	89U	90U	95U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	88U	89U	90U	95U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	43U	44U	44U	47U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	43U	44U	44U	47U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	88U	89U	90U	95U
CHRYSENE	UG/KG	340	8196	**750**	**350J**	200J	**780**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	88U	370J	90U	95U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	88U	89U	90U	95U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	**120J**	**70J**	44U	**140J**
DIETHYL PHTHALATE	UG/KG	NS	NS	88U	89U	90U	95U
DIMETHYL PHTHALATE	UG/KG	NS	NS	88U	89U	90U	95U
FLUORANTHENE	UG/KG	750	18174	**1300**	650	290J	**1400**
FLUORENE	UG/KG	190	2851	90J	44U	44U	59J
HEXACHLOROBENZENE	UG/KG	20	24000	43U	44U	44U	47U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	88U	89U	90U	95U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	220U	230U	230U	240U
HEXACHLOROETHANE	UG/KG	NS	NS	43U	44U	44U	47U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	470	240J	130J	500
ISOPHORONE	UG/KG	NS	NS	43U	44U	44U	47U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	43U	44U	44U	47U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	88U	89U	90U	95U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	56J	44U	44U	240J
NAPHTHALENE	UG/KG	160	37	43U	44U	44U	47U
NITROBENZENE	UG/KG	NS	NS	43U	44U	44U	47U
PENTACHLOROPHENOL	UG/KG	NS	NS	220U	230U	230U	240U

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H7-2-01 (0-1 ft. bgs) 04/19/2001	SD-H8-4-01 (0-1.5 ft. bgs) 04/18/2001	SD-I10-2-01 (0-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0-1 ft. bgs) 04/18/2001
Semi-Volatile Organic Constituents							
PHENANTHRENE	UG/KG	560	16927	**690**	360J	170J	**830**
PHENOL	UG/KG	NS	NS	88U	89U	90U	95U
PYRENE	UG/KG	490	15145	**1400**	**650**	320J	**1200**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I11-2-01 (0-1 ft. bgs) 04/18/2001	SD-I5-1-01 (0-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0-1.5 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	50U	42U	44U	52U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	50U	42U	44U	52U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	50U	42U	44U	52U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	50U	42U	44U	52U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	50U	42U	44U	52U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	100U	85U	90U	110U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	100U	85U	90U	110U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	100U	85U	90U	110U
2,4-DINITROPHENOL	UG/KG	NS	NS	1000U	850U	900U	1100U
2,4-DINITROTOLUENE	UG/KG	NS	NS	100U	85U	90U	110U
2,6-DINITROTOLUENE	UG/KG	NS	NS	50U	42U	44U	52U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	50U	42U	44U	52U
2-CHLOROPHENOL	UG/KG	NS	NS	50U	42U	44U	52U
2-NITROPHENOL	UG/KG	NS	NS	100U	85U	90U	110U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	100U	85U	90U	110U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	260U	220U	230U	270U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	100U	85U	90U	110U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	100U	85U	90U	110U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	50U	42U	44U	52U
4-NITROPHENOL	UG/KG	NS	NS	260U	220U	230U	270U
ACENAPHTHENE	UG/KG	16	9	50U	42U	44U	52U
ACENAPHTHYLENE	UG/KG	44	11	50U	42U	44U	52U
ANTHRACENE	UG/KG	220	6593	61J	42U	44U	52U
BENZIDINE	UG/KG	NS	NS	1000U	850U	900U	1100U
BENZO(a)ANTHRACENE	UG/KG	320	26371	170J	42U	120J	52U
BENZO(a)PYRENE	UG/KG	370	25658	190J	42U	93J	52U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	260J	42U	130J	74J

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I11-2-01 (0-1 ft. bgs) 04/18/2001	SD-I5-1-01 (0-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0-1.5 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
BENZO(g,h,i)PERYLENE	UG/KG	170	5702	150J	42U	60J	52U
BENZO(k)FLUORANTHENE	UG/KG	240	23876	110J	42U	50J	52U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	100U	85U	90U	110U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	100U	85U	90U	110U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	50U	42U	44U	52U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	50U	42U	44U	52U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	1400U	97J	90U	110U
CHRYSENE	UG/KG	340	8196	240J	42U	130J	59J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	100U	85U	90U	110U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	100U	85U	90U	110U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	50U	42U	44U	52U
DIETHYL PHTHALATE	UG/KG	NS	NS	100U	85U	90U	110U
DIMETHYL PHTHALATE	UG/KG	NS	NS	100U	85U	90U	110U
FLUORANTHENE	UG/KG	750	18174	360J	42U	310J	89J
FLUORENE	UG/KG	190	2851	50U	42U	44U	52U
HEXACHLOROBENZENE	UG/KG	20	24000	50U	42U	44U	52U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	100U	85U	90U	110U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	260U	220U	230U	270U
HEXACHLOROETHANE	UG/KG	NS	NS	50U	42U	44U	52U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	150J	42U	75J	52U
ISOPHORONE	UG/KG	NS	NS	50U	42U	44U	52U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	50U	42U	44U	52U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	100U	85U	90U	110U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	78J	42U	44U	52U
NAPHTHALENE	UG/KG	160	37	50U	42U	44U	52U
NITROBENZENE	UG/KG	NS	NS	50U	42U	44U	52U
PENTACHLOROPHENOL	UG/KG	NS	NS	260U	220U	230U	270U

Table 5-62

Sediment Analytical Results - Eastern Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I11-2-01 (0-1 ft. bgs) 04/18/2001	SD-I5-1-01 (0-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0-1.5 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
PHENANTHRENE	UG/KG	560	16927	230J	42U	200J	52U
PHENOL	UG/KG	NS	NS	100U	85U	90U	110U
PYRENE	UG/KG	490	15145	400J	42U	240J	74J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG)
Lowest Effects Level (LEL)

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Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-63

Sediment Analytical Results - Eastern Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0-2 ft. bgs) 04/17/2001	SD-H7-1-01 (0-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0-1 ft. bgs) 04/19/2001	SD-H8-4-01 (0-1.5 ft. bgs) 04/18/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	0.85U	0.86U	0.91U	0.87U	0.84U	0.84U
ARSENIC	MG/KG	6	33	5.2	4.4J	3.4	3.4J	3.3J	3.7J
BERYLLIUM	MG/KG	NS	NS	0.66	0.84	0.57B	0.72	0.44B	0.6B
CADMIUM	MG/KG	0.6	10	0.072U	0.073UN	0.077U	0.074UN	0.071J	0.071UN
CHROMIUM, TOTAL	MG/KG	26	110	**32.2**	**60.7N***	**136**	13.9N*	10.5J	14.1N*
COPPER	MG/KG	16	110	10.5	**36.2J**	12.4	**19.8J**	**22.9J**	14.6J
LEAD	MG/KG	31	250	21.7*	25.1	15.2*	8.1B	20.6	**314**
MERCURY	MG/KG	0.2	2	**0.23N**	**0.58J**	**0.42N**	0.11J	**0.59J**	**0.54J**
NICKEL	MG/KG	16	75	10.3	10.2	7.2	9.2	12.1	8.4
SELENIUM	MG/KG	NS	NS	0.63U	0.63U	0.83B	0.64U	0.62U	0.62U
SILVER	MG/KG	1	4	0.18U	0.19U	0.2U	0.19U	0.18U	0.18U
THALLIUM	MG/KG	NS	NS	1.1U	3.2B	1.2U	3.1B	3.3B	3.1B
ZINC	MG/KG	120	820	52.4	108N*	73.8	59.6N*	79.4J	89.4N*

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Table 5-63

Sediment Analytical Results - Eastern Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I10-2-01 (0-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0-1 ft. bgs) 04/18/2001	SD-I5-1-01 (0-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0-1.5 ft. bgs) 04/19/2001
Total Metals									
ANTIMONY	MG/KG	NS	NS	0.87U	0.92U	0.99U	0.91B	1.9B	1U
ARSENIC	MG/KG	6	33	4.7J	5.7J	4.5J	3.9J	4.5*	**7.5J**
BERYLLIUM	MG/KG	NS	NS	0.73	0.58B	0.39B	0.73J	0.75	0.85
CADMIUM	MG/KG	0.6	10	0.074UN	0.078UN	0.084UN	0.069UN	0.073UN	0.087UN
CHROMIUM, TOTAL	MG/KG	26	110	19N*	**66.5N***	10N*	6.3	8.7N*	13.2N*
COPPER	MG/KG	16	110	15.4J	**28.6J**	**16.6J**	8.3	13N*	12.4J
LEAD	MG/KG	31	250	18.8	**35**	20	14.2	22.1	25.9
MERCURY	MG/KG	0.2	2	**0.73J**	**0.32J**	**0.56J**	0.011B	0.022BN*	0.046J
NICKEL	MG/KG	16	75	11.3	9.7	8.4	3.7B	5.2B	7.7B
SELENIUM	MG/KG	NS	NS	0.64U	0.68U	0.73U	0.82UJ	4.7B	1.5B
SILVER	MG/KG	1	4	0.19U	0.2U	0.21U	0.17U	0.19U	0.22U
THALLIUM	MG/KG	NS	NS	3.1B	4.1B	3B	5.4B	11.1B	7.7B
ZINC	MG/KG	120	820	96.3N*	**120N***	102N*	**123J**	**167N***	**186N***

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ft. bgs = Feet below ground surface

Table 5-64

Sediment Analytical Results - Eastern Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0-2 ft. bgs) 04/17/2001	SD-H7-1-01 (0-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0-1 ft. bgs) 04/19/2001
Explosive and Energetic Compounds								
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
2,4-DINITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
2-NITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
3-NITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
4-NITROTOLUENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	130U	140U	140U	140U	130U
NITROBENZENE	UG/KG	NS	NS	130U	140U	140U	140U	130U
NITROCELLULOSE	MG/KG	NS	NS	79UJ	82U	84UJ	81U	78UJ
NITROGLYCERIN	UG/KG	NS	NS	2600U	2700U	2800U	2700U	130U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	130U	140U	140U	140U	130U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2600U	2700U	2800U	2700U	130UJ
TETRYL	UG/KG	NS	NS	130U	140U	140U	140U	130U

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Table 5-64

Sediment Analytical Results - Eastern Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-H8-4-01 (0-1.5 ft. bgs) 04/18/2001	SD-I10-2-01 (0-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0-1 ft. bgs) 04/18/2001
Explosive and Energetic Compounds							
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	130U	130U	140U	150U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	130U	140U	150U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
2,4-DINITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
2-NITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
3-NITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
4-NITROTOLUENE	UG/KG	NS	NS	130U	130U	140U	150U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	130U	130U	140U	150U
NITROBENZENE	UG/KG	NS	NS	130U	130U	140U	150U
NITROCELLULOSE	MG/KG	NS	NS	80U	80U	85U	92U
NITROGLYCERIN	UG/KG	NS	NS	2700U	2700U	2800U	3100U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	130U	130U	140U	150U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2700U	2700U	2800U	3100U
TETRYL	UG/KG	NS	NS	130U	130U	140U	150U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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Table 5-64

Sediment Analytical Results - Eastern Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I5-1-01 (0-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0-1.5 ft. bgs) 04/19/2001
Explosive and Energetic Compounds						
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	130U	130U	160U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	130U	160U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	130U	130U	160U
2,4-DINITROTOLUENE	UG/KG	NS	NS	130UJ	130U	160U
2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	130U	160U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	130U	160U
2-NITROTOLUENE	UG/KG	NS	NS	130U	130U	160U
3-NITROTOLUENE	UG/KG	NS	NS	130U	130U	160U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	130U	160U
4-NITROTOLUENE	UG/KG	NS	NS	130U	130U	160U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	130U	130U	160U
NITROBENZENE	UG/KG	NS	NS	130U	130U	160U
NITROCELLULOSE	MG/KG	NS	NS	76U	80U	95U
NITROGLYCERIN	UG/KG	NS	NS	2500U	2700U	3200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	130U	130U	160U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2500U	2700U	3200U
TETRYL	UG/KG	NS	NS	130U	130U	160U

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Table 5-65

Sediment Analytical Results - Eastern Drainage System - Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-G12-2-01 (0-2 ft. bgs) 04/17/2001	SD-H12-2-01 (0-1 ft. bgs) 04/17/2001	SD-H12-3-01 (0-2 ft. bgs) 04/17/2001	SD-H7-1-01 (0-2 ft. bgs) 04/19/2001	SD-H7-2-01 (0-1 ft. bgs) 04/19/2001	SD-H8-4-01 (0-1.5 ft. bgs) 04/18/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	24.4	26.6	28.3	26.1	23.5	25
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1	2.7	3.4	2.9	2.3	2.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	79.7	62	66.7	70.8	65.6	80
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	99.9	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	92.8	85	91.7	87.7	96	91.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3.8	6.7	9.6	7.5	6.4	8.1
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	47.4	47.6	42.2	46.8	41.5	55.1
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	28.2	40.6	26.4	31.3	29.8	36.5
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	12.6	30.8	17.1	16.8	16.3	18.5
TOTAL ORGANIC CARBON	MG/KG	NS	NS	19300	22100	11500	10400	11200J	13600

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Table 5-65

Sediment Analytical Results - Eastern Drainage System - Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-I10-2-01 (0-1.5 ft. bgs) 04/18/2001	SD-I11-1-01 (0-1 ft. bgs) 04/18/2001	SD-I11-2-01 (0-1 ft. bgs) 04/18/2001	SD-I5-1-01 (0-1 ft. bgs) 04/19/2001	SD-I5-2-01 (0-1 ft. bgs) 04/19/2001	SD-I6-1-01 (0-1.5 ft. bgs) 04/19/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	25.3	29.2	34.5	21.3	25.4	37.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.8	1.8	1.1	1.1	1.4	2.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	76.8	77.7	79.8	63	78.7	91.8
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	90.5	98	100	91.8	100	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	9.1	4.5	3	3.2	4.2	8.4
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	46.7	45.2	36.2	34.8	52.9	57.6
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	32	25.4	18.4	20.2	32.5	34.4
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	19	11.5	7.5	9	12	19.9
TOTAL ORGANIC CARBON	MG/KG	NS	NS	12200	14600	16200	14000	11200	19300

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ft. bgs = Feet below ground surface

Table 5-66

Sediment Analytical Results - Eastern Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	170U	150U	210UJ	230U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	170U	150U	210UJ	230U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	170U	150U	210UJ	230U
1,1-DICHLOROETHANE	UG/KG	NS	NS	170U	150U	210UJ	230U
1,1-DICHLOROETHENE	UG/KG	NS	NS	170U	150U	210UJ	230U
1,2-DICHLOROETHANE	UG/KG	NS	NS	170U	150U	210UJ	230U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	170U	150U	210UJ	230U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	340U	300U	420UJ	460U
ACROLEIN	UG/KG	NS	NS	3400R	3000R	4200R	4600R
ACRYLONITRILE	UG/KG	NS	NS	680U	600U	840UJ	920U
AMYL ALCOHOL	UG/KG	NS	NS	14000U	14000U	15000U	18000U
BENZENE	UG/KG	340	NS	170U	150U	210UJ	230U
BROMODICHLOROMETHANE	UG/KG	NS	NS	170U	150U	210UJ	230U
BROMOFORM	UG/KG	NS	NS	170U	150U	210UJ	230U
BROMOMETHANE	UG/KG	NS	NS	340U	300U	420UJ	460U
CARBON TETRACHLORIDE	UG/KG	NS	NS	170U	150U	210UJ	230U
CHLOROBENZENE	UG/KG	NS	NS	170U	150U	210UJ	230U
CHLOROETHANE	UG/KG	NS	NS	340U	300U	420UJ	460U
CHLOROFORM	UG/KG	NS	NS	170U	150U	210UJ	230U
CHLOROMETHANE	UG/KG	NS	NS	340U	300U	420UJ	460U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	170U	150U	210UJ	230U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	150U	210UJ	230U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	14000UJ	14000UJ	15000UJ	18000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	170U	150U	210UJ	230U

Table 5-66

Sediment Analytical Results - Eastern Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0.5-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0.5-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0.5-1 ft. bgs) 04/11/2001	SD-G12-1-01 (0.5-1 ft. bgs) 04/16/2001
Volatile Organic Constituents							
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	14000U	14000U	15000U	18000U
ETHANOL	UG/KG	NS	NS	14000U	14000U	15000U	18000U
ETHYLBENZENE	UG/KG	1400	NS	170U	150U	210UJ	230U
METHANOL	UG/KG	NS	NS	14000U	14000U	15000U	18000U
METHYLENE CHLORIDE	UG/KG	NS	NS	340U	300U	420UJ	460U
n-BUTYL ETHER	UG/KG	NS	NS	14000UJ	14000UJ	15000UJ	18000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	170U	150U	210UJ	230U
TOLUENE	UG/KG	2500	NS	170U	150U	210UJ	230U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	170U	150U	210UJ	230U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170U	150U	210UJ	230U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	170U	150U	210UJ	230U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	340U	300U	420UJ	460U
VINYL CHLORIDE	UG/KG	NS	NS	170U	150U	210UJ	230U
XYLENES, TOTAL	UG/KG	120	NS	170U	150U	210UJ	230U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

E = Indicates that the concentration exceeded the calibration range of the instrument

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

N = Flashpoint not observed, heated to specific limit

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-67

Sediment Analytical Results - Eastern Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0-1 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	46U	46U	50U	58U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	46U	46U	50U	58U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	46U	46U	50U	58U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	46U	46U	50U	58U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	46U	46U	50U	58U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	93U	94U	100U	120U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	93U	94U	100U	120U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	93U	94U	100U	120U
2,4-DINITROPHENOL	UG/KG	NS	NS	930U	940U	1000U	1200U
2,4-DINITROTOLUENE	UG/KG	NS	NS	93U	94U	100U	120U
2,6-DINITROTOLUENE	UG/KG	NS	NS	46U	46U	50U	58U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	46U	46U	50U	58U
2-CHLOROPHENOL	UG/KG	NS	NS	46U	46U	50U	58U
2-NITROPHENOL	UG/KG	NS	NS	93U	94U	100U	120U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	93U	94U	100U	120U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	240U	240U	260U	300U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	93U	94U	100U	120U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	93U	94U	100U	120U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	46U	46U	50U	58U
4-NITROPHENOL	UG/KG	NS	NS	240U	240U	260U	300U
ACENAPHTHENE	UG/KG	16	25	46U	46U	50U	58U
ACENAPHTHYLENE	UG/KG	44	33	**63J**	46U	**61J**	58U
ANTHRACENE	UG/KG	220	18827	110J	46U	76J	58U
BENZIDINE	UG/KG	NS	NS	930U	940U	1000U	1200UJ
BENZO(a)ANTHRACENE	UG/KG	320	75308	280J	120J	270J	160J

Table 5-67

Sediment Analytical Results - Eastern Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0-1 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents							
BENZO(a)PYRENE	UG/KG	370	73273	310J	150J	270J	160J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	500	220J	350J	240J
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	**230J**	110J	**200J**	110J
BENZO(k)FLUORANTHENE	UG/KG	240	68185	220J	110J	130J	90J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	93U	94U	100U	120U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	46U	46U	50U	58U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	46U	46U	50U	58U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
CHRYSENE	UG/KG	340	23407	**360J**	160J	**370J**	270J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	**60J**	46U	**61J**	58U
DIETHYL PHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
DIMETHYL PHTHALATE	UG/KG	NS	NS	93U	94U	100U	120U
FLUORANTHENE	UG/KG	750	51902	**760**	260J	610	430J
FLUORENE	UG/KG	190	8141	160J	46U	50U	58U
HEXACHLOROBENZENE	UG/KG	20	24000	46U	46U	50U	58U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	93U	94U	100U	120U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	240U	240U	260U	300U
HEXACHLOROETHANE	UG/KG	NS	NS	46U	46U	50U	58U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	260J	110J	200J	110J
ISOPHORONE	UG/KG	NS	NS	46U	46U	50U	58U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	46U	46U	50U	58U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	93U	94U	100U	120U

Table 5-67

Sediment Analytical Results - Eastern Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0-1 ft. bgs) 04/16/2001
Semi-Volatile Organic Constituents							
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	1100	420J	540	87J
NAPHTHALENE	UG/KG	160	107	46U	46U	50U	58U
NITROBENZENE	UG/KG	NS	NS	46U	46U	50U	58U
PENTACHLOROPHENOL	UG/KG	NS	NS	240U	240U	260U	300U
PHENANTHRENE	UG/KG	560	48340	490	180J	360J	220J
PHENOL	UG/KG	NS	NS	93U	94U	100U	120U
PYRENE	UG/KG	490	43251	**680**	260J	**610**	370J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
E = Indicates that the concentration exceeded the calibration range of the instrument

* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-68

Sediment Analytical Results - Eastern Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0-1 ft. bgs) 04/16/2001
Total Metals							
ANTIMONY	MG/KG	NS	NS	0.87U	0.88UJ	0.98U	1.2B
ARSENIC	MG/KG	6	33	2.8J	1.1B	3.1J	**7.1J**
BERYLLIUM	MG/KG	NS	NS	0.3B	0.24U	0.39B	0.49B
CADMIUM	MG/KG	0.6	10	0.11B	0.075U	0.083U	0.28B
CHROMIUM, TOTAL	MG/KG	26	110	21.4	15.7	**27.9**	15.4
COPPER	MG/KG	16	110	10.4	6.4	**16.3**	**26.1**
LEAD	MG/KG	31	250	**73.1**	**70***	**87.7**	**453**
MERCURY	MG/KG	0.2	2	**0.56J**	**0.26N**	**0.43J**	**0.68J**
NICKEL	MG/KG	16	75	5B	3.6B	6B	8.3B
SELENIUM	MG/KG	NS	NS	0.64U	0.65U	0.98B	1.2B
SILVER	MG/KG	1	4	0.19U	0.19U	0.21U	0.26B
THALLIUM	MG/KG	NS	NS	1.1U	1.2U	1.3U	1.5U
ZINC	MG/KG	120	820	85	55.4	66.8	76.7

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-69

Sediment Analytical Results - Eastern Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0-1 ft. bgs) 04/16/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	140U	140U	150U	180U
1,3-DINITROBENZENE	UG/KG	NS	NS	140U	140U	150U	180U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
2,4-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
2-NITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
3-NITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
4-NITROTOLUENE	UG/KG	NS	NS	140U	140U	150U	180U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	140U	140U	150U	180U
NITROBENZENE	UG/KG	NS	NS	140U	140U	150U	180U
NITROCELLULOSE	MG/KG	NS	NS	215J	84UJ	91UJ	110U
NITROGLYCERIN	UG/KG	NS	NS	2800U	2800U	3000U	3500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	140U	140U	150U	180U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2800U	2800U	3000U	3500U
TETRYL	UG/KG	NS	NS	140U	140U	150U	180U

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SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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E = Indicates that the concentration exceeded the calibration range of the instrument

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-70

Sediment Analytical Results - Eastern Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-F13-1-01 (0-1 ft. bgs) 04/16/2001	SD-F14-1-01 (0-1 ft. bgs) 04/13/2001	SD-F14-2-01 (0-1.5 ft. bgs) 04/11/2001	SD-G12-1-01 (0-1 ft. bgs) 04/16/2001
General Chemistry							
MOISTURE, PERCENT	%W/W	NS	NS	28.1J	28.6	33.9	43.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.1	0.6J	1	1.8
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	85.6	58.1	61.6	59.4
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.6	87.6	93	89.3
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	4.7	2.5	3.6	5.2
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	66.9	37.8	40.3	37.4
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	46.1	22.1	23.6	23.3
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.9	8.6	10.8	12.8
TOTAL ORGANIC CARBON	MG/KG	NS	NS	13500J	18200	13200J	39000J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-71

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-K5-2-01 (0.5-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0.5-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0.5-1 ft. bgs) 04/09/2001	SW-L5-3-01 (0.5-1 ft. bgs) 04/09/2001	SW-L6-1-01 (0.5-1 ft. bgs) 04/05/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2UJ	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000UJ
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U

Table 5-71

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-K5-2-01 (0.5-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0.5-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0.5-1 ft. bgs) 04/09/2001	SW-L5-3-01 (0.5-1 ft. bgs) 04/09/2001	SW-L6-1-01 (0.5-1 ft. bgs) 04/05/2001
Volatile Organic Constituents								
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000UJ
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-71

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M5-1-01 (0.5-1 ft. bgs) 04/24/2001	SW-M5-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-M5-3-01 (0.5-1 ft. bgs) 04/19/2001	SW-M6-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-M6-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-M6-3-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40UJ	40UJ	40UJ	40UJ	40UJ
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U

Table 5-71

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M5-1-01 (0.5-1 ft. bgs) 04/24/2001	SW-M5-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-M5-3-01 (0.5-1 ft. bgs) 04/19/2001	SW-M6-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-M6-2-01 (0.5-1 ft. bgs) 04/19/2001	SW-M6-3-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents								
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-71

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-N5-1-01 (0.5-1 ft. bgs) 04/25/2001	SW-N5-2-01 (0.5-1 ft. bgs) 04/24/2001	SW-N5-3-01 (0.5-1 ft. bgs) 04/25/2001	SW-N5-4-01 (0.5-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents								
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2UJ	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U

Table 5-71

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-1-01 (0.5-1 ft. bgs) 04/05/2001	SW-N5-1-01 (0.5-1 ft. bgs) 04/25/2001	SW-N5-2-01 (0.5-1 ft. bgs) 04/24/2001	SW-N5-3-01 (0.5-1 ft. bgs) 04/25/2001	SW-N5-4-01 (0.5-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents								
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0-0.5 ft. bgs) 04/19/2001	SW-K5-2-01 (0-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0-3 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	19U	19U	20U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	19U	19U	20U	20U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0-0.5 ft. bgs) 04/19/2001	SW-K5-2-01 (0-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0-3 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents						
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	NR
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	1U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0-0.5 ft. bgs) 04/19/2001	SW-K5-2-01 (0-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0-3 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents						
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	1U
PYRENE	UG/L	797	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-L5-3-01 (0-3 ft. bgs) 04/09/2001	SW-L6-1-01 (0-4 ft. bgs) 04/05/2001	SW-M5-1-01 (0-2 ft. bgs) 04/24/2001	SW-M5-2-01 (0-4 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	0.9U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	0.9U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	0.9U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	0.9U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	0.9U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	0.9U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	19U	19U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	0.9U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	0.9U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	0.9U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	0.9U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	0.9U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	9U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	0.9U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	0.9U	1U
ANTHRACENE	UG/L	9570	1U	1U	0.9U	1U
BENZIDINE	UG/L	0.00012	20U	19U	19U	19U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-L5-3-01 (0-3 ft. bgs) 04/09/2001	SW-L6-1-01 (0-4 ft. bgs) 04/05/2001	SW-M5-1-01 (0-2 ft. bgs) 04/24/2001	SW-M5-2-01 (0-4 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	0.9U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	0.9U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	0.9U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	0.9U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	0.9U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	0.9U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	0.9U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	0.9U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	0.9U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	0.9U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	0.9U	1U
FLUORENE	UG/L	1340	NR	1U	0.9U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	0.9U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	0.9U	1U
ISOPHORONE	UG/L	552	1U	1U	0.9U	1U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-L5-3-01 (0-3 ft. bgs) 04/09/2001	SW-L6-1-01 (0-4 ft. bgs) 04/05/2001	SW-M5-1-01 (0-2 ft. bgs) 04/24/2001	SW-M5-2-01 (0-4 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	0.9U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	0.9U	1U
NAPHTHALENE	UG/L	NS	1U	1U	0.9U	1U
NITROBENZENE	UG/L	16	1U	1U	0.9U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	0.9U	1U
PHENOL	UG/L	20900	1U	1U	0.9U	1U
PYRENE	UG/L	797	1U	1U	0.9U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated l

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M5-3-01 (0-2 ft. bgs) 04/19/2001	SW-M6-1-01 (0-6 ft. bgs) 04/19/2001	SW-M6-2-01 (0-4 ft. bgs) 04/19/2001	SW-M6-3-01 (0-4 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	20U	20U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	20U	20U	20U	19U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M5-3-01 (0-2 ft. bgs) 04/19/2001	SW-M6-1-01 (0-6 ft. bgs) 04/19/2001	SW-M6-2-01 (0-4 ft. bgs) 04/19/2001	SW-M6-3-01 (0-4 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	**2J**
CHRYSENE	UG/L	0.0028	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	1U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M5-3-01 (0-2 ft. bgs) 04/19/2001	SW-M6-1-01 (0-6 ft. bgs) 04/19/2001	SW-M6-2-01 (0-4 ft. bgs) 04/19/2001	SW-M6-3-01 (0-4 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents						
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	1U
PYRENE	UG/L	797	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

blank.

Bold = Indicates Concentration Exceeds

N = Flashpoint not observed, heated to s

B = Indicates that the compound was fou

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-1-01 (0-2 ft. bgs) 04/05/2001	SW-N5-1-01 (0-1 ft. bgs) 04/25/2001	SW-N5-2-01 (0-14 ft. bgs) 04/24/2001	SW-N5-3-01 (0-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	0.9U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	0.9U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	0.9U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	0.9U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	0.9U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	0.9U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U
2,4-DINITROPHENOL	UG/L	69.7	20U	19U	20U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	0.9U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	0.9U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	0.9U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	0.9U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	9U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	0.9U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	0.9U
ANTHRACENE	UG/L	9570	1U	1U	1U	0.9U
BENZIDINE	UG/L	0.00012	20U	19U	20U	19U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-1-01 (0-2 ft. bgs) 04/05/2001	SW-N5-1-01 (0-1 ft. bgs) 04/25/2001	SW-N5-2-01 (0-14 ft. bgs) 04/24/2001	SW-N5-3-01 (0-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	0.9U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	0.9U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	0.9U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	0.9U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	0.9U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	0.9U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	0.9U
FLUORENE	UG/L	1340	1U	1U	1U	0.9U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	0.9U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	0.9U
ISOPHORONE	UG/L	552	1U	1U	1U	0.9U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-1-01 (0-2 ft. bgs) 04/05/2001	SW-N5-1-01 (0-1 ft. bgs) 04/25/2001	SW-N5-2-01 (0-14 ft. bgs) 04/24/2001	SW-N5-3-01 (0-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	0.9U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	0.9U
NAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U
NITROBENZENE	UG/L	16	1U	1U	1U	0.9U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U	1U	0.9U
PHENOL	UG/L	20900	1U	1U	1U	0.9U
PYRENE	UG/L	797	1U	1U	1U	0.9U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

SWQC

specific limit

und in the associated blank.

Bold = Indicates C

N = Flashpoint not

B = Indicates that t

R = Rejected based

* = Value obtained

NR = Not Reportec

NS = No Standard

ft. bgs = Feet below

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N5-4-01 (0-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0-1 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents				
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U
ANTHRACENE	UG/L	9570	1U	1U
BENZIDINE	UG/L	0.00012	20U	19U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N5-4-01 (0-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0-1 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents				
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U
FLUORANTHENE	UG/L	310	1U	1U
FLUORENE	UG/L	1340	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U
ISOPHORONE	UG/L	552	1U	1U

Table 5-72

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N5-4-01 (0-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0-1 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents				
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U
NITROBENZENE	UG/L	16	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U
PHENANTHRENE	UG/L	NS	1U	1U
PHENOL	UG/L	20900	1U	1U
PYRENE	UG/L	797	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

oncentration Exceeds SWQC

observed, heated to specific limit

he compound was found in the associated blank.

l on data validation

l from a 1:5 dilution

d

v ground surface

Table 5-73

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0-0.5 ft. bgs) 04/19/2001	SW-K5-2-01 (0-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0-3 ft. bgs) 04/09/2001	SW-L5-3-01 (0-3 ft. bgs) 04/09/2001	SW-L6-1-01 (0-4 ft. bgs) 04/05/2001
Total Metals								
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	5U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	2.7B	2.4U	2.4U	2.8U	2.4U	2.4U
LEAD	UG/L	5	**10.1B**	8.8U	8.8U	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.043U	0.026UN*	0.026U	0.026U	0.026U	0.026U
NICKEL	UG/L	516	1.6U	1.6UN*	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	16.3B	20.6U	25.3	24.6B	24.4B	22.7B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-73

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M5-1-01 (0-2 ft. bgs) 04/24/2001	SW-M5-2-01 (0-4 ft. bgs) 04/19/2001	SW-M5-3-01 (0-2 ft. bgs) 04/19/2001	SW-M6-1-01 (0-6 ft. bgs) 04/19/2001	SW-M6-2-01 (0-4 ft. bgs) 04/19/2001	SW-M6-3-01 (0-4 ft. bgs) 04/19/2001
Total Metals								
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	5.4U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	4.3U	2.4U	2.5B	2.4U	2.4U	2.6B
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.026UN*	0.026U	0.026U	0.026U	0.026U	0.026U
NICKEL	UG/L	516	1.6UN*	2.1U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	31.2U	14.4U	14.1U	14.5U	13.4U	15.4U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-73

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-1-01 (0-2 ft. bgs) 04/05/2001	SW-N5-1-01 (0-1 ft. bgs) 04/25/2001	SW-N5-2-01 (0-14 ft. bgs) 04/24/2001	SW-N5-3-01 (0-2 ft. bgs) 04/25/2001	SW-N5-4-01 (0-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0-1 ft. bgs) 04/25/2001
Total Metals								
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	6.8U	5.9U
ARSENIC	UG/L	0.017	3.7U	4.6U	10.3U	7.3U	3.7U	4.9U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	2.2U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	2.4B	5.2U	2.9U	4.8U	11U	6U
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U	**16.9B**	8.8U
MERCURY	UG/L	0.144	0.026U	0.026UN*	0.026UN*	0.026UN*	**0.16BN***	0.026UN*
NICKEL	UG/L	516	1.6U	1.6UN*	1.6UN*	1.9BN*	3.6BN*	2.3BN*
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	21.2B	33.2	41	35.3	419	40.5

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-74

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0-0.5 ft. bgs) 04/19/2001	SW-K5-2-01 (0-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0-3 ft. bgs) 04/09/2001	SW-L5-3-01 (0-3 ft. bgs) 04/09/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.4U	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4UJ	4U	4U	4U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-74

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-L6-1-01 (0-4 ft. bgs) 04/05/2001	SW-M5-1-01 (0-2 ft. bgs) 04/24/2001	SW-M5-2-01 (0-4 ft. bgs) 04/19/2001	SW-M5-3-01 (0-2 ft. bgs) 04/19/2001	SW-M6-1-01 (0-6 ft. bgs) 04/19/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.4U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.4U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500UJ	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	8U	4U	4U	4U
TETRYL	UG/L	NS	0.2U	0.4U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-74

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M6-2-01 (0-4 ft. bgs) 04/19/2001	SW-M6-3-01 (0-4 ft. bgs) 04/19/2001	SW-M7-1-01 (0-2 ft. bgs) 04/05/2001	SW-N5-1-01 (0-1 ft. bgs) 04/25/2001	SW-N5-2-01 (0-14 ft. bgs) 04/24/2001
Energetic and Explosive Compounds							
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	0.4U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	1U	0.4U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.4U
NITROCELLULOSE	UG/L	NS	500U	500U	500UJ	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	1U	0.4U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	4U	8U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.4U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-74

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N5-3-01 (0-2 ft. bgs) 04/25/2001	SW-N5-4-01 (0-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0-1 ft. bgs) 04/25/2001
Energetic and Explosive Compounds					
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.9U	0.2U	0.7U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.9U	0.2U	0.7U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-75

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-J5-2-01 (0-0.5 ft. bgs) 04/19/2001	SW-K5-2-01 (0-1 ft. bgs) 04/26/2001	SW-L5-1-01 (0-1 ft. bgs) 04/20/2001	SW-L5-2-01 (0-3 ft. bgs) 04/09/2001	SW-L5-3-01 (0-3 ft. bgs) 04/09/2001	SW-L6-1-01 (0-4 ft. bgs) 04/05/2001	SW-M5-1-01 (0-2 ft. bgs) 04/24/2001
General Chemistry									
DISSOLVED OXYGEN	MG/L	NS	11.62	10.35	11.74	14.15	13.25	7.75	9.31
pH	PH	NS	7.17	6.9	7.42	6.32	6.49	7.16	5.34

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-75

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M5-2-01 (0-4 ft. bgs) 04/19/2001	SW-M5-3-01 (0-2 ft. bgs) 04/19/2001	SW-M6-1-01 (0-6 ft. bgs) 04/19/2001	SW-M6-2-01 (0-4 ft. bgs) 04/19/2001	SW-M6-3-01 (0-4 ft. bgs) 04/19/2001	SW-M7-1-01 (0-2 ft. bgs) 04/05/2001	SW-N5-1-01 (0-1 ft. bgs) 04/25/2001
General Chemistry									
DISSOLVED OXYGEN	MG/L	NS	11.29	9.03	9.56	9.87	10.19	6.2	8.58
pH	PH	NS	7.71	7.53	7.33	7.38	7.17	7.11	5.28

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-75

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N5-2-01 (0-14 ft. bgs) 04/24/2001	SW-N5-3-01 (0-2 ft. bgs) 04/25/2001	SW-N5-4-01 (0-1 ft. bgs) 04/25/2001	SW-N5-5-01 (0-1 ft. bgs) 04/25/2001
General Chemistry						
DISSOLVED OXYGEN	MG/L	NS	9.16	8.88	9.99	9.42
pH	PH	NS	5.61	5.19	4.47	5.13

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

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* = Value obtained from a 1:5 dilution

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NS = No Standard

ft. bgs = Feet below ground surface

Table 5-76

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-J5-2-01 (0-0.5 ft. bgs) 04/19/01	SW-K5-2-01 (0-1 ft. bgs) 04/26/01	SW-L5-1-01 (0-1 ft. bgs) 04/20/01	SW-L5-2-01 (0-3 ft. bgs) 04/09/01	SW-L5-3-01 (0-3 ft. bgs) 04/09/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.5	1.7	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	210.2	100.2	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	13.2	10.4	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	623.8	97.2	1.6U	1.6U	1.8B	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	17.1U
ZINC	UG/L	74.2	73.4	10.5B	18.9B	6.3B	21.5B	22B
Semi-Volatile Organic Constituents								
PENTACHLOROPHENOL	UG/L	4.97	3.13	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-76

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-L6-1-01 (0-4 ft. bgs) 04/05/01	SW-M5-1-01 (0-2 ft. bgs) 04/24/01	SW-M5-2-01 (0-4 ft. bgs) 04/19/01	SW-M5-3-01 (0-2 ft. bgs) 04/19/01	SW-M6-1-01 (0-6 ft. bgs) 04/19/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.5	1.7	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	210.2	100.2	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	13.2	10.4	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	623.8	97.2	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	74.2	73.4	16.3B	33.4	12.5B	14.6B	18.4B
Semi-Volatile Organic Constituents								
PENTACHLOROPHENOL	UG/L	4.97	3.13	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-76

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-M6-2-01 (0-4 ft. bgs) 04/19/01	SW-M6-3-01 (0-4 ft. bgs) 04/19/01	SW-M7-1-01 (0-2 ft. bgs) 04/05/01	SW-N5-1-01 (0-1 ft. bgs) 04/25/01	SW-N5-2-01 (0-14 ft. bgs) 04/24/01
Dissolved Metals								
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.8B	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.5	1.7	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	210.2	100.2	1.7U	1.7U	4.2U	1.7U	1.7U
COPPER	UG/L	13.2	10.4	2.4U	2.4U	2.9B	2.4U	2.4U
LEAD	UG/L	38	5.4	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	623.8	97.2	1.6U	1.6U	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	9.7B	8.8U	8.8U
ZINC	UG/L	74.2	73.4	12.7B	12.7U	20.8B	32.7	43.6
Semi-Volatile Organic Constituents								
PENTACHLOROPHENOL	UG/L	4.97	3.13	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-76

Surface Water Analytical Results - Duck Pond and Tributaries Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-N5-3-01 (0-2 ft. bgs) 04/25/01	SW-N5-4-01 (0-1 ft. bgs) 04/25/01	SW-N5-5-01 (0-1 ft. bgs) 04/25/01
Dissolved Metals						
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U
CADMIUM	UG/L	1.5	1.7	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	210.2	100.2	1.7U	1.7U	1.7U
COPPER	UG/L	13.2	10.4	2.4U	2.9B	2.4U
LEAD	UG/L	38	5.4	8.8U	**9.2B**	8.8U
NICKEL	UG/L	623.8	97.2	1.6U	1.6U	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U
SILVER	UG/L	0.02	NS	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U
ZINC	UG/L	74.2	73.4	32	38.6	33.9
Semi-Volatile Organic Constituents						
PENTACHLOROPHENOL	UG/L	4.97	3.13	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-77

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-K5-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-L5-1-01 (0.5-1 ft. bgs) 04/20/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	360U	850UJ	270U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	360U	850UJ	270U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	360U	850UJ	270U
1,1-DICHLOROETHANE	UG/KG	NS	NS	360U	850UJ	270U
1,1-DICHLOROETHENE	UG/KG	NS	NS	360U	850UJ	270U
1,2-DICHLOROETHANE	UG/KG	NS	NS	360U	850UJ	270U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	360U	850UJ	270U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	720U	1700UJ	540U
ACROLEIN	UG/KG	NS	NS	7200U	17000R	5400U
ACRYLONITRILE	UG/KG	NS	NS	1400U	3400UJ	1100U
AMYL ALCOHOL	UG/KG	NS	NS	28000U	70000U	21000U
BENZENE	UG/KG	340	NS	360U	850UJ	270U
BROMODICHLOROMETHANE	UG/KG	NS	NS	360U	850UJ	270U
BROMOFORM	UG/KG	NS	NS	360U	850UJ	270U
BROMOMETHANE	UG/KG	NS	NS	720U	1700UJ	540U
CARBON TETRACHLORIDE	UG/KG	NS	NS	360U	850UJ	270U
CHLOROBENZENE	UG/KG	NS	NS	360U	850UJ	270U
CHLOROETHANE	UG/KG	NS	NS	720U	1700UJ	540U
CHLOROFORM	UG/KG	NS	NS	360U	850UJ	270U
CHLOROMETHANE	UG/KG	NS	NS	720U	1700UJ	540U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	360U	850UJ	270U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	360U	850UJ	270U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	28000U	70000U	21000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	360U	850UJ	270U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	28000U	70000U	21000U
ETHANOL	UG/KG	NS	NS	28000U	70000U	21000U
ETHYLBENZENE	UG/KG	1400	NS	360U	850UJ	270U

Table 5-77

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-K5-2-01 (0.5-1 ft. bgs) 04/26/2001	SD-L5-1-01 (0.5-1 ft. bgs) 04/20/2001
METHANOL	UG/KG	NS	NS	28000U	70000U	21000U
METHYLENE CHLORIDE	UG/KG	NS	NS	720U	1700UJ	540U
n-BUTYL ETHER	UG/KG	NS	NS	28000U	70000U	21000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	360U	850UJ	270U
TOLUENE	UG/KG	2500	NS	360U	850UJ	270U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	360U	850UJ	270U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	360U	850UJ	270U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	360U	850UJ	270U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	720U	1700UJ	540U
VINYL CHLORIDE	UG/KG	NS	NS	360U	850UJ	270U
XYLENES, TOTAL	UG/KG	120	NS	360U	850UJ	270U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-78

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0-2 ft. bgs) 04/19/2001	SD-K5-2-01 (0-2 ft. bgs) 04/26/2001	SD-L5-1-01 (0-2 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	93U	230U	69U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	93U	230U	69U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	93U	230U	69U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	93U	230U	69U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	93U	230U	69U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	190U	470U	140U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	190U	470U	140U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	190U	470U	140U
2,4-DINITROPHENOL	UG/KG	NS	NS	1900UJ	4700U	1400UJ
2,4-DINITROTOLUENE	UG/KG	NS	NS	190U	470U	410J
2,6-DINITROTOLUENE	UG/KG	NS	NS	93U	230U	180J
2-CHLORONAPHTHALENE	UG/KG	NS	NS	93U	230U	69U
2-CHLOROPHENOL	UG/KG	NS	NS	93U	230U	69U
2-NITROPHENOL	UG/KG	NS	NS	190U	470U	140U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	190U	470U	140U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	480U	1200U	350U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	190U	470U	140U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	190U	470U	140U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	93U	230U	69U
4-NITROPHENOL	UG/KG	NS	NS	480U	1200U	350U
ACENAPHTHENE	UG/KG	16	9	93U	230U	69U
ACENAPHTHYLENE	UG/KG	44	11	93U	230U	69U
ANTHRACENE	UG/KG	220	6593	93U	230U	69U
BENZIDINE	UG/KG	NS	NS	1900U	4700U	1400U

Table 5-78

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0-2 ft. bgs) 04/19/2001	SD-K5-2-01 (0-2 ft. bgs) 04/26/2001	SD-L5-1-01 (0-2 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents						
BENZO(a)ANTHRACENE	UG/KG	320	26371	93U	230U	69U
BENZO(a)PYRENE	UG/KG	370	25658	93U	230U	69U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	93U	230U	69U
BENZO(g,h,i)PERYLENE	UG/KG	170	5702	93U	230U	69U
BENZO(k)FLUORANTHENE	UG/KG	240	23876	93U	230U	69U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	190U	470U	140U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	190U	470U	140U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	93U	230U	69U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	93U	230U	69U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	560J	470U	140U
CHRYSENE	UG/KG	340	8196	93U	230U	69U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	190U	470U	440J
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	190U	470U	140U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	2316	93U	230U	69U
DIETHYL PHTHALATE	UG/KG	NS	NS	190U	470U	370J
DIMETHYL PHTHALATE	UG/KG	NS	NS	190U	470U	140U
FLUORANTHENE	UG/KG	750	18174	99J	230U	91J
FLUORENE	UG/KG	190	2851	93U	230U	69U
HEXACHLOROBENZENE	UG/KG	20	24000	93U	230U	69U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	190U	470U	140U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	480U	1200U	350U
HEXACHLOROETHANE	UG/KG	NS	NS	93U	230U	69U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	93U	230U	69U
ISOPHORONE	UG/KG	NS	NS	93U	230U	69U

Table 5-78

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0-2 ft. bgs) 04/19/2001	SD-K5-2-01 (0-2 ft. bgs) 04/26/2001	SD-L5-1-01 (0-2 ft. bgs) 04/20/2001
Semi-Volatile Organic Constituents						
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	93U	230U	69U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	190U	470U	140U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	93U	230U	94J
NAPHTHALENE	UG/KG	160	37	93U	230U	69U
NITROBENZENE	UG/KG	NS	NS	93U	230U	69U
PENTACHLOROPHENOL	UG/KG	NS	NS	480U	1200U	350U
PHENANTHRENE	UG/KG	560	16927	93U	230U	69U
PHENOL	UG/KG	NS	NS	190U	470U	140U
PYRENE	UG/KG	490	15145	100J	230U	92J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-79

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0-2 ft. bgs) 04/19/2001	SD-K5-2-01 (0-2 ft. bgs) 04/26/2001	SD-L5-1-01 (0-2 ft. bgs) 04/20/2001
Total Metals						
ANTIMONY	MG/KG	NS	NS	0.64UJ	4.5J	0.65UJ
ARSENIC	MG/KG	6	33	2.8	**13.6**	3.3
BERYLLIUM	MG/KG	NS	NS	0.24B	1.1B	0.25B
CADMIUM	MG/KG	0.6	10	0.054U	**1.5B**	0.15B
CHROMIUM, TOTAL	MG/KG	26	110	4.5	20.1B	6.6
COPPER	MG/KG	16	110	14N*	**58.2**	**131N***
LEAD	MG/KG	31	250	**39.9***	**181**	**232***
MERCURY	MG/KG	0.2	2	**0.33**	**1.3**	**0.33**
NICKEL	MG/KG	16	75	2.5B	13.6B	3.8B
SELENIUM	MG/KG	NS	NS	0.63B	4.8B	1.2
SILVER	MG/KG	1	4	0.14U	0.98U	0.14U
THALLIUM	MG/KG	NS	NS	0.84U	5.9U	0.85U
ZINC	MG/KG	120	820	80.9*	**372J**	118*

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-80

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0-2 ft. bgs) 04/19/2001	SD-K5-2-01 (0-2 ft. bgs) 04/26/2001	SD-L5-1-01 (0-2 ft. bgs) 04/20/2001
Energetic and Explosives Compounds						
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	280U	700U	210U
1,3-DINITROBENZENE	UG/KG	NS	NS	280U	700U	210U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
2,4-DINITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
2,6-DINITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
2-NITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
3-NITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
4-NITROTOLUENE	UG/KG	NS	NS	280U	700U	210U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	280U	700U	210U
NITROBENZENE	UG/KG	NS	NS	280U	700U	210U
NITROCELLULOSE	MG/KG	NS	NS	170U	420U	130U
NITROGLYCERIN	UG/KG	NS	NS	5600U	14000U	4200U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	280U	700U	210U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	5600U	14000U	4200U
TETRYL	UG/KG	NS	NS	280U	700U	210U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated b

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NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-81

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Streams - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-2-01 (0-2 ft. bgs) 04/19/2001	SD-K5-2-01 (0-2 ft. bgs) 04/26/2001	SD-L5-1-01 (0-2 ft. bgs) 04/20/2001
General Chemistry						
MOISTURE, PERCENT	%W/W	NS	NS	64.6	85.7	52
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	4.8	2.5	1.9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	97.1	87.4	95.8
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	99.7	99.8
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	12.2	6.1	6.3
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	65.6	34.9	55.4
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	44.7	20.5	31.1
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	25.9	11.8	15
TOTAL ORGANIC CARBON	MG/KG	NS	NS	79000	122000	102000

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-82

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0.5-1 ft. bgs) 04/09/2001	SD-L5-3-01 (0.5-1 ft. bgs) 04/09/2001	SD-L6-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-M5-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-M5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-M5-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-1-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
1,1-DICHLOROETHANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
1,1-DICHLOROETHENE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
1,2-DICHLOROETHANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	940UJ	900UJ	580U	280U	690UJ	560U	3000U
ACROLEIN	UG/KG	NS	NS	9400UJ	9000UJ	5800U	2800U	6900UJ	5500U	30000U
ACRYLONITRILE	UG/KG	NS	NS	1900UJ	1800UJ	1200U	560U	1400UJ	1100U	6000U
AMYL ALCOHOL	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U
BENZENE	UG/KG	340	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
BROMODICHLOROMETHANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
BROMOFORM	UG/KG	NS	NS	470UJ	450UJ	290U	280U	340UJ	280U	1500U
BROMOMETHANE	UG/KG	NS	NS	940UJ	900UJ	580U	280U	690UJ	560U	3000U
CARBON TETRACHLORIDE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
CHLOROBENZENE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
CHLOROETHANE	UG/KG	NS	NS	940UJ	900UJ	580U	280U	690UJ	560U	3000U
CHLOROFORM	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
CHLOROMETHANE	UG/KG	NS	NS	940UJ	900UJ	580U	280U	690UJ	560U	3000U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	42000U	40000UJ	23000UJ	9900U	32000U	20000U	120000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U

Table 5-82

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0.5-1 ft. bgs) 04/09/2001	SD-L5-3-01 (0.5-1 ft. bgs) 04/09/2001	SD-L6-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-M5-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-M5-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-M5-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-1-01 (0.5-1 ft. bgs) 04/19/2001
Volatile Organic Constituents										
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	42000U	40000U	23000UJ	9900U	32000U	20000U	120000U
ETHANOL	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U
ETHYLBENZENE	UG/KG	1400	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
METHANOL	UG/KG	NS	NS	42000U	40000U	23000U	9900U	32000U	20000U	120000U
METHYLENE CHLORIDE	UG/KG	NS	NS	940UJ	900UJ	580U	280U	690UJ	560U	3000U
n-BUTYL ETHER	UG/KG	NS	NS	42000U	40000UJ	23000UJ	9900U	32000U	20000U	120000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
TOLUENE	UG/KG	2500	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	940UJ	900UJ	580U	280U	690UJ	560U	3000U
VINYL CHLORIDE	UG/KG	NS	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U
XYLENES, TOTAL	UG/KG	120	NS	470UJ	450UJ	290U	140U	340UJ	280U	1500U

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SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

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R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-82

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M7-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-N5-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N5-3-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-5-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
1,1-DICHLOROETHANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
1,1-DICHLOROETHENE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
1,2-DICHLOROETHANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	270U	340U	1100U	320U	240UJ	310U	290U
ACROLEIN	UG/KG	NS	NS	2700U	3400U	11000U	3200R	2300UJ	3100R	2900R
ACRYLONITRILE	UG/KG	NS	NS	550U	670U	2200U	630U	470UJ	620U	580U
AMYL ALCOHOL	UG/KG	NS	NS	13000U	15000U	45000U	13000U	10000U	13000U	13000U
BENZENE	UG/KG	340	NS	140U	170U	560U	160U	120UJ	150U	140U
BROMODICHLOROMETHANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
BROMOFORM	UG/KG	NS	NS	140U	170U	560U	160U	230UJ	150U	140U
BROMOMETHANE	UG/KG	NS	NS	270U	340U	1100U	320U	240UJ	310U	290U
CARBON TETRACHLORIDE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
CHLOROBENZENE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
CHLOROETHANE	UG/KG	NS	NS	270U	340U	1100U	320U	240UJ	310U	290U
CHLOROFORM	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
CHLOROMETHANE	UG/KG	NS	NS	270U	340U	1100U	320U	240UJ	310U	290U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	15000U	45000U	13000U	10000U	13000U	13000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U

Table 5-82

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-2-01 (0.5-1 ft. bgs) 04/19/2001	SD-M6-3-01 (0.5-1 ft. bgs) 04/19/2001	SD-M7-1-01 (0.5-1 ft. bgs) 04/05/2001	SD-N5-1-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N5-3-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-5-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents										
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	15000U	45000U	13000U	10000U	13000U	13000U
ETHANOL	UG/KG	NS	NS	13000U	15000U	45000U	13000U	10000U	13000U	13000U
ETHYLBENZENE	UG/KG	1400	NS	140U	170U	560U	160U	120UJ	150U	140U
METHANOL	UG/KG	NS	NS	13000U	15000U	45000U	13000U	10000U	13000U	13000U
METHYLENE CHLORIDE	UG/KG	NS	NS	270U	340U	1100U	320U	240UJ	310U	290U
n-BUTYL ETHER	UG/KG	NS	NS	13000U	15000U	45000UJ	13000U	10000U	13000U	13000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	140U	170U	560U	160U	120UJ	150U	140U
TOLUENE	UG/KG	2500	NS	140U	170U	560U	160U	120UJ	150U	140U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	140U	170U	560U	160U	120UJ	150U	140U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	270U	340U	1100U	320U	240UJ	310U	290U
VINYL CHLORIDE	UG/KG	NS	NS	140U	170U	560U	160U	120UJ	150U	140U
XYLENES, TOTAL	UG/KG	120	NS	140U	170U	560U	160U	120UJ	150U	140U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0-2 ft. bgs) 04/09/2001	SD-L5-3-01 (0-2 ft. bgs) 04/09/2001	SD-L6-1-01 (0-2 ft. bgs) 04/05/2001	SD-M5-1-01 (0-1.5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	140U	130U	77U	33U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	140U	130U	77U	33U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	140U	130U	77U	33U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	140U	130U	77U	33U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	140U	130U	77U	33U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	280U	270U	160U	67U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	280U	270U	160U	67U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	280U	270U	160U	67U
2,4-DINITROPHENOL	UG/KG	NS	NS	2800U	2700U	1600U	670U
2,4-DINITROTOLUENE	UG/KG	NS	NS	280U	270U	160U	67U
2,6-DINITROTOLUENE	UG/KG	NS	NS	140U	130U	77U	33U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	140U	130U	77U	33U
2-CHLOROPHENOL	UG/KG	NS	NS	140U	130U	77U	33U
2-NITROPHENOL	UG/KG	NS	NS	280U	270U	160U	67U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	280U	270UJ	160U	67U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	710U	690U	400U	170U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	280U	270U	160U	67U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	280U	270U	160U	67U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	140U	130U	77U	33U
4-NITROPHENOL	UG/KG	NS	NS	710U	690U	400UJ	170U
ACENAPHTHENE	UG/KG	16	29	140U	130U	77U	33U
ACENAPHTHYLENE	UG/KG	44	38	140U	130U	77U	33U
ANTHRACENE	UG/KG	220	21809	140U	130U	77U	33U
BENZIDINE	UG/KG	NS	NS	2800U	2700UJ	1600U	670U
BENZO(a)ANTHRACENE	UG/KG	320	87234	180J	150J	77U	48J
BENZO(a)PYRENE	UG/KG	370	84876	180J	160J	77U	33U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	300J	300J	160J	48J

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0-2 ft. bgs) 04/09/2001	SD-L5-3-01 (0-2 ft. bgs) 04/09/2001	SD-L6-1-01 (0-2 ft. bgs) 04/05/2001	SD-M5-1-01 (0-1.5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents							
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	140U	**180J**	110J	33U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	140U	130U	77U	33U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	280U	270U	160U	67U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	280U	270U	160U	67U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	140U	130U	77U	33U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	140U	130U	77UJ	33U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	280U	270U	160U	230J
CHRYSENE	UG/KG	340	27113	260J	230J	140J	78J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	280U	300J	160U	67U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	280U	270U	160U	67U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	140U	130U	77U	33U
DIETHYL PHTHALATE	UG/KG	NS	NS	280U	270U	160U	67U
DIMETHYL PHTHALATE	UG/KG	NS	NS	280U	270U	160U	67U
FLUORANTHENE	UG/KG	750	60121	380J	400J	230J	60J
FLUORENE	UG/KG	190	9431	140U	130U	77U	33U
HEXACHLOROBENZENE	UG/KG	20	24000	140U	130U	77U	33U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	280U	270U	160U	67U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	710U	690UJ	400U	170U
HEXACHLOROETHANE	UG/KG	NS	NS	140U	130U	77U	33U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	140U	180J	100J	33U
ISOPHORONE	UG/KG	NS	NS	140U	130U	77U	33U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	140U	130U	77U	33U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	280U	270U	160U	67U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	770J	620J	77U	33U
NAPHTHALENE	UG/KG	160	124	140U	130U	77U	33U
NITROBENZENE	UG/KG	NS	NS	140U	130U	77U	33U
PENTACHLOROPHENOL	UG/KG	NS	NS	710U	690U	400U	170U

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0-2 ft. bgs) 04/09/2001	SD-L5-3-01 (0-2 ft. bgs) 04/09/2001	SD-L6-1-01 (0-2 ft. bgs) 04/05/2001	SD-M5-1-01 (0-1.5 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents							
PHENANTHRENE	UG/KG	560	55995	150J	160J	110J	33U
PHENOL	UG/KG	NS	NS	280U	270U	160U	67U
PYRENE	UG/KG	490	50101	370J	370J	180J	53J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

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* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M5-2-01 (0-2 ft. bgs) 04/19/2001	SD-M5-3-01 (0-2 ft. bgs) 04/19/2001	SD-M6-1-01 (0-2 ft. bgs) 04/19/2001	SD-M6-2-01 (0-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	100U	67U	390U	42U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	100U	67U	390U	42U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	100U	67U	390U	42U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	100U	67U	390U	42U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	100U	67U	390U	42U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	210U	140U	800U	86U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	210U	140U	800U	86U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	210U	140U	800U	86U
2,4-DINITROPHENOL	UG/KG	NS	NS	2100UJ	1400UJ	8000UJ	860UJ
2,4-DINITROTOLUENE	UG/KG	NS	NS	210U	140U	800U	86U
2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	67U	390U	42U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	100U	67U	390U	42U
2-CHLOROPHENOL	UG/KG	NS	NS	100U	67U	390U	42U
2-NITROPHENOL	UG/KG	NS	NS	210U	140U	800U	86U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	210U	140U	800U	86U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	530U	340U	2000U	220U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	210U	140U	800U	86U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	210U	140U	800U	86U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	100U	67U	390U	42U
4-NITROPHENOL	UG/KG	NS	NS	530U	340U	2000U	220U
ACENAPHTHENE	UG/KG	16	29	100U	67U	390U	42U
ACENAPHTHYLENE	UG/KG	44	38	**1000J**	**73J**	390U	42U
ANTHRACENE	UG/KG	220	21809	**830J**	67U	390U	42U
BENZIDINE	UG/KG	NS	NS	2100U	1400U	8000U	860U
BENZO(a)ANTHRACENE	UG/KG	320	87234	**4400**	82J	390U	42U
BENZO(a)PYRENE	UG/KG	370	84876	**5300**	76J	390U	46J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	6500	160J	390U	42U

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M5-2-01 (0-2 ft. bgs) 04/19/2001	SD-M5-3-01 (0-2 ft. bgs) 04/19/2001	SD-M6-1-01 (0-2 ft. bgs) 04/19/2001	SD-M6-2-01 (0-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	**1600**	67U	390U	42U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	**2500**	67U	390U	42U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	210U	140U	800U	86U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	210U	140U	800U	86U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	100U	67U	390U	42U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	100U	67U	390U	42U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	210U	140U	800U	86U
CHRYSENE	UG/KG	340	27113	**4200**	110J	390U	42U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	400J	140U	800U	86U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	210U	140U	800U	86U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	**510J**	67U	390U	42U
DIETHYL PHTHALATE	UG/KG	NS	NS	210U	140U	800U	86U
DIMETHYL PHTHALATE	UG/KG	NS	NS	210U	140U	800U	86U
FLUORANTHENE	UG/KG	750	60121	**4700**	130J	390U	42U
FLUORENE	UG/KG	190	9431	160J	67U	390U	42U
HEXACHLOROBENZENE	UG/KG	20	24000	100U	67U	390U	42U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	210U	140U	800U	86U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	530U	340U	2000U	220U
HEXACHLOROETHANE	UG/KG	NS	NS	100U	67U	390U	42U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	2100	67U	390U	42U
ISOPHORONE	UG/KG	NS	NS	100U	67U	390U	42U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	100U	67U	390U	42U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	210U	140U	800U	86U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	710J	67U	390U	42U
NAPHTHALENE	UG/KG	160	124	**260J**	67U	390U	42U
NITROBENZENE	UG/KG	NS	NS	100U	67U	390U	42U
PENTACHLOROPHENOL	UG/KG	NS	NS	530U	340U	2000U	220U

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M5-2-01 (0-2 ft. bgs) 04/19/2001	SD-M5-3-01 (0-2 ft. bgs) 04/19/2001	SD-M6-1-01 (0-2 ft. bgs) 04/19/2001	SD-M6-2-01 (0-2 ft. bgs) 04/19/2001
Semi-Volatile Organic Constituents							
PHENANTHRENE	UG/KG	560	55995	**580J**	67U	390U	42U
PHENOL	UG/KG	NS	NS	210U	140U	800U	86U
PYRENE	UG/KG	490	50101	**4600**	130J	390U	42U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-3-01 (0-2 ft. bgs) 04/19/2001	SD-M7-1-01 (0-2 ft. bgs) 04/05/2001	SD-N5-1-01 (0-3 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	51U	150U	41U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	51U	150U	41U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	51U	150U	41U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	51U	150U	41U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	51U	150U	41U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	100U	300U	84U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	100U	300U	84U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	100U	300U	84U
2,4-DINITROPHENOL	UG/KG	NS	NS	1000UJ	3000U	840U
2,4-DINITROTOLUENE	UG/KG	NS	NS	100U	300U	84U
2,6-DINITROTOLUENE	UG/KG	NS	NS	51U	150U	41U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	51U	150U	41U
2-CHLOROPHENOL	UG/KG	NS	NS	51U	150U	41U
2-NITROPHENOL	UG/KG	NS	NS	100U	300U	84U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	100U	300U	84U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	260U	770U	210U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	100U	300U	84U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	100U	300U	84U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	51U	150U	41U
4-NITROPHENOL	UG/KG	NS	NS	260U	770UJ	210U
ACENAPHTHENE	UG/KG	16	29	51U	150U	41U
ACENAPHTHYLENE	UG/KG	44	38	51U	150U	41U
ANTHRACENE	UG/KG	220	21809	51U	150U	41U
BENZIDINE	UG/KG	NS	NS	1000U	3000UJ	840U
BENZO(a)ANTHRACENE	UG/KG	320	87234	51U	270J	41U
BENZO(a)PYRENE	UG/KG	370	84876	51U	270J	41U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	51U	540J	41U

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-3-01 (0-2 ft. bgs) 04/19/2001	SD-M7-1-01 (0-2 ft. bgs) 04/05/2001	SD-N5-1-01 (0-3 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	51U	**250J**	41U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	51U	200J	41U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	100U	300U	84U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	100U	300U	84U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	51U	150U	41U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	51U	150UJ	41UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	120J	300U	84U
CHRYSENE	UG/KG	340	27113	51U	**510J**	41U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	100U	300U	84U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	100U	300U	84U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	51U	150U	41U
DIETHYL PHTHALATE	UG/KG	NS	NS	100U	300U	84U
DIMETHYL PHTHALATE	UG/KG	NS	NS	100U	300U	84U
FLUORANTHENE	UG/KG	750	60121	51U	700J	41U
FLUORENE	UG/KG	190	9431	51U	150U	41U
HEXACHLOROBENZENE	UG/KG	20	24000	51U	150U	41U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	100U	300U	84U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	260U	770U	210U
HEXACHLOROETHANE	UG/KG	NS	NS	51U	150U	41U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	51U	260J	41U
ISOPHORONE	UG/KG	NS	NS	51U	150U	41U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	51U	150U	41UJ
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	100U	300U	84U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	51U	150U	41U
NAPHTHALENE	UG/KG	160	124	51U	150U	41U
NITROBENZENE	UG/KG	NS	NS	51U	150U	41U
PENTACHLOROPHENOL	UG/KG	NS	NS	260U	770U	210U

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-3-01 (0-2 ft. bgs) 04/19/2001	SD-M7-1-01 (0-2 ft. bgs) 04/05/2001	SD-N5-1-01 (0-3 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
PHENANTHRENE	UG/KG	560	55995	51U	290J	41U
PHENOL	UG/KG	NS	NS	100U	300U	84U
PYRENE	UG/KG	490	50101	51U	**620J**	41U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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J = Value is less than the practical quantitation limit, but greater than zero

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ft. bgs = Feet below ground surface

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N5-2-01 (0-2 ft. bgs) 04/24/2001	SD-N5-3-01 (0-2 ft. bgs) 04/25/2001	SD-N5-5-01 (0-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	33U	42U	45U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	33U	42U	45U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	42U	45U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	33U	42U	45U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	33U	42U	45U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	67U	86U	91U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	67U	86U	91U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	67U	86U	91U
2,4-DINITROPHENOL	UG/KG	NS	NS	670U	860U	910U
2,4-DINITROTOLUENE	UG/KG	NS	NS	67U	470	91U
2,6-DINITROTOLUENE	UG/KG	NS	NS	33U	42U	45U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	33U	42U	45U
2-CHLOROPHENOL	UG/KG	NS	NS	33U	42U	45U
2-NITROPHENOL	UG/KG	NS	NS	67U	86U	91U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	67U	86U	91U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	220U	230U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	67U	86U	91U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	86U	91U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	33U	42U	45U
4-NITROPHENOL	UG/KG	NS	NS	170U	220U	230U
ACENAPHTHENE	UG/KG	16	29	33U	42U	45U
ACENAPHTHYLENE	UG/KG	44	38	33U	42U	45U
ANTHRACENE	UG/KG	220	21809	33U	42U	45U
BENZIDINE	UG/KG	NS	NS	670U	860U	910U
BENZO(a)ANTHRACENE	UG/KG	320	87234	33U	42U	45U
BENZO(a)PYRENE	UG/KG	370	84876	33U	42U	45U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	33U	42U	45U

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N5-2-01 (0-2 ft. bgs) 04/24/2001	SD-N5-3-01 (0-2 ft. bgs) 04/25/2001	SD-N5-5-01 (0-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	33U	42U	45U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	33U	42U	45U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	67U	86U	91U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	67U	86U	91U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	33U	42U	45U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	33U	42UJ	45UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	810	86U	91U
CHRYSENE	UG/KG	340	27113	33U	42U	45U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	67U	1500	91U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	67U	86U	91U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	33U	42U	45U
DIETHYL PHTHALATE	UG/KG	NS	NS	67U	86U	91U
DIMETHYL PHTHALATE	UG/KG	NS	NS	67U	86U	91U
FLUORANTHENE	UG/KG	750	60121	41J	42U	45U
FLUORENE	UG/KG	190	9431	33U	42U	45U
HEXACHLOROBENZENE	UG/KG	20	24000	33U	42U	45U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	67U	86U	91U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	170U	220U	230U
HEXACHLOROETHANE	UG/KG	NS	NS	33U	42U	45U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	33U	42U	45U
ISOPHORONE	UG/KG	NS	NS	33U	42U	45U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	42UJ	45UJ
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	86U	91U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	35J	140J	45U
NAPHTHALENE	UG/KG	160	124	33U	42U	45U
NITROBENZENE	UG/KG	NS	NS	33U	42U	45U
PENTACHLOROPHENOL	UG/KG	NS	NS	170U	220U	230U

Table 5-83

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N5-2-01 (0-2 ft. bgs) 04/24/2001	SD-N5-3-01 (0-2 ft. bgs) 04/25/2001	SD-N5-5-01 (0-2 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
PHENANTHRENE	UG/KG	560	55995	33U	42U	45U
PHENOL	UG/KG	NS	NS	67U	86U	91U
PYRENE	UG/KG	490	50101	34J	42U	45U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-84

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds- Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0-2 ft. bgs) 04/09/2001	SD-L5-3-01 (0-2 ft. bgs) 04/09/2001	SD-L6-1-01 (0-2 ft. bgs) 04/05/2001	SD-M5-1-01 (0-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (0-2 ft. bgs) 04/19/2001	SD-M5-3-01 (0-2 ft. bgs) 04/19/2001	SD-M6-1-01 (0-2 ft. bgs) 04/19/2001
Total Metals										
ANTIMONY	MG/KG	NS	NS	2.7UJ	3.5BJ	1.5U	1.2BN	0.65UJ	0.64UJ	0.64UJ
ARSENIC	MG/KG	6	33	**14**	**17.6**	5.5	2.7	3.1	1.7	0.41B
BERYLLIUM	MG/KG	NS	NS	0.81B	0.74B	0.57B	0.73	0.16B	0.12B	0.049B
CADMIUM	MG/KG	0.6	10	**1.5B**	**2.8B**	0.36B	0.079U	0.25B	0.087B	0.054U
CHROMIUM, TOTAL	MG/KG	26	110	19	24.6	14.3	18.6	4.7	3.9B	1.1B
COPPER	MG/KG	16	110	**123**	**171**	**19.2**	**20.4J**	**18.1N***	6.3N*	1.8BN*
LEAD	MG/KG	31	250	**329N**	**498N**	**63.6***	12.6B	**52.6***	26*	3.9B*
MERCURY	MG/KG	0.2	2	**1.4***	**2.9***	0.16BN	0.02B	0.16	0.065B	0.012B
NICKEL	MG/KG	16	75	14.6B	**18.4B**	11.4B	**25.3J**	3.7B	2B	0.84B
SELENIUM	MG/KG	NS	NS	2U	2.1B	1.1U	0.69U	0.65B	0.48U	0.48U
SILVER	MG/KG	1	4	0.63B	**1.1B**	0.33U	0.25B	0.22B	0.14U	0.14U
THALLIUM	MG/KG	NS	NS	3.6B	3.4U	2U	2B	0.85U	0.84U	0.84U
ZINC	MG/KG	120	820	**497**	**531**	**129N**	106J	**134***	31.2*	18.6*

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SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-84

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds- Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-2-01 (0-2 ft. bgs) 04/19/2001	SD-M6-3-01 (0-2 ft. bgs) 04/19/2001	SD-M7-1-01 (0-2 ft. bgs) 04/05/2001	SD-N5-1-01 (0-3 ft. bgs) 04/25/2001	SD-N5-2-01 (0-2 ft. bgs) 04/24/2001	SD-N5-3-01 (0-2 ft. bgs) 04/25/2001	SD-N5-5-01 (0-2 ft. bgs) 04/25/2001
Total Metals										
ANTIMONY	MG/KG	NS	NS	0.65UJ	0.64UJ	3.1B	0.79J	0.92BJ	0.88J	0.85J
ARSENIC	MG/KG	6	33	2.9	1.4	**9.8**	3.1	5.1	3.9	2.6
BERYLLIUM	MG/KG	NS	NS	0.52	0.27B	1B	0.61B	0.77	0.51B	0.67
CADMIUM	MG/KG	0.6	10	0.055U	0.054U	**1.4B**	0.16B	0.078U	0.15B	0.16B
CHROMIUM, TOTAL	MG/KG	26	110	12.8	8.2	24.3	16.6	19.9	12.1	15
COPPER	MG/KG	16	110	7.3N*	2.8BN*	**55.8**	**18.4**	**26.9**	**18.6**	**16.4**
LEAD	MG/KG	31	250	5.2B*	5.8B*	**288***	5.9B	11.7J	9.9B	7.1B
MERCURY	MG/KG	0.2	2	0.011B	0.012B	**0.41BN**	0.014B	0.0093B	0.016B	0.0094B
NICKEL	MG/KG	16	75	7.8	6.1	**18.7B**	10.3	**20.7**	7.4	11.4
SELENIUM	MG/KG	NS	NS	0.48U	0.48U	2.4B	0.59U	0.68U	0.61U	0.63U
SILVER	MG/KG	1	4	0.14U	0.14U	0.63U	0.2B	0.2U	0.18U	0.18U
THALLIUM	MG/KG	NS	NS	0.85U	0.84U	3.8U	1U	1.2U	1.1U	1.1U
ZINC	MG/KG	120	820	50.1*	64.4*	**390N**	73.3J	80.1J	95.6J	84.4J

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J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-85

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0-2 ft. bgs) 04/09/2001	SD-L5-3-01 (0-2 ft. bgs) 04/09/2001	SD-L6-1-01 (0-2 ft. bgs) 04/05/2001	SD-M5-1-01 (0-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (0-2 ft. bgs) 04/19/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	420U	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
1,3-DINITROBENZENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
1,4-DINITROBENZENE	UG/KG	NS	NS	420U	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
2,4-DINITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
2,6-DINITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
2-NITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
3-NITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
4-NITROTOLUENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	420U	400U	230U	100U	310U
NITROBENZENE	UG/KG	NS	NS	420U	400U	230U	100U	310U
NITROCELLULOSE	MG/KG	NS	NS	250U	380J	140U	60U	210J
NITROGLYCERIN	UG/KG	NS	NS	8300U	8100U	4700U	2000U	8800J
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	420U	400U	230U	100U	310U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	8300U	8100U	4700U	2000U	6300U
TETRYL	UG/KG	NS	NS	420U	400U	230U	100U	310U

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Table 5-85

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M5-3-01 (0-2 ft. bgs) 04/19/2001	SD-M6-1-01 (0-2 ft. bgs) 04/19/2001	SD-M6-2-01 (0-2 ft. bgs) 04/19/2001	SD-M6-3-01 (0-2 ft. bgs) 04/19/2001	SD-M7-1-01 (0-2 ft. bgs) 04/05/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
1,3-DINITROBENZENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
2,4-DINITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
2,6-DINITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
2-NITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
3-NITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
4-NITROTOLUENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
NITROBENZENE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
NITROCELLULOSE	MG/KG	NS	NS	120U	710U	77U	92U	270U
NITROGLYCERIN	UG/KG	NS	NS	4000U	24000U	2600U	3100U	9000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	200U	1200U	130U	150U	450U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	4000U	24000U	2600U	3100U	9000U
TETRYL	UG/KG	NS	NS	200U	1200U	130U	150U	450U

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ft. bgs = Feet below ground surface

Table 5-85

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N5-1-01 (0-3 ft. bgs) 04/25/2001	SD-N5-2-01 (0-2 ft. bgs) 04/24/2001	SD-N5-3-01 (0-2 ft. bgs) 04/25/2001	SD-N5-5-01 (0-2 ft. bgs) 04/25/2001
Energetic and Explosive Compounds							
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	130U	99U	130U	130U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	99U	130U	130U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
2,4-DINITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
2-NITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
3-NITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
4-NITROTOLUENE	UG/KG	NS	NS	130U	99U	130U	130U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	130U	99U	130U	130U
NITROBENZENE	UG/KG	NS	NS	130U	99U	130U	130U
NITROCELLULOSE	MG/KG	NS	NS	75U	60U	77U	81U
NITROGLYCERIN	UG/KG	NS	NS	2500U	2000U	2500U	NR
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	130U	99U	130U	130U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2500U	2000U	2500U	2700U
TETRYL	UG/KG	NS	NS	130U	99U	130U	130U

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ft. bgs = Feet below ground surface

Table 5-86

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-L5-2-01 (0-2 ft. bgs) 04/09/2001	SD-L5-3-01 (0-2 ft. bgs) 04/09/2001	SD-L6-1-01 (0-2 ft. bgs) 04/05/2001	SD-M5-1-01 (0-1.5 ft. bgs) 04/24/2001	SD-M5-2-01 (0-2 ft. bgs) 04/19/2001	SD-M5-3-01 (0-2 ft. bgs) 04/19/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	76	75.2	57.4	30.8	68.2	50.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.5	14.1	4.9	3.9	5.5	4.3
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	98.3	96.2	90.4	86	99.3	99.1
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	NR	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	100	NR	100	100	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	10.6	29.7	14.3	9.9	16.3	14.2
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	63.5	78	69	62.8	87.1	85
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	41.1	58.4	50.6	42.6	60.3	65.3
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	22.5	44.3	28.4	21.3	35.5	41.2
TOTAL ORGANIC CARBON	MG/KG	NS	NS	314000	134000J	49000	9900	122000	162000

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less than

N = Flashpoint not o

B = Indicates that the

* = Value obtained fi

R = Rejected based o

NR = Not Reported

NS = No Standard

ft. bgs = Feet below

Table 5-86

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-M6-1-01 (0-2 ft. bgs) 04/19/2001	SD-M6-2-01 (0-2 ft. bgs) 04/19/2001	SD-M6-3-01 (0-2 ft. bgs) 04/19/2001	SD-M7-1-01 (0-2 ft. bgs) 04/05/2001	SD-N5-1-01 (0-3 ft. bgs) 04/25/2001	SD-N5-2-01 (0-2 ft. bgs) 04/24/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	91.6	22.2	34.7	77.9	20.4	30.2
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.5	0.9J	2.8	5.3	3.9	3.4
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	96	65.3	76.4	99.8	83	99.8
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	NR	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	92.4	95.9	NR	93.5	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	6.3	2.9	8	15.9	9.5	9.6
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	32.6	37.2	45.9	67.3	54.2	57.9
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	19.3	17.9	34.5	44.4	32.9	30.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	11.6	7.3	18.2	31	18.9	18.8
TOTAL ORGANIC CARBON	MG/KG	NS	NS	570000	6000	46800	167000	9200	13600J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

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J = Value is less than the practical quantit

N = Flashpoint not observed, heated to sp

B = Indicates that the compound was four

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-86

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N5-3-01 (0-2 ft. bgs) 04/25/2001	SD-N5-5-01 (0-2 ft. bgs) 04/25/2001
General Chemistry					
MOISTURE, PERCENT	%W/W	NS	NS	21.9	26
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.8	2
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	91	90.1
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	100	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	4.7	6.7
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	71.7	55.2
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	41.6	34.6
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	15.3	17.1
TOTAL ORGANIC CARBON	MG/KG	NS	NS	6300	10000

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

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nd in the associated blank.

Table 5-87

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-N5-4-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-6-01 (0.5-1 ft. bgs) 04/25/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	860U	160U	290U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	860U	160U	290U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	860U	160U	290U
1,1-DICHLOROETHANE	UG/KG	NS	NS	860U	160U	290U
1,1-DICHLOROETHENE	UG/KG	NS	NS	860U	160U	290U
1,2-DICHLOROETHANE	UG/KG	NS	NS	860U	160U	290U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	860U	160U	290U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	1700U	330U	570U
ACROLEIN	UG/KG	NS	NS	17000U	3300R	5700R
ACRYLONITRILE	UG/KG	NS	NS	3500U	660U	1100U
AMYL ALCOHOL	UG/KG	NS	NS	63000U	13000U	19000U
BENZENE	UG/KG	340	NS	860U	160U	290U
BROMODICHLOROMETHANE	UG/KG	NS	NS	860U	160U	290U
BROMOFORM	UG/KG	NS	NS	860U	160U	290U
BROMOMETHANE	UG/KG	NS	NS	1700U	330U	570U
CARBON TETRACHLORIDE	UG/KG	NS	NS	860U	160U	290U
CHLOROBENZENE	UG/KG	NS	NS	860U	160U	290U
CHLOROETHANE	UG/KG	NS	NS	1700U	330U	570U
CHLOROFORM	UG/KG	NS	NS	860U	160U	290U
CHLOROMETHANE	UG/KG	NS	NS	1700U	330U	570U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	860U	160U	290U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	860U	160U	290U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	63000U	13000U	19000U

Table 5-87

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-N5-4-01 (0.5-1 ft. bgs) 04/25/2001	SD-N5-6-01 (0.5-1 ft. bgs) 04/25/2001
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	860U	160U	290U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	63000U	13000U	19000U
ETHANOL	UG/KG	NS	NS	63000U	13000U	19000U
ETHYLBENZENE	UG/KG	1400	NS	860U	160U	290U
METHANOL	UG/KG	NS	NS	63000U	13000U	19000U
METHYLENE CHLORIDE	UG/KG	NS	NS	1700U	330U	570U
n-BUTYL ETHER	UG/KG	NS	NS	63000U	13000U	19000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	860U	160U	290U
TOLUENE	UG/KG	2500	NS	860U	160U	290U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	860U	160U	290U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	860U	160U	290U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	860U	160U	290U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	1700U	330U	570U
VINYL CHLORIDE	UG/KG	NS	NS	860U	160U	290U
XYLENES, TOTAL	UG/KG	120	NS	860U	160U	290U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-88

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0-2 ft. bgs) 04/19/2001	SD-N5-4-01 (0-2 ft. bgs) 04/25/2001	SD-N5-6-01 (0-1.5 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	210U	43U	64U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	210U	43U	64U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	210U	43U	64U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	210U	43U	64U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	210U	43U	64U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	420U	88U	130U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	420U	88U	130U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	420U	88U	130U
2,4-DINITROPHENOL	UG/KG	NS	NS	4200UJ	880U	1300U
2,4-DINITROTOLUENE	UG/KG	NS	NS	420U	88U	130U
2,6-DINITROTOLUENE	UG/KG	NS	NS	210U	43U	64U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	210U	43U	64U
2-CHLOROPHENOL	UG/KG	NS	NS	210U	43U	64U
2-NITROPHENOL	UG/KG	NS	NS	420U	88U	130U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	420U	88U	130U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	1100U	220U	330U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	420U	88U	130U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	420U	88U	130U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	210U	43U	64U
4-NITROPHENOL	UG/KG	NS	NS	1100U	220U	330U
ACENAPHTHENE	UG/KG	16	25	210U	43U	64U
ACENAPHTHYLENE	UG/KG	44	33	210U	43U	64U
ANTHRACENE	UG/KG	220	18827	210U	43U	64U
BENZIDINE	UG/KG	NS	NS	4200U	880U	1300U
BENZO(a)ANTHRACENE	UG/KG	320	75308	210U	43U	64U
BENZO(a)PYRENE	UG/KG	370	73273	210U	43U	64U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	210U	43U	64U
BENZO(g,h,i)PERYLENE	UG/KG	170	16283	210U	43U	64U
BENZO(k)FLUORANTHENE	UG/KG	240	68185	210U	43U	64U

Table 5-88

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0-2 ft. bgs) 04/19/2001	SD-N5-4-01 (0-2 ft. bgs) 04/25/2001	SD-N5-6-01 (0-1.5 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	420U	88U	130U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	420U	88U	130U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	210U	43U	64U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	210U	43U	64UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	420U	88U	150J
CHRYSENE	UG/KG	340	23407	210U	43U	64U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	420U	88U	130U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	420U	88U	130U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	6615	210U	43U	64U
DIETHYL PHTHALATE	UG/KG	NS	NS	420U	88U	130U
DIMETHYL PHTHALATE	UG/KG	NS	NS	420U	88U	130U
FLUORANTHENE	UG/KG	750	51902	230J	43U	64U
FLUORENE	UG/KG	190	8141	210U	43U	64U
HEXACHLOROBENZENE	UG/KG	20	24000	210U	43U	64U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	420U	88U	130U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	1100U	220U	330U
HEXACHLOROETHANE	UG/KG	NS	NS	210U	43U	64U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	210U	43U	64U
ISOPHORONE	UG/KG	NS	NS	210U	43U	64U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	210U	43U	64UJ
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	420U	88U	130U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	210U	43U	64U
NAPHTHALENE	UG/KG	160	107	210U	43U	64U
NITROBENZENE	UG/KG	NS	NS	210U	43U	64U
PENTACHLOROPHENOL	UG/KG	NS	NS	1100U	220U	330U
PHENANTHRENE	UG/KG	560	48340	210U	43U	64U
PHENOL	UG/KG	NS	NS	420U	88U	130U
PYRENE	UG/KG	490	43251	210U	43U	64U

Table 5-88

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0-2 ft. bgs) 04/19/2001	SD-N5-4-01 (0-2 ft. bgs) 04/25/2001	SD-N5-6-01 (0-1.5 ft. bgs) 04/25/2001
Semi-Volatile Organic Constituents						

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
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J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-89

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0-2 ft. bgs) 04/19/2001	SD-N5-4-01 (0-2 ft. bgs) 04/25/2001	SD-N5-6-01 (0-1.5 ft. bgs) 04/25/2001
Total Metals						
ANTIMONY	MG/KG	NS	NS	0.64UJ	0.85J	1.2J
ARSENIC	MG/KG	6	33	1.2	2.9	2.7
BERYLLIUM	MG/KG	NS	NS	0.14B	0.63B	0.29B
CADMIUM	MG/KG	0.6	10	0.091B	0.15B	0.22B
CHROMIUM, TOTAL	MG/KG	26	110	2.5B	14.2	12.3
COPPER	MG/KG	16	110	5.9N*	15.1	15.8
LEAD	MG/KG	31	250	16.5*	6B	26.4
MERCURY	MG/KG	0.2	2	0.12	0.0075B	0.082B
NICKEL	MG/KG	16	75	1.2B	11.3	6.3B
SELENIUM	MG/KG	NS	NS	0.47U	0.63U	1.3B
SILVER	MG/KG	1	4	0.14U	0.19B	0.27U
THALLIUM	MG/KG	NS	NS	0.83U	1.1U	1.6U
ZINC	MG/KG	120	820	23.3*	80.7J	32.8J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-90

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0-2 ft. bgs) 04/19/2001	SD-N5-4-01 (0-2 ft. bgs) 04/25/2001	SD-N5-6-01 (0-1.5 ft. bgs) 04/25/2001
Energetic and Explosive Constituents						
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	630U	130U	190U
1,3-DINITROBENZENE	UG/KG	NS	NS	630U	130U	190U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
2,4-DINITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
2,6-DINITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
2-NITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
3-NITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
4-NITROTOLUENE	UG/KG	NS	NS	630U	130U	190U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	630U	130U	190U
NITROBENZENE	UG/KG	NS	NS	630U	130U	190U
NITROCELLULOSE	MG/KG	NS	NS	380U	79U	120U
NITROGLYCERIN	UG/KG	NS	NS	13000U	2600U	3800U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	630U	130U	780U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	13000U	2600U	3800U
TETRYL	UG/KG	NS	NS	630U	130U	190U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-91

Sediment Analytical Results - Duck Pond and Tributaries Drainage System - Wet Areas - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-J5-1-01 (0-2 ft. bgs) 04/19/2001	SD-N5-4-01 (0-2 ft. bgs) 04/25/2001	SD-N5-6-01 (0-1.5 ft. bgs) 04/25/2001
General Chemistry						
MOISTURE, PERCENT	%W/W	NS	NS	84.1	23.6	48.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.6	3.4	7.5
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	89.6	89.1	87.5
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.3	97.7	99.9
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	5.8	10.8	15.7
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	29.2	55.7	63.3
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	17.6	39.3	45.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	10.7	20.6	28.4
TOTAL ORGANIC CARBON	MG/KG	NS	NS	344000	10800J	98200

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0.5-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0.5-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0.5-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0.5-1 ft. bgs) 04/26/2001	SW-K5-4-01 (0.5-1 ft. bgs) 04/26/2001	SW-M7-2-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-1-01 (0.5-1 ft. bgs) 04/24/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2UJ	2U	2U	2U	2U	2UJ
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0.5-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0.5-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0.5-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0.5-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0.5-1 ft. bgs) 04/26/2001	SW-K5-4-01 (0.5-1 ft. bgs) 04/26/2001	SW-M7-2-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-1-01 (0.5-1 ft. bgs) 04/24/2001
Volatile Organic Constituents										
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-2-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-6-01 (0.5-1 ft. bgs) 04/23/2001	SW-N7-7-01 (0.5-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-10-01 (0.5-1 ft. bgs) 04/06/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000UJ

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-2-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0.5-1 ft. bgs) 04/24/2001	SW-N7-6-01 (0.5-1 ft. bgs) 04/23/2001	SW-N7-7-01 (0.5-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-10-01 (0.5-1 ft. bgs) 04/06/2001
Volatile Organic Constituents										
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-2-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-4-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-5-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SW-O5-1-01 (0.5-1 ft. bgs) 04/06/2001	SW-O5-2-01 (0.5-1 ft. bgs) 04/09/2001
Volatile Organic Constituents										
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000U	1000U	1000U	1000U	1000U	1000UJ	1000U	1000U

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-2-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-4-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-5-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0.5-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SW-O5-1-01 (0.5-1 ft. bgs) 04/06/2001	SW-O5-2-01 (0.5-1 ft. bgs) 04/09/2001
Volatile Organic Constituents										
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0.5-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0.5-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
Volatile Organic Constituents						
1,1,1-TRICHLOROETHANE	UG/L	127	1U	1U	1U	1U
1,1,2,2-TETRACHLOROETHANE	UG/L	1.72	1U	1U	1U	1U
1,1,2-TRICHLOROETHANE	UG/L	13.5	1U	1U	1U	1U
1,1-DICHLOROETHANE	UG/L	NS	1U	1U	1U	1U
1,1-DICHLOROETHENE	UG/L	4.81	1U	1U	1U	1U
1,2-DICHLOROETHANE	UG/L	0.291	1U	1U	1U	1U
1,2-DICHLOROPROPANE	UG/L	NS	1U	1U	1U	1U
2-CHLOROETHYL VINYL ETHER	UG/L	NS	2U	2U	2U	2U
ACROLEIN	UG/L	320	40U	40U	40U	40U
ACRYLONITRILE	UG/L	0.0591	4U	4U	4U	4U
AMYL ALCOHOL	UG/L	NS	1000U	1000U	1000U	1000U
BENZENE	UG/L	0.15	1U	1U	1U	1U
BROMODICHLOROMETHANE	UG/L	0.266	1U	1U	1U	1U
BROMOFORM	UG/L	4.38	1U	1U	1U	1U
BROMOMETHANE	UG/L	48.4	2U	2U	2U	2U
CARBON TETRACHLORIDE	UG/L	0.363	1U	1U	1U	1U
CHLOROBENZENE	UG/L	22	1U	1U	1U	1U
CHLOROETHANE	UG/L	NS	2U	2U	2U	2U
CHLOROFORM	UG/L	5.67	1U	1U	1U	1U
CHLOROMETHANE	UG/L	NS	2U	2U	2U	2U
cis-1,2-DICHLOROETHYLENE	UG/L	NS	1U	1U	1U	1U
cis-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/L	NS	1000U	1000U	1000U	1000U
DIBROMOCHLOROMETHANE	UG/L	72.6	1U	1U	1U	1U
DIETHYL ETHER (ETHYL ETHER)	UG/L	NS	1000U	1000U	1000U	1000U
ETHANOL	UG/L	NS	1000U	1000U	1000U	1000U
ETHYLBENZENE	UG/L	3030	1U	1U	1U	1U
METHANOL	UG/L	NS	1000U	1000U	1000U	1000U
METHYLENE CHLORIDE	UG/L	2.49	2U	2U	2U	2U
n-BUTYL ETHER	UG/L	NS	1000UJ	1000UJ	1000UJ	1000UJ

Table 5-92

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0.5-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0.5-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
Volatile Organic Constituents						
TETRACHLOROETHYLENE(PCE)	UG/L	0.338	1U	1U	1U	1U
TOLUENE	UG/L	7440	1U	1U	1U	1U
trans-1,2-DICHLOROETHENE	UG/L	592	1U	1U	1U	1U
trans-1,3-DICHLOROPROPENE	UG/L	NS	1U	1U	1U	1U
TRICHLOROETHYLENE (TCE)	UG/L	1.09	1U	1U	1U	1U
TRICHLOROFLUOROMETHANE	UG/L	NS	2U	2U	2U	2U
VINYL CHLORIDE	UG/L	0.083	1U	1U	1U	1U
XYLENES, TOTAL	UG/L	NS	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

Bold = Indicates Concentration Exceeds SWQC

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0-2 ft. bgs) 04/26/2001	SW-K5-4-01 (0-1 ft. bgs) 04/26/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	0.9U	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	0.9U	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	0.9U	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	0.9U	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	0.9U	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	0.9U	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	0.9U	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	19U	20U	20U	20U	20U
2,4-DINITROTOLUENE	UG/L	0.11	1U	0.9U	1UJ	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	0.9U	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	0.9U	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	0.9U	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	0.9U	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	9U	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	0.9U	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	20U	19U	20U	20U	20U	20U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	0.9U	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	0.9U	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	0.9U	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	0.9U	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	0.9U	1U	1U	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U	2U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0-2 ft. bgs) 04/26/2001	SW-K5-4-01 (0-1 ft. bgs) 04/26/2001
Semi-Volatile Organic Constituents								
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	0.9U	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	0.9U	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	0.9U	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	0.9U	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	0.9U	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	0.9U	1U	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	0.9U	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	0.9U	1U	1U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	0.9U	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	0.9U	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U	3U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0-2 ft. bgs) 04/26/2001	SW-K5-4-01 (0-1 ft. bgs) 04/26/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/L	NS	1U	0.9U	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	0.9U	1U	1U	1U	1U
PYRENE	UG/L	797	1U	0.9U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-1-01 (0-1 ft. bgs) 04/24/2001	SW-N7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0-1 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	20U	19U	19U	20U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	10U	10U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	1U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	1U	1U	1U
BENZIDINE	UG/L	0.00012	20U	20U	19U	19U	20U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	1U	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U	2U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-1-01 (0-1 ft. bgs) 04/24/2001	SW-N7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0-1 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2UJ	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2UJ	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	1U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	1U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	1U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	1U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	1U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U	3U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-1-01 (0-1 ft. bgs) 04/24/2001	SW-N7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0-1 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/L	NS	1U	1U	1U	1U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	1U	1U	1U
PYRENE	UG/L	797	1U	1U	1U	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
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R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-6-01 (0-0.5 ft. bgs) 04/23/2001	SW-N7-7-01 (0-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0-1 ft. bgs) 04/04/2001	SW-O4-10-01 (0-0.75 ft. bgs) 04/06/2001	SW-O4-2-01 (0-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0-1 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	0.9U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	0.9U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	0.9U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	0.9U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	0.9U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	0.9U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	20U	20U	20U	19U	23U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	0.9U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	0.9U	1U	1U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	0.9U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	4U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	6U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	0.9U	1U	1U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	9U	12U	10U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
ANTHRACENE	UG/L	9570	1U	1U	1U	0.9U	1U	1U
BENZIDINE	UG/L	0.00012	20U	20U	20U	19U	23U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	0.9U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	0.9U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U	2U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-6-01 (0-0.5 ft. bgs) 04/23/2001	SW-N7-7-01 (0-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0-1 ft. bgs) 04/04/2001	SW-O4-10-01 (0-0.75 ft. bgs) 04/06/2001	SW-O4-2-01 (0-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0-1 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents								
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	0.9U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	0.9U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	0.9U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	0.9U	1U	1U
FLUORENE	UG/L	1340	1U	1U	1U	0.9U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	6U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	0.9U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
ISOPHORONE	UG/L	552	1U	1U	1U	0.9U	1U	6J
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	0.9U	1U	1U
NAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
NITROBENZENE	UG/L	16	1U	1U	1U	0.9U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	4U	3U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-6-01 (0-0.5 ft. bgs) 04/23/2001	SW-N7-7-01 (0-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0-1 ft. bgs) 04/04/2001	SW-O4-10-01 (0-0.75 ft. bgs) 04/06/2001	SW-O4-2-01 (0-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0-1 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/L	NS	1U	1U	1U	0.9U	1U	1U
PHENOL	UG/L	20900	1U	1U	1U	0.9U	1U	1U
PYRENE	UG/L	797	1U	1U	1U	0.9U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-4-01 (0-1.5 ft. bgs) 04/04/2001	SW-O4-5-01 (0-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0-0.75 ft. bgs) 04/06/2001	SW-O5-1-01 (0-1 ft. bgs) 04/06/2001	SW-O5-2-01 (0-1.5 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1U	1U	1U	0.9U	0.9U	0.9U
1,2-DICHLOROBENZENE	UG/L	2520	1U	1U	1U	0.9U	0.9U	0.9U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1U	1U	1U	0.9U	0.9U	0.9U
1,3-DICHLOROBENZENE	UG/L	2620	1U	1U	1U	0.9U	0.9U	0.9U
1,4-DICHLOROBENZENE	UG/L	343	1U	1U	1U	0.9U	0.9U	0.9U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2U	2U	2U	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1U	1U	1U	0.9U	0.9U	0.9U
2,4-DIMETHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
2,4-DINITROPHENOL	UG/L	69.7	20U	19U	19U	19U	19U	19U
2,4-DINITROTOLUENE	UG/L	0.11	1U	1U	1U	0.9U	0.9U	0.9U
2,6-DINITROTOLUENE	UG/L	NS	2U	2U	2U	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
2-CHLOROPHENOL	UG/L	122	1U	1U	1U	0.9U	0.9U	0.9U
2-NITROPHENOL	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3U	3U	3U	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5U	5U	5U	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2U	2U	2U	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
4-NITROPHENOL	UG/L	NS	10U	10U	10U	9U	9U	9U
ACENAPHTHENE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
ACENAPHTHYLENE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
ANTHRACENE	UG/L	9570	1U	1U	1U	0.9U	0.9U	0.9U
BENZIDINE	UG/L	0.00012	20U	19U	19U	19U	19U	19U
BENZO(a)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U	0.9U	0.9U
BENZO(a)PYRENE	UG/L	0.0028	1U	1U	1U	0.9U	0.9U	0.9U
BENZO(b)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U	0.9U	0.9U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1U	1U	1U	0.9U	0.9U	0.9U
BENZO(k)FLUORANTHENE	UG/L	0.031	1U	1U	1U	0.9U	0.9U	0.9U
BENZYL BUTYL PHTHALATE	UG/L	239	2U	2U	2U	2U	2U	2U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-4-01 (0-1.5 ft. bgs) 04/04/2001	SW-O4-5-01 (0-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0-0.75 ft. bgs) 04/06/2001	SW-O5-1-01 (0-1 ft. bgs) 04/06/2001	SW-O5-2-01 (0-1.5 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents								
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1U	1U	1U	0.9U	0.9U	0.9U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1U	1U	1U	0.9U	0.9U	0.9U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2U	2U	2U	2U	2U	2U
CHRYSENE	UG/L	0.0028	1U	1U	1U	0.9U	0.9U	0.9U
DI-n-BUTYL PHTHALATE	UG/L	3530	2U	2U	2U	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2U	2U	2U	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1U	1U	1U	0.9U	0.9U	0.9U
DIETHYL PHTHALATE	UG/L	21200	2U	2U	2U	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2U	2U	2U	2U	2U	2U
FLUORANTHENE	UG/L	310	1U	1U	1U	0.9U	0.9U	0.9U
FLUORENE	UG/L	1340	1U	1U	1U	0.9U	0.9U	NR
HEXACHLOROBENZENE	UG/L	0.00075	2U	2U	2U	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2U	2U	2U	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5U	5U	5U	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1U	1U	1U	0.9U	0.9U	0.9U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
ISOPHORONE	UG/L	552	1U	1U	1U	0.9U	0.9U	0.9U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2U	2U	2U	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1U	1U	1U	0.9U	0.9U	0.9U
NAPHTHALENE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
NITROBENZENE	UG/L	16	1U	1U	1U	0.9U	0.9U	0.9U
PENTACHLOROPHENOL	UG/L	0.282	3U	3U	3U	3U	3U	3U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-4-01 (0-1.5 ft. bgs) 04/04/2001	SW-O4-5-01 (0-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0-0.75 ft. bgs) 04/06/2001	SW-O5-1-01 (0-1 ft. bgs) 04/06/2001	SW-O5-2-01 (0-1.5 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/L	NS	1U	1U	1U	0.9U	0.9U	0.9U
PHENOL	UG/L	20900	1U	1U	1U	0.9U	0.9U	0.9U
PYRENE	UG/L	797	1U	1U	1U	0.9U	0.9U	0.9U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents						
1,2,4-TRICHLOROBENZENE	UG/L	30.6	1UJ	1U	1U	1U
1,2-DICHLOROBENZENE	UG/L	2520	1UJ	1U	1U	1U
1,2-DIPHENYLHYDRAZINE	UG/L	0.0405	1UJ	1U	1U	1U
1,3-DICHLOROBENZENE	UG/L	2620	1UJ	1U	1U	1U
1,4-DICHLOROBENZENE	UG/L	343	1UJ	1U	1U	1U
2,4,6-TRICHLOROPHENOL	UG/L	2.14	2UJ	2U	2U	2U
2,4-DICHLOROPHENOL	UG/L	92.7	1UJ	1U	1U	1U
2,4-DIMETHYLPHENOL	UG/L	NS	1UJ	1U	1U	1U
2,4-DINITROPHENOL	UG/L	69.7	19UJ	19U	20U	22U
2,4-DINITROTOLUENE	UG/L	0.11	1UJ	1U	1U	1U
2,6-DINITROTOLUENE	UG/L	NS	2UJ	2U	2U	2U
2-CHLORONAPHTHALENE	UG/L	NS	1UJ	1U	1U	1U
2-CHLOROPHENOL	UG/L	122	1UJ	1U	1U	1U
2-NITROPHENOL	UG/L	NS	1UJ	1U	1U	1U
3,3'-DICHLOROBENZIDINE	UG/L	0.0386	3UJ	3U	3U	3U
4,6-DINITRO-2-METHYLPHENOL	UG/L	13.4	5UJ	5U	5U	5U
4-BROMOPHENYL PHENYL ETHER	UG/L	NS	2UJ	2U	2U	2U
4-CHLORO-3-METHYLPHENOL	UG/L	NS	1UJ	1U	1U	1U
4-CHLOROPHENYL PHENYL ETHER	UG/L	NS	1UJ	1U	1U	1U
4-NITROPHENOL	UG/L	NS	10UJ	10U	10U	11U
ACENAPHTHENE	UG/L	NS	1UJ	1U	1U	1U
ACENAPHTHYLENE	UG/L	NS	1UJ	1U	1U	1U
ANTHRACENE	UG/L	9570	1UJ	1U	1U	1U
BENZIDINE	UG/L	0.00012	19UJ	19U	20U	22U
BENZO(a)ANTHRACENE	UG/L	0.0028	1UJ	1U	1U	1U
BENZO(a)PYRENE	UG/L	0.0028	1UJ	1U	1U	1U
BENZO(b)FLUORANTHENE	UG/L	0.031	1UJ	1U	1U	1U
BENZO(g,h,i)PERYLENE	UG/L	0.0028	1UJ	1U	1U	1U
BENZO(k)FLUORANTHENE	UG/L	0.031	1UJ	1U	1U	1U
BENZYL BUTYL PHTHALATE	UG/L	239	2UJ	2U	2U	2U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents						
bis(2-CHLOROETHOXY) METHANE	UG/L	NS	1UJ	1U	1U	1U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/L	0.0311	1UJ	1U	1U	1U
bis(2-CHLOROISOPROPYL) ETHER	UG/L	1250	1UJ	1U	1U	1U
bis(2-ETHYLHEXYL) PHTHALATE	UG/L	1.76	2UJ	2U	2U	2U
CHRYSENE	UG/L	0.0028	1UJ	1U	1U	1U
DI-n-BUTYL PHTHALATE	UG/L	3530	2UJ	2U	2U	2U
DI-n-OCTYLPHTHALATE	UG/L	NS	2UJ	2U	2U	2U
DIBENZ(a,h)ANTHRACENE	UG/L	0.0028	1UJ	1U	1U	1U
DIETHYL PHTHALATE	UG/L	21200	2UJ	2U	2U	2U
DIMETHYL PHTHALATE	UG/L	313000	2UJ	2U	2U	2U
FLUORANTHENE	UG/L	310	1UJ	1U	1U	1U
FLUORENE	UG/L	1340	1UJ	1U	1U	1U
HEXACHLOROBENZENE	UG/L	0.00075	2UJ	2U	2U	2U
HEXACHLOROBUTADIENE	UG/L	6.94	2UJ	2U	2U	2U
HEXACHLOROCYCLOPENTADIENE	UG/L	245	5UJ	5U	5U	5U
HEXACHLOROETHANE	UG/L	2.73	1UJ	1U	1U	1U
INDENO(1,2,3-c,d)PYRENE	UG/L	NS	1UJ	1U	1U	1U
ISOPHORONE	UG/L	552	1UJ	1U	1U	1U
N-NITROSODI-n-PROPYLAMINE	UG/L	NS	1UJ	1U	1U	1U
N-NITROSODIMETHYLAMINE	UG/L	0.00069	2UJ	2U	2U	2U
N-NITROSODIPHENYLAMINE	UG/L	4.95	1UJ	1U	1U	1U
NAPHTHALENE	UG/L	NS	1J	1U	1U	1U
NITROBENZENE	UG/L	16	1UJ	1U	1U	1U
PENTACHLOROPHENOL	UG/L	0.282	3UJ	3U	3U	3U

Table 5-93

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents						
PHENANTHRENE	UG/L	NS	1UJ	1U	1U	1U
PHENOL	UG/L	20900	1UJ	1U	1U	1U
PYRENE	UG/L	797	1UJ	1U	1U	1U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-94

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0-2 ft. bgs) 04/26/2001	SW-K5-4-01 (0-1 ft. bgs) 04/26/2001	SW-M7-2-01 (0-1 ft. bgs) 04/24/2001
Total Metals									
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	3.7U	7.6U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	NR	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	2.6B	1.7U	1.7U	1.7U
COPPER	UG/L	NS	6.7B	2.4U	2.4U	2.4U	5.7U	5.5U	5.5B
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.064U	0.026U	0.026U	0.026U	0.027BN*	0.026UN*	0.026U
NICKEL	UG/L	516	1.6U	1.6U	1.6U	1.6U	1.6UN*	1.6UN*	4.2B
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	79.8	18B	8.9B	7.6B	44.9	44	65.6

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

R = Rejected based on data validation

* = Value obtained from a 1:5 dilution

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-94

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-1-01 (0-1 ft. bgs) 04/24/2001
Total Metals			
ANTIMONY	UG/L	12.2	5.9U
ARSENIC	UG/L	0.017	**9.2B**
BERYLLIUM	UG/L	NS	0.64U
CADMIUM	UG/L	10	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U
COPPER	UG/L	NS	3.2B
LEAD	UG/L	5	8.8U
MERCURY	UG/L	0.144	0.026J
NICKEL	UG/L	516	1.6UN*
SELENIUM	UG/L	10	4.3U
SILVER	UG/L	164	1.3U
THALLIUM	UG/L	1.7	8.8U
ZINC	UG/L	NS	19.2B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Table 5-94

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0-1 ft. bgs) 04/24/2001	SW-N7-6-01 (0-0.5 ft. bgs) 04/23/2001	SW-N7-7-01 (0-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0-1 ft. bgs) 04/04/2001
Total Metals									
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U	9.8B
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.026U	0.035U	0.026U	0.026U	0.026U	0.059U	0.026U
NICKEL	UG/L	516	1.6U	1.6U	1.6U	1.6U	1.6U	1.6U	9.1B
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	6B	18.4B	26.2	14.2B	12.7B	9.8B	100

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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* = Value obtained from a 1:5 dilution

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-94

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-10-01 (0-0.75 ft. bgs) 04/06/2001
Total Metals			
ANTIMONY	UG/L	12.2	5.9U
ARSENIC	UG/L	0.017	3.7U
BERYLLIUM	UG/L	NS	0.64U
CADMIUM	UG/L	10	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U
COPPER	UG/L	NS	2.4U
LEAD	UG/L	5	8.8U
MERCURY	UG/L	0.144	0.026U
NICKEL	UG/L	516	1.7B
SELENIUM	UG/L	10	4.3U
SILVER	UG/L	164	1.3U
THALLIUM	UG/L	1.7	8.8U
ZINC	UG/L	NS	23.1B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Table 5-94

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-2-01 (0-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0-1 ft. bgs) 04/04/2001	SW-O4-4-01 (0-1.5 ft. bgs) 04/04/2001	SW-O4-5-01 (0-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0-0.75 ft. bgs) 04/06/2001	SW-O5-1-01 (0-1 ft. bgs) 04/06/2001
Total Metals									
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	8B	9.8B	7.8B	7.3B	5.9B	6.7B	2.4U
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.043B	0.026U	0.033B	0.026U	0.026U	0.064U	0.026U
NICKEL	UG/L	516	2.9B	4.1B	2.8B	5.2B	3.1B	1.6U	1.6U
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	40.2	40.3	29.2	20.9B	16.3B	79.8	12.8B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-94

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O5-2-01 (0-1.5 ft. bgs) 04/09/2001
Total Metals			
ANTIMONY	UG/L	12.2	5.9U
ARSENIC	UG/L	0.017	3.7U
BERYLLIUM	UG/L	NS	0.64U
CADMIUM	UG/L	10	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U
COPPER	UG/L	NS	2.4U
LEAD	UG/L	5	8.8U
MERCURY	UG/L	0.144	0.026U
NICKEL	UG/L	516	1.6U
SELENIUM	UG/L	10	4.3U
SILVER	UG/L	164	1.3U
THALLIUM	UG/L	1.7	8.8U
ZINC	UG/L	NS	11.3B

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Table 5-94

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0-1 ft. bgs) 04/23/2001
Total Metals						
ANTIMONY	UG/L	12.2	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	0.017	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	10	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	160	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	NS	3.2B	2.4U	2.4U	2.4U
LEAD	UG/L	5	8.8U	8.8U	8.8U	8.8U
MERCURY	UG/L	0.144	0.047U	0.044U	0.054U	0.026U
NICKEL	UG/L	516	2.4B	2.2B	1.6U	1.8B
SELENIUM	UG/L	10	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	164	2.8B	1.3U	1.3U	1.3U
THALLIUM	UG/L	1.7	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	NS	27.7	31.8	29.2	32.9

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-95

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0-2 ft. bgs) 04/26/2001	SW-K5-4-01 (0-1 ft. bgs) 04/26/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	4UJ	4UJ	4UJ
PERCHLORATE	UG/L	NS	NR	NR	NR	NR	5U	5U
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-95

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-M7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-1-01 (0-1 ft. bgs) 04/24/2001	SW-N7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0-1 ft. bgs) 04/24/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120UJ	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4UJ	4U	4UJ	4UJ	4UJ	4UJ
PERCHLORATE	UG/L	NS	NR	NR	NR	NR	NR	NR
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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N = Flashpoint not observed, heated to specific limit
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U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-95

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-6-01 (0-0.5 ft. bgs) 04/23/2001	SW-N7-7-01 (0-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0-1 ft. bgs) 04/04/2001	SW-O4-10-01 (0-0.75 ft. bgs) 04/06/2001	SW-O4-2-01 (0-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0-1 ft. bgs) 04/04/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500UJ	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4UJ	4UJ	4U	4U	4U	4U
PERCHLORATE	UG/L	NS	NR	NR	NR	NR	NR	NR
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
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R = Rejected based on data validation
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NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-95

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-4-01 (0-1.5 ft. bgs) 04/04/2001	SW-O4-5-01 (0-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0-0.75 ft. bgs) 04/06/2001	SW-O5-1-01 (0-1 ft. bgs) 04/06/2001	SW-O5-2-01 (0-1.5 ft. bgs) 04/09/2001
Energetic and Explosive Compounds								
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500UJ	500UJ	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4U	4U	4U	4U	4U	4U
PERCHLORATE	UG/L	NS	NR	NR	NR	NR	NR	NR
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
N = Flashpoint not observed, heated to specific limit
J = Value is less than the practical quantitation limit, but greater than zero
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R = Rejected based on data validation
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NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-95

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0-1 ft. bgs) 04/23/2001
Energetic and Explosive Compounds						
1,3,5-TRINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
1,3-DINITROBENZENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
2,4,6-TRINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
2,4-DINITROTOLUENE	UG/L	0.11	0.2U	0.2U	0.2U	0.2U
2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
2-AMINO-4,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
2-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
3-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
4-AMINO-2,6-DINITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
4-NITROTOLUENE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
NITROBENZENE	UG/L	16	0.2U	0.2U	0.2U	0.2U
NITROCELLULOSE	UG/L	NS	500U	500U	500U	500U
NITROGLYCERIN	UG/L	NS	120U	120U	120U	120U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/L	NS	0.2U	0.2U	0.2U	0.2U
PENTAERYTHRITOL TETRANITRATE	UG/L	NS	4UJ	4UJ	4UJ	4UJ
PERCHLORATE	UG/L	NS	NR	NR	NR	NR
TETRYL	UG/L	NS	0.2U	0.2U	0.2U	0.2U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-96

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-H5-1-01 (0-1 ft. bgs) 04/20/2001	SW-K11-1-01 (0-1 ft. bgs) 04/19/2001	SW-K4-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-1-01 (0-1 ft. bgs) 04/24/2001	SW-K5-3-01 (0-2 ft. bgs) 04/26/2001	SW-K5-4-01 (0-1 ft. bgs) 04/26/2001	SW-M7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-1-01 (0-1 ft. bgs) 04/24/2001
General Chemistry										
DISSOLVED OXYGEN	MG/L	NS	11.02	10.73	10.69	10.87	10.4	11.33	9.9	10.38
pH	PH	NS	7.6	7.25	6.86	6.57	6.04	6.31	6.91	6.61

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-96

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-N7-2-01 (0-1 ft. bgs) 04/24/2001	SW-N7-3-01 (0-1 ft. bgs) 04/24/2001	SW-N7-4-01 (0-1 ft. bgs) 04/24/2001	SW-N7-5-01 (0-1 ft. bgs) 04/24/2001	SW-N7-6-01 (0-0.5 ft. bgs) 04/23/2001	SW-N7-7-01 (0-1 ft. bgs) 04/23/2001	SW-O4-1-01 (0-1 ft. bgs) 04/04/2001	SW-O4-10-01 (0-0.75 ft. bgs) 04/06/2001
General Chemistry										
DISSOLVED OXYGEN	MG/L	NS	8.63	9.33	9.48	8.71	9.41	8.35	9.02	7.75
pH	PH	NS	6.6	6.5	6.19	6.53	5.65	6.05	6.31	5.8

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-96

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-O4-2-01 (0-1 ft. bgs) 04/04/2001	SW-O4-3-01 (0-1 ft. bgs) 04/04/2001	SW-O4-4-01 (0-1.5 ft. bgs) 04/04/2001	SW-O4-5-01 (0-1 ft. bgs) 04/04/2001	SW-O4-6-01 (0-1 ft. bgs) 04/04/2001	SW-O4-9-01 (0-0.75 ft. bgs) 04/06/2001	SW-O5-1-01 (0-1 ft. bgs) 04/06/2001	SW-O5-2-01 (0-1.5 ft. bgs) 04/09/2001
General Chemistry										
DISSOLVED OXYGEN	MG/L	NS	7.05	5.2	7.09	6.6	7.01	6.8	11.15	12.5
pH	PH	NS	5.87	5.96	5.9	5.86	5.78	7.22	4.78	4.28

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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Table 5-96

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Human Health - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Human Health SWQC	SW-P4-1-01 (0-1 ft. bgs) 04/23/2001	SW-P4-2-01 (0-1 ft. bgs) 04/23/2001	SW-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SW-R4-1-01 (0-1 ft. bgs) 04/23/2001
General Chemistry						
DISSOLVED OXYGEN	MG/L	NS	10.71	10.5	9.38	8.51
pH	PH	NS	5.7	4.93	4.66	4.87

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-97

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-H5-1-01 (0-1 ft. bgs) 04/20/01	SW-K11-1-01 (0-1 ft. bgs) 04/19/01	SW-K4-1-01 (0-1 ft. bgs) 04/24/01	SW-K5-1-01 (0-1 ft. bgs) 04/24/01	SW-K5-3-01 (0-2 ft. bgs) 04/26/01	SW-K5-4-01 (0-1 ft. bgs) 04/26/01
Dissolved Metals									
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	0.8	1.1	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	127.4	60.8	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	7.4	6.1	4.4B	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	3.8	5.4	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	372.	57.9	2.4B	1.6U	2.3B	3.1B	1.6U	1.9B
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.01	NS	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	44.2	43.4	36.8	8.1B	5.4B	5.7B	**49.9**	**291**
Semi-Volatile Organic Constituents									
PENTACHLOROPHENOL	UG/L	3.32	2.1	3U	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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ft. bgs = Feet below ground surface

Table 5-97

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-M7-2-01 (0-1 ft. bgs) 04/24/01	SW-N7-1-01 (0-1 ft. bgs) 04/24/01	SW-N7-2-01 (0-1 ft. bgs) 04/24/01	SW-N7-3-01 (0-1 ft. bgs) 04/24/01	SW-N7-4-01 (0-1 ft. bgs) 04/24/01	SW-N7-5-01 (0-1 ft. bgs) 04/24/01
Dissolved Metals									
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	0.8	1.1	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	127.4	60.8	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	7.4	6.1	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U
LEAD	UG/L	3.8	5.4	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	372.	57.9	3.7B	1.6U	2.2B	2.8B	2.4B	1.8B
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.01	NS	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	44.2	43.4	17.2B	16.6B	4.8B	22.2B	22.8B	5.8B
Semi-Volatile Organic Constituents									
PENTACHLOROPHENOL	UG/L	3.32	2.1	3U	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

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B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-97

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-N7-6-01 (0-0.5 ft. bgs) 04/23/01	SW-N7-7-01 (0-1 ft. bgs) 04/23/01	SW-O4-1-01 (0-1 ft. bgs) 04/04/01	SW-O4-10-01 (0-0.75 ft. bgs) 04/06/01	SW-O4-2-01 (0-1 ft. bgs) 04/04/01	SW-O4-3-01 (0-1 ft. bgs) 04/04/01
Dissolved Metals									
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	0.8	1.1	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	127.4	60.8	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	7.4	6.1	2.4U	2.4U	2.4U	3.8B	2.4U	2.4U
LEAD	UG/L	3.8	5.4	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	372.	57.9	2.5B	1.6U	1.6U	1.7B	1.6U	1.7B
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.01	NS	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	44.2	43.4	18.6B	9.8B	**49.2**	18.1B	31.4	26.8
Semi-Volatile Organic Constituents									
PENTACHLOROPHENOL	UG/L	3.32	2.1	3U	3U	3U	3U	4U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-97

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-O4-4-01 (0-1.5 ft. bgs) 04/04/01	SW-O4-5-01 (0-1 ft. bgs) 04/04/01	SW-O4-6-01 (0-1 ft. bgs) 04/04/01	SW-O4-9-01 (0-0.75 ft. bgs) 04/06/01	SW-O5-1-01 (0-1 ft. bgs) 04/06/01	SW-O5-2-01 (0-1.5 ft. bgs) 04/09/01
Dissolved Metals									
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	0.8	1.1	0.64U	0.64U	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	127.4	60.8	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	7.4	6.1	2.4U	2.4U	2.4U	4.9B	**6.7B**	2.4U
LEAD	UG/L	3.8	5.4	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	372.	57.9	1.6B	1.6U	1.6U	2.6B	7.6B	1.6U
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.01	NS	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	44.2	43.4	22.5B	10B	9.5B	23.7B	30.3	12.7B
Semi-Volatile Organic Constituents									
PENTACHLOROPHENOL	UG/L	3.32	2.1	3U	3U	3U	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-97

Surface Water Analytical Results - Miscellaneous Ponds Drainage System Aquatic Life
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	Acute Aquatic Life SWQC	Chronic Aquatic Life SWQC	SW-P4-1-01 (0-1 ft. bgs) 04/23/01	SW-P4-2-01 (0-1 ft. bgs) 04/23/01	SW-Q4-1-01 (0-1 ft. bgs) 04/23/01	SW-R4-1-01 (0-1 ft. bgs) 04/23/01
Dissolved Metals							
ANTIMONY	UG/L	NS	NS	5.9U	5.9U	5.9U	5.9U
ARSENIC	UG/L	360	190	3.7U	3.7U	3.7U	3.7U
BERYLLIUM	UG/L	NS	NS	0.64U	0.64U	0.64U	0.64U
CADMIUM	UG/L	0.8	1.1	0.64U	0.64U	0.64U	0.64U
CHROMIUM, TOTAL	UG/L	127.4	60.8	1.7U	1.7U	1.7U	1.7U
COPPER	UG/L	7.4	6.1	2.9B	2.4U	2.4U	2.4U
LEAD	UG/L	3.8	5.4	8.8U	8.8U	8.8U	8.8U
NICKEL	UG/L	372.	57.9	3.1B	3.2B	1.6U	2.3B
SELENIUM	UG/L	20	4.61	4.3U	4.3U	4.3U	4.3U
SILVER	UG/L	0.01	NS	1.3U	1.3U	1.3U	1.3U
THALLIUM	UG/L	NS	NS	8.8U	8.8U	8.8U	8.8U
ZINC	UG/L	44.2	43.4	26.2	28.1	25.8	28.2
Semi-Volatile Organic Constituents							
PENTACHLOROPHENOL	UG/L	3.32	2.1	3UJ	3U	3U	3U

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

Bold = Indicates Concentration Exceeds SWQC
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
R = Rejected based on data validation
* = Value obtained from a 1:5 dilution
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0.5-1 ft. bgs) 05/02/2001	SD-D11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-H5-1-01 (0.5-1 ft. bgs) 04/20/2001	SD-K11-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-K4-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-K5-1-01 (0.5-1 ft. bgs) 04/24/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
1,1-DICHLOROETHANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
1,1-DICHLOROETHENE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
1,2-DICHLOROETHANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
1,2-DICHLOROPROPANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	290U	530U	330U	370U	230UJ	230UJ
ACROLEIN	UG/KG	NS	NS	2900U	5300R	3300U	3700U	2300UJ	2300UJ
ACRYLONITRILE	UG/KG	NS	NS	570U	1100U	660U	740U	450UJ	460UJ
AMYL ALCOHOL	UG/KG	NS	NS	13000U	21000U	15000U	14000U	10000U	10000U
BENZENE	UG/KG	340	NS	140U	270U	170U	190U	110UJ	110UJ
BROMODICHLOROMETHANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
BROMOFORM	UG/KG	NS	NS	140U	270U	170U	190U	230UJ	230UJ
BROMOMETHANE	UG/KG	NS	NS	290U	530U	330U	370U	230UJ	230UJ
CARBON TETRACHLORIDE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
CHLOROBENZENE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
CHLOROETHANE	UG/KG	NS	NS	290U	530U	330U	370U	230UJ	230UJ
CHLOROFORM	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
CHLOROMETHANE	UG/KG	NS	NS	290U	530U	330U	370U	230UJ	230UJ
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	13000U	21000U	15000U	14000U	10000U	10000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	13000U	21000U	15000U	14000U	10000U	10000U
ETHANOL	UG/KG	NS	NS	13000U	21000U	15000U	14000U	10000U	10000U

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0.5-1 ft. bgs) 05/02/2001	SD-D11-2-01 (0.5-1 ft. bgs) 05/02/2001	SD-H5-1-01 (0.5-1 ft. bgs) 04/20/2001	SD-K11-1-01 (0.5-1 ft. bgs) 04/19/2001	SD-K4-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-K5-1-01 (0.5-1 ft. bgs) 04/24/2001
ETHYLBENZENE	UG/KG	1400	NS	140U	270U	170U	190U	110UJ	110UJ
METHANOL	UG/KG	NS	NS	13000U	21000U	15000U	14000U	10000U	10000U
METHYLENE CHLORIDE	UG/KG	NS	NS	290U	530U	330U	370U	230UJ	230UJ
n-BUTYL ETHER	UG/KG	NS	NS	13000U	21000U	15000U	14000U	10000U	10000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	140U	270U	170U	190U	110UJ	110UJ
TOLUENE	UG/KG	2500	NS	140U	270U	170U	190U	110UJ	110UJ
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	140U	270U	170U	190U	110UJ	110UJ
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	290U	530U	330U	370U	230UJ	230UJ
VINYL CHLORIDE	UG/KG	NS	NS	140U	270U	170U	190U	110UJ	110UJ
XYLENES, TOTAL	UG/KG	120	NS	140U	270U	170U	190U	110UJ	110UJ

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-3-01 (0.5-1 ft. bgs) 04/26/2001	SD-K5-4-01 (0.5-1 ft. bgs) 04/26/2001	SD-M7-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-3-01 (0.5-1 ft. bgs) 04/24/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
1,1-DICHLOROETHANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
1,1-DICHLOROETHENE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
1,2-DICHLOROETHANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
1,2-DICHLOROPROPANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	720U	2300UJ	240U	740UJ	250U	250UJ
ACROLEIN	UG/KG	NS	NS	7200R	23000R	2400U	7400UJ	2500U	2500UJ
ACRYLONITRILE	UG/KG	NS	NS	1400U	4600UJ	480U	1500UJ	490U	510UJ
AMYL ALCOHOL	UG/KG	NS	NS	26000U	84000U	10000U	30000U	10000U	10000U
BENZENE	UG/KG	340	NS	360U	1200UJ	120U	370UJ	120U	130UJ
BROMODICHLOROMETHANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
BROMOFORM	UG/KG	NS	NS	360U	1200UJ	240U	370UJ	250U	250UJ
BROMOMETHANE	UG/KG	NS	NS	720U	2300UJ	240UJ	740UJ	250UJ	250UJ
CARBON TETRACHLORIDE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
CHLOROBENZENE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
CHLOROETHANE	UG/KG	NS	NS	720U	2300UJ	240U	740UJ	250U	250UJ
CHLOROFORM	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
CHLOROMETHANE	UG/KG	NS	NS	720U	2300UJ	240U	740UJ	250U	250UJ
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	26000U	84000U	10000U	30000UJ	10000U	10000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	26000U	84000U	10000U	30000UJ	10000U	10000U
ETHANOL	UG/KG	NS	NS	26000U	84000U	10000U	30000U	10000U	10000U

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-3-01 (0.5-1 ft. bgs) 04/26/2001	SD-K5-4-01 (0.5-1 ft. bgs) 04/26/2001	SD-M7-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-1-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-2-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-3-01 (0.5-1 ft. bgs) 04/24/2001
ETHYLBENZENE	UG/KG	1400	NS	360U	1200UJ	120U	370UJ	120U	130UJ
METHANOL	UG/KG	NS	NS	26000U	84000U	10000U	30000U	10000U	10000U
METHYLENE CHLORIDE	UG/KG	NS	NS	720U	2300UJ	240U	740UJ	250U	250UJ
n-BUTYL ETHER	UG/KG	NS	NS	26000U	84000U	10000U	30000UJ	10000U	10000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	360U	1200UJ	120U	370UJ	120U	130UJ
TOLUENE	UG/KG	2500	NS	360U	1200UJ	120U	370UJ	120U	130UJ
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	360U	1200UJ	120U	370UJ	120U	130UJ
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	720U	2300UJ	240U	740UJ	250U	250UJ
VINYL CHLORIDE	UG/KG	NS	NS	360U	1200UJ	120U	370UJ	120U	130UJ
XYLENES, TOTAL	UG/KG	120	NS	360U	1200UJ	120U	370UJ	120U	130UJ

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-4-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-5-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-6-01 (0.5-1 ft. bgs) 04/23/2001	SD-N7-7-01 (0.5-1 ft. bgs) 04/24/2001	SD-O4-1-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-10-01 (0.5-1 ft. bgs) 04/06/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
1,1-DICHLOROETHANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
1,1-DICHLOROETHENE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
1,2-DICHLOROETHANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	340UJ	240U	380U	240UJ	470U	350U
ACROLEIN	UG/KG	NS	NS	3400UJ	2400U	3800U	2400UJ	4700U	3500U
ACRYLONITRILE	UG/KG	NS	NS	680UJ	490U	770U	480UJ	940U	700U
AMYL ALCOHOL	UG/KG	NS	NS	10000U	10000U	14000U	10000U	17000U	15000U
BENZENE	UG/KG	340	NS	170UJ	120U	190U	120UJ	240U	170U
BROMODICHLOROMETHANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
BROMOFORM	UG/KG	NS	NS	340UJ	240U	190U	240UJ	240U	170U
BROMOMETHANE	UG/KG	NS	NS	340UJ	240UJ	380U	240UJ	470U	350U
CARBON TETRACHLORIDE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
CHLOROBENZENE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
CHLOROETHANE	UG/KG	NS	NS	340UJ	240U	380U	240UJ	470U	350U
CHLOROFORM	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
CHLOROMETHANE	UG/KG	NS	NS	340UJ	240U	380U	240UJ	470U	350U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	10000U	10000U	14000U	10000U	17000U	15000UJ
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	10000U	10000U	14000U	10000U	17000U	15000UJ
ETHANOL	UG/KG	NS	NS	10000U	10000U	14000U	10000U	17000U	15000U

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-4-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-5-01 (0.5-1 ft. bgs) 04/24/2001	SD-N7-6-01 (0.5-1 ft. bgs) 04/23/2001	SD-N7-7-01 (0.5-1 ft. bgs) 04/24/2001	SD-O4-1-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-10-01 (0.5-1 ft. bgs) 04/06/2001
ETHYLBENZENE	UG/KG	1400	NS	170UJ	120U	190U	120UJ	240U	170U
METHANOL	UG/KG	NS	NS	10000U	10000U	14000U	10000U	17000U	15000U
METHYLENE CHLORIDE	UG/KG	NS	NS	340UJ	240U	380U	240UJ	470U	350U
n-BUTYL ETHER	UG/KG	NS	NS	10000U	10000U	14000U	10000U	17000UJ	15000UJ
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	170UJ	120U	190U	120UJ	240U	170U
TOLUENE	UG/KG	2500	NS	170UJ	120U	190U	120UJ	240U	170U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	170UJ	120U	190U	120UJ	240U	170U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	340UJ	240U	380U	240UJ	470U	350U
VINYL CHLORIDE	UG/KG	NS	NS	170UJ	120U	190U	120UJ	240U	170U
XYLENES, TOTAL	UG/KG	120	NS	170UJ	120U	190U	120UJ	240U	170U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-2-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-3-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-4-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-5-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-6-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-7-01 (0.5-1 ft. bgs) 04/09/2001
Volatile Organic Constituents									
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
1,1-DICHLOROETHANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
1,1-DICHLOROETHENE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
1,2-DICHLOROETHANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
1,2-DICHLOROPROPANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	650U	670U	550U	420U	640U	810UJ
ACROLEIN	UG/KG	NS	NS	6500U	6700U	5500U	4200U	6400U	8100UJ
ACRYLONITRILE	UG/KG	NS	NS	1300U	1300U	1100U	830U	1300U	1600UJ
AMYL ALCOHOL	UG/KG	NS	NS	26000U	28000U	22000U	16000U	26000U	34000U
BENZENE	UG/KG	340	NS	330U	330U	280U	210U	320U	400UJ
BROMODICHLOROMETHANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
BROMOFORM	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
BROMOMETHANE	UG/KG	NS	NS	650U	670U	550U	420U	640U	810UJ
CARBON TETRACHLORIDE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
CHLOROBENZENE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
CHLOROETHANE	UG/KG	NS	NS	650U	670U	550U	420U	640U	810UJ
CHLOROFORM	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
CHLOROMETHANE	UG/KG	NS	NS	650U	670U	550U	420U	640U	810UJ
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	26000U	28000U	22000U	16000U	26000U	34000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	26000U	28000U	22000U	16000U	26000U	34000U
ETHANOL	UG/KG	NS	NS	26000U	28000U	22000U	16000U	26000U	34000U

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-2-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-3-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-4-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-5-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-6-01 (0.5-1 ft. bgs) 04/04/2001	SD-O4-7-01 (0.5-1 ft. bgs) 04/09/2001
ETHYLBENZENE	UG/KG	1400	NS	330U	330U	280U	210U	320U	400UJ
METHANOL	UG/KG	NS	NS	26000U	28000U	22000U	16000U	26000U	34000U
METHYLENE CHLORIDE	UG/KG	NS	NS	650U	670U	550U	420U	640U	810UJ
n-BUTYL ETHER	UG/KG	NS	NS	26000UJ	28000UJ	22000UJ	16000UJ	26000UJ	34000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	330U	330U	280U	210U	320U	400UJ
TOLUENE	UG/KG	2500	NS	330U	330U	280U	210U	320U	400UJ
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	330U	330U	280U	210U	320U	400UJ
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	650U	670U	550U	420U	640U	810UJ
VINYL CHLORIDE	UG/KG	NS	NS	330U	330U	280U	210U	320U	400UJ
XYLENES, TOTAL	UG/KG	120	NS	330U	330U	280U	210U	320U	400UJ

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrument

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-8-01 (0.5-1 ft. bgs) 04/09/2001	SD-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-2-01 (0.5-1 ft. bgs) 04/09/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	760UJ	180U	200U	200U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	760UJ	180U	200U	200U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	760UJ	180U	200U	200U
1,1-DICHLOROETHANE	UG/KG	NS	NS	760UJ	180U	200U	200U
1,1-DICHLOROETHENE	UG/KG	NS	NS	760UJ	180U	200U	200U
1,2-DICHLOROETHANE	UG/KG	NS	NS	760UJ	180U	200U	200U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	760UJ	180U	200U	200U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	1500UJ	370U	400U	410U
ACROLEIN	UG/KG	NS	NS	15000UJ	3700U	4000U	4100U
ACRYLONITRILE	UG/KG	NS	NS	3100UJ	730U	800U	810U
AMYL ALCOHOL	UG/KG	NS	NS	57000U	17000U	17000U	18000U
BENZENE	UG/KG	340	NS	760UJ	180U	200U	200U
BROMODICHLOROMETHANE	UG/KG	NS	NS	760UJ	180U	200U	200U
BROMOFORM	UG/KG	NS	NS	760UJ	180U	200U	200U
BROMOMETHANE	UG/KG	NS	NS	1500UJ	370U	400U	410U
CARBON TETRACHLORIDE	UG/KG	NS	NS	760UJ	180U	200U	200U
CHLOROBENZENE	UG/KG	NS	NS	760UJ	180U	200U	200U
CHLOROETHANE	UG/KG	NS	NS	1500UJ	370U	400U	410U
CHLOROFORM	UG/KG	NS	NS	760UJ	180U	200U	200U
CHLOROMETHANE	UG/KG	NS	NS	1500UJ	370U	400U	410U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	760UJ	180U	200U	200U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	760UJ	180U	200U	200U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	57000U	17000UJ	17000U	18000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	760UJ	180U	200U	200U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	57000U	17000UJ	17000UJ	18000U
ETHANOL	UG/KG	NS	NS	57000U	17000U	17000U	18000U

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-8-01 (0.5-1 ft. bgs) 04/09/2001	SD-O4-9-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0.5-1 ft. bgs) 04/06/2001	SD-O5-2-01 (0.5-1 ft. bgs) 04/09/2001
ETHYLBENZENE	UG/KG	1400	NS	760UJ	180U	200U	200U
METHANOL	UG/KG	NS	NS	57000U	17000U	17000U	18000U
METHYLENE CHLORIDE	UG/KG	NS	NS	1500UJ	370U	400U	410U
n-BUTYL ETHER	UG/KG	NS	NS	57000U	17000UJ	17000UJ	18000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	760UJ	180U	200U	200U
TOLUENE	UG/KG	2500	NS	760UJ	180U	200U	200U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	760UJ	180U	200U	200U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	760UJ	180U	200U	200U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	760UJ	180U	200U	200U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	1500UJ	370U	400U	410U
VINYL CHLORIDE	UG/KG	NS	NS	760UJ	180U	200U	200U
XYLENES, TOTAL	UG/KG	120	NS	760UJ	180U	200U	200U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

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J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrumer

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-P4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-P4-2-01 (0.5-1 ft. bgs) 04/23/2001	SD-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
Volatile Organic Constituents							
1,1,1-TRICHLOROETHANE	UG/KG	NS	NS	300U	480U	290U	260U
1,1,2,2-TETRACHLOROETHANE	UG/KG	NS	NS	300U	480U	290U	260U
1,1,2-TRICHLOROETHANE	UG/KG	NS	NS	300U	480U	290U	260U
1,1-DICHLOROETHANE	UG/KG	NS	NS	300U	480U	290U	260U
1,1-DICHLOROETHENE	UG/KG	NS	NS	300U	480U	290U	260U
1,2-DICHLOROETHANE	UG/KG	NS	NS	300U	480U	290U	260U
1,2-DICHLOROPROPANE	UG/KG	NS	NS	300U	480U	290U	260U
2-CHLOROETHYL VINYL ETHER	UG/KG	NS	NS	590U	960U	580U	520U
ACROLEIN	UG/KG	NS	NS	5900U	9500U	5800U	5200U
ACRYLONITRILE	UG/KG	NS	NS	1200U	1900U	1200U	1000U
AMYL ALCOHOL	UG/KG	NS	NS	19000U	37000U	25000U	18000U
BENZENE	UG/KG	340	NS	300U	480U	290U	260U
BROMODICHLOROMETHANE	UG/KG	NS	NS	300U	480U	290U	260U
BROMOFORM	UG/KG	NS	NS	300U	480U	290U	260U
BROMOMETHANE	UG/KG	NS	NS	590U	960U	580U	520U
CARBON TETRACHLORIDE	UG/KG	NS	NS	300U	480U	290U	260U
CHLOROBENZENE	UG/KG	NS	NS	300U	480U	290U	260U
CHLOROETHANE	UG/KG	NS	NS	590U	960U	580U	520U
CHLOROFORM	UG/KG	NS	NS	300U	480U	290U	260U
CHLOROMETHANE	UG/KG	NS	NS	590U	960U	580U	520U
cis-1,2-DICHLOROETHYLENE	UG/KG	NS	NS	300U	480U	290U	260U
cis-1,3-DICHLOROPROPENE	UG/KG	NS	NS	300U	480U	290U	260U
Di-n-propyl ether (1,1'-oxybis-Propane)	UG/KG	NS	NS	19000U	37000U	25000U	18000U
DIBROMOCHLOROMETHANE	UG/KG	NS	NS	300U	480U	290U	260U
DIETHYL ETHER (ETHYL ETHER)	UG/KG	NS	NS	19000U	37000U	25000U	18000U
ETHANOL	UG/KG	NS	NS	19000U	37000U	25000U	18000U

Table 5-98

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - VOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-P4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-P4-2-01 (0.5-1 ft. bgs) 04/23/2001	SD-Q4-1-01 (0.5-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0.5-1 ft. bgs) 04/23/2001
ETHYLBENZENE	UG/KG	1400	NS	300U	480U	290U	260U
METHANOL	UG/KG	NS	NS	19000U	37000U	25000U	18000U
METHYLENE CHLORIDE	UG/KG	NS	NS	590U	960U	580U	520U
n-BUTYL ETHER	UG/KG	NS	NS	19000U	37000U	25000U	18000U
TETRACHLOROETHYLENE(PCE)	UG/KG	450	NS	300U	480U	290U	260U
TOLUENE	UG/KG	2500	NS	300U	480U	290U	260U
trans-1,2-DICHLOROETHENE	UG/KG	NS	NS	300U	480U	290U	260U
trans-1,3-DICHLOROPROPENE	UG/KG	NS	NS	300U	480U	290U	260U
TRICHLOROETHYLENE (TCE)	UG/KG	1600	NS	300U	480U	290U	260U
TRICHLOROFLUOROMETHANE	UG/KG	NS	NS	590U	960U	580U	520U
VINYL CHLORIDE	UG/KG	NS	NS	300U	480U	290U	260U
XYLENES, TOTAL	UG/KG	120	NS	300U	480U	290U	260U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

E = Indicates that the concentration exceeded the calibration range of the instrumen

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0-2 ft. bgs) 05/02/2001	SD-D11-2-01 (0-2 ft. bgs) 05/02/2001	SD-H5-1-01 (0-2 ft. bgs) 04/20/2001	SD-K11-1-01 (0-2 ft. bgs) 04/19/2001	SD-K4-1-01 (0-2 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	44U	69U	50U	45U	33U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	44U	69U	50U	45U	33U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	44U	69U	50U	45U	33U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	44U	69U	50U	45U	33U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	44U	69U	50U	45U	33U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	89U	140U	100U	92U	67U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	89U	140U	100U	92U	67U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	89U	140U	100U	92U	67U
2,4-DINITROPHENOL	UG/KG	NS	NS	890U	1400U	1000UJ	920UJ	670U
2,4-DINITROTOLUENE	UG/KG	NS	NS	89U	140U	100U	92U	67U
2,6-DINITROTOLUENE	UG/KG	NS	NS	44U	69U	50U	45U	33U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	44U	69U	50U	45U	33U
2-CHLOROPHENOL	UG/KG	NS	NS	44U	69U	50U	45U	33U
2-NITROPHENOL	UG/KG	NS	NS	89U	140U	100U	92U	67U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	89U	140U	100U	92U	67U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	220U	350U	260U	230U	170U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	89U	140U	100U	92U	67U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	89U	140U	100U	92U	67U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	44U	69U	50U	45U	33U
4-NITROPHENOL	UG/KG	NS	NS	220U	350U	260U	230U	170U
ACENAPHTHENE	UG/KG	16	29	44U	69U	**50J**	45U	33U
ACENAPHTHYLENE	UG/KG	44	38	44U	69U	**240J**	**50J**	33U
ANTHRACENE	UG/KG	220	21809	44U	69U	**280J**	67J	33U
BENZIDINE	UG/KG	NS	NS	890U	1400U	1000U	920U	670UJ
BENZO(a)ANTHRACENE	UG/KG	320	87234	84J	69U	**850**	**320J**	69J
BENZO(a)PYRENE	UG/KG	370	84876	68J	69U	**1000**	350J	79J
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	150J	450J	1300	450J	120J

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0-2 ft. bgs) 05/02/2001	SD-D11-2-01 (0-2 ft. bgs) 05/02/2001	SD-H5-1-01 (0-2 ft. bgs) 04/20/2001	SD-K11-1-01 (0-2 ft. bgs) 04/19/2001	SD-K4-1-01 (0-2 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	55J	86J	**770**	**200J**	51J
BENZO(k)FLUORANTHENE	UG/KG	240	78982	56J	130J	**530**	200J	41J
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	89U	140U	100U	92U	67U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	89U	140U	100U	92U	67U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	44U	69U	50U	45U	33U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	44U	69U	50U	45U	33U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	140J	140U	370J	92U	67U
CHRYSENE	UG/KG	340	27113	130J	280J	**1100**	**410J**	130J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	89U	140U	100U	230J	67U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	89U	140U	100U	92U	67U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	44U	69U	**210J**	**63J**	33U
DIETHYL PHTHALATE	UG/KG	NS	NS	89U	140U	100U	92U	67U
DIMETHYL PHTHALATE	UG/KG	NS	NS	89U	140U	100U	92U	67U
FLUORANTHENE	UG/KG	750	60121	160J	300J	**1700**	550	180J
FLUORENE	UG/KG	190	9431	44U	69U	100J	45U	33U
HEXACHLOROBENZENE	UG/KG	20	24000	44U	69U	50U	45U	33U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	89U	140U	100U	92U	67U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	220U	350U	260U	230U	170U
HEXACHLOROETHANE	UG/KG	NS	NS	44U	69U	50U	45U	33U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	64J	120J	800	220J	53J
ISOPHORONE	UG/KG	NS	NS	44U	69U	50U	45U	33U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	44U	69U	50U	45U	33U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	220U	350U	100U	92U	67U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	44U	76J	50U	45U	33U
NAPHTHALENE	UG/KG	160	124	44U	69U	50U	45U	33U
NITROBENZENE	UG/KG	NS	NS	44U	69U	50U	45U	33U
PENTACHLOROPHENOL	UG/KG	NS	NS	220U	350U	260U	230U	170U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0-2 ft. bgs) 05/02/2001	SD-D11-2-01 (0-2 ft. bgs) 05/02/2001	SD-H5-1-01 (0-2 ft. bgs) 04/20/2001	SD-K11-1-01 (0-2 ft. bgs) 04/19/2001	SD-K4-1-01 (0-2 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	55995	62J	170J	**870**	190J	150J
PHENOL	UG/KG	NS	NS	89U	140U	100U	92U	67U
PYRENE	UG/KG	490	50101	150J	150J	**2000**	**670**	170J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-1-01 (0-2 ft. bgs) 04/24/2001	SD-K5-3-01 (0-4 ft. bgs) 04/26/2001	SD-K5-4-01 (0-4 ft. bgs) 04/26/2001	SD-M7-2-01 (0-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (0-2 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
2,4-DINITROPHENOL	UG/KG	NS	NS	670U	1700UJ	5600UJ	670UJ	2000U
2,4-DINITROTOLUENE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
2,6-DINITROTOLUENE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
2-CHLOROPHENOL	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
2-NITROPHENOL	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200UJ
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	440UJ	1400UJ	170U	500U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
4-NITROPHENOL	UG/KG	NS	NS	170U	440UJ	1400UJ	170U	500U
ACENAPHTHENE	UG/KG	16	29	33U	86UJ	280UJ	33U	**3300**
ACENAPHTHYLENE	UG/KG	44	38	33U	86UJ	280UJ	33U	**8400J**
ANTHRACENE	UG/KG	220	21809	33U	86UJ	280UJ	33U	**16000**
BENZIDINE	UG/KG	NS	NS	670U	1700UJ	5600UJ	670U	2000UJ
BENZO(a)ANTHRACENE	UG/KG	320	87234	33U	86UJ	280UJ	96J	**48000**
BENZO(a)PYRENE	UG/KG	370	84876	33U	86UJ	280UJ	100J	**39000**
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	35J	86UJ	280UJ	160J	84000

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-1-01 (0-2 ft. bgs) 04/24/2001	SD-K5-3-01 (0-4 ft. bgs) 04/26/2001	SD-K5-4-01 (0-4 ft. bgs) 04/26/2001	SD-M7-2-01 (0-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (0-2 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	33U	86UJ	280UJ	76J	**11000J**
BENZO(k)FLUORANTHENE	UG/KG	240	78982	33U	86UJ	280UJ	65J	**31000**
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	300J
CHRYSENE	UG/KG	340	27113	35J	86UJ	280UJ	180J	**68000**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	67U	170UJ	3500J	67U	200U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	33U	86UJ	280UJ	33U	**5000J**
DIETHYL PHTHALATE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
DIMETHYL PHTHALATE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
FLUORANTHENE	UG/KG	750	60121	45J	86UJ	280UJ	140J	**59000**
FLUORENE	UG/KG	190	9431	33U	86UJ	280UJ	33U	**3400**
HEXACHLOROBENZENE	UG/KG	20	24000	33U	86UJ	280UJ	33U	97U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	170U	440UJ	1400UJ	170U	500UJ
HEXACHLOROETHANE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	33U	86UJ	280UJ	83J	16000J
ISOPHORONE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	33U	86UJ	280UJ	83J	1000
NAPHTHALENE	UG/KG	160	124	33U	86UJ	280UJ	33U	**3400**
NITROBENZENE	UG/KG	NS	NS	33U	86UJ	280UJ	33U	97U
PENTACHLOROPHENOL	UG/KG	NS	NS	170U	440UJ	1400UJ	170U	500U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-1-01 (0-2 ft. bgs) 04/24/2001	SD-K5-3-01 (0-4 ft. bgs) 04/26/2001	SD-K5-4-01 (0-4 ft. bgs) 04/26/2001	SD-M7-2-01 (0-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (0-2 ft. bgs) 04/24/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	55995	36J	86UJ	280UJ	99J	**11000**
PHENOL	UG/KG	NS	NS	67U	170UJ	560UJ	67U	200U
PYRENE	UG/KG	490	50101	37J	86UJ	280UJ	150J	**78000**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
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* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-2-01 (0-2 ft. bgs) 04/24/2001	SD-N7-3-01 (0-2 ft. bgs) 04/24/2001	SD-N7-4-01 (0-2 ft. bgs) 04/24/2001	SD-N7-5-01 (0-2 ft. bgs) 04/24/2001	SD-N7-6-01 (0-2 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	33U	46U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	33U	46U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	33U	33U	33U	46U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	33U	46U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	33U	33U	33U	33U	46U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	67U	67U	67U	67U	93U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	67U	67U	67U	67U	93U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	67U	67U	67U	67U	93U
2,4-DINITROPHENOL	UG/KG	NS	NS	670U	670UJ	670U	670U	930U
2,4-DINITROTOLUENE	UG/KG	NS	NS	67U	67U	67U	67U	93U
2,6-DINITROTOLUENE	UG/KG	NS	NS	33U	33U	33U	33U	46U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	33U	33U	33U	33U	46U
2-CHLOROPHENOL	UG/KG	NS	NS	33U	33U	33U	33U	46U
2-NITROPHENOL	UG/KG	NS	NS	67U	67U	67U	67U	93U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	67U	67U	67U	67U	93U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	170U	170U	170U	240U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	67U	67U	67U	67U	93U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	67U	67U	67U	93U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	33U	33U	33U	33U	46U
4-NITROPHENOL	UG/KG	NS	NS	170U	170U	170U	170U	240U
ACENAPHTHENE	UG/KG	16	29	33U	33U	33U	**36J**	46U
ACENAPHTHYLENE	UG/KG	44	38	33U	33U	33U	**1600**	**170J**
ANTHRACENE	UG/KG	220	21809	33U	33U	33U	**1300**	150J
BENZIDINE	UG/KG	NS	NS	670U	670U	670U	670U	930U
BENZO(a)ANTHRACENE	UG/KG	320	87234	33U	43J	33U	**7000**	**730**
BENZO(a)PYRENE	UG/KG	370	84876	33U	81J	34J	**6700**	**570**
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	33U	120J	60J	13000	1300

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-2-01 (0-2 ft. bgs) 04/24/2001	SD-N7-3-01 (0-2 ft. bgs) 04/24/2001	SD-N7-4-01 (0-2 ft. bgs) 04/24/2001	SD-N7-5-01 (0-2 ft. bgs) 04/24/2001	SD-N7-6-01 (0-2 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	33U	66J	33U	**2200**	83J
BENZO(k)FLUORANTHENE	UG/KG	240	78982	33U	34J	33U	**4700**	**550**
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	67U	67U	67U	67U	93U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	67U	67U	67U	67U	93U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	33U	33U	33U	33U	46U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	33U	33U	33U	33U	46U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	67U	67U	92J	82J	93U
CHRYSENE	UG/KG	340	27113	33U	83J	48J	**9300**	**880**
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	67U	67U	67U	67U	93U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	67U	67U	67U	67U	93U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	33U	39J	33U	**950**	46U
DIETHYL PHTHALATE	UG/KG	NS	NS	67U	67U	67U	67U	93U
DIMETHYL PHTHALATE	UG/KG	NS	NS	67U	67U	67U	67U	93U
FLUORANTHENE	UG/KG	750	60121	33U	91J	65J	**5300**	710
FLUORENE	UG/KG	190	9431	33U	33U	33U	75J	46U
HEXACHLOROBENZENE	UG/KG	20	24000	33U	33U	33U	33U	46U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	67U	67U	67U	67U	93U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	170U	170U	170U	170U	240U
HEXACHLOROETHANE	UG/KG	NS	NS	33U	33U	33U	33U	46U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	33U	60J	33U	3100	130J
ISOPHORONE	UG/KG	NS	NS	33U	33U	33U	33U	46U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	33U	33U	33U	46U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	67U	67U	67U	93U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	33U	33U	33U	1200	46U
NAPHTHALENE	UG/KG	160	124	33U	33U	33U	33U	46U
NITROBENZENE	UG/KG	NS	NS	33U	33U	33U	33U	46U
PENTACHLOROPHENOL	UG/KG	NS	NS	170U	170U	170U	170U	240U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-2-01 (0-2 ft. bgs) 04/24/2001	SD-N7-3-01 (0-2 ft. bgs) 04/24/2001	SD-N7-4-01 (0-2 ft. bgs) 04/24/2001	SD-N7-5-01 (0-2 ft. bgs) 04/24/2001	SD-N7-6-01 (0-2 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	55995	33U	49J	33U	440	50J
PHENOL	UG/KG	NS	NS	67U	67U	67U	67U	93U
PYRENE	UG/KG	490	50101	33U	84J	66J	**9900**	**1200**

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-7-01 (0-2 ft. bgs) 04/24/2001	SD-O4-1-01 (0-2 ft. bgs) 04/04/2001	SD-O4-10-01 (0-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (0-2 ft. bgs) 04/04/2001	SD-O4-3-01 (0-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	33U	56U	50U	84U	91U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	67U	110U	100U	170U	180U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	67U	110U	100U	170U	180U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	67U	110U	100U	170U	180U
2,4-DINITROPHENOL	UG/KG	NS	NS	670U	1100U	1000U	1700U	1800U
2,4-DINITROTOLUENE	UG/KG	NS	NS	67U	110U	100U	170U	180U
2,6-DINITROTOLUENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
2-CHLOROPHENOL	UG/KG	NS	NS	33U	56U	50U	84U	91U
2-NITROPHENOL	UG/KG	NS	NS	67U	110U	100U	170U	180U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	67U	110U	100U	170U	180U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	170U	290U	260U	430U	470U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	67U	110U	100U	170U	180U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	67U	110U	100U	170U	180U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	33U	56U	50U	84U	91U
4-NITROPHENOL	UG/KG	NS	NS	170U	290UJ	260UJ	430UJ	470UJ
ACENAPHTHENE	UG/KG	16	29	33U	56U	50U	84U	91U
ACENAPHTHYLENE	UG/KG	44	38	33U	56U	50U	84U	91U
ANTHRACENE	UG/KG	220	21809	33U	56U	50U	84U	91U
BENZIDINE	UG/KG	NS	NS	670U	1100UJ	1000U	1700U	1800UJ
BENZO(a)ANTHRACENE	UG/KG	320	87234	33U	56U	50U	84U	91U
BENZO(a)PYRENE	UG/KG	370	84876	33U	56U	50U	84U	91U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	36J	56U	50U	84U	93J

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-7-01 (0-2 ft. bgs) 04/24/2001	SD-O4-1-01 (0-2 ft. bgs) 04/04/2001	SD-O4-10-01 (0-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (0-2 ft. bgs) 04/04/2001	SD-O4-3-01 (0-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents								
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	33U	56U	50U	84U	91U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	33U	56U	50U	84U	91U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	67U	110U	100U	170U	180U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	67U	110U	100U	170U	180U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	33U	56UJ	50U	84U	91U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	33U	56UJ	50UJ	84UJ	91UJ
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	67U	110U	100U	330U	180U
CHRYSENE	UG/KG	340	27113	33U	56U	50U	110J	130J
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	67U	110U	100U	170U	180U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	67U	110U	100U	170U	180U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	33U	56U	50U	84U	91U
DIETHYL PHTHALATE	UG/KG	NS	NS	67U	110U	100U	170U	180U
DIMETHYL PHTHALATE	UG/KG	NS	NS	67U	110U	100U	170U	180U
FLUORANTHENE	UG/KG	750	60121	45J	56U	50U	100J	150J
FLUORENE	UG/KG	190	9431	33U	56U	50U	84U	91U
HEXACHLOROBENZENE	UG/KG	20	24000	33U	56U	50U	84U	91U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	67U	110U	100U	170U	180U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	170U	290U	260U	430U	470U
HEXACHLOROETHANE	UG/KG	NS	NS	33U	56U	50U	84U	91U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
ISOPHORONE	UG/KG	NS	NS	33U	56U	50U	84U	91U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	33U	56U	50U	84U	91U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	67U	110U	100U	170U	180U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	33U	56U	50U	84U	91U
NAPHTHALENE	UG/KG	160	124	33U	56U	50U	84U	91U
NITROBENZENE	UG/KG	NS	NS	33U	56U	50U	84U	91U
PENTACHLOROPHENOL	UG/KG	NS	NS	170U	290U	260U	430U	470U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-7-01 (0-2 ft. bgs) 04/24/2001	SD-O4-1-01 (0-2 ft. bgs) 04/04/2001	SD-O4-10-01 (0-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (0-2 ft. bgs) 04/04/2001	SD-O4-3-01 (0-2 ft. bgs) 04/04/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	55995	33U	56U	50U	130J	200J
PHENOL	UG/KG	NS	NS	67U	110U	100U	170U	180U
PYRENE	UG/KG	490	50101	40J	56U	50U	93J	110J

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-4-01 (0-2 ft. bgs) 04/04/2001	SD-O4-5-01 (0-2 ft. bgs) 04/04/2001	SD-O4-6-01 (0-2 ft. bgs) 04/04/2001	SD-O4-7-01 (0-2 ft. bgs) 04/09/2001	SD-O4-8-01 (0-2 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	73U	53U	85U	110U	190U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	150U	110U	170U	230U	380U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	150U	110U	170U	230U	380U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	150U	110U	170U	230U	380U
2,4-DINITROPHENOL	UG/KG	NS	NS	1500U	1100U	1700U	2300U	3800U
2,4-DINITROTOLUENE	UG/KG	NS	NS	150U	110U	170U	230U	380U
2,6-DINITROTOLUENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
2-CHLOROPHENOL	UG/KG	NS	NS	73U	53U	85U	110U	190U
2-NITROPHENOL	UG/KG	NS	NS	150U	110U	170U	230U	380U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	150U	110U	170U	230U	380U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	380U	270U	440U	580U	970U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	150U	110U	170U	230U	380U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	150U	110U	170U	230U	380U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	73U	53U	85U	110U	190U
4-NITROPHENOL	UG/KG	NS	NS	380UJ	270UJ	440UJ	580U	970U
ACENAPHTHENE	UG/KG	16	29	73U	53U	85U	110U	190U
ACENAPHTHYLENE	UG/KG	44	38	73U	53U	85U	110U	190U
ANTHRACENE	UG/KG	220	21809	73U	53U	85U	110U	190U
BENZIDINE	UG/KG	NS	NS	1500UJ	1100UJ	1700UJ	2300U	3800U
BENZO(a)ANTHRACENE	UG/KG	320	87234	73U	53U	85U	110U	190U
BENZO(a)PYRENE	UG/KG	370	84876	73U	53U	85U	110U	190U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	73U	53U	85U	110U	190U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-4-01 (0-2 ft. bgs) 04/04/2001	SD-O4-5-01 (0-2 ft. bgs) 04/04/2001	SD-O4-6-01 (0-2 ft. bgs) 04/04/2001	SD-O4-7-01 (0-2 ft. bgs) 04/09/2001	SD-O4-8-01 (0-2 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents								
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	73U	53U	85U	110U	190U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	73U	53U	85U	110U	190U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	150U	110U	170U	230U	380U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	150U	110U	170U	230U	380U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	73U	53U	85U	110U	190U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	73UJ	53UJ	85UJ	110U	190U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	150U	110U	170U	230U	380U
CHRYSENE	UG/KG	340	27113	73U	53U	85U	110U	190U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	150U	110U	170U	230U	380U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	150U	110U	170U	230U	380U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	73U	53U	85U	110U	190U
DIETHYL PHTHALATE	UG/KG	NS	NS	150U	110U	170U	230U	380U
DIMETHYL PHTHALATE	UG/KG	NS	NS	150U	110U	170U	230U	380U
FLUORANTHENE	UG/KG	750	60121	98J	53U	85U	110U	190U
FLUORENE	UG/KG	190	9431	73U	53U	85U	110U	190U
HEXACHLOROBENZENE	UG/KG	20	24000	73U	53U	85U	110U	190U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	150U	110U	170U	230U	380U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	380U	270U	440U	580U	970U
HEXACHLOROETHANE	UG/KG	NS	NS	73U	53U	85U	110U	190U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
ISOPHORONE	UG/KG	NS	NS	73U	53U	85U	110U	190U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	73U	53U	85U	110U	190U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	150U	110U	170U	230U	380U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	73U	53U	85U	110U	190U
NAPHTHALENE	UG/KG	160	124	73U	53U	85U	110U	190U
NITROBENZENE	UG/KG	NS	NS	73U	53U	85U	110U	190U
PENTACHLOROPHENOL	UG/KG	NS	NS	380U	270U	440U	580U	970U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-4-01 (0-2 ft. bgs) 04/04/2001	SD-O4-5-01 (0-2 ft. bgs) 04/04/2001	SD-O4-6-01 (0-2 ft. bgs) 04/04/2001	SD-O4-7-01 (0-2 ft. bgs) 04/09/2001	SD-O4-8-01 (0-2 ft. bgs) 04/09/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	55995	120J	53U	85U	110U	190U
PHENOL	UG/KG	NS	NS	150U	110U	170U	230U	380U
PYRENE	UG/KG	490	50101	73U	53U	85U	110U	190U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0-2 ft. bgs) 04/06/2001	SD-O5-2-01 (0-2 ft. bgs) 04/09/2001	SD-P4-1-01 (0-2 ft. bgs) 04/23/2001	SD-P4-2-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	55U	57U	59U	64U	120U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	110U	120U	120U	130U	250U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	110U	120U	120U	130U	250U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	110U	120U	120U	130U	250U
2,4-DINITROPHENOL	UG/KG	NS	NS	1100U	1200U	1200U	1300UJ	2500U
2,4-DINITROTOLUENE	UG/KG	NS	NS	110U	120U	120U	130U	250U
2,6-DINITROTOLUENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
2-CHLOROPHENOL	UG/KG	NS	NS	55U	57U	59U	64U	120U
2-NITROPHENOL	UG/KG	NS	NS	110U	120U	120U	130U	250U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	110U	120U	120U	130U	250U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	280U	290U	300U	330U	630U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	110U	120U	120U	130U	250U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	110U	120U	120U	130U	250U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	55U	57U	59U	64U	120U
4-NITROPHENOL	UG/KG	NS	NS	280UJ	290UJ	300U	330U	630U
ACENAPHTHENE	UG/KG	16	29	55U	57U	59U	64U	120U
ACENAPHTHYLENE	UG/KG	44	38	55U	57U	59U	64U	120U
ANTHRACENE	UG/KG	220	21809	55U	57U	59U	64U	120U
BENZIDINE	UG/KG	NS	NS	1100U	1200U	1200U	1300U	2500U
BENZO(a)ANTHRACENE	UG/KG	320	87234	55U	57U	59U	64U	120U
BENZO(a)PYRENE	UG/KG	370	84876	55U	57U	59U	64U	120U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	55U	57U	59U	64U	120U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0-2 ft. bgs) 04/06/2001	SD-O5-2-01 (0-2 ft. bgs) 04/09/2001	SD-P4-1-01 (0-2 ft. bgs) 04/23/2001	SD-P4-2-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	55U	57U	59U	64U	120U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	55U	57U	59U	64U	120U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	110U	120U	120U	130U	250U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	110U	120U	120U	130U	250U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	55U	57U	59U	64U	120U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	55UJ	57UJ	59U	64U	120U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	110U	120U	120U	130U	250U
CHRYSENE	UG/KG	340	27113	55U	57U	59U	64U	120U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	110U	120U	120U	130U	250U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	110U	120U	120U	130U	250U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	55U	57U	59U	64U	120U
DIETHYL PHTHALATE	UG/KG	NS	NS	110U	120U	120U	130U	250U
DIMETHYL PHTHALATE	UG/KG	NS	NS	110U	120U	120U	130U	250U
FLUORANTHENE	UG/KG	750	60121	55U	57U	66J	81J	120U
FLUORENE	UG/KG	190	9431	55U	57U	59U	64U	120U
HEXACHLOROBENZENE	UG/KG	20	24000	55U	57U	59U	64U	120U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	110U	120U	120U	130U	250U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	280U	290U	300U	330U	630U
HEXACHLOROETHANE	UG/KG	NS	NS	55U	57U	59U	64U	120U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
ISOPHORONE	UG/KG	NS	NS	55U	57U	59U	64U	120U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	55U	57U	59U	64U	120U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	110U	120U	120U	130U	630U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	55U	57U	59U	64U	120U
NAPHTHALENE	UG/KG	160	124	55U	57U	59U	64U	120U
NITROBENZENE	UG/KG	NS	NS	55U	57U	59U	64U	120U
PENTACHLOROPHENOL	UG/KG	NS	NS	280U	290U	300U	330U	630U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0-2 ft. bgs) 04/06/2001	SD-O5-2-01 (0-2 ft. bgs) 04/09/2001	SD-P4-1-01 (0-2 ft. bgs) 04/23/2001	SD-P4-2-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents								
PHENANTHRENE	UG/KG	560	55995	55U	57U	59U	80J	120U
PHENOL	UG/KG	NS	NS	110U	120U	120U	130U	250U
PYRENE	UG/KG	490	50101	55U	57U	62J	86J	120U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)
SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)
Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents					
1,2,4-TRICHLOROBENZENE	UG/KG	NS	NS	84U	61U
1,2-DICHLOROBENZENE	UG/KG	NS	NS	84U	61U
1,2-DIPHENYLHYDRAZINE	UG/KG	NS	NS	84U	61U
1,3-DICHLOROBENZENE	UG/KG	NS	NS	84U	61U
1,4-DICHLOROBENZENE	UG/KG	NS	NS	84U	61U
2,4,6-TRICHLOROPHENOL	UG/KG	NS	NS	170U	120U
2,4-DICHLOROPHENOL	UG/KG	NS	NS	170U	120U
2,4-DIMETHYLPHENOL	UG/KG	NS	NS	170U	120U
2,4-DINITROPHENOL	UG/KG	NS	NS	1700U	1200U
2,4-DINITROTOLUENE	UG/KG	NS	NS	170U	120U
2,6-DINITROTOLUENE	UG/KG	NS	NS	84U	61U
2-CHLORONAPHTHALENE	UG/KG	NS	NS	84U	61U
2-CHLOROPHENOL	UG/KG	NS	NS	84U	61U
2-NITROPHENOL	UG/KG	NS	NS	170U	120U
3,3'-DICHLOROBENZIDINE	UG/KG	NS	NS	170U	120U
4,6-DINITRO-2-METHYLPHENOL	UG/KG	NS	NS	430U	320U
4-BROMOPHENYL PHENYL ETHER	UG/KG	NS	NS	170U	120U
4-CHLORO-3-METHYLPHENOL	UG/KG	NS	NS	170U	120U
4-CHLOROPHENYL PHENYL ETHER	UG/KG	NS	NS	84U	61U
4-NITROPHENOL	UG/KG	NS	NS	430U	320U
ACENAPHTHENE	UG/KG	16	29	84U	61U
ACENAPHTHYLENE	UG/KG	44	38	84U	61U
ANTHRACENE	UG/KG	220	21809	84U	61U
BENZIDINE	UG/KG	NS	NS	1700U	1200U
BENZO(a)ANTHRACENE	UG/KG	320	87234	84U	61U
BENZO(a)PYRENE	UG/KG	370	84876	84U	61U
BENZO(b)FLUORANTHENE	UG/KG	NS	NS	84U	61U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents					
BENZO(g,h,i)PERYLENE	UG/KG	170	18861	84U	61U
BENZO(k)FLUORANTHENE	UG/KG	240	78982	84U	61U
BENZYL BUTYL PHTHALATE	UG/KG	NS	NS	170U	120U
bis(2-CHLOROETHOXY) METHANE	UG/KG	NS	NS	170U	120U
bis(2-CHLOROETHYL) ETHER (2-CHLOROETHYL ETHER)	UG/KG	NS	NS	84U	61U
bis(2-CHLOROISOPROPYL) ETHER	UG/KG	NS	NS	84U	61U
bis(2-ETHYLHEXYL) PHTHALATE	UG/KG	NS	NS	170U	120U
CHRYSENE	UG/KG	340	27113	84U	61U
DI-n-BUTYL PHTHALATE	UG/KG	NS	NS	170U	120U
DI-n-OCTYLPHTHALATE	UG/KG	NS	NS	170U	120U
DIBENZ(a,h)ANTHRACENE	UG/KG	60	7662	84U	61U
DIETHYL PHTHALATE	UG/KG	NS	NS	170U	120U
DIMETHYL PHTHALATE	UG/KG	NS	NS	170U	120U
FLUORANTHENE	UG/KG	750	60121	84U	61U
FLUORENE	UG/KG	190	9431	84U	61U
HEXACHLOROBENZENE	UG/KG	20	24000	84U	61U
HEXACHLOROBUTADIENE	UG/KG	NS	NS	170U	120U
HEXACHLOROCYCLOPENTADIENE	UG/KG	NS	NS	430U	320U
HEXACHLOROETHANE	UG/KG	NS	NS	84U	61U
INDENO(1,2,3-c,d)PYRENE	UG/KG	NS	NS	84U	61U
ISOPHORONE	UG/KG	NS	NS	84U	61U
N-NITROSODI-n-PROPYLAMINE	UG/KG	NS	NS	84U	61U
N-NITROSODIMETHYLAMINE	UG/KG	NS	NS	170U	120U
N-NITROSODIPHENYLAMINE	UG/KG	NS	NS	84U	61U
NAPHTHALENE	UG/KG	160	124	84U	61U
NITROBENZENE	UG/KG	NS	NS	84U	61U
PENTACHLOROPHENOL	UG/KG	NS	NS	430U	320U

Table 5-99

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - SVOCs
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0-1 ft. bgs) 04/23/2001
Semi-Volatile Organic Constituents					
PHENANTHRENE	UG/KG	560	55995	84U	61U
PHENOL	UG/KG	NS	NS	170U	120U
PYRENE	UG/KG	490	50101	84U	61U

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL
U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit
J = Value is less than the practical quantitation limit, but greater than zero
N = Flashpoint not observed, heated to specific limit
B = Indicates that the compound was found in the associated blank.
* = Value obtained from a 1:5 dilution
R = Rejected based on data validation
E = Indicates that the concentration exceeded the calibration range of the instrument
NR = Not Reported
NS = No Standard
ft. bgs = Feet below ground surface

Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0-2 ft. bgs) 05/02/2001	SD-D11-2-01 (0-2 ft. bgs) 05/02/2001	SD-H5-1-01 (0-2 ft. bgs) 04/20/2001	SD-K11-1-01 (0-2 ft. bgs) 04/19/2001	SD-K4-1-01 (0-2 ft. bgs) 04/24/2001	SD-K5-1-01 (0-2 ft. bgs) 04/24/2001	SD-K5-3-01 (0-4 ft. bgs) 04/26/2001
Total Metals										
ANTIMONY	MG/KG	NS	NS	0.85J	8.7J	0.63UJ	0.65UJ	1.5UJ	1.1UJ	1.7J
ARSENIC	MG/KG	6	33	**8.2**	**9.8**	3.3	4.2	**8**	2.1	2.3B
BERYLLIUM	MG/KG	NS	NS	0.16B	0.14B	0.81	0.53	1.4	0.57B	0.49B
CADMIUM	MG/KG	0.6	10	0.072U	0.49B	0.077B	0.055U	0.38B	0.16B	0.23B
CHROMIUM, TOTAL	MG/KG	26	110	24.6J	4.4B	19.6	11.3	15.6	8.1	6B
COPPER	MG/KG	16	110	11.3J	13.2	**30.1N***	11.8N*	**23.2**	8.7	**35.4**
LEAD	MG/KG	31	250	**1350**	**85300**	**169***	10.6*	**177J**	**31.5J**	**77.6**
MERCURY	MG/KG	0.2	2	0.099B	**1.4**	0.071B	0.017B	**0.21B**	0.069B	0.17B
NICKEL	MG/KG	16	75	5.6B	3.7B	13.4	8.3	11.3B	4.8B	3.1B
SELENIUM	MG/KG	NS	NS	0.67B	0.98U	0.55B	0.48B	2B	0.82U	1.2U
SILVER	MG/KG	1	4	0.18U	0.42B	0.14U	0.14U	0.32U	0.24U	0.36U
THALLIUM	MG/KG	NS	NS	1.1U	3.4B	0.83U	0.85U	1.9U	1.5U	2.2U
ZINC	MG/KG	120	820	67.4N	94.9J	**144***	49.1*	**122J**	52J	64J

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* = Value obtained from a 1:5 dilution

E = Indicates that the concentration exceeded the calibration range of the instrument

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ft. bgs = Feet below ground surface

Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-4-01 (0-4 ft. bgs) 04/26/2001	SD-M7-2-01 (0-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (0-2 ft. bgs) 04/24/2001	SD-N7-2-01 (0-2 ft. bgs) 04/24/2001	SD-N7-3-01 (0-2 ft. bgs) 04/24/2001	SD-N7-4-01 (0-2 ft. bgs) 04/24/2001	SD-N7-5-01 (0-2 ft. bgs) 04/24/2001
Total Metals										
ANTIMONY	MG/KG	NS	NS	8J	1.1UJ	0.68J	1.2UJ	1.3UJ	1.2UJ	1.2UJ
ARSENIC	MG/KG	6	33	**9.5**	4.8	**29.4**	1.4B	**6.1**	1.7B	**7.6**
BERYLLIUM	MG/KG	NS	NS	0.57B	0.17B	0.16B	0.29B	0.74B	0.4B	0.77B
CADMIUM	MG/KG	0.6	10	**10.4B**	0.58B	0.2B	0.1U	0.11U	0.098U	**2.7B**
CHROMIUM, TOTAL	MG/KG	26	110	**120**	11.2	7.5	9.7	19.7	7B	17.9
COPPER	MG/KG	16	110	**180**	**103**	**25.5J**	6.6B	**44.2**	5.4B	**32.5**
LEAD	MG/KG	31	250	**402**	**1230J**	**34.3***	27.5J	**228J**	**31.7EN***	**84.6J**
MERCURY	MG/KG	0.2	2	**16**	**2.7**	**0.23**	0.07B	**0.35**	0.083B	0.19
NICKEL	MG/KG	16	75	15.2B	13.8	7.6	4.2B	**20.2**	3.2B	11
SELENIUM	MG/KG	NS	NS	4U	0.85U	0.55B	0.88U	1.5B	0.85U	0.92B
SILVER	MG/KG	1	4	1.2U	0.25U	0.14U	0.26U	0.27U	0.25U	0.26U
THALLIUM	MG/KG	NS	NS	7U	1.5U	0.85U	1.6U	1.7U	1.5U	1.6U
ZINC	MG/KG	120	820	**4010J**	**274J**	**308J**	36J	**293J**	31.2J	**273J**

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ft. bgs = Feet below ground surface

Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-6-01 (0-2 ft. bgs) 04/23/2001	SD-N7-7-01 (0-2 ft. bgs) 04/24/2001	SD-O4-1-01 (0-2 ft. bgs) 04/04/2001	SD-O4-10-01 (0-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (0-2 ft. bgs) 04/04/2001	SD-O4-3-01 (0-2 ft. bgs) 04/04/2001	SD-O4-4-01 (0-2 ft. bgs) 04/04/2001
Total Metals										
ANTIMONY	MG/KG	NS	NS	0.65UJ	1.5UJ	1.1U	0.97U	1.6U	1.8U	1.4U
ARSENIC	MG/KG	6	33	4.4	3.3	2.3	1.1B	4.9	**7.6**	4.3
BERYLLIUM	MG/KG	NS	NS	0.58	1B	1	0.41B	1.5	0.92B	1.1B
CADMIUM	MG/KG	0.6	10	0.055U	0.12U	0.18B	0.082U	**0.73B**	0.35B	0.21B
CHROMIUM, TOTAL	MG/KG	26	110	13.2	13.2	11.2	15.1	20.5	15.7	17.1
COPPER	MG/KG	16	110	12.8N*	**18**	**21.5**	4.9U	**65.6**	**67.3**	**47.9**
LEAD	MG/KG	31	250	14.3*	**34.9J**	19.2*	14.2B*	**60***	**54.6***	28.6*
MERCURY	MG/KG	0.2	2	0.044B	0.14B	0.057BN	0.064BN	0.14BN	0.082BN	0.049BN
NICKEL	MG/KG	16	75	8.6	9.1B	7.3B	6.3B	12.9	12.4B	11B
SELENIUM	MG/KG	NS	NS	0.92B	1.1U	0.94B	0.72U	1.9B	1.4B	1.1U
SILVER	MG/KG	1	4	0.14U	0.32U	0.23U	0.21U	0.35U	0.39U	0.31U
THALLIUM	MG/KG	NS	NS	0.85U	1.9U	1.4U	1.3U	2.1U	2.3U	1.9U
ZINC	MG/KG	120	820	49.1*	71J	57.8N	26.5N	**127N**	116N	96.4N

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Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-5-01 (0-2 ft. bgs) 04/04/2001	SD-O4-6-01 (0-2 ft. bgs) 04/04/2001	SD-O4-7-01 (0-2 ft. bgs) 04/09/2001	SD-O4-8-01 (0-2 ft. bgs) 04/09/2001	SD-O4-9-01 (0-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0-2 ft. bgs) 04/06/2001	SD-O5-2-01 (0-2 ft. bgs) 04/09/2001
Total Metals										
ANTIMONY	MG/KG	NS	NS	1U	1.7U	2.2UJ	3.7UJ	1.1U	1.1UJ	1.2UJ
ARSENIC	MG/KG	6	33	**9.2**	2.2B	1.7B	2.8B	1.8	2.2	1.2B
BERYLLIUM	MG/KG	NS	NS	0.87	0.63B	0.91B	0.65B	0.57B	1.1	0.49B
CADMIUM	MG/KG	0.6	10	0.087U	0.24B	0.38B	0.31U	0.09U	**0.61B**	0.14B
CHROMIUM, TOTAL	MG/KG	26	110	23.9	9.7B	8B	6.3B	22.2	**33.3**	8.2
COPPER	MG/KG	16	110	**23.5**	**16.1**	**30.7**	**26.5**	10.3	15.1	7.8
LEAD	MG/KG	31	250	15B*	26.5*	20.2BN	**65.7N**	23.2*	24.3	29N
MERCURY	MG/KG	0.2	2	0.018BN	0.052BN	0.16B*	**0.24B***	0.065BN	0.038B	0.071B*
NICKEL	MG/KG	16	75	13.8	**21.4**	7.7B	6.9B	8.8	**17.7E**	3.7B
SELENIUM	MG/KG	NS	NS	0.76U	1.2U	1.6U	2.7U	0.79U	0.82U	0.86U
SILVER	MG/KG	1	4	0.22U	0.36U	0.48U	0.8U	0.23U	0.24U	0.25U
THALLIUM	MG/KG	NS	NS	1.3U	2.2U	2.9U	4.8U	1.4U	1.5U	1.5U
ZINC	MG/KG	120	820	107N	30.6N	35.3	53.9B	42.7N	75.8	24.8

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ft. bgs = Feet below ground surface

Table 5-100

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - Total Metals
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-P4-1-01 (0-2 ft. bgs) 04/23/2001	SD-P4-2-01 (0-1 ft. bgs) 04/23/2001	SD-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0-1 ft. bgs) 04/23/2001
Total Metals							
ANTIMONY	MG/KG	NS	NS	0.65UJ	0.65UJ	0.65UJ	0.64UJ
ARSENIC	MG/KG	6	33	2.8	1.4	1.1	0.64B
BERYLLIUM	MG/KG	NS	NS	0.43B	0.43B	0.12B	0.19B
CADMIUM	MG/KG	0.6	10	0.055U	0.13B	0.15B	0.096B
CHROMIUM, TOTAL	MG/KG	26	110	8.6	4.5	2B	3.1B
COPPER	MG/KG	16	110	6.1N*	6N*	4.8N*	3.6BN*
LEAD	MG/KG	31	250	23.3*	**34.1***	20.2*	14.6*
MERCURY	MG/KG	0.2	2	0.04B	0.1	0.046B	0.034B
NICKEL	MG/KG	16	75	5	3.1B	1.7B	1.8B
SELENIUM	MG/KG	NS	NS	0.84B	0.88B	0.84B	0.47U
SILVER	MG/KG	1	4	0.14U	0.14B	0.14U	0.14U
THALLIUM	MG/KG	NS	NS	0.85U	0.85U	0.85U	0.83U
ZINC	MG/KG	120	820	65*	29.7*	10.6*	11.7*

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NS = No Standard

R = Rejected based on data validation

ft. bgs = Feet below ground surface

Table 5-101

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0-2 ft. bgs) 05/02/2001	SD-D11-2-01 (0-2 ft. bgs) 05/02/2001	SD-H5-1-01 (0-2 ft. bgs) 04/20/2001	SD-K11-1-01 (0-2 ft. bgs) 04/19/2001	SD-K4-1-01 (0-2 ft. bgs) 04/24/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
1,3-DINITROBENZENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
2,4-DINITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
2-NITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
3-NITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
4-NITROTOLUENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	130U	210U	150U	140U	100U
NITROBENZENE	UG/KG	NS	NS	130U	210U	150U	140U	100U
NITROCELLULOSE	MG/KG	NS	NS	79UJ	130UJ	90U	82U	60U
NITROGLYCERIN	UG/KG	NS	NS	2600U	4200U	3000U	2700U	2000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	130U	210U	150U	140U	100U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2600U	4200U	3000U	2700U	2000U
PERCHLORATE	MG/KG	NS	NS	NR	NR	NR	NR	NR
TETRYL	UG/KG	NS	NS	130U	210U	150U	140U	100U

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ft. bgs = Feet below ground surface

Table 5-101

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-1-01 (0-2 ft. bgs) 04/24/2001	SD-K5-3-01 (0-4 ft. bgs) 04/26/2001	SD-K5-4-01 (0-4 ft. bgs) 04/26/2001	SD-M7-2-01 (0-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (0-2 ft. bgs) 04/24/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	290U
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
1,3-DINITROBENZENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	290U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
2,4-DINITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
2-NITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
3-NITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
4-NITROTOLUENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	100U	260U	830U	100U	290U
NITROBENZENE	UG/KG	NS	NS	100U	260U	830U	100U	290U
NITROCELLULOSE	MG/KG	NS	NS	60U	160U	500U	60U	180UJ
NITROGLYCERIN	UG/KG	NS	NS	2000U	5100U	17000U	2000U	9000J
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	100U	260U	830U	100U	400J
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	5100U	17000U	2000U	5900U
PERCHLORATE	MG/KG	NS	NS	NR	0.359U	0.359U	NR	NR
TETRYL	UG/KG	NS	NS	100U	260U	830U	100U	290U

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Bold = Indicates Concentration Exceeds FSSG LEL or SEL

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

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ft. bgs = Feet below ground surface

Table 5-101

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-2-01 (0-2 ft. bgs) 04/24/2001	SD-N7-3-01 (0-2 ft. bgs) 04/24/2001	SD-N7-4-01 (0-2 ft. bgs) 04/24/2001	SD-N7-5-01 (0-2 ft. bgs) 04/24/2001	SD-N7-6-01 (0-2 ft. bgs) 04/23/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
1,3-DINITROBENZENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
2,4-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
2-NITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
3-NITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
4-NITROTOLUENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	100U	100U	100U	100U	140U
NITROBENZENE	UG/KG	NS	NS	100U	100U	100U	100U	140U
NITROCELLULOSE	MG/KG	NS	NS	60U	60U	60U	60U	83U
NITROGLYCERIN	UG/KG	NS	NS	2000U	2000U	2000U	2000U	2800U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	100U	100U	100U	100U	140U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	2000U	2000U	2000U	2800U
PERCHLORATE	MG/KG	NS	NS	NR	NR	NR	NR	NR
TETRYL	UG/KG	NS	NS	100U	100U	100U	100U	140U

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ft. bgs = Feet below ground surface

Table 5-101

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-7-01 (0-2 ft. bgs) 04/24/2001	SD-O4-1-01 (0-2 ft. bgs) 04/04/2001	SD-O4-10-01 (0-1.5 ft. bgs) 04/06/2001	SD-O4-2-01 (0-2 ft. bgs) 04/04/2001	SD-O4-3-01 (0-2 ft. bgs) 04/04/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
1,3-DINITROBENZENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
2,4-DINITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
2-NITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
3-NITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
4-NITROTOLUENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	100U	170U	150U	260U	280U
NITROBENZENE	UG/KG	NS	NS	100U	170U	150U	260U	280U
NITROCELLULOSE	MG/KG	NS	NS	60U	100U	90U	150U	170U
NITROGLYCERIN	UG/KG	NS	NS	2000U	3400UJ	3000U	5100U	5500U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	100U	170U	150U	260U	280U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	2000U	3400U	3000U	5100U	5500U
PERCHLORATE	MG/KG	NS	NS	NR	NR	NR	NR	NR
TETRYL	UG/KG	NS	NS	100U	170U	150U	260U	280U

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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Table 5-101

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-4-01 (0-2 ft. bgs) 04/04/2001	SD-O4-5-01 (0-2 ft. bgs) 04/04/2001	SD-O4-6-01 (0-2 ft. bgs) 04/04/2001	SD-O4-7-01 (0-2 ft. bgs) 04/09/2001	SD-O4-8-01 (0-2 ft. bgs) 04/09/2001
Energetic and Explosive Compounds								
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	340U	570U
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
1,3-DINITROBENZENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR	340U	570U
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
2,4-DINITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
2,6-DINITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
2-NITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
3-NITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
4-NITROTOLUENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	220U	160U	260U	340U	570U
NITROBENZENE	UG/KG	NS	NS	220U	160U	260U	340U	570U
NITROCELLULOSE	MG/KG	NS	NS	130U	96U	150U	200U	340U
NITROGLYCERIN	UG/KG	NS	NS	4500U	3200U	5100U	6800U	11000U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	220U	160U	260U	340U	570U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	4500U	3200U	5100U	6800U	11000U
PERCHLORATE	MG/KG	NS	NS	NR	NR	NR	NR	NR
TETRYL	UG/KG	NS	NS	220U	160U	260U	340U	570U

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Table 5-101

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-9-01 (0-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0-2 ft. bgs) 04/06/2001	SD-O5-2-01 (0-2 ft. bgs) 04/09/2001	SD-P4-1-01 (0-2 ft. bgs) 04/23/2001
Energetic and Explosive Compounds							
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	180U	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	170U	170U	180U	190U
1,3-DINITROBENZENE	UG/KG	NS	NS	170U	170U	180U	190U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	180U	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
2,4-DINITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
2,6-DINITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
2-NITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
3-NITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
4-NITROTOLUENE	UG/KG	NS	NS	170U	170U	180U	190U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	170U	170U	180U	190U
NITROBENZENE	UG/KG	NS	NS	170U	170U	180U	190U
NITROCELLULOSE	MG/KG	NS	NS	100U	100U	110U	120U
NITROGLYCERIN	UG/KG	NS	NS	3300U	3500UJ	3600U	3900U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	170U	170U	180U	190U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	3300U	3500U	3600U	3900U
PERCHLORATE	MG/KG	NS	NS	NR	NR	NR	NR
TETRYL	UG/KG	NS	NS	170U	170U	180U	190U

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Table 5-101

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - E and E
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-P4-2-01 (0-1 ft. bgs) 04/23/2001	SD-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0-1 ft. bgs) 04/23/2001
Energetic and Explosive Compounds						
1,2-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR
1,3,5-TRINITROBENZENE	UG/KG	NS	NS	370U	250U	190U
1,3-DINITROBENZENE	UG/KG	NS	NS	370U	250U	190U
1,4-DINITROBENZENE	UG/KG	NS	NS	NR	NR	NR
2,4,6-TRINITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
2,4-DINITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
2,6-DINITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
2-AMINO-4,6-DINITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
2-NITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
3-NITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
4-AMINO-2,6-DINITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
4-NITROTOLUENE	UG/KG	NS	NS	370U	250U	190U
HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE	UG/KG	NS	NS	370U	250U	190U
NITROBENZENE	UG/KG	NS	NS	370U	250U	190U
NITROCELLULOSE	MG/KG	NS	NS	220U	150U	110U
NITROGLYCERIN	UG/KG	NS	NS	7400U	5100U	3700U
OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE	UG/KG	NS	NS	370U	250U	190U
PENTAERYTHRITOL TETRANITRATE	UG/KG	NS	NS	7400U	5100U	3700U
PERCHLORATE	MG/KG	NS	NS	NR	NR	NR
TETRYL	UG/KG	NS	NS	370U	250U	190U

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Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-C11-4-01 (0-2 ft. bgs) 05/02/2001	SD-D11-2-01 (0-2 ft. bgs) 05/02/2001	SD-H5-1-01 (0-2 ft. bgs) 04/20/2001	SD-K11-1-01 (0-2 ft. bgs) 04/19/2001	SD-K4-1-01 (0-2 ft. bgs) 04/24/2001	SD-K5-1-01 (0-2 ft. bgs) 04/24/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	24.4	52.1	33.7	26.8	56.1	42.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	2.2	0.9J	2.5	2.8	2.2	9
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	92.2	86.1	66.4	62.5	99.2	99.3
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.8	99.8	100	100	99.6	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.2	3.9	8.4	9.5	7.8	21.4
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	67.1	49.9	33.1	34.6	88.9	76.9
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	45.5	26.8	23.4	26.6	46.2	57.5
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	20.6	12.3	15.7	18.3	20.3	37.2
SOLIDS, PERCENT	%W/W	NS	NS	NR	NR	NR	NR	NR	NR
TOTAL ORGANIC CARBON	MG/KG	NS	NS	12400	53500	29500	6900	90700J	41400

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R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

J = Value is less thar
N = Flashpoint not o
B = Indicates that th
* = Value obtained f
R = Rejected based
NR = Not Reported
NS = No Standard
ft. bgs = Feet below

Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-K5-3-01 (0-4 ft. bgs) 04/26/2001	SD-K5-4-01 (0-4 ft. bgs) 04/26/2001	SD-M7-2-01 (0-1.5 ft. bgs) 04/24/2001	SD-N7-1-01 (0-2 ft. bgs) 04/24/2001	SD-N7-2-01 (0-2 ft. bgs) 04/24/2001	SD-N7-3-01 (0-2 ft. bgs) 04/24/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	61.5	88	43.9	66.1	46.2	49.2
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	3.3	2.5	2	0.8J	3.6	3.7
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	93.2	79.3	69.2	48.5	91.4	92.9
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.9	95.3	96	97.2	99.9	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	7.9	6.5	5.5	2.7	10	13.4
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	46.7	38	39	21.9	60.3	69.3
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	29.2	22.7	23.7	12.2	43.2	51.2
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	16.3	13.2	12.6	6.7	22.4	31.1
SOLIDS, PERCENT	%W/W	NS	NS	34.9	9.83	NR	NR	NR	NR
TOTAL ORGANIC CARBON	MG/KG	NS	NS	169000	361000	13300	181000UJ	28700	54400

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observed, heated to specific limit

ıe compound was found in the associated blank.

from a 1:5 dilution

on data validation

ground surface

J = Value is less than the practical quanti

N = Flashpoint not observed, heated to sp

B = Indicates that the compound was fou

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-N7-4-01 (0-2 ft. bgs) 04/24/2001	SD-N7-5-01 (0-2 ft. bgs) 04/24/2001	SD-N7-6-01 (0-2 ft. bgs) 04/23/2001	SD-N7-7-01 (0-2 ft. bgs) 04/24/2001	SD-O4-1-01 (0-2 ft. bgs) 04/04/2001	SD-O4-10-01 (0-1.5 ft. bgs) 04/06/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	44.8	45.8	27.7	56.2	41.1	33.7
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	7.1	3.5	8.5	4.9	4.4	2.6
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	98	79.6	99	95.9	93.3	94.1
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	100	100	100	NR	NR
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.8	99.1	100	99.9	NR	NR
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	17.9	8.9	21.3	14	14.9	6.5
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	78.9	48.2	65	66.7	74.9	56.7
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	57.6	30.7	49.5	47.1	59.8	24.6
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	35.4	16.9	35.5	27	35.1	12.8
SOLIDS, PERCENT	%W/W	NS	NS	NR	NR	NR	NR	NR	NR
TOTAL ORGANIC CARBON	MG/KG	NS	NS	48900	40600	31500	52400	52700	42700

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

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nd in the associated blank.

J = Value is less than the practical quantitation limit, but grea

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-2-01 (0-2 ft. bgs) 04/04/2001	SD-O4-3-01 (0-2 ft. bgs) 04/04/2001	SD-O4-4-01 (0-2 ft. bgs) 04/04/2001	SD-O4-5-01 (0-2 ft. bgs) 04/04/2001	SD-O4-6-01 (0-2 ft. bgs) 04/04/2001	SD-O4-7-01 (0-2 ft. bgs) 04/09/2001
General Chemistry									
MOISTURE, PERCENT	%W/W	NS	NS	60.8	63.7	55.1	37.6	61.1	70.6
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.6	2.8	3.4	2	2.6	2.7
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	99.5	79.6	98.1	87.7	91.2	97.3
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	NR	NR	NR	NR	NR	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	NR	NR	NR	NR	NR	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	8	7.6	12	5.9	8.8	7
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	73.9	47.9	73.6	63.8	72.5	44.6
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	52.7	31.4	53.6	41.2	45.6	25.3
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	25	16.7	30	20.3	23	14.5
SOLIDS, PERCENT	%W/W	NS	NS	NR	NR	NR	NR	NR	NR
TOTAL ORGANIC CARBON	MG/KG	NS	NS	193000	45200	189000	20900	87000	298000

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

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E = Indicates that the concentration exceeded the calibration range of the instrument

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J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-O4-8-01 (0-2 ft. bgs) 04/09/2001	SD-O4-9-01 (0-1 ft. bgs) 04/06/2001	SD-O5-1-01 (0-2 ft. bgs) 04/06/2001	SD-O5-2-01 (0-2 ft. bgs) 04/09/2001	SD-P4-1-01 (0-2 ft. bgs) 04/23/2001
General Chemistry								
MOISTURE, PERCENT	%W/W	NS	NS	82.4	39.8	42.1	44	48.5
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	1.5	0.9J	2.5	3.9	2.7
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	86.1	97.4	99.1	98.9	94.7
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	100	NR	NR	100	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	99.2	NR	NR	100	99.7
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	3.6	3.7	8.3	12.7	8.3
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	23.2	54.9	61.5	79.2	62.6
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	13.1	21.1	39.1	59.8	34.7
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	7.3	10	19.8	30.6	18.5
SOLIDS, PERCENT	%W/W	NS	NS	NR	NR	NR	NR	NR
TOTAL ORGANIC CARBON	MG/KG	NS	NS	556000	39000	87900	54000	136000

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 5-102

Sediment Analytical Results - Miscellaneous Ponds Drainage System - Ponds - General Chemistry
SW/SD - SI
Kenvil Works Facility, New Jersey

	Units	LEL	SEL	SD-P4-2-01 (0-1 ft. bgs) 04/23/2001	SD-Q4-1-01 (0-1 ft. bgs) 04/23/2001	SD-R4-1-01 (0-1 ft. bgs) 04/23/2001
General Chemistry						
MOISTURE, PERCENT	%W/W	NS	NS	72.9	60.6	46.1
SIEVE NO. 200, PERCENT PASSING	% PASSING	NS	NS	7.2	2.5	11
SIEVE NO. 4, PERCENT PASSING	% PASSING	NS	NS	96	92.2	92.7
Sieve, 1.5 inch, Percent Passing	% PASSING	NS	NS	98.7	99.6	100
Sieve, 3/4 inch, Percent Passing	% PASSING	NS	NS	97.7	99.5	100
SIEVE, NO. 100, PERCENT PASSING	% PASSING	NS	NS	18.6	7.9	24
SIEVE, NO. 16, PERCENT PASSING	% PASSING	NS	NS	79.5	59.9	72.9
SIEVE, NO. 30, PERCENT PASSING	% PASSING	NS	NS	59.1	34.6	58
SIEVE, NO. 50, PERCENT PASSING	% PASSING	NS	NS	39.3	19.8	40.3
SOLIDS, PERCENT	%W/W	NS	NS	NR	NR	NR
TOTAL ORGANIC CARBON	MG/KG	NS	NS	205000	176000	83700

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

Bold = Indicates Concentration Exceeds FSSG LEL or SEL

U = Indicates that the compound was analyzed for but not detected, number indicates the pratical quantitation limit

E = Indicates that the concentration exceeded the calibration range of the instrument

J = Value is less than the practical quantitation limit, but greater than zero

N = Flashpoint not observed, heated to specific limit

B = Indicates that the compound was found in the associated blank.

* = Value obtained from a 1:5 dilution

R = Rejected based on data validation

NR = Not Reported

NS = No Standard

ft. bgs = Feet below ground surface

Table 6-1

Site-Wide Surface Water Sample Locations Requiring Furthur Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	Human Health SWQC Exceedance	Acute Aquatic Life SWQC Exceedance	Chronic Aquatic Life SWQC Exceedance
Western Drainage System	SW-A15-1-01	Metals	No Exceedance	No Exceedance
		VOCs		
	SW-A15-2-01	Metals	No Exceedance	No Exceedance
	SW-A15-3-01	VOCs	No Exceedance	No Exceedance
	SW-B14-2-01	Metals	No Exceedance	No Exceedance
		VOCs		
	SW-B15-1-01	Metals	No Exceedance	No Exceedance
	SW-B15-2-01	VOCs	No Exceedance	No Exceedance
	SW-D14-3-01	Metals	No Exceedance	No Exceedance
	SW-D14-4-01	Metals	No Exceedance	No Exceedance
	SW-D14-5-01	Metals	No Exceedance	No Exceedance
	SW-D15-1-01	Metals	No Exceedance	No Exceedance
	SW-E14-3-01	Metals	No Exceedance	No Exceedance
	SW-E15-2-01	Metals	No Exceedance	No Exceedance
		VOCs		
	SW-E15-2-01	Metals	No Exceedance	No Exceedance
	SW-E15-3-01	Metals	No Exceedance	No Exceedance
		SVOCs		
	SW-E16-1-01	Metals	No Exceedance	No Exceedance

Table 6-1

Site-Wide Surface Water Sample Locations Requiring Furthur Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	Human Health SWQC Exceedance	Acute Aquatic Life SWQC Exceedance	Chronic Aquatic Life SWQC Exceedance
Central Drainage System	SW-C12-1-01	Metals	No Exceedance	No Exceedance
	SW-C12-2-01	Metals	No Exceedance	No Exceedance
		Metals		
	SW-D11-1-01	E&E	No Exceedance	No Exceedance
	SW-D12-2-01	Metals	No Exceedance	No Exceedance
	SW-D12-4-01	Metals	No Exceedance	No Exceedance
		SVOCs		
	SW-D13-2-01	Metals	Metals	No Exceedance
	SW-D13-4-01	SVOCs	No Exceedance	No Exceedance
	SW-D13-5-01	No Exceedance	No Exceedance	Metals
	SW-D14-1-01	Metals	No Exceedance	No Exceedance
	SW-E11-3-01	Metals	No Exceedance	No Exceedance
	SW-E12-3-01	Metals	No Exceedance	No Exceedance
	SW-E14-2-01	Metals	No Exceedance	No Exceedance
	SW-F10-1-01	No Exceedance	Metals	Metals
	SW-F11-1-01	Metals	No Exceedance	No Exceedance
Eastern Drainage System	SW-F14-1-01	No Exceedance	No Exceedance	Metals
	SW-G12-1-01	Metals	No Exceedance	No Exceedance
	SW-G12-3-01	Metals	No Exceedance	No Exceedance
	SW-H11-1-01	Metals	No Exceedance	No Exceedance
	SW-H12-1-01	Metals	No Exceedance	No Exceedance
	SW-I11-1-01	Metals	No Exceedance	No Exceedance

Table 6-1

Site-Wide Surface Water Sample Locations Requiring Furthur Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	Human Health SWQC Exceedance	Acute Aquatic Life SWQC Exceedance	Chronic Aquatic Life SWQC Exceedance
Duck Pond and Tributaries Drainage System	SW-J5-2-01	Metals	No Exceedance	No Exceedance
	SW-M6-3-01	SVOCs	No Exceedance	No Exceedance
	SW-N5-4-01	Metals	No Exceedance	Metals
Miscellaneous Ponds Drainage System	SW-K5-3-01	No Exceedance	Metals	Metals
	SW-K5-4-01	No Exceedance	Metals	Metals
	SW-N7-1-01	Metals	No Exceedance	No Exceedance
	SW-O4-1-01	No Exceedance	Metals	Metals
	SW-O5-1-01	No Exceedance	No Exceedance	Metals

SWQC = Surface Water Quality Criteria. SWQC values derived from New Jersey Department of Environmental Protection (NJDEP) Surface Water Quality Criteria as specified in N.J.A.C. 7:9B and from the United States Environmental Protection Agency (USEPA) Code of Federal Regulations (CFR) Title 40 Protection of the Environment Part 131 Water Quality Standards Sub Part D (40 CFR 131.36) Federally Promulgated Water Quality Standards – Toxics Criteria for those states not complying with Clean Water Act Section 303 (C)(2)(B) (EPASWQC).

VOCs = Volatile Organic Constituents

SVOCs = Semi-Volatile Organic Constituents

E&E = Energetic and Explosive Constituents

Table 6-2

Site-Wide Sediment Sample Locations Requiring Further Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	LEL Exceedances	SEL Exceedances
Western Drainage System	SD-A15-2-01	Metals	No Exceedance
	SD-A15-3-01	Metals	No Exceedance
	SD-B13-1-01	Metals	No Exceedance
	SD-B13-2-01	Metals	No Exceedance
	SD-B13-3-01	Metals	Metals
	SD-B13-4-01	Metals	No Exceedance
	SD-B14-1-01	Metals	No Exceedance
	SD-B14-2-01	Metals	No Exceedance
	SD-B14-4-01	Metals	SVOCs
	SD-B15-1-01	VOCs	No Exceedance
		Metals	
	SD-B15-2-01	VOCs	No Exceedance
		Metals	
	SD-B16-1-01	SVOCs	SVOCs
		Metals	
	SD-C13-1-01	Metals	No Exceedance
	SD-C14-2-01	Metals	No Exceedance
	SD-C15-1-01	SVOCs	No Exceedance
		Metals	
	SD-C15-2-01	SVOCs	No Exceedance
		Metals	
	SD-D14-3-01	Metals	No Exceedance
	SD-D14-4-01	Metals	Metals
	SD-E14-3-01	Metals	Metals
	SD-E15-1-01	Metals	No Exceedance
	SD-E15-3-01	Metals	No Exceedance
	SD-E16-3-01	SVOCs	SVOCs
		Metals	
Central Drainage System	SD-B8-1-01	SVOCs	No Exceedance
		Metals	
	SD-C10-1-01	Metals	Metals
	SD-C10-2-01	Metals	No Exceedance
	SD-C10-3-01	SVOCs	Metals
		Metals	

Table 6-2

Site-Wide Sediment Sample Locations Requiring Further Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	LEL Exceedances	SEL Exceedances
Central Drainage System cont'd	SD-C10-4-01	Metals	Metals
	SD-C11-1-01	Metals	Metals
	SD-C11-2-01	SVOCs	Metals
		Metals	
	SD-C11-3-01	Metals	Metals
	SD-C12-1-01	SVOCs	SVOCs
		Metals	Metals
	SD-C12-2-01	Metals	No Exceedance
	SD-C9-1-01	Metals	No Exceedance
	SD-D10-1-01	SVOCs	SVOCs
		Metals	
	SD-D11-1-01	Metals	No Exceedance
	SD-D12-1-01	Metals	No Exceedance
	SD-D12-2-01	SVOCs	SVOCs
		Metals	
	SD-D12-3-01	Metals	Metals
	SD-D12-4-01	SVOCs	Metals
		Metals	
	SD-D13-1-01	SVOCs	Metals
		Metals	
	SD-D13-2-01	Metals	No Exceedance
	SD-D13-3-01	Metals	Metals
	SD-D13-4-01	SVOCs	Metals
		Metals	
	SD-D13-5-01	SVOCs	SVOCs
		Metals	
	SD-D13-6-01	Metals	No Exceedance
	SD-D14-1-01	Metals	Metals
	SD-D14-2-01	Metals	Metals
	SD-E10-1-01	Metals	Metals
	SD-E11-1-01	SVOCs	No Exceedance
		Metals	
	SD-E11-3-01	Metals	No Exceedance

Table 6-2

Site-Wide Sediment Sample Locations Requiring Further Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	LEL Exceedances	SEL Exceedances
Central Drainage System cont'd	SD-E11-4-01	SVOCs	SVOCs
		Metals	Metals
	SD-E12-1-01	Metals	No Exceedance
	SD-E12-2-01	SVOCs	SVOCs
		Metals	
	SD-E12-3-01	Metals	No Exceedance
	SD-E14-1-01	SVOCs	Metals
		Metals	
	SD-E14-2-01	Metals	No Exceedance
	SD-F10-1-01	Metals	No Exceedance
	SD-F10-2-01	Metals	Metals
	SD-F11-1-01	SVOCs	Metals
		Metals	
	SD-F11-2-01	Metals	No Exceedance
	SD-F12-1-01	Metals	No Exceedance
	SD-F8-1-01	Metals	No Exceedance
	SD-F8-2-01	Metals	No Exceedance
	SD-F9-1-01	SVOCs	SVOCs
		Metals	Metals
	SD-F9-2-01	Metals	No Exceedance
	SD-F13-1-01	SVOCs	SVOCs
		Metals	
	SD-F14-1-01	Metals	No Exceedance
	SD-F14-2-01	SVOCs	SVOCs
		Metals	
	SD-G12-1-01	Metals	Metals

Table 6-2

Site-Wide Sediment Sample Locations Requiring Further Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	LEL Exceedances	SEL Exceedances
Eastern Drainage System	SD-G12-2-01	SVOCs Metals	SVOCs
	SD-G12-3-01	SVOCs Metals	Metals
	SD-H11-1-01	SVOCs Metals	SVOCs Metals
	SD-H11-2-01	Metals	No Exceedance
	SD-H12-1-01	Metals	Metals
	SD-H12-2-01	Metals	No Exceedance
	SD-H12-3-01	Metals	Metals
	SD-H6-1-01	SVOCs Metals	SVOCs
	SD-H7-1-01	Metals	No Exceedance
	SD-H7-2-01	SVOCs Metals	SVOCs
	SD-H8-1-01	SVOCs Metals	SVOCs Metals
	SD-H8-4-01	SVOCs Metals	SVOCs Metals
	SD-H9-1-01	SVOCs Metals	SVOCs Metals
	SD-I10-2-01	SVOCs Metals	SVOCs
	SD-I11-1-01	SVOCs Metals	SVOCs
	SD-I11-2-01	Metals	No Exceedance
	SD-I5-1-01	Metals	No Exceedance
	SD-I5-2-01	Metals	No Exceedance
	SD-I6-1-01	Metals	No Exceedance
	SD-I7-1-01	Metals	No Exceedance
	SD-I8-1-01	Metals	Metals
	SD-J10-1-01	SVOCs Metals	No Exceedance

Table 6-2

Site-Wide Sediment Sample Locations Requiring Further Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	LEL Exceedances	SEL Exceedances
Duck Pond and Tributaries Drainage System	SD-J5-2-01	Metals	No Exceedance
	SD-K5-2-01	Metals	No Exceedance
	SD-L5-1-01	Metals	Metals
	SD-L5-2-01	Metals	Metals
	SD-L5-3-01	SVOCs	Metals
		Metals	
	SD-L6-1-01	Metals	No Exceedance
	SD-M5-1-01	Metals	No Exceedance
	SD-M5-2-01	SVOCs	SVOCs
		Metals	
	SD-M5-3-01	SVOCs	SVOCs
	SD-M7-1-01	SVOCs	Metals
		Metals	
	SD-N5-1-01	Metals	No Exceedance
	SD-N5-2-01	Metals	No Exceedance
	SD-N5-3-01	Metals	No Exceedance
	SD-N5-5-01	Metals	No Exceedance
Miscellaneous Ponds Drainage System	SD-C11-4-01	Metals	Metals
	SD-D11-2-01	Metals	Metals
	SD-H5-1-01	SVOCs	SVOCs
		Metals	
	SD-K11-1-01	SVOCs	SVOCs
	SD-K4-1-01	Metals	No Exceedance
	SD-K5-1-01	Metals	No Exceedance
	SD-K5-3-01	Metals	No Exceedance
	SD-K5-4-01	Metals	Metals
	SD-M7-2-01	Metals	Metals
	SD-N7-1-01	SVOCs	SVOCs
		Metals	
	SD-N7-3-01	Metals	No Exceedance
	SD-N7-4-01	Metals	No Exceedance
	SD-N7-5-01	SVOCs	SVOCs
		Metals	
	SD-N7-6-01	SVOCs	SVOCs

Table 6-2

Site-Wide Sediment Sample Locations Requiring Further Action
SW/SD - SI
Kenvil Works Facility, New Jersey

Drainage System	Sample Location	LEL Exceedances	SEL Exceedances
Miscellaneous Ponds Drainage System cont'd	SD-N7-7-01	Metals	No Exceedance
	SD-O4-1-01	Metals	No Exceedance
	SD-O4-2-01	Metals	No Exceedance
	SD-O4-3-01	Metals	No Exceedance
	SD-O4-4-01	Metals	No Exceedance
	SD-O4-5-01	Metals	No Exceedance
	SD-O4-6-01	Metals	No Exceedance
	SD-O4-7-01	Metals	No Exceedance
	SD-O4-8-01	Metals	No Exceedance
	SD-O5-1-01	Metals	No Exceedance
	SD-P4-2-01	Metals	No Exceedance

LEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Lowest Effects Level (LEL)

SEL = New Jersey Department of Environmental Protection Freshwater Sediment Screening Guidelines (FSSG) Severe Effects Level (SEL)

VOCs = Volatile Organic Constituents

SVOCs = Semi-Volatile Organic Constituents

APPENDIX A
SITE HISTORY

APPENDIX A
SITE HISTORY

1.0 FACILITY DESCRIPTION

The Facility is located on Howard Boulevard, approximately 0.5 miles northwest of the center of Kenvil, in Morris County, New Jersey. Figure A-1 illustrates the location of the site with respect to Roxbury Township. Figure A-2 provides a general layout of the plant divided into 13 former operational areas, including:

1. Trinitrotoluene (TNT) Area
2. Dynamite Area
3. Nitroglycerin (NG) Area
4. Pentaerythritol Tetranitrate (PETN) Area
5. Development Area
6. Diazodinitrophenol (DIAZO) Area
7. Maintenance Area
8. B-Line Area
9. A-Line Area
10. Finishing Area
11. Ammonia Nitrate (AN) Area
12. Storage Area
13. Miscellaneous/Offsite Area

The plant is located approximately 40 miles west of New York City and 30 miles east of the Delaware Water Gap. The site is approximately 13,000 feet long by 5,000 feet wide and occupies approximately 1,200 acres, of which approximately 800 acres were developed for plant use. The remaining 400 acres are undeveloped areas between process units and around the perimeter of the site, which buffer the former active portions of the plant from the surrounding community.

The plant's production areas are centrally located in a relatively flat area with a slight slope extending to Howard Boulevard on the northwest side and a topographic ridge on the southeast side that separates the production area from the Berkshire Valley area. The

property contains several wet areas and has one major pond, known as "Duck Pond", which is approximately 10 acres in size.

The principal process areas at the Facility include the TNT Area, NG Area, Diazo area, A-Line Area, B-Line Area, Dynamite Area, Development Area, and Finishing Area. The material handling areas at the Facility included loading and unloading areas, where raw materials were unloaded and finished product was loaded for shipment by truck, and tank farms where raw and recovered materials were stored.

2.0 FACILITY HISTORY

The Facility dates back to the 1870's when it was opened for the manufacture of dynamite to support the iron ore mining operations in the surrounding area. The Facility was operated by various companies until 1912 when Hercules became the sole owner.

The Facility has produced a variety of explosive and energetic (propellant) (E&E) related products for both military and commercial applications. In the early 1900's, the plant produced trinitrotoluene (TNT) in support of World War I activities, along with other ordnance-related materials. The production of materials for military applications was expanded during World War II to include smokeless powder for both the United States and Great Britain. During the 1980's, the explosives industry began using Ammonium Nitrate/Fuel Oil (ANFO) in many explosive applications. Ammonium Nitrate manufacturing operations were installed and slurry explosive trucks operated out of the Facility. The Facility has also maintained a research and development area and produced special products such as initiating materials, ingredients for medical applications, and materials for actuating devices.

The principal product over the last 20 years has been smokeless powder, which was most recently produced by Alliant Techsystems (Alliant) under a Facility lease agreement. The principal processing areas for smokeless powder includes: the Nitroglycerin (NG) Area, A-Line production area, B-Line production area, and Finishing production area. The Storage Area was used to unload incoming raw materials, and ship finished product by truck. The Development and Maintenance Areas provided support to the Facility and included office

space, plant laboratories, maintenance areas, power houses, mixed acid areas, drum storage areas, the water supply system, a wastewater treatment plant (WWTP), warehouses and other miscellaneous production and support buildings.

In early 1995, Hercules sold the smokeless powder business to Alliant, who operated the Facility until December 31, 1996. Hercules re-acquired control of the Facility on January 1, 1997 and as the property owner, is responsible for the remediation and closure of the Facility for sale or reuse.

3.0 REGIONAL GEOLOGY

The Facility is located in the New Jersey Highlands physiographic province of north central New Jersey. This area is characterized by broad, elevated ridges separated by long, narrow valleys. Areas of higher elevation are underlain by Proterozoic crystalline metamorphic bedrock that has been intricately deformed by folding and faulting. Prominent faults in the vicinity of the site include the Longwood Valley Fault, the Berkshire Valley Fault, and the Picatinny Fault. These faults are the result of several periods of Paleozoic and Mesozoic deformation. Faults and fold axes are generally oriented in a southwest to northeast direction; therefore topographic features such as ridges and valleys are also oriented in a southwest to northeast direction. A layer of colluvium and weathered bedrock, generally less than 10 feet thick, is present on some hillsides in the area. The colluvium is composed of unstratified and unsorted boulders, cobbles, and pebbles of bedrock in an orange-brown, silty-sand matrix. The weathered bedrock ranges from sandy saprolite to a rubble of angular cobbles and boulders.

Bedrock and surficial geologic maps for the vicinity of the site are provided in Figures A-3 and A-4, respectively. Figure A-5 presents a geologic cross section of the region.

3.1 BEDROCK GEOLOGIC UNITS

The Byram Intrusive Suite of the Proterozoic age forms the ridges of Mine Hill southeast of the site and Mount Arlington and Mooney Mountain northwest of the site. The bedrock of the Byram Intrusive Suite predominantly consists of light-colored granite gneisses and gneissoid granites.

The Hardyston Formation and the Leithsville Dolomite of the Cambrian age are present in the subsurface within the valleys between Mine Hill and Mooney Mountain. The Hardyston Formation consists of quartzite and conglomerate. The Leithsville Formation contains dolomite, dolomitic shale, and interbedded sandstone. The Hardyston Formation occurs throughout most of Long Valley and is overlain by bedrock of the Leithsville Formation. These formations are overlain by glacial deposits in the vicinity of the site.

Beds of Silurian age quartzite and conglomerate of the Green Pond Formation form a minor ridge, Green Pond Ridge, which divides Long Valley into two parts in the vicinity of the site. The ridge is present along the southeastern boundary of the plant. The Green Pond Conglomerate is oriented in a southwest to northeast direction and continues in the subsurface beneath the overlying glacial deposits away from the Facility.

Undifferentiated sedimentary rocks of Silurian and Devonian age consisting of shale and sandstone are present north of the site within the Berkshire Valley.

3.2 GLACIAL DEPOSITS

Three Pleistocene age glacial geologic units, known in literature as "valley-fill", are present in the area. They include: a basal fluvial and deltaic sand and gravel unit; a middle lacustrine unit consisting of fine sand, silt, and clay; and an upper outwash deposit consisting of sand and gravel. The top of the basal sand and gravel unit occurs at the Facility at a depth of approximately 200 feet below ground surface (bgs) and is up to 50 feet thick. The middle lacustrine unit occurs at a depth of approximately 50 to 200 feet bgs and is approximately 150 feet thick. The upper outwash unit occurs at the ground surface in the vicinity of the site and is approximately 50 feet thick.

The valley-fill deposits are overlain by terminal moraine deposits in the northeastern portions of the Facility. Terminal moraine deposits, which were formed at the furthest advance of the glacial front, are a distinctive topographic feature extending across northern New Jersey and through the northern portion of the Facility. The terminal moraine deposits are composed of poorly sorted clay and boulders interstratified with well-sorted sand and gravel. Boulders as

large as 10 feet in diameter are reportedly present in the terminal moraine deposits in the vicinity of the Facility (Roux, 1993).

4.0 REGIONAL HYDROGEOLOGY

The occurrence and movement of groundwater in the region varies according to the geologic materials present. In the bedrock geologic units, groundwater occurs principally within fractures, bedding planes, and zones of shearing and faulting. The primary porosity of these rocks is minimal. The availability of water from wells drilled in these bedrock formations is dependent upon the size and frequency of fractures encountered in any particular well. The yield of large-diameter supply wells located within the bedrock formations in Morris County reportedly range from 4 to 400 gallons per minute (gpm) with a median range of 25 to 50 gpm (Roux, 1993). Recharge occurs to these formations by direct infiltration from precipitation. Local ground water flows from the topographic high areas and discharges into the adjacent valleys.

The sand and gravel deposits form the most significant aquifers in the region due to their high porosity. The sand and gravel aquifers occur throughout the valleys in the vicinity of the Facility. The aquifers receive recharge from direct infiltration of precipitation, infiltration from surface water bodies, and from subsurface discharge from adjacent bedrock formations. Discharge occurs to streams in low-lying parts of the valley. Yields of large-diameter wells reportedly range from 20 to 2,000 gpm with a median range between 200 to 500 gpm (Roux, 1993).

Groundwater occurs in the sand and gravel deposits under unconfined conditions throughout large areas, and under confined and semi-confined conditions where bounded by impermeable clays. The sand and gravel valley-fill aquifers are the largest producers of water in the region. Groundwater flow in the sand and gravel aquifers is controlled by the topography and by the locations of the major stream drainage systems. The permeability of the sand and gravel aquifers is greater than that of the surrounding bedrock which act as semi-permeable boundaries. Groundwater generally flows in the direction of the valley and trends either to the northeast or southwest. The ridge composed of quartzite and

conglomerate of the Green Pond Formation divides the valley into two parts, and locally acts as a northeast to southwest boundary to groundwater flow.

5.0 PREVIOUS INVESTIGATIONS SUMMARY

This section summarizes the previous investigations conducted at the Facility, including the Preliminary Assessment (PA) and the Preliminary SI of the TNT Area conducted by Roux Associates (Roux). These investigations were conducted prior to the development of the facility-wide restoration strategy.

5.1 PRELIMINARY ASSESSMENT REPORT

A PA of the Facility was conducted by Roux in December of 1993. The objective of the PA was to provide background information for the Facility and identify areas of potential concern. The activities conducted as part of the PA included:

- File search
- Review of historic plant maps
- Employee interviews
- Interpretation of historic aerial photographs
- Site inspections
- Magnetic Surveys
- Ground Penetrating Radar (GPR) Surveys
- Established the Facility map grid system

The data compiled in the PA Report were reviewed and utilized to guide the development of the facility-wide restoration strategy. However, many AOCs have been identified since the PA report was issued and thus were not included in the report, and further developmental efforts were required to fully identify all of the AOCs at the Facility. Section 1.8 describes the additional activities conducted to augment the facility-wide restoration strategy.

5.2 PRELIMINARY SI OF THE TNT AREA

A preliminary SI was conducted by Roux in the TNT Area of the Facility in the fall of 1997. The objective of the Preliminary TNT SI was to maintain the RA schedule compliance and to

obtain an initial indication of TNT Area constituents of concern. The activities included sampling a number of AOCs within the TNT Area. The data generated during the Preliminary TNT SI was used to modify the Phase I Soils - SI for the TNT Area.

6.0 RECENT INVESTIGATION SUMMARY

This section describes the developmental activities conducted to plan the facility-wide SI effort in support of the ISRA requirements. As a function of the information development process described in the following sections, the number of AOCs increased by approximately 46% over those originally identified and presented in the PA. As agreed with the NJDEP, these additional AOCs, largely comprised of remnant Facility structures obscured by structural degradation and/or soil and vegetation overgrowth, were added to the overall facility-wide SI effort.

6.1 HISTORICAL MAP REVIEW/DIGITIZATION

A historic map and document search was conducted in October 1997 wherein 120 maps were identified and selected as representing the most significant sources of land use history information for the Facility. The purpose of the search was to develop a graphic database which detailed site infrastructure at different phases over the course of the Facility's history. Previously undocumented AOCs of structural and/or environmental significance were identified and categorized. The historic maps were then computer digitized so that the information represented on the maps could easily be electronically manipulated to help create the Facility-wide basemap.

6.2 SITE RECONNAISSANCE/SURVEY

Based on the results of the historic map review, a site reconnaissance was conducted in 3rd quarter of 1998. The purpose of the site reconnaissance was to field-verify Facility AOCs and to survey their locations using global positioning system (GPS) and conventional surveying techniques. Surveyed AOCs were documented via digital photography and log book descriptions, and compiled into a Facility information database compatible with NJDEP Geographic Information System (GIS) requirements.

6.3 BASE MAP DEVELOPMENT

Following the site reconnaissance, a Facility-wide basemap was developed. The basemap was constructed utilizing the various data sets generated during the previous Facility information development phases. The Facility basemap was developed in N.J.A.C. 7:26E required format and is presented in Figure 1-2.

6.4 FACILITY GRID SYSTEM

An alphanumeric grid system was previously developed for the Facility and was utilized to develop a subsequent system to aid in the simplification of sample designation. The original grid is a uniform size of 500 ft by 500 ft with alphabetic designations established along the east-west axis and numeric designations established along the north-south axis. For example groundwater sample 1, located in grid G14, is uniquely designated as GW-G14-1. Section 2.0 provides a detailed discussion of the groundwater sample identification system.

6.5 UNDEVELOPED AREA PRELIMINARY ASSESSMENT/ SITE INVESTIGATION (PA/SI)

A PA/SI was conducted in the outlying portions of the Facility that had never been utilized for manufacturing or support activities conducted at the Facility. The objective of the Undeveloped Area PA/SI was to accelerate through the ISRA closure process the portions of the site that are likely not to have been impacted by historic operations. This investigation utilized both random and biased sampling to identify areas requiring further investigation and potentially remediation as described by Technical Requirements. The results of this investigation identified five isolated areas requiring further investigation. Four of the areas are less than 100-square feet (sq. ft.) and one area approximately 900-sq. ft. The Undeveloped Area PA/SI was submitted to the NJDEP in December 2000, and is currently under review.

6.6 SOILS SITE INVESTIGATION

A facility-wide soils site investigation was performed at the Facility. The primary objective, as described in N.J.A.C. 7:26E-3.3(a), was to determine on a facility-wide basis, and in a

manageable and cost effective manner, if there are any contaminants present within the Facility soils at concentrations exceeding any applicable clean-up standards.

To accomplish the objective of the Soils - SI, Hercules categorized the approximately 1,200 areas of concern (AOCs) into common groups to aid in processing each AOC through the SI process. To categorize the AOCs into common groups, the results of the approximately 1,900 laboratory analyzed samples collected during the Soil – SI field investigation were compared to the NJDEP Residential Direct Contact Soil Clean-up Criteria (RDCSCC), Non-Residential Direct Contact Soil Clean-up Criteria (NRDSCC), and Impact to Groundwater Soil Clean-up Criteria (IGWSCC).

The results of the AOC categorization yielded 517 AOCs recommended for NFA and 694 AOCs requiring FA. Included in the 694 AOCs requiring FA, 34 AOCs were suitable for Single Phase Remediation, 43 AOCs were Reserved for RI, 19 AOCs require confirmation sampling, and one AOC was inadvertently missed during the field investigation. The total number of AOCs investigated, site-wide, during the Soils – SI was 1211 AOCs. The Soils – SI was submitted to the NJDEP in April 2001 and is currently in the comment and response stage with the NJDEP.

6.7 GROUNDWATER SITE INVESTIGATION

A facility-wide groundwater site investigation was performed at the Facility. The primary objective of the GW – SI as described in N.J.A.C. 7:26E-3.3(a) was to determine on a facility-wide basis, and in a manageable and cost effective manner, if there are contaminants present within the Facility groundwater at concentrations exceeding any applicable clean-up standards.

The results of the laboratory analysis performed during the GW – SI field investigation were compared to the applicable NJDEP groundwater cleanup criteria presented in the Groundwater Quality Standards N.J.A.C. 7:9-6. Specifically, the results were compared to the Class – IIA Groundwater Cleanup Criteria (GWQS). Key conclusions drawn from this comparison are:

- There were no significant site-wide plumes identified.

- The occurrence of the metal constituents that exceed the GWQS by less than an order of magnitude are primarily attributed to the highly turbid samples collected using Geoprobe® sampling techniques and is likely not representative of actual groundwater quality. The detected concentrations of metal constituents that exceed the GWQS by more than an order of magnitude may require additional investigation.

- The detected concentrations of PCE, TCE, and cis-1,2-Dichloroethylene exceeding the GWQS in the Miscellaneous/Offsite Area are not attributed to historic Facility operations. A large regional chlorinated solvent plume underlies Kenvil and the southern portions of the Facility. The chlorinated solvent plume is derived from off-site sources and has not been attributed to historic operations performed at the Facility. The NJDEP (Robert Fowler/Robert Beretsky) conducted a groundwater investigation of the southern portion of the Facility in March 1999 and concluded the Facility was not a source area to the regional plume.

- The detected concentrations of PCE and TCE exceeding the GWQS within the Maintenance, B-Line, Finishing, and Storage Areas are likely a result of historic manufacturing operations. The number of detections and their respective concentrations indicate that the presence of PCE and TCE is a localized situation. Down-gradient groundwater sample analysis determined the PCE and TCE are contained within the former operational areas of the Facility.

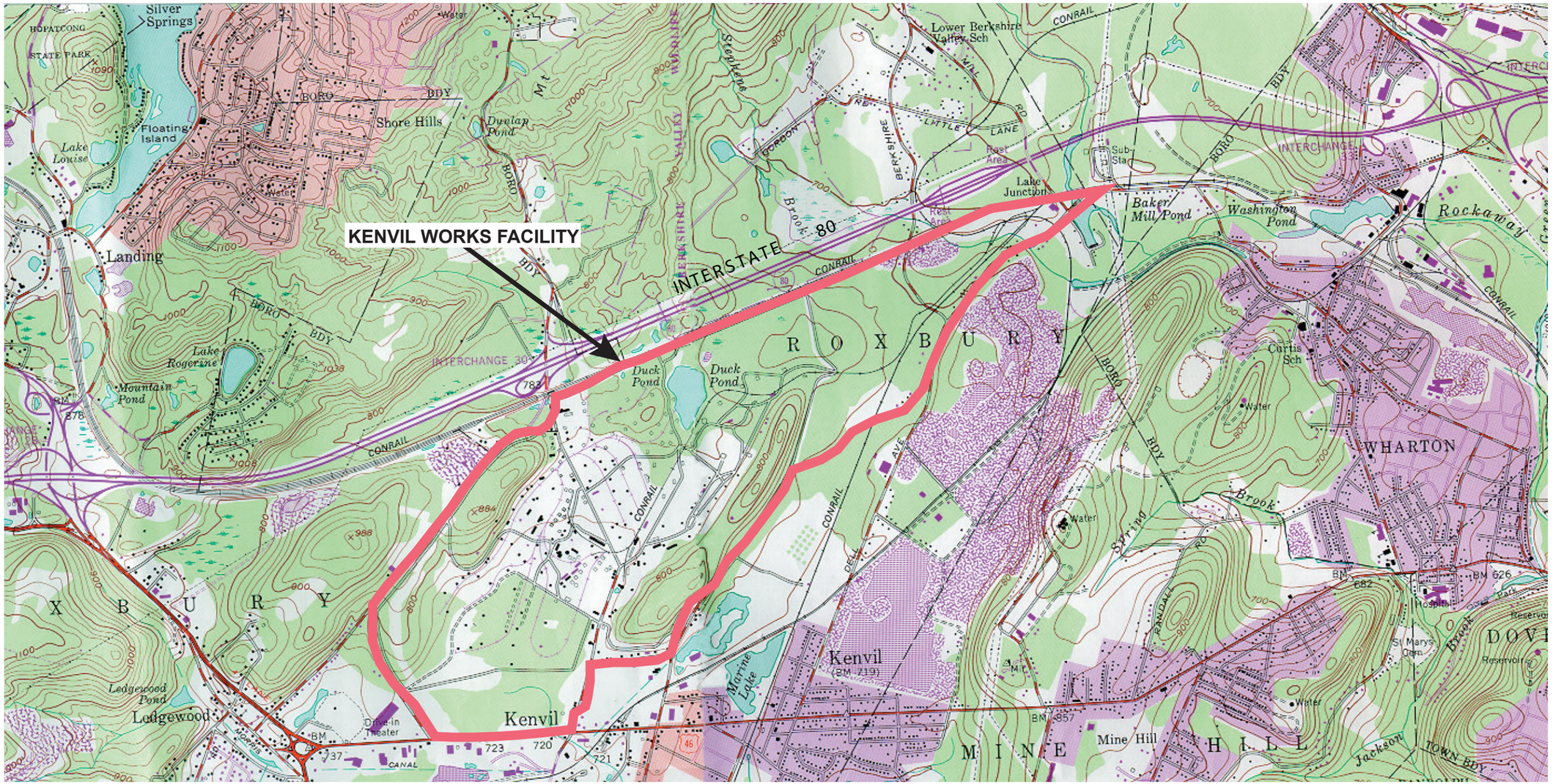
- The detected concentrations of Bis(2-ethylhexyl) phthalate exceeding the GWQS is likely a result of historic manufacturing operations.

- NG was not detected at concentrations that would likely indicate the presence of a potential free phase source in the former NG manufacturing /handling areas.

APPENDIX A TABLE OF CONTENTS

Figure No.

A-1 Facility Location Map
A-2 Former Operational Areas Map
A-3 Bedrock Geologic Map
A-4 Bedrock Surficial Geologic Map
A-5 Regional Geologic Cross section



NEW JERSEY

Source: Base map developed from the Stanhope, New Jersey 7.5 minute U.S.G.S. Topographic Quadrangle Map, dated 1954, photorevised 1981.

SCALE IN FEET

0 2000 4000

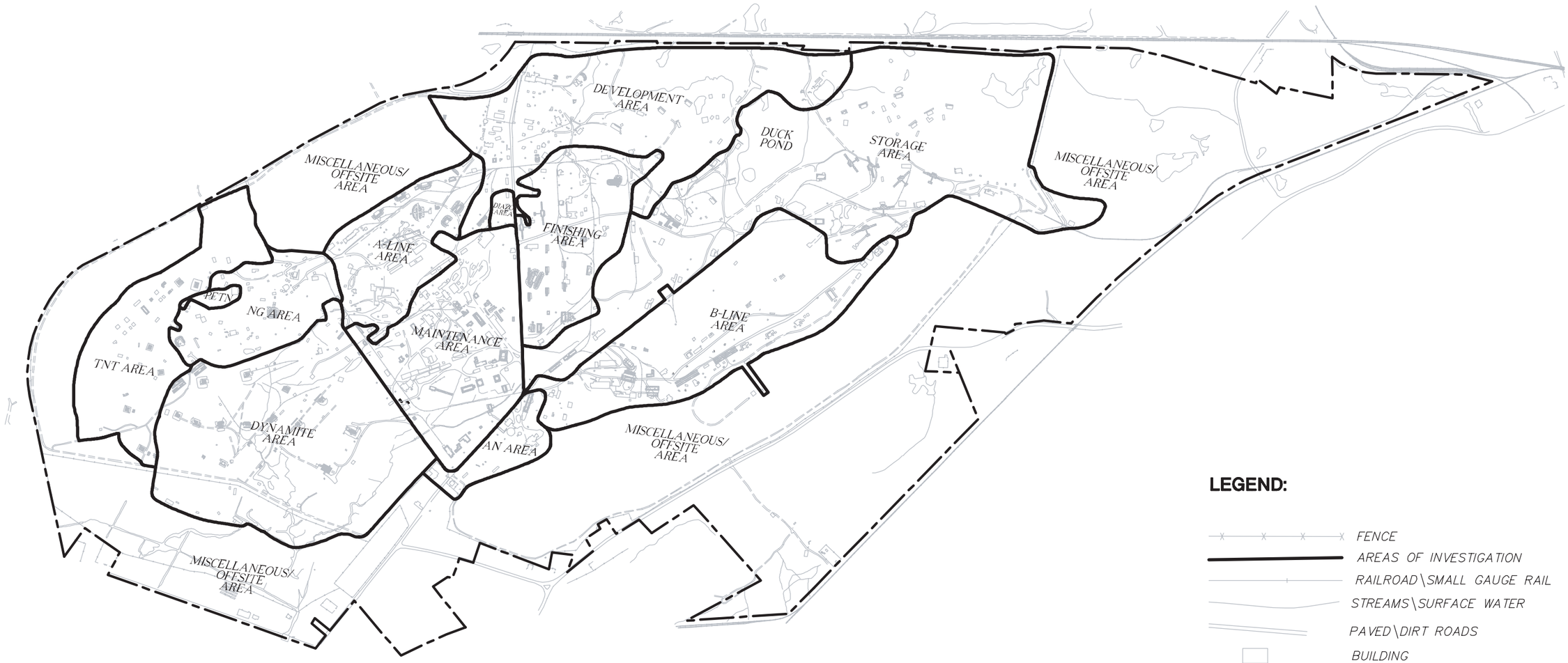
north

SURFACE WATER/SEDIMENT SI REPORT
HERCULES INCORPORATED
KENVIL WORKS FACILITY

FACILITY LOCATION MAP

MWH

FIGURE A-1



LEGEND:

- FENCE
- AREAS OF INVESTIGATION
- RAILROAD\SMALL GAUGE RAIL
- STREAMS\SURFACE WATER
- PAVED\DIRT ROADS
- BUILDING

SOURCE:

1. SITE RECONNAISSANCE AND GPS SURVEY CONDUCTED BY MONTGOMERY WATSON FROM MARCH TO JUNE 1998. SURVEY CONTROL PROVIDED BY PAUL J. EMILIUS JR., GEOD CORPORATION, N.J. LICENSE NO. 37186.

2. PLANIMETRIC MAP PREPARED BY ATLANTIS AERIAL SURVEY COMPANY, INC. FROM PHOTOGRAPHY DATED 3/18/95. GROUND CONTROL PROVIDED BY EDWARD F. SECCO P.L.S. N.J. LICENSE NO. 18607.

3. KENVIL WORKS FACILITY SITE HISTORICAL MAPS PROVIDED BY HERCULES INC.

NOTES:

1. THIS FILE IS IN THE NORTH AMERICAN DATUM 1983 NEW JERSEY STATE PLANE COORDINATE SYSTEM.

2. THE BOUNDARY LINE AS DELINEATED IS APPROXIMATE AND HAS BEEN DIGITIZED FROM A MAP ENTITLED "HERCULES INCORPORATED, KENVIL PLANT PROPERTY MAP, PLANT 080, ACCOUNT 9500, CLASSIFICATION 21045, FILE CODE 5WE REVISION 1" REVISED TO JUNE 11, 1970 PROVIDED BY REPRESENTATIVES OF HERCULES, INC., AND THE TAX MAP OF THE TOWNSHIP OF ROXBURY AND NOT FROM AN ACTUAL FIELD SURVEY OR WITH THE BENEFIT OF A TITLE SEARCH.

north

0 1000 2000

SCALE IN FEET

SURFACE WATER/SEDIMENT SI REPORT
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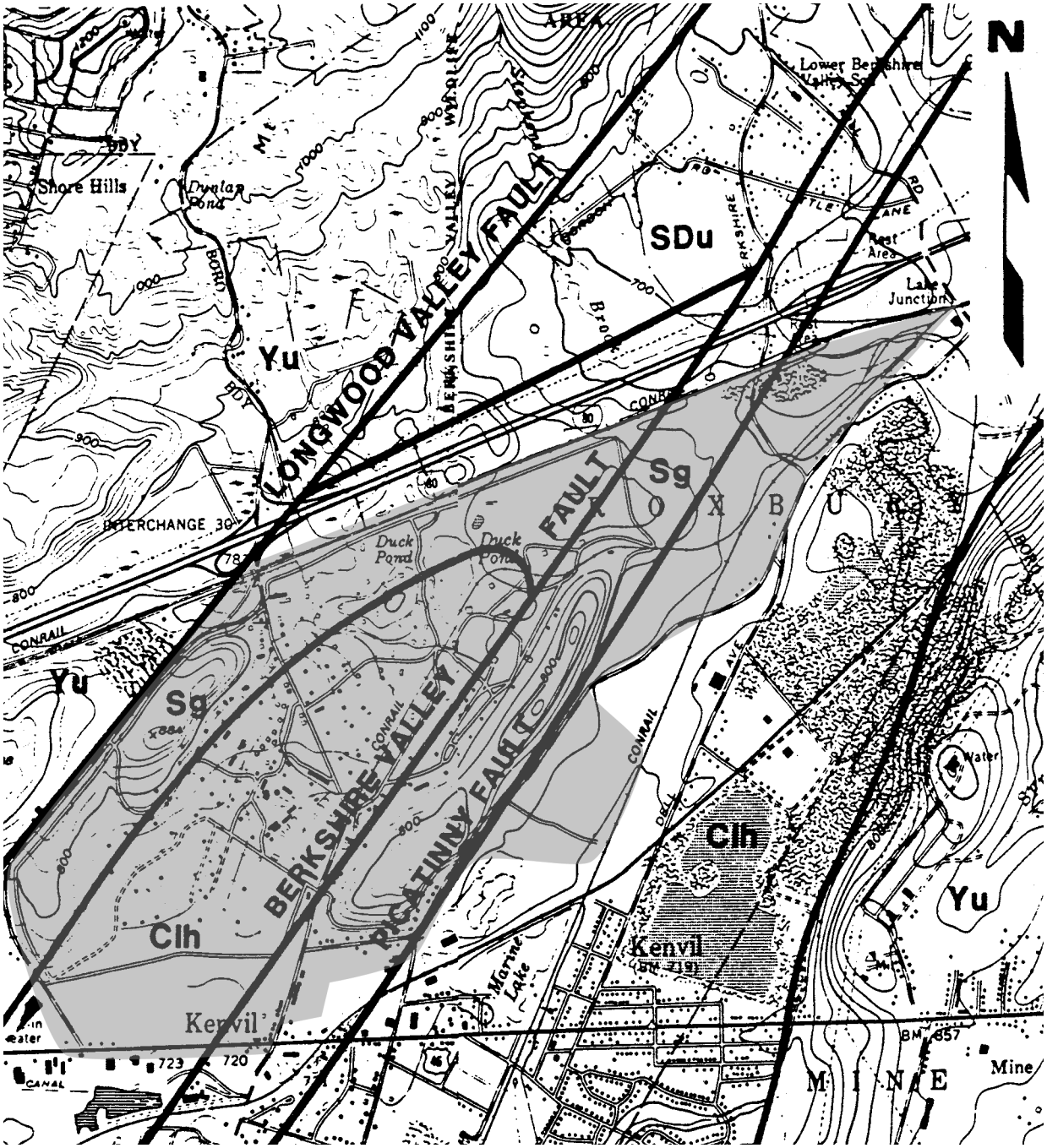
FORMER OPERATIONAL AREAS MAP

MWH

FIGURE A-2

S:\IND PROJECTS\Hercules-1267015\Kenvil\GW SI\GW SI REPORT FINAL\FIGURES\GWSI FIN-08.DWG



LEGEND

SDu	UNDIFFERENTIATED SILURIAN AND DEVONIAN UNITS
Sg	GREEN POND FORMATION
Clh	LEITHSVILLE AND HARDYSTON FORMATION
Yu	PROTEROZOIC BEDROCK UNITS

Shaded Area = Kenvil Works Facility

GEOLOGY ADAPTED FROM HERMAN ET AL (1991)

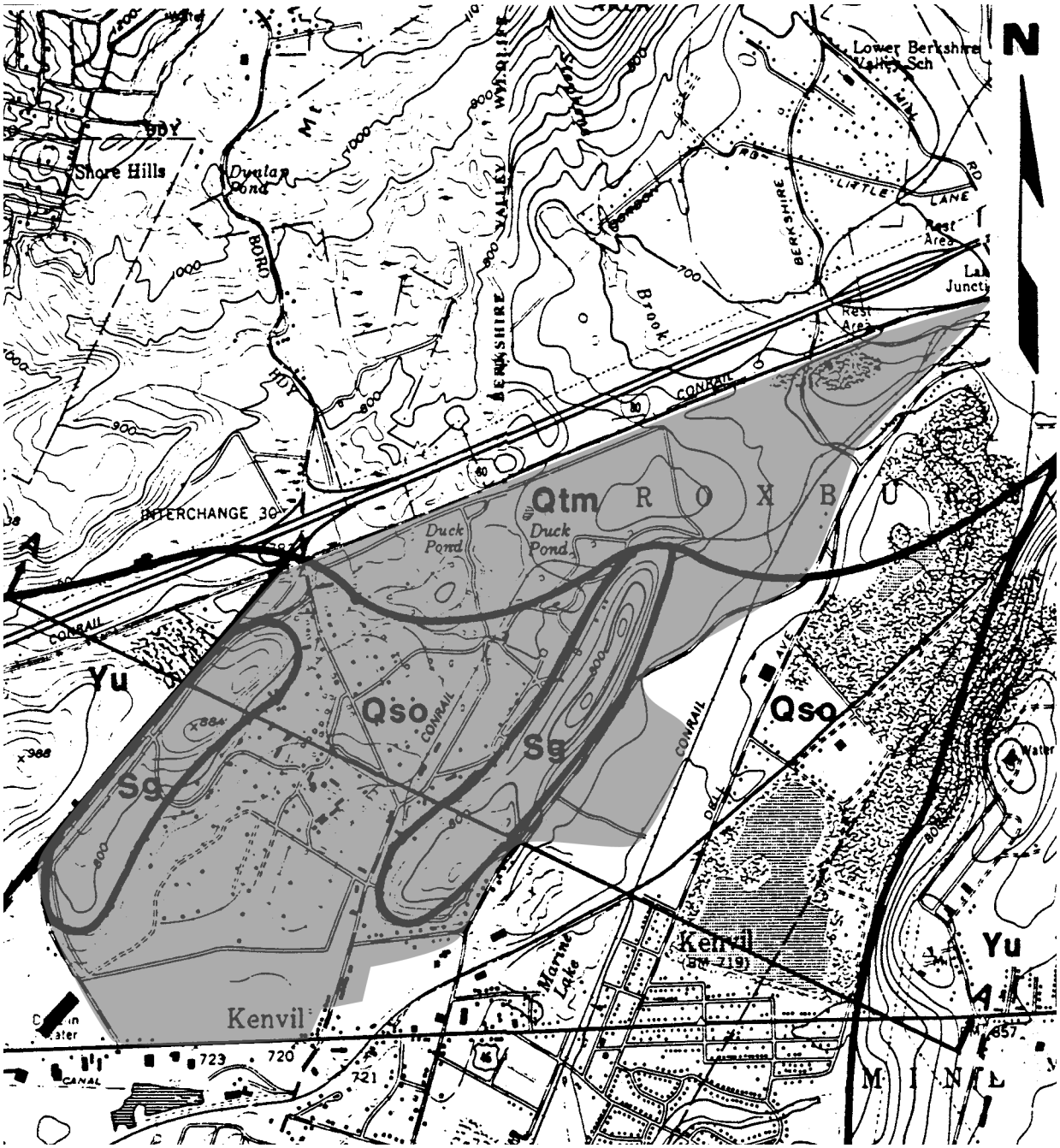
Source: U.S.G.S. Stanhope, NJ, Quadrangle 1954 7.5. Minutes Series (Topographic). Photorevised 1981, and U.S.G.S. Dover, NJ, Quadrangle 1954 7.5 Minute Series (Topographic). Photorevised 1981.

SURFACE WATER/SEDIMENT SI REPORT
HERCULES INCORPORATED
KENVIL WORKS FACILITY

BEDROCK GEOLOGIC MAP

MWH

FIGURE A-3



LEGEND

Qtm	TERMINAL MORAINE DEPOSITS
Qso	UPPER SAND AND GRAVEL OUTWASH
Sg	GREEN POND FORMATION
Yu	PROTEROZOIC BEDROCK UNITS

Shaded Area = Kenvil Works Facility

GEOLOGY ADAPTED FROM HERMAN ET AL (1991) AND STANFORD (1989)

Source: U.S.G.S. Stanhope, NJ, Quadrangle 1954 7.5. Minutes Series (Topographic). Photorevised 1981, and U.S.G.S. Dover, NJ, Quadrangle 1954 7.5 Minute Series (Topographic). Photorevised 1981.

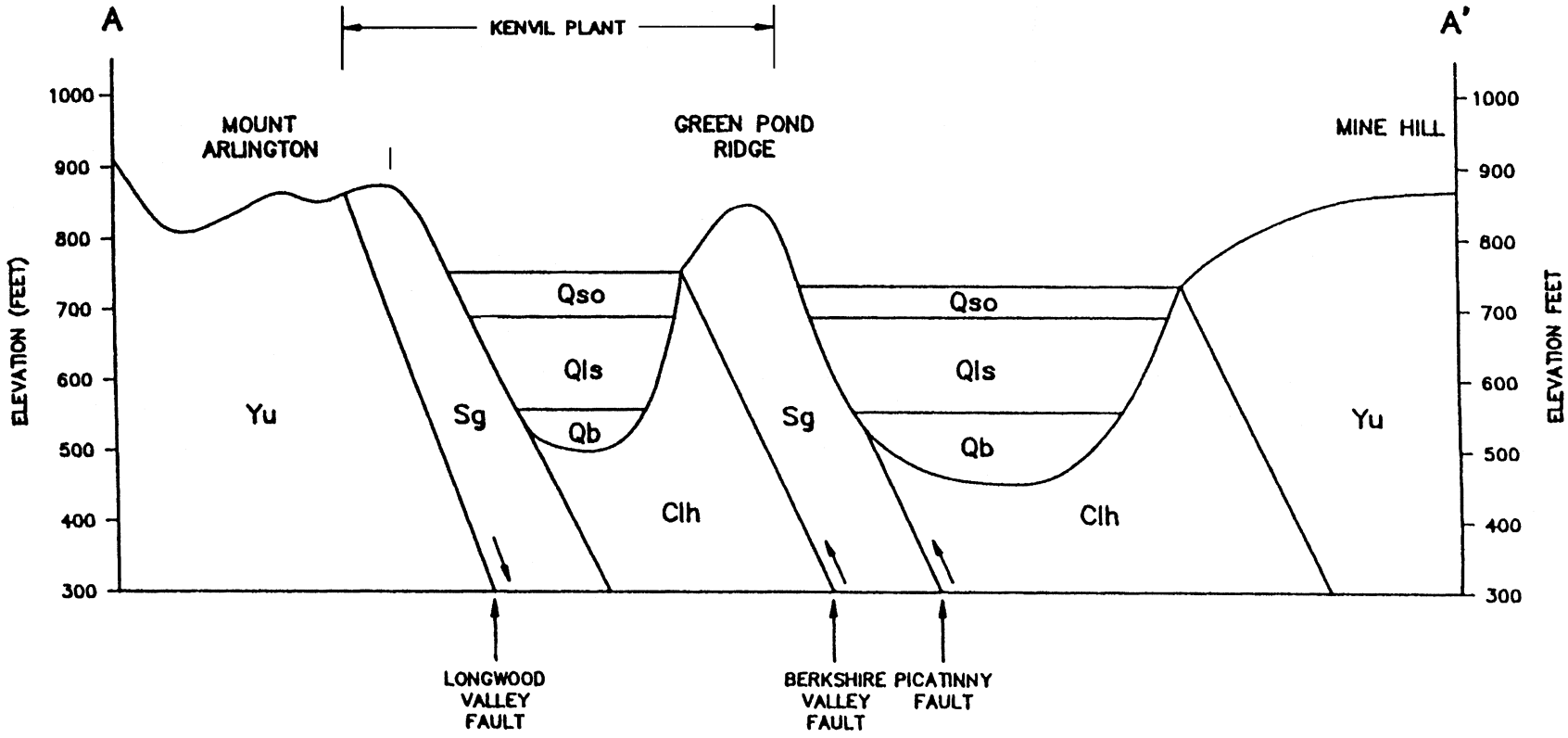
SURFACE WATER/SEDIMENT SI REPORT
HERCULES INCORPORATED
KENVIL WORKS FACILITY

BEDROCK SURFICIAL GEOLOGIC MAP

MWH

FIGURE A-4

S:\IND PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Draft Final SW-SD Report\Appendix A\Figure A-4.ai



LEGEND

GLACIAL VALLEY-FILL GEOLOGIC UNITS

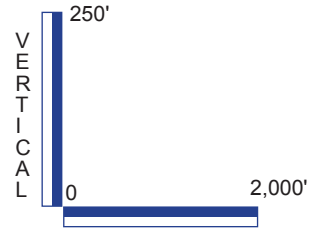
Qso UPPER SAND AND GRAVEL OUTWASH
Qls MIDDLE LACUSTRINE DEPOSITS
Qb BASAL SAND AND GRAVEL

BEDROCK GEOLOGIC UNITS

Sg GREEN POND FORMATION
Clh LEITHSVILLE AND HARDYSTON FORMATIONS
Yu PROTEROZOIC BEDROCK

GEOLOGY ADAPTED FROM HERMAN ET AL (1991) AND STANFORD (1989)

Source: ROUX Associates, Inc.



VERTICAL EXAGGERATION = 5x

SURFACE WATER/SEDIMENT SI REPORT
HERCULES INCORPORATED
KENVIL WORKS FACILITY

REGIONAL GEOLOGIC CROSS SECTION

MWH

FIGURE A-5

S:\IND PROJECTS\Hercules-1267015\Kenvil\18-SW-Sed Report\Draft Final SW-SD Report\Appendix A\Figure A-5.ai

APPENDIX B
DATA VALIDATION CHECKLIST

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 5.15.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KUL02
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-04-1-01 (0.5)	2 SD-04-2-01(0.5)	3 SD-04-2-01(0.5)DUP	4 SD-04-3-01(0.5)	5 SD-04-4-01(0.5)	6 SD-04-5-01(0.5)	7 FB-111-SD	8 SD-04-6-01(0.5)	9 SD-C15-2-01(0.5)	10 SD-D15-1-01(0.5)	11 SD-B15-2-01(0.5)	12 SD-B15-1-01(0.5)	13 SD-A15-2-01(0.5)	14 SD-A15-3-01(0.5)	15 SD-B16-1-01(0.5)	16 SD-A15-1-01(0.5)	17 SD-M7-1-01(0.5)	18 SD-M7-1-01(0.5)	19 SD-L6-1-01(0.5)	20 SD-L6-1-01(0.5)DUP
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A											→	X	X	A					
MS/MSD: SD-M7-1-01(0.5)	A																			
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :		A	A																A	A
Trip/Equip /Field Blank							A													

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

TB-4/6/01

surr. out for SD-A15-2-01(0.5) and SD-A15-3-01(0) in analysis and re-analysis. - all cmpds qual. ~~as~~ noted for these samples

LCL acceptable & OK

RL not met for acrolein. No qual, just noted in QC text.

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: _____
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL02
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-04-9-01(0.5)	2 FB-113-SD150	3 SD-04-10-01(0.5)	4 SD-05-1-01(0.5)	5 FB-4/6/16	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A	→	→	→	→															
Holding Times	A	→	→	→	→															
Tuning Performance	A	→	→	→	→															
Initial Calibration	A	→	→	→	→															
Continuing Calibration	A	→	→	→	→															
Method Blanks	A	→	→	→	→															
LCS	A	→	→	→	→															
Surrogate/ Internal %R	A	→	→	→	X															
MS/MSD:	A	→	→	→	→															
Reporting Limits	X	→	→	→	→															
Completeness of Analyte List	A	→	→	→	→															
Field Duplicate Pair :																				
Trip/Equip /Field Blank		A			A															

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

no qual of data

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 5.17.01
Sample Collection Dates:
The following data validation areas were reviewed:

SDG: KVL02
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-04-10-01(0.5)	2 FB-113-SW150	3 SD-04-1-01(0.5)	4 SD-04-2-01(0.5)	5 SD-04-3-01(0.5)	6 SD-04-4-01(0)	7 SD-04-4-01(0.5)	8 SD-04-6-01(0.5)	9 SD-C15-2-01(0.5)	10 SD-D15-1-01(0.5)	11 SD-B15-2-01(0.5)	12 SD-B15-1-01(0.5)	13 SD-A15-2-01(0.5)	14 SD-A15-3-01(0.5)	15 SD-B16-1-01(0.5)	16 SD-A15-1-01(0.5)	17 SD-MW7-1-01(0.5) FB-112-SW150 SD-MW7-1-01(0.5)	18 SD-L6-1-01(0.5)	19 SD-L6-1-01(0.5) DUP	20 FB-111-SD SD-A15-2-01(0.5)
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	X	X	X	A	A	X	X									→	X	X	X	X X
Method Blanks	A		X	A																
LCS	A																			
Surrogate/ Internal %R	A	A																		
MS/MSD: SD-MW7-1-01	A																			
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :	A		A	A														X	X	A
Equip /Field Blank	CCAL 4/11 A (4/6) 22'oxybis(1-chl), bis(2-chlisopropyl)ether, 4-nitroph, benzidine																A			A

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: CCAL 3/24 4-nitroph, benzidine 4/11 " " 4/12 22'oxybis(1-chl), bis(2-chl) ether, 4-nitroph, benzidine

MeCl2 blank 210 µg/kg 'U' SD-04-2-01(0)

MS/MSD: 2,4-Dinitrophenol est in SD-MW7-1-01(0)
benzidine est in SD-04-1-01(0)

LCS out in one spl for benzidine, OK in another. Lab considered able to recover benzidine. No qualification of data.

RL not met for benzidine and 2,4-Dinitrophenol.
Lab reports to MDL's in QAPP.

FD SD-L6-1-01(0.5)/DUP phenanthrene, pyrene, fluoranthene, chrysene, benzo(b)fluoranthene, ~~benzo(k)fluoranthene~~, indeno(123-cd)pyrene, benzo(ghi)perylene

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 5.17.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL02
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-04-10-01(0)	2 SD-05-1-01(0)	3 SD-04-2-01(0)	4 SD-04-2-01(0)DUP	5 SD-04-3-01(0)	6 SD-04-4-01(0)	7 SD-04-5-01(0)	8 FB-111-SD	9 SD-04-6-01(0)	10 SD-C15-2-01(0)	11 SD-D15-1-01(0)	12 SD-B15-2-01(0)	13 SD-B15-1-01(0)	14 SD-A15-2-01(0)	15 SD-A15-3-01(0)	16 SD-B16-1-01(0)	17 SD-A15-1-01(0)	18 SD-EM02-1-01(0)	19 SD-L6-1-01(0)	20 FB-112-SD(SW)	SD-04-9-01(0)
Completeness of Analyses	A																				
Holding Times	A																				
Initial Calibration	A	A																			
Continuing Calibration	A																				
Method Blanks	X	A																			
LCS	A																				
Post Digestion spikes	A																				
Lab Duplicate SD-MZ-1-01(0)	A																				
Matrix Spike SD-MZ-1-01(0)	A	X	A																		
Reporting Limits	X																				
Completeness of Analyte List	A																				
Field Duplicate Pair :		A	A															X	X		
Equip /Field Blank							X													A	

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Cu 'U' SD-04-10-01(0) MBlank.
MS/MSD ↓ Sb est in SD-05-1-01(0)
Lab dup out for Pb, ok for 2nd set, no qual.
Serial D out for one spl, in for 2nd, no qual.
1 MS 'U' FB-113-SD/SW Zn

FB-111-SD Hg @ 0.055B ug/L
FD SD-L6-1-01(0) out for As, Cr, Cu, Pb, Zn

RL not met for Sb in Sediment matrix

LEVEL III VALIDATION WORKSHEET

Method: Gen. Chem NC, TOC, Alcohols
Date Reviewed: 5.17.01
Sample Collection Dates:
SDG: KVL02
Reviewer: C Jensen
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-04-10-0160 SW	2 SD-05-1-0160	3 SD-04-1-0160	4 SD-04-2-0160	5 SD-04-2-0160 DUP	6 SD-04-3-0160	7 SD-04-4-0160	8 SD-04-5-0160	9 FB-111-SD	10 SD-04-6-0160	11 SD-C15-2-0160	12 SD-D15-1-0160	13 SD-B15-2-0160	14 SD-B15-1-0160	15 SD-A15-2-0160	16 SD-A15-3-0160	17 SD-A15-1-0160	18 SD-M7-1-0160	19 SD-L6-1-0160	20 SD-L6-1-0160 DUP	21 FB-112-SD (SW) SD-04-6-0160 SW
Completeness of Analyses	A																				
Holding Times	A																				
Initial Calibration	A																				
Continuing Calibration	X																				
Method Blanks	A																		→	X A A	
LCS	A																		→	X A A	
Surrogate %R	NA																			X A A	
MS/MSD: SD-M7-1-0160	A															→	X	A			
Reporting Limits	A																				
Completeness of Analyte List	A																				
Field Duplicate Pair :			X	X														X	X		
Equip /Field Blank								A													A

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: FB-113-SD-SW TOC @ 0.94 mg/L

NC not on COC for FB-111-SD, lab analyzed.

NC MS/MSD ↓ SD-M7-1-0160) LCS high, est in spl.

NC LCS ↓ for waters, FB-112-SD FB-113 SD/SW est.

butyl ether RPD out, %R's in, no qual. (H2O)

diethyl ether LCS/LCSD ↑, MS/MSD ↑ (soil), 2nd set ok.

MS/MSD butyl ether ↓ (soils), est. in SD-M7-1-0160

4/9 CCAL butyl ether

4/10 propyl ether, butyl ether, diethyl ether

4/11 diethyl ether

FD SD-04-2-0160/DUP out for methanol, Es.

FD SD-L6-1-0160/DUP out for TOC

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL02 **Date:** 5.17.01

Sample ID(s)	Qualification	Reason
SD-04-1-01(0).	J, UJ	Nitroglycerin %D>15
SD-04-2-01(0)/DUP	↓	↓
SD-M7-1-01(0)		
FB-112-SD/SW		
FB-113-SD/SW		
SD-05-1-01(0)	↓	↓

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

Date: Sept., 1994
Revision: 1.3

N/A YES NO

CASE NUMBER: KVL02 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

N/A

YES NO NA

3.0 Data Completeness and Deliverables

3.1 Have any missing deliverables been received and added to the data package? [ ] ___ ✓

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.

3.2 Was SAS-request included with package? [ ] ___ ✓

If no, a SAS-request can be retrieved from RSCC.

4.0 Cover Letter SDG Narrative

4.1 Is the Narrative or Cover Letter Present? [✓] ___ ___

4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter? [ ] ___ ✓

5.0 Traffic Reports and Laboratory Narrative

5.1 Are Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

NOTE: Samples are not preserved.

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓

Are the chromatograms free of interferences? [ ] ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction — [✓]

B. For soil/sediment samples 14 days from sample collection to extraction — [✓]

C. For all samples extracts 40 days from time of extraction to time of analysis — [✓]

Holding Time Violations

YES NO

N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [ ] ___ ___
b. Soil/Solid? [ ] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		☑	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

	YES	NO	N/A
9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	☑		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	☑		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	0 out of 19

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? not provided [ ] ___ ✓

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT $\pm$ three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be $\pm$0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be $\leq$20%) ✓ [ ] ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ [✓] ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? not provided [ ] ___ [✓]

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? %D 7/15 [ ] [✓] ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last 4/10 ng 4/11 ng

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]	___	___
b. soil	[✓]	___	___
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]	___	___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[✓]	___	___

ACTION: If hits are $\geq$ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]	___	___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ [✓]

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [✓] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]	___	___
b. Laboratory Control Samples?	[✓]	___	___
c. Blanks?	[✓]	___	___
d. Matrix spikes and Matrix spike duplicates?	[✓]	___	___
e. Lab duplicate?	[ ]	___	✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report?	[ ]	✓	___
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]	___	___
Resolution?	[✓]	___	___
Peak shape?	[✓]	___	___
Full-scale graph (attenuation)?	[✓]	___	___
Other: _____	[ ]	___	___

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[ ]	✓	___

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? [ ] [✓] [ ]

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? not provided [ ] [ ] [✓]

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? [✓] [ ] [ ]

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ [✓] ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters
b. soils

[ ] — ✓
[ ] — ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%).

[ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present?

[✓] — —

	YES	NO	N/A
19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG).	☑		

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330. Were the correct analytes and were the concentrations within range?	[ ]		

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
2 out of 36	11 out of 38

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
0 out of 19	0 out of 19

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD.

no qual.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) SW. **SDG:** KVL03
Date Reviewed: 5.21.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-D5-1-01(0.5')	2 SW-C15-2-01(0.5') FB-4/6/01	3 SW-04-6-01(0.5') SW05-1-01(0.5')	4 SW-04-10-01(0.5')	5 SW-04-9-01(0.5')	6 SW-L6-1-01(0.5')	7 SW-L6-4-01(0.5')	8 SW-M7-1-01(0.5')	9 SW-A15-1-01(0.5') SW-M7-1-01(0.5')	10 SW-B16-1-01(0.5')	11 SW-A15-3-01(0.5')	12 SW-A15-2-01(0.5')	13 SW-B15-1-01(0.5')	14 SW-B15-2-01(0.5') TB-4/4/01	15 FB-4/11-SW	16 SW-04-5-01(0.5')	17 SW-04-4-01(0.5')	18 SW-04-3-01(0.5')	19 SW-04-2-01(0.5') DUP	20 SW-04-2-01(0.5')
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A	A																		
MS/MSD: SW M7-1-01(0.5')							X													
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :					•	•													•	•
Trip/Equip /Field Blank															A					

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

VBLK59 4/11 hexachl. 5J nontarget.
MS/MSD 2clvl no recovery, LCS ok. qual est. 2clvl in SW-M7-1-01(0.5')

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) **SDG:** KVL03
Date Reviewed: 5.20.01 **Reviewer:** C Jensen
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW04-6Q(0)	2 SW-G15-2-01(0)	3 SW015-1-01(0)	4 SW04-1-01(0)	5 SW04-2-01(0)	6 SW04-2-01(0)DUP	7 SW04-3-01(0)	8 SW-04-4-01(0)	9 SW-04-5-01(0)	10 FB-111-SW	11 SW-B15-2-01(0)	12 SW-B15-1-01(0)	13 SW-A15-2-01(0)	14 SW-A15-3-01(0)	15 SW-B16-1-01(0)	16 SW-A15-1-01(0)	17 SW-MW-1-01(0) MS/MSD	18 SW-L6-1-01(0)	19 SW-L6-1-01(0)DUP	20 SW-04-9-01(0) SW-04-10-01(0)
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: SW-MW-1-01(0)	A																			
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :					A	A												A	A	
Equip /Field Blank										A										

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SBLKWC0964 4/7 Butylbenzylphth. only affects LCS, no qual.

no qual. of data.

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 5.21.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL03
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-05-1-01(0)	2 SW-04-10-01(0)	3 SW-04-9-01(0)	4 SW-Lb-1-01(0) DUP	5 SW-Lb-1-01(0)	6 SW-M7-1-01(0)	7 SW-A15-1-01(0)	8 SW-b16-1-01(0)	9 SW-A15-3-01(0)	10 SW-A15-2-01(0)	11 SW-b15-1-01(0)	12 SW-b15-2-01(0)	13 FB-111-SW	14 SW-045-01(0)	15 SW-04-4-01(0)	16 SW-04-3-01(0)	17 SW-04-2-01(0) DUP	18 SW-04-2-01(0)	19 SW-04-1-01(0)	20 SW-D15-1-01(0) SW-A15-2-01(0)
Completeness of Analyses	A																			
Holding Times	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A	→	→	→	→	X	X	A	→	X	A								→	X A
LCS	A																			
Post Digestion spikes (Lab)																				
Lab Duplicate (SW-M7-1-01(0))	A																			
Matrix Spike (SW-M7-1-01(0))	A																			→
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :			A	A													X	X		
Equip /Field Blank													A							

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MB's'u' Cr SW-M7-1-01, SW-A15-1-01(0), SW-A15-2-01(0), SW-D15-1-01(0)
Cd SW-A15-2-01(0)
Be SW-D15-1-01(0)

PB RL not met.

FD pair SW-04-2-01(0)/DUP Cu not met.

LEVEL III VALIDATION WORKSHEET

Method: Gen Chem / Alcohols / Ethers
Date Reviewed: 5.20.01
Sample Collection Dates:
The following data validation areas were reviewed:

SDG: KVL03
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-04-6-01(0)	2 SW-015-2-01(0)	3 SW-015-1-01(0)	4 SW-04-1-01(0)	5 SW-04-2-01(0)	6 SW-04-2-01(0)DUP	7 SW-04-3-01(0)	8 SW-04-4-01(0)	9 SW-04-5-01(0)	10 FB-111-SW	11 SW-B15-2-01(0)	12 SW-B15-1-01(0)	13 SW-A15-2-01(0)	14 SW-A15-3-01(0)	15 SW-B16-1-01(0)	16 SW-A15-1-01(0)	17 SW-MT-1-01(0) SW-L6-1-01(0)	18 SW-L6-1-01(0)DUP SW-04-9-01(0)	19 SW-04-10-01(0)	20 SW-05-1-01(0)
Completeness of Analyses	A	→																		→
Holding Times	A	→																		→
Initial Calibration	A	→																		→
Continuing Calibration	A	→											→	X	X	X	AX	XX	X	AX
Method Blanks	A	→																		→
LCS	A	→								→	X	X	X	X	X	X	XX	XX	X	A
Surrogate %R	NA																			
MS/MSD: SW-MT-1-01(0)	X	→																		→
Reporting Limits	A	→																		→
Completeness of Analyte List	A	→																		→
Field Duplicate Pair :					A	A											A	A		
Equip /Field Blank										A										

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: MS slightly high - no qual.

LCS & MC results qual est. for SW-05-1-01(0)
0% MC R' spl. MC, MS MSD %R oh, spl. estimated.

→ SW-B15-2-01(0), SW-B15-1-01(0), SW-A15-2-01(0), SW-A15-3-01(0), SW-B16-1-01(0)
SW-A15-1-01(0), SW-MT-1-01(0), SW-L6-1-01(0)/DUP/SW-04-9-01(0), SW-04-10-01(0)

CCAL propyl ether, butyl ether 20D 15% qual. est. in SW-A15-3-01(0)
SW-B16-1-01(0), SW-A15-1-01(0), SW-L6-1-01(0)/DUP
butyl ether est. in SW-04-9-01(0), SW-04-10-01(0)

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

5.21.01

Date: Sept., 1994
Revision: 1.3

N/A

YES NO

CASE NUMBER: KVL03 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO	N/A
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓	
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?	[ ]	✓	
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?	[✓]		
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	[✓]		
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?	[✓]		
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		[✓]	
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ _

Are the chromatograms free of interferences? [ ] _ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction _ [✓] _

B. For soil/sediment samples 14 days from sample collection to extraction _ [ ] ✓

C. For all samples extracts 40 days from time of extraction to time of analysis _ [✓] _

Holding Time Violations

YES NO

N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] — —
b. Soil/Solid? [ ] — ✓

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ [✓] ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? [✓] ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

YES NO N/A

8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms: __ ☑ __

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab) ☑ __ __

9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix? ☑ __ __

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? not provided [ ] ___ ✓

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT $\pm$ three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be $\pm$0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be $\leq$20%) ✓ [ ] ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ [✓] ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? not provided. [ ] ___ [✓]

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [✓] ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]	___	___
b. soil	[ ]	___	___
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]	___	___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[✓]	___	___

ACTION: If hits are $\geq$ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]	___	___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

all low or ND

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [✓] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]		
b. Laboratory Control Samples?	[✓]		
c. Blanks?	[✓]		
d. Matrix spikes and Matrix spike duplicates?	[✓]		
e. Lab duplicate?	[ ]		✓

ACTION: If any data are missing, Contact Lab for resubmittals.

response only

15.3 Are the response factors shown in the Quant Report?	[ ]	✓	
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]		
Resolution?	[✓]		
Peak shape?	[✓]		
Full-scale graph (attenuation)?	[✓]		
Other: _____	[ ]		✓

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[ ]	✓	

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? not provided

[ ] ___ [✓]

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? [✓] ___ ___

all 'ND'

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ☑ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ☑ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ —
b. soils [ ] — —

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] — —

	YES	NO	N/A
19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG).	☑		

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330. Were the correct analytes and were the concentrations within range?	☑		

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
2 out of 38	_____ out of ___

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
0 out of 19	_____ out of ___

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

LEVEL III VALIDATION WORKSHEET

Method: Metals (EPA 6010/7000 Series) **MW JOB #:** ~~757321~~

SDG #: 757321 KVL04-01 **Date Reviewed:** 5.6.08

Laboratory: Lancaster **Reviewer:** Clausen

Sample Collection Dates: _____

The following data validation areas were reviewed:

Validation Criteria	Sample Identification																						
	SW-04-1-01(0)	SW-05-1-01(0)	SW-04-1-01(0)	SW-04-2-01(0)	SW-04-2-01(0) Dup	SW-04-3-01	SW-04-4-01(0)	SW-04-5-01(0)	SW-04-6-01(0)	SW-05-2-01(0)	SW-05-1-01(0)	SW-B5-2-01(0)	SW-B5-1-01(0)	SW-A15-2-01(0)	SW-A15-3-01(0)	SW-A15-1-01(0)	SW-A15-1-01(0) MS	SW-M7-1-01(0)	SW-M7-1-01(0) MS	SW-M7-1-01(0) Dup	SW-L6-1-01(0)	SW-L6-1-01(0) MS	SW-L6-1-01(0) MSD
	SW	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 7	SW 8	SW 9	SW 10	SW 11	SW 12	SW 13	SW 14	SW 15	SW 16	SW 17	SW 18	SW 19	SW 20		
Completeness of Scheduled Analyses	A																						
Holding Times	A																						
Initial Calibration	A																						
Continuing Calibration	A																						
Method Blanks	A															→	X	A					
LCS	A																						
Post-Digestion Spikes N/A																							
Sample Duplicate: SW-M7-1-01(0) SW-L6-1-01(0)	A																						
MS: SW-L6-1-01(0) SW-M7-1-01(0) MS/MSD	A																						
→ Reporting Limits Achieved	X																						
Completeness of Analyte List	A																						
Field Duplicate Pair A: SW04-2-01(0)			A	X																			
Field Duplicate Pair B: SW-L6-1-01(0)																				A	A		

Note: X = Validation criteria were evaluated and not met.
A = Validation criteria were evaluated and met.
N = Data was not available for review.
NA = Not applicable.
ND = No analytes detected.

Comments:

MB 'U' QV SW-M7-1-01(0)
Serial D ok.

RL- Pb not met

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) Sediment
Date Reviewed: 5.22.01
Sample Collection Dates:
The following data validation areas were reviewed:

SDG: KVL05
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-05-2-01(0.5)	2 SD-04-7-01(0.5)	3 SD-04-8-01(0.5)	4 SD-L5-2-01(0.5)	5 SD-L5-2-01(0.5)DU	6 SD-L5-3-01(0.5)	7 FB-4/14 SAMSD	8 EB-4/15 SD 0.5	9 SD-E16-2-01(0.5)	10 SD-G15-3-01(0.5)	11 SD-G15-2-01(0.5)	12 SD-E15-1-01(0.5)	13 SD-E16-4-01(0.5)	14 SD-E14-3-01(0.5)	15 SD-E14-2-01(0.5)	16 SD-D14-4-01(0.5)	17 SD-D14-3-01(0.5)	18 TB-4/11/01	19 SD-B14-2-01(0.5) SD-C15-1-01(0.5)	20 SD-D14-8-01(0.5) SD-D14-E-01(0.5)
Completeness of Analyses	A																			→
Holding Times	A																			→
Tuning Performance	A																			→
Initial Calibration	A																			→
Continuing Calibration	A																			→
Method Blanks	A																			→
LCS	A																			→
Surrogate/ Internal %R	A	X	X	X	A	X	A						→	X	A					→
MS/MSD: SD-L5-3-01(0.5)	A																			→
Reporting Limits	A																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :				A	A															
Trip/Equip /Field Blank							NA											A		

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SURROGATE for SD-04-7-01(0.5), SD-04-8-01(0.5), SD-L5-2-01(0.5) SD-L5-3-01(0.5), SD-E14-3-01(0.5) - all cmpds estimated

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) Sediments **SDG:** KVL05
Date Reviewed: 5-22-01 **Reviewer:** C Jensen
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-05-2-01(0)	2 SD-04-7-01(0)	3 SD-04-8-01(0)	4 SD-L5-2-01(0)	5 SD-L5-2-01(0)DUP	6 SD-L5-3-01(0)	7 FB-114-SW/SD	8 SD-E16-3-01(0)	9 SD-E16-2-01(0)	10 SD-E15-3-01(0)	11 SD-E15-2-01(0)	12 SD-E15-1-01(0)	13 SD-E16-1-01(0)	14 SD-E14-3-01(0)	15 SD-E14-2-01(0)	16 SD-D14-4-01(0)	17 SD-D14-3-01(0)	18 FB-115-SD/SW	19 SD-B14-2-01(0)	20 SD-C15-1-01(0) SD-D14-9-01(0) SD-D14-7-01(0)
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: SD-L5-3-01(0)	A				→	X	A								→	X	A			
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :				X	X															
Equip /Field Blank							A											A		

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

4/13 butylbenz. hyd/c no qual.
MS/MSD ↓ hexachlorocyclop., 0% R benzidine, 33'dichlorobenz. all cmpds. ~~ALL~~ est in SDL5-3-01(0)
" ↓ benzidine est in SD-D14-4-01(0)

LCS ↓ N-nitrosodipropamine - ~~est~~ no qual.

FD not met for pair SD-L5-2-01(0)/DUP for n-nitrosodiphenylamine pyrene, fluoranthene, benzo(a)anthracene, chrysene benzo(k) fluoranthene, benzo(b) fluoranthene

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) Sediments
Date Reviewed: 5.22.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL05
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-05-2-01(0)	2 SD-04-7-01(0)	3 SD-04-8-01(0)	4 SD-L5-2-01(0)	5 SD-L5-2-01(0)D	6 SD-L5-3-01(0)	7 FB-114-SW/SD	8 SD-E16-3-01(0)	9 SD-E16-2-01(0)	10 SD-E15-3-01(0)	11 SD-E15-2-01(0)	12 SD-E15-1-01(0)	13 SD-E16-1-01(0)	14 SD-E14-3-01(0)	15 SD-E14-2-01(0)	16 SD-D14-4-01(0)	17 SD-D14-3-01(0)	18 FB-115-SD/SW	19 SD-B14-2-01(0)	20 SD-C15-1-01(0) SD-D14-9-01(0) SD-D14-7-01(0)
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: SD-L5-3-01(0)	A				→	X	A								→	X	A			
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :				X	X															
Equip /Field Blank							A											A		

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

4/13 butylbenz. hyd. no qual.
MS/MSD ↓ hexachlorocyclop., 0% R benzidine, 3,3'dichlorobenz. all cmpds. det. est in SD-L5-3-01(0)
" ↓ benzidine est in SD-D14-4-01(0)

LCS ↓ N-nitrosodipropamine - est no qual.

FD not met for pair SD-L5-2-01(0)/DUP for n-nitrosodiphenylamine pyrene, fluoranthene, benzo(a)anthracene, chrysene benzo(k)fluoranthene, Benzo(b)fluoranthene

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series Sediment **SDG:** KVL05
Date Reviewed: 5.22.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-05-2-01(0)	2 SD-04-7-01(0)	3 SD-04-8-01(0)	4 SD-L5-2-01(0)	5 SD-L5-2-01(0)DUP	6 SD-L5-3-01(0)	7 FB-114-SW/SD SD-L5-7-01(0)	8 SD-E16-3-01(0)	9 SD-E16-2-01(0)	10 SD-E15-3-01(0)	11 SD-E15-2-01(0)	12 SD-E15-1-01(0)	13 SD-E16-1-01(0)	14 SD-E14-3-01(0)	15 SD-E14-2-01(0)	16 SD-D14-4-01(0)	17 SD-D14-3-01(0)	18 FB-115-SD/SW	19 SD-B14-2-01(0)	20 SD-D14-8-01(0)	SD-F14-2-01(0)
Completeness of Analyses	A																				→
Holding Times	A																				→
Initial Calibration	A																				→
Continuing Calibration	A																				→
Method Blanks	A																				→
LCS	X					→	A	X									→	A	X		→
Post Digestion spikes	A					→	NA	A													
Lab Duplicate	A																				
Matrix Spike SD-L5-3-01(0)	A				→	X	A														→
Reporting Limits	X																				
Completeness of Analyte List	A																				→
Field Duplicate Pair :				A	A																
Equip /Field Blank																					

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

RL not met for Sb.
MS/MSD %R + RPD out for Hg - qual est. in SD-L5-3-01(0)
Sb LCS %R, qual est in all sediments

FB-115 SD/SW has 5.1 ug/L Zinc

LEVEL III VALIDATION WORKSHEET

Method: Alcohols / Ethers / NC
Date Reviewed: 5.23.01
Sample Collection Dates: _____
SDG: KVL05
Reviewer: C Jensen
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD05-2-01(0)	2 SD-04-7-01(0)	3 SD-04-8-01(0)	4 SD-L5-2-01(0)	5 SD-L5-2-01(0)DUP	6 SD-L5-3-01(0)	7 FB-114-SW/SD	8 SD-E16-3-01(0)	9 SD-E16-2-01(0)	10 SD-E15-3-01(0)	11 SD-E15-2-01(0)	12 SD-E15-1-01(0)	13 SD-E16-1-01(0)	14 SD-E14-3-01(0)	15 SD-E14-2-01(0)	16 SD-D14-4-01(0)	17 SD-D14-3-01(0)	18 FB-115-SD/SW	19 SD-B14-2-01(0) SD-C15-1-01(0)	20 SD-D14-8-01(0) SD-D14-7-01(0)
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Continuing Calibration	A	→	→	→	→	→	X	A	→	→	→	→	→	→	X	X	X	X	X X	X X
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
LCS	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Surrogate %R NA																				
MS/MSD: SD-L5-3-01(0)	A	→	→	→	→	X	A	→	→	→	→	→	→	→	→	→	→	→	→	→
Reporting Limits	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Field Duplicate Pair :				X	X															
Equip /Field Blank							X											X		

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: FB-114-SW/SD TOC @ .67J mg/L, FB-115-SD/SW TOC @ .73J mg/L

Subs
MS/MSD NC ↓ LCS ↑ NC est in SD-L5-3-01(0)

MS/MSD TOC ↓ LCS ok. ~~TOC~~ est in SD-L5-3-01(0)

FD out for TOC for pair SD-L5-2-01(0)/DUP

TOC Dup 4/20/01 out, 4/11 in control ~~no qual~~. Spls analyzed 4/20 qual. as estimated for TOC (SD-E14-3-01(0), SD-E14-2-01(0) SD-D14-4-01(0), SD-D14-3-01(0), SD-B14-2-01(0) SD-C15-1-01(0), SD-D14-8-01(0), SD-D14-7-01(0))

H2O LCS ↑ no qual.

MS/MSD propeth, butyleth ↓ LCS ok. Qual est in SD-L5-3-01(0)

CCAL 4/12 ~~prop ether + butyl ether out~~
4/13 DI butyl ether HH FB-114-SW/SD, FB-115-SW/SD SD-D14-7-01(0)
4/14 diethether, propeth, butyleth SD-E14-2-01(0), SD-D14-3-01(0), SD-C15-1-01(0)
SD-D14-4-01(0), SD-B14-2-01(0), SD-D14-8-01(0)

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

5.22.01

Date: Sept., 1994
Revision: 1.3

N/A

YES NO

CASE NUMBER: KVL05 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	N/A	YES	NO
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?		[ ]	[✓]
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?		[ ]	[✓]
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?		[✓]	
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?		[✓]	
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?		[✓]	
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?			[✓]
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ___ ___

Are the chromatograms free of interferences? [ ] ___ ___

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction ___ [✓] ___

B. For soil/sediment samples 14 days from sample collection to extraction ___ [✓] ___

C. For all samples extracts 40 days from time of extraction to time of analysis ___ [✓] ___

Holding Time Violations

YES NO

N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] ___ ___
b. Soil/Solid? [✓] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	M
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

YES NO N/A

8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms: __ [✓] __

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab) [✓] __ __

9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix? [✓] __ __

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 38	0 out of 19 + 0 of 38 2nd set

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence?

not provided
✓ — — 9

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%)

9
✓ [M] —

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

1 — nitronaphthalene
22, 9
ok 9

10.8 Do the standards show degradation products of tetryl?

— [N] —

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards $\leq$15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]		
b. soil	[✓]		
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]		

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[✓]		

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]		

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ [✓]

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [✓] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

5.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]		
b. Laboratory Control Samples?	[✓]		
c. Blanks?	[✓]		
d. Matrix spikes and Matrix spike duplicates?	[✓]		
e. Lab duplicate?	[ ]		✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response)	[✓]		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]		
Resolution?	[✓]		
Peak shape?	[✓]		
Full-scale graph (attenuation)?	[✓]		
Other: _____	[ ]		✓

ACTION: Use professional judgement to determine the acceptability of the data.

6.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[ ]	✓	

ACTION: If no, contact lab for resubmittals.

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?		✓	

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

	YES	NO	N/A
16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?		✓	

all ND

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A
16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?		✓	

all ND

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? [ ] ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? [✓] ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters
b. soils

[ ] ✓ ✓
[ ] — —

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%).

[ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present?

✓ — —

	YES	NO	N/A
19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG).	✓		

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

	YES	NO	N/A
19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330. Were the correct analytes and were the concentrations within range?	✓		

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
_____ out of ___	10 out of 38

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
_____ out of ___	0 out of 19

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD. NO qual.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL06 **Date:** 5.21.01

Sample ID(s)	Qualification	Reason
SW-CIS-1-0160	J	%D >25 2,6-DNT

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

Date: Sept., 1994
Revision: 1.3

N/A YES NO

CASE NUMBER: KVL06 LAB: KVL06 Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO	N/A
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓	
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?	[ ]	✓	
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?	✓		
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	✓		
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?	✓		
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		✓	
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] ~~__~~ ✓

B. For soil/sediment samples 14 days from sample collection to extraction __ [✓] ✓ __

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

Holding Time Violations

YES NO

N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [ ] ___ ✓
b. Soil/Solid? [✓] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

YES NO N/A

8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms: __ [✓] __

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab) [✓] __ __

9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix? [✓] __ __

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
____ out of ___	0 out of 19

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? not provided [ ] ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT $\pm$ three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be $\pm$0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be $\leq$20%) ___ [ ] ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ [ ] ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? not provided [ ] ___ [✓]

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [✓] ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]	___	___
b. soil	[ ]	___	✓
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]	___	___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[✓]	___	___

ACTION: If hits are $\geq$ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]	___	___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ ✓

in with S.Water package

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [ ] ✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

2,4,6-TNT 2,6-DNT
SW-846-8330 6/94

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]		
b. Laboratory Control Samples?	[✓]		
c. Blanks?	[✓]		
d. Matrix spikes and Matrix spike duplicates?	[✓]		
e. Lab duplicate?	[ ]		✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	[✓]		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]		
Resolution?	[✓]		
Peak shape?	[✓]		
Full-scale graph (attenuation)?	[✓]		
Other: _____	[ ]		✓

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[ ]	✓	

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? not provided

[ ] ___ ✓

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? [ ] ___ ___

manually calculated

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ [✓] ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓
b. soils [ ] ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] ___ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

9.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] ___ ___

YES NO N/A

19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG). [✓] ___ ___

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330.
Were the correct analytes and were the concentrations within range? [✓] ___ ___

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
4 out of 38	_____ out of ___

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
0 out of 19	_____ out of ___

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

LEVEL III VALIDATION WORKSHEET

Method: Metals (EPA 6010/7000 Series) **MW JOB #:** _____
SDG #: KVL07-04BKG **Date Reviewed:** 5.7.01
Laboratory: Lancaster **Reviewer:** 5.7.01 Chmr
Sample Collection Dates: _____

The following data validation areas were reviewed:

Validation Criteria	Sample Identification: 1 SW-LS-2-01(0)	2 SW-LS-2-01(0)MS	3 SW-LS-2-01(0)MSD	4 SW-LS-3-01(0)	5 SW-E16-3-01(0)	6 SW-E16-2-01(0)	7 SW-E15-3-01(0)	8 SW-E15-2-01(0)	9 SW-E15-1-01(0)	10 SW-E16-1-01(0)	11 SW-E14-3-01(0)	12 SW-E14-2-01(0)	13 SW-D14-4-01(0)	14 SW-D14-3-01(0)	15 SW-E14-2-01(0)	16 SW-C15-1-01(0)	17 SW-D14-8-01(0)	18 SW-C15-4-01(0)	19	20
Completeness of Scheduled Analyses	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
Continuing Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
Method Blanks	A	→	→	X	A	→	→	X	X	A	→	→	→	→	→	X	X	A		
LCS	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
Post-Digestion Spikes	NA																			
Sample Duplicate: SW-LS-2-01(0)	A	A	A	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
MS: SW-LS-3-01(0) MS/MSD	A	→	→	X	A	→	→	→	→	→	→	→	→	→	→	→	→	→		
Reporting Limits Achieved	X	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→		
Field Duplicate Pair A: SW-LS-2-01	~~A~~	A	A																	
Field Duplicate Pair B: _____																				

Note: X = Validation criteria were evaluated and not met.
A = Validation criteria were evaluated and met.
N = Data was not available for review.
NA = Not applicable.
ND = No analytes detected.

Comments:

TI in SW-LS-3-01(0), SW-E15-2-01(0), SW-E15-1-01(0), SW-C15-1-01(0) SW-D14-8-01(0)

RL - Pb not met for surface water

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 5.30.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL09
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 FB-1 17-9/8W SD-F14-2-01(0)	2 SD-E14-1-01(0.5)	3 SD-C14-4-01(0.5) SD-D14-5-01(0.5)	4 TB-4/12/01	5 SD-C14-2-01(0.5)	6 SD-D14-6-01(0.5)	7 SD-B14-1-01(0.5)	8 SD-B14-3-01(0.5)	9 SD-B14-4-01(0.5)	10 SD-D14-1-01(0.5)	11 SD-D14-1-01(0.5) DUP	12 SD-D13-3-01(0.5)	13 SD-D13-6-01(0.5)	14 SD-D13-4-01(0.5)	15 TB-4/13/01	16 SD-F13-1-01(0.5)	17 SD-F13-1-01(0.5) DUP	18 SD-E12-3-01(0)	19 SD-612-1-01(0.5)	20 SD-E11-4-01(0.5) SD-F12-1-01(0.5)
Completeness of Analyses	A																			✓
Holding Times	A	X	A																	✓
Tuning Performance	A																			✓
Initial Calibration	K																			✓
Continuing Calibration	A																			✓
Method Blanks	A																			✓
LCS	A																			✓
Surrogate/ Internal %R	A A	X	A						→	X	X	A								✓ ✓
MS/MSD: SD-B12-1-01(0.5)	A																			✓
Reporting Limits	A																			✓
Completeness of Analyte List	A																			✓
Field Duplicate Pair :										A	A					A	A			
Trip/Equip /Field Blank				A											A					

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SURR- all cmpds est for SD-E14-1-01(0.5), SD-D14-1-01(0.5), SD-D14-1-01(0.5) DUP
ICAL Acrolein RRF<.05 - all spls 'R' for acrolein

CCAL 4/24 acetone RF<.05 cj

SD-E14-1-01(0) qual est. due to 13°C.
SD-F14-2-01(0) " " " 14°C

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 2.20.01
Sample Collection Dates:

SDG: KVL09
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-E14-2-01(0)	2 SD-E14-1-01(0)	3 SD-D14-5-01(0)	4 FB-116-SD/GW	5 SD-C14-2-01(0)	6 SD-D14-6-01(0)	7 SD-B14-1-01(0)	8 SD-B14-3-01(0)	9 SD-B14-4-01(0)	10 SD-C14-1-01(0)	11 SD-D14-1-01(0.5)	12 SD-D14-1-01(0)DUP	13 SD-D13-3-01(0)	14 SD-D13-6-01(0)	15 SD-D13-4-01(0)	16 FB-117-SD/GW	17 SD-F13-1-01(0)	18 SD-F13-1-01(0)DUP	19 SD-G12-1-01(0)	20 SD-E12-3-01(0) SD-E11-4-01(0)
Completeness of Analyses	A																			
Holding Times	A	~~A~~																		
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A	→		X	A										→	X	A			
Surrogate/ Internal %R	A	A																		
MS/MSD: SD-612-1	A																	→	X	A
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :											A	A					X	X		
Equip /Field Blank			X													A				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

~~SD-E14-1-01(0)~~ qual est due to outside 4±2° B° as noted by lab.
MS/MSD H2O matrix – phenol, 2-chlph, 24Dich, 4chl3mep, 246TNT, benz
no qual since this was a non-MW sample.
MS/MSD soil benzidine not recovered – qual est in SD-612-1-01(0)
LCS water out for hexachloroethane – qual est in FB-116, FB-117

FB-116 BeHP 4 µg/L
FD pair SD-F13-1-01(0) out for acenaphthylene, fluorene, phenanthrene, pyrene, anthracene, fluoranthene, benzo(a)anthracene, chrysene, benzo(b)flu benzo(k)fluoranth, benzo(a)pyr, indeno(123-cd)pyr, dibenz(ah)anth, benzo(ghi)pe

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 5.30.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KUL09
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-E14-2-01(0)	2 SD-E14-1-01(0)	3 SD-D14-5-01(0)	4 FB-116-SD/SW	5 SD-C14-2-01(0)	6 SD-D14-6-01(0)	7 SD-B14-1-01(0)	8 SD-B14-3-01(0)	9 SD-B14-4-01(0)	10 SD-C14-1-01(0)	11 SD-D14-5-01(0)	12 SD-D14-1-01(0)DUP	13 SD-D13-3-01(0) SD-D13-6-01(0)	14 SD-D13-4-01(0) FB-117 SD/SW	15 SD-F13-1-01(0) SD-F13-1-01(0)DUP	16 SD-G12-1-01(0) SD-E12-3-01(0)	17 SD-G12-1-01(0)	18	19	20
Completeness of Analyses	A																→			
Holding Times	A																→			
Initial Calibration	A																→			
Continuing Calibration	A																→			
Method Blanks	A														→	XA1	→			
LCS	A																→			
Post Digestion spikes	A																→			
Lab Duplicate	X	→	→	NA	X	→	→	→	→	→	→	→	→	NA X	→	→	→			
Matrix Spike SD-G12-1-01(0)	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	XA	→			
Reporting Limits	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→			
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→			
Field Duplicate Pair :											X	X		HA						
Equip /Field Blank				X										A						

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

~~MB'ed' Ag, SD-G12-1-01(0)-cj~~

ms/msd Hg ↓ LCSoh. Hg est in SD-G12-1-01(0)
Lab dup out for As, Hg - qual. est. in all soils

FB-116-SD/SW Hg (0.032 ug/L), Zn (5.0 ug/L) FB117-SD/SW Hg .041 ug/L

FD pair out SD-D14-1-01(0)/DUP, As, Pb

LEVEL III VALIDATION WORKSHEET

Method: Alcohols/Ethers, NC
Date Reviewed: 5.31.01
Sample Collection Dates:

SDG: KUL09
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-F14-2-01(0)	2 SD-E14-1-01(0) SD-D14-5-01(0) FB-116-SD/SW	3 SD-C14-2-01(0)	4 SD-D14-6-01(0)	5 SD-B14-1-01(0)	6 SD-B14-3-01(0)	7 SD-B14-4-01(0)	8 SD-C14-1-01(0)	9 SD-C14-1-01(0.5)	10 SD-D14-1-01(0)	11 SD-D14-1-01(0) DUP	12 SD-D13-3-01(0)	13 SD-D13-6-01(0)	14 SD-D13-4-01(0)	15 FB-117-SD/SW	16 SD-F13-1-01(0)	17 SD-F13-1-01(0) DUP	18 SD-G12-1-01(0)	19 SD-E12-3-01(0) SD-E11-4-01(0)	20 SD-F12-1-01(0)
Completeness of Analyses	A																			
Holding Times	A																			
Initial Calibration	A																			
Continuing Calibration	X																			
Method Blanks	A	→	X	A										→	X	A				→
LCS	X	AX	A	X	X	A	A	X	A	→	X	X	X	X	A						→
Surrogate %R	NA																				
MS/MSD:	A		→	X	A	X	A										→	X	A	→
Reporting Limits	A																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :										A	A					A	A			
Equip /Field Blank		A													A					

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MB TOC 'U' FB-116-SD/SW, FB-117-SD/SW
MS/MSD ↓ NC ~~est~~ SD-C14-2-01(0), SD-B14-1-01(0), SD-G12-1-01(0)
MS/MSD ↓ butyl ether ~~est~~ in SD-G12-1-01(0)
TOC Lab dup out - all soil est. for TOC
LCS ↓, est in SD-F14-2-01(0), SD-D14-5-01(0), SD-C14-2-01(0), SD-D14-6-01(0) SD-B14-4-01(0), SD-D14-1-01(0) ~~DUP~~, SD-D13-3-01(0), SD-~~D13~~-6-01(0)

Lab dup out for moisture - est in surreal samples.
4/13 butyl ether 16:04, 19:21, 22:39 + propyl ether
4/19 prop, butyl 19:03, 22:20, 1:41, 5:00 butyl only, 8:19 butyl

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KUL09 **Date:** 5.30.01

Sample ID(s)	Qualification	Reason
SD-B14-1-01(0)	J	Surr. 246TNT, 24DNT, 26DNT
SD-C14-2-01(0)	J	4am26DNT (>25%), 246TNT
"	R	24DNT >90
SD-B14-1-01(0)	J R	26DNT, 24DNT
SD-C14-1-01(0)	J	2AM46DNT, 246TNT
"	R	24DNT, 26DNT
SD-D13-4-01(0)	J	246TNT

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

5.30.01

Date: Sept., 1994
Revision: 1.3

N/A

YES NO

CASE NUMBER: KVL09 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO	N/A
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓	
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?	[ ]	✓	
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?	[✓]		
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	[✓]		
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?	[✓]		
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		[✓]	
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [✓] __

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

Holding Time Violations

YES NO

N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] ___ ___
b. Soil/Solid? [✓] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

YES NO N/A

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ✓ [ ] ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? [✓] ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		☑	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	☑		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	☑		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 38	0 out of 38

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate — ☑ — —

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? ☑ — —

10.4 Are modified Forms present and completed for each analytical sequence and each column? ☑ — —

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? — ☑ —

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? [✓] ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ✓ [ ] ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ [✓] ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]		
b. soil	[✓]		
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]		

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[✓]		

ACTION: If hits are $\geq$ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]		

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ [✓]

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [✓] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]	___	___
b. Laboratory Control Samples?	[✓]	___	___
c. Blanks?	[✓]	___	___
d. Matrix spikes and Matrix spike duplicates?	[✓]	___	___
e. Lab duplicate?	[ ]	___	✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	[✓]	___	___
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]	___	___
Resolution?	[✓]	___	___
Peak shape?	[✓]	___	___
Full-scale graph (attenuation)?	[✓]	___	___
Other: _____	[ ]	___	✓

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[✓]	___	___

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? ☑ ___ ___

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? [ ] ✓ ___

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

See attached

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ☑ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters
b. soils

[ ] ✓ —
[ ] — ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%).

[ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present?

[✓] — —

YES NO N/A

19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG). ☑ ___ ___

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330.
Were the correct analytes and were the concentrations within range? ☑ ___ ___

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
_____ out of ___	1 out of 38

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
_____ out of ___	0 out of 19

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) **SDG:** KVL10
Date Reviewed: 5/31/01 **Reviewer:** C Jensen
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-E14-2-01(0.5)	2 SW-E14-1-01(0.5)	3 SW-D14-5-01(0.5)	4 TB-4/12/01	5 SW-D14-6-01(0.5)	6 SW-D14-1-01(0.5)	7 SW-D14-1-01(0.5) DUP	8 SW-D13-3-01(0.5)	9 SW-D13-6-01(0.5)	10 SW-D13-4-01(0.5)	11 TB-4/13/01	12 SW-D13-1-01(0.5)	13 SW-C12-2-01(0.5)	14 SW-D13-2-01(0.5)	15 SW-D13-5-01(0.5)	16 SW-D13-5-01(0.5) DUP	17 SW-F14-1-01(0.5)	18 SW-F13-1-01(0.5)	19 SW-F13-1-01(0.5)	20 SW-G12-1-01(0.5) TB-4/10/01
Completeness of Analyses	A																			
Holding Times	A	X	X		X															
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: SW-G12-1-01(0.5)	A																		→	X A A
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :						A	A								A	A				
Trip/Equip /Field Blank				A							A									A

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD 2cene no %R (esoh, 2cene est in SW-G12-1-01(0.5)

RL not met for acrolein.

SW-E14-1-01(0), SW-D14-5-01(0) & SW-D14-6-01(0) est due to elevated temp

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 5.31.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KUL10
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-F14-2-01(0)	2 SW-F14-1-01(0)	3 SW-D14-5-01(0)	4 SW-D14-6-01(0)	5 SW-D14-1-01(0)	6 SW-D13-3-01(0)	7 SW-D13-6-01(0)	8 SW-D13-4-01(0)	9 SW-D13-1-01(0)	10 SW-C12-2-01(0)	11 SW-D13-2-01(0)	12 SW-D13-5-01(0) DUP	13 SW-F14-4-01(0)	14 SW-F13-1-01(0)	15 SW-F13-1-01(0) DUP	16 SW-612-1-01(0)	17 SW-E11-4-01(0)	18	19	20
Completeness of Analyses A																	→			
Holding Times A																	→			
Tuning Performance A																	→			
Initial Calibration A																	→			
Continuing Calibration A				→	X	X	X	X	X	X	X	X	X	A			→			
Method Blanks A																	→			
LCS A																	→			
Surrogate/ Internal %R A	A																→			
MS/MSD: SW-612-1-01(0) A																	→			
Reporting Limits X	X																→			
Completeness of Analyte List A																	→			
Field Duplicate Pair :											A	A		A	A					
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

CCAL4120 Bromophenyl phenyl ether, SW-D13-3-01(0), SW-D13-6-01(0) SW-D13-4-01(0), SW-D13-1-01(0), SW-C12-2-01(0), SW-D13-2-01(0), SW-D13-5-01(0)/DUP SW-F14-1-01(0)

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 5.31.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL10
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-612-1-01(0)	2 SW-F14-2-01(0)	3 SW-614-1-01(0)	4 SW-D14-5-01(0)	5 SW-D14-6-01(0)	6 SW-D14-1-01(0)	7 SW-D14-1-01(0)DUP	8 SW-D13-3-01(0)	9 SW-D13-6-01(0)	10 SW-D13-4-01(0)	11 SW-D13-1-01(0)	12 SW-C12-2-01(0)	13 SW-D13-2-01(0)	14 SW-D13-5-01(0)	15 SW-D13-5-01(0)	16 SW-F14-1-01(0)	17 SW-F13-1-01(0)	18 SW-F13-1-01(0)DUP	19 SW-612-1-01(0)	20
Completeness of Analyses	A																		→	
Holding Times	A		(X)	(X)	(A)														→	
Initial Calibration	A																		→	
Continuing Calibration	A																		→	
Method Blanks	A	→	X	A					→	X	A								→	
LCS	A																		→	
Post Digestion spikes NA																				
Lab Duplicate	A																		→	
Matrix Spike SW-612-1-01(0)	A																		→	
Reporting Limits	X																		→	
Completeness of Analyte List	A																		→	
Field Duplicate Pair :						X	X										A	A		
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Hg 'W' SW-F14-1-01(0), SW-D13-4-01(0)

RL not met for Pb.

FD SW-D14-1-01(0)/DUP out for Zn.

~~SW-F14-1-01(0),~~ SW-D14-5-01(0) & SW-D14-6-01(0) est. due to cooler temps

LEVEL III VALIDATION WORKSHEET

Method: Alcohol, Ester, TOC, NC
Date Reviewed: 5.16.01
Sample Collection Dates:

SDG: KVL10
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-F14-2-01(0)	2 SW-E14-1-01(0)	3 SW-D14-5-01(0)	4 SW-D14-6-01(0)	5 SW-D14-1-01(0)	6 SW-D13-3-01(0)	7 SW-D13-6-01(0)	8 SW-D13-4-01(0)	9 SW-D13-1-01(0)	10 SW-C12-2-01(0)	11 SW-D13-2-01(0)	12 SW-D13-5-01(0) DUP	13 SW-F14-1-01(0)	14 SW-F13-1-01(0)	15 SW-F13-1-DUP(0) DUP	16 SW-G12-1-01(0)	17 SW-E11-4-01(0)	18	19	20
Completeness of Analyses	A																↓			
Holding Times	A																↓			
Initial Calibration	A																↓			
Continuing Calibration	X																↓			
Method Blanks	A																↓			
LCS	A																↓			
Surrogate %R	NA																			
MS/MSD: SW-G12-1-01(0)	A														→	X	A			
Reporting Limits	A																↓			
Completeness of Analyte List	A																↓			
Field Duplicate Pair :											"	"		-	-					
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD ES1. SW-G12-1-01(0) for methanol, ethanol, butyl ether, amyl alcoh

CCAL 4/13 16:04 butyl 19:21 butyl & propyl 22:39 b+p

4/14 1:58 butyl 16:43 b

4/17 20:04 diethyl, prop, b 23:35 p, b 2:48 b

4/18 6:09 p, b 9:30 b

4/20 15:53 b 19:10 b

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KUL10 **Date:** 5.31.01

Sample ID(s)	Qualification	Reason
SW-D14-501(0)	J	RDX
SW-D14-1-01(0)	J	HMX
~~SW-D14-1-01(0)DUP~~	~~J~~	~~HMX~~
SW-D13-16-01(0)	J	4am26DNT, 2am46DNT
SW-D13-4-01(0)	J	2am46DNT

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

Date: Sept., 1994
Revision: 1.3

N/A YES NO

CASE NUMBER: KUL10 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	N/A	YES	NO
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?		[ ]	[✓]
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?		[ ]	[✓]
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?		[✓]	
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?		[✓]	
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?		[✓]	
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?			[✓]
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [ ] ✓

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

Holding Time Violations

YES NO N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] — —
b. Soil/Solid? [ ] — ✓

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

YES NO N/A

8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms: __ [✓] __

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab) [✓] __ __

9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix? [✓] __ __

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 38	____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? [✓] ___ __

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ✓ [ ] __

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ [✓] __

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]	___	___
b. soil	[ ]	___	✓
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]	___	___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[✓]	___	___

ACTION: If hits are $\geq$ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank.
If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]	___	___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [ ] ✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]		
b. Laboratory Control Samples?	[✓]		
c. Blanks?	[✓]		
d. Matrix spikes and Matrix spike duplicates?	[✓]		
e. Lab duplicate?	[ ]		✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	[✓]		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]		
Resolution?	[✓]		
Peak shape?	[✓]		
Full-scale graph (attenuation)?	[✓]		
Other: _____	[ ]		✓

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[✓]		

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? — ☑ —

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? ☑ — —

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? [ ] ✓ —

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

See attached.

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ [✓] ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ —
b. soils [ ] — ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] — —

YES NO N/A

19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG). [✓] ___ ___

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330.
Were the correct analytes and were the concentrations within range? [✓] ___ ___

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
0 out of 38	_____ out of ___

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
0 out of 19	_____ out of ___

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 5.30.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL11
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-F14-2-01(0)	2 SW-E14-1-01(0)	3 SW-D14-5-01(0)	4 SW-D14-6-01(0)	5 SW-D14-4-01(0)	6 SW-D14-1-01(0)	7 SW-D13-3-01(0)	8 SW-D13-6-01(0)	9 SW-D13-4-01(0)	10 SW-D13-1-01(0)	11 SW-E12-2-01(0)	12 SW-D13-2-01(0)	13 SW-D13-5-01(0)	14 SW-D13-5-01(0) DUP	15 SW-E14-1-01(0)	16 SW-F13-1-01(0)	17 SW-F13-1-01(0) DUP	18 SW-612-1-01(0)	19 SW-E11-4-01(0)	20
Completeness of Analyses	A																		↓	
Holding Times	A																		↓	
Initial Calibration	A																		↓	
Continuing Calibration	A																		↓	
Method Blanks	A											↓	X	A					↓	
LCS	A																		↓	
Post Digestion spikes NA																				
Lab Duplicate	A																		↓	
Matrix Spike SW612-01(0)	A																		↓	
Reporting Limits	X																		↓	
Completeness of Analyte List	A																		↓	
Field Duplicate Pair :													A	A		A	A			
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS 'U' Cd SW-D13-5-01(0)

RL not met for Pb

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) Sediment
Date Reviewed: 5.24.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL12
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-D13-1-01(0.5)	2 FB-118-SD&W SD-C12-2-01(0.5)	3 SD-D13-2-01(0.5)	4 SD-D13-5-01(0.5)	5 SD-D13-5-01(0.5)DUP	6 SD-F14-1-01(0.5)	7 SD-D12-2-01(0.5)	8 SD-D12-4-01(0.5)	9 SD-D12-3-01(0.5)	10 SD-D12-1-01(0.5)	11 SD-E12-1-01(0.5)	12 SD-E12-2-01(0.5) FB-119-SD&W 4/17/01	13	14 SD-E11-3-01(0.5)	15 SD-E11-2-01(0.5)	16 SD-E11-2-01(0.5)DUP	17 SD-D11-1-01(0.5)	18 SD-E11-1-01(0.5)	19 SD-D10-1-01(0.5)	20 SD-H12-3-01(0.5)
Completeness of Analyses	A																			→
Holding Times	A																			→
Tuning Performance	A																			→
Initial Calibration	X											→	A	X						→
Continuing Calibration	X																			→
Method Blanks	A																			→
LCS	A																			→
Surrogate/ Internal %R	A	X	X	X	X	A														→
MS/MSD: SD E10-1-01(0.5)	A																			→
Reporting Limits	X																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :				A	A										A	A				
Trip/Equip /Field Blank		A																		

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: Library search for dimethyl ether.

Acrolein RL not met

Lab notes for diluted spls the weight was outside NJ requirement 8-12g. Surr out for SD-C12-2-01(0.5), SD-D13-2-01(0.5), SD-D13-5-01(0.5) SD-D13-5-01(0.5)DUP all cmpds qual as estimated.

All spls 'R' for acrolein due to the ICAL RRF < .05 (.0493) all soil spls. CCAL also out for soils for acrolein - no further qual. CCAL %D > 25 acrolein - qual est in TB-4/17/01, FB118, FB-119

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) Sediment
Date Reviewed: 5.24.01
Sample Collection Dates: _____
SDG: KVL12
Reviewer: C Jensen
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-D13-1-01(0)	2 SD-C12-2-01(0)	3 SD-D13-2-01(0)	4 SD-D13-5-01(0)	5 SD-D13-5-01(0)DUP	6 SD-F14-1-01(0)	7 FB-118-SD/SW	8 SD-D12-2-01(0)	9 SD-D12-4-01(0)	10 SD-D12-1-01(0)	11 SD-E12-1-01(0)	12 SD-G12-2-01(0)	13 FB-119-SD/SW	14 SD-E11-3-01(0)	15 SD-G11-2-01(0)	16 SD-G11-2-01(0)DUP	17 SD-D11-1-01(0)	18 SD-G11-1-01(0)	19 SD-E10-1-01(0)	20 SD-H12-3-01(0) SD-G12-2-01(0)
Completeness of Analyses	A																			
Holding Times	A					→	X	A												↓
Tuning Performance	A																			↓
Initial Calibration	A																			↓
Continuing Calibration	A																			↓
Method Blanks	A																			↓
LCS	A					→	X	A				→	X	A						↓
Surrogate/ Internal %R	A					→	X	A												↓
MS/MSD:	A	X	A																	↓
Reporting Limits	X																	→	X	A
Completeness of Analyte List	A																			↓
Field Duplicate Pair :				X	X															↓
Equip /Field Blank							A						A		A	A				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

RL not met for benzidine, 2,4-dinitrophenol

FB118- surrout. + HT missed in RE. - all cmpds qual. est.
ms/msd Benzidine %R, RPD out SD-C12-2-01(0) qual est for Benzidine
" n-Nitrosodiphenylamine out, Benzidine., 3,3' dichlorobenzidine est in SD-E10-1-01(0)

LCS FB118, FB119 2,4DNP, 4,6-din-2-meP, PCP out qual. est.

FD out for SD-D13-5-01(0)/DUP for ~~acenaphthylene~~, pyrene, anthracene, fluoranthene, benzo(a)anthracene, chrysene, benzo(b)fluor, benzo(k)fluor., benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, benzo(g,h,i)perylene

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 5.30.01
Sample Collection Dates:
The following data validation areas were reviewed:

SDG: KVL12
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-H12-3-0(6)	2 SD-D13-1-0(6)	3 SD-C12-2-0(6)	4 SD-D13-2-0(6)	5 SD-D13-5-0(6)DUP	6 SD-E14-1-0(6)	7 FB-118-SD/SW	8 SD-D12-2-0(6)	9 SD-D12-4-0(6)	10 SD-D12-3-0(6)	11 SD-D12-1-0(6)	12 SD-E12-1-0(6)	13 SD-E12-2-0(6)	14 FB-119-SD/SW	15 SD-E11-3-0(6)	16 SD-E11-2-0(6)	17 SD-E11-2-0(6)DUP	18 SD-D11-1-0(6)	19 SD-E11-1-0(6)	20 SD-E10-1-0(6) SD A12-7-0(6)
Completeness of Analyses	A																			
Holding Times	A																			
Initial Calibration	A	A																		
Continuing Calibration	A																			
Method Blanks	X	→	→	→	→	→	A	X	→	→	→	→	→	A	X	→	→	→	→	→
LCS	X	→	→	→	→	→	A	X	→	→	→	→	→	A	X	→	→	→	→	→
Post Digestion spikes	NA																			
Lab Duplicate	A																			
Matrix Spike SD-E10-1-0(6)	A																		→	X A
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :				A	A											X	X			
Equip /Field Blank							A							A						

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SD-E11-3-0(6) SD-E11-2-0(6)/DUP, SD-D11-1-0(6), SD-E11-1-0(6), SD-E10-1-0(6)
SD-D12-2-0(6), SD-D12-4-0(6), SD-D12-3-0(6), SD-D12-1-0(6), SD-E12-1-0(6)

'U' Be SD-D13-1-0(6), SD-C12-2-0(6), SD-D13-2-0(6), SD-D13-5-0(6)/DUP, SD-F14-1-0(6)

'U' Se SD-D13-1-0(6), SD-C12-2-0(6) SD-D13-2-0(6), SD-D13-5-0(6)/DUP
SD-D12-2-0(6), SD-D12-4-0(6), SD-D12-3-0(6), SD-D12-1-0(6), SD-E11-3-0(6)
SD-E11-2-0(6)/DUP, SD-D11-1-0(6), SD-E11-1-0(6), SD-E10-1-0(6)

Cd 'U' SD-E12-2-0(6)

ms/msd PD out LCS ok. PD est on SD-E10-1-0(6)

LCS Sb & %R - all soils est.

FB-118-SD/SW Hg .028 ug/L, Zn 5.3 ug/L

FB-119-SD/SW Hg .049 ug/L

FD out for SD-E11-2-0(6) AS

LEVEL III VALIDATION WORKSHEET

Method: Gen Chem, Alcohols + Ethers
Date Reviewed: 5.3.11
Sample Collection Dates:
SDG: KUL12
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-H12-3-01(0)	2 SD-D13-1-01(0)	3 SD-C12-2-01(0)	4 SD-D13-3-01(0)	5 SD-D13-5-01(0)DUP	6 SD-F14-1-01(0)	7 FB-118-SD/SW	8 SD-D12-2-01(0)	9 SD-D12-4-01(0)	10 SD-D12-3-01(0)	11 SD-D12-1-01(0)	12 SD-E12-1-01(0)	13 SD-E12-2-01(0)	14 FB-119-SD/SW	15 SD-E11-3-01(0)	16 SD-E11-2-01(0)	17 SD-E11-2-01(0)DUP	18 SD-D11-1-01(0)	19 SD-E11-1-01(0)	20 SD-E10-1-01(0) SD-G12-2-01(0)
Completeness of Analyses	A																			
Holding Times	A																			
Initial Calibration	A																			
Continuing Calibration	A	A	A	A	X	X	X	X	X	A	X	X	A	→	X	X	A	→	X	
Method Blanks	A					→	X	A					→						→	
LCS	X					→	A	A						A	X				→	
Surrogate %R	NA																			
MS/MSD: SD-E10-1-01(0)	A																		→	X A
Reporting Limits	A																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :				A	A											A	A			
Equip /Field Blank						—	A							A						

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: FB-119-SD/SW TOC .46J mg/L.

'W' TOC FB118

LCS & NC 'W' ~~SD-D13-1-01(0), SD-C12-2-01(0)~~ majority of soil Aplsin SDG

~~MS/MSD NC~~

MS/MSD butylether-d(Soils) LCS ok. butylether est for SD-E10-1-01(0)

4/17 butylether %D. 23:25

4/18 " 2:48 FB-118

4/18 butyl + propyl 6:09

4/19 butyl + propyl 19:03, 22:20 SD-F14-1-01(0), SD-C12-2-01(0), SD-D13-2-01(0), SD-D13-5-01(0)/DUP

4/20 butyl 1:41, 5:00, 8:19 + propyl 11:01 propyl + butyl 15:53 butyl 19:0 butyl

SD-D12-2-01(0), SD-D12-3-01(0), SD-D12-1-01(0), SD-E11-3-01(0)

SD-E11-2-01(0), SD-G12-2-01(0)

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL12 **Date:** 5.27.01

Sample ID(s)	Qualification	Reason
SD-C12-Z-0160	R	246TNT %D>90
FB-119-SD/SW	UJ	NC %D≥15 CCAL

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

Date: Sept., 1994
Revision: 1.3

N/A YES NO

CASE NUMBER: KVL12 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

		YES	NO	N/A
3.0	**Data Completeness and Deliverables**			
3.1	Have any missing deliverables been received and added to the data package?	[ ]	✓	
	ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2	Was SAS-request included with package?	[ ]	✓	
	If no, a SAS-request can be retrieved from RSCC.			
4.0	**Cover Letter SDG Narrative**			
4.1	Is the Narrative or Cover Letter Present?	[✓]		
4.2	Are Case Number and/or SAS number contained in the Narrative or Cover letter?	[✓]		
5.0	**Traffic Reports and Laboratory Narrative**			
5.1	Are Traffic Report Forms present for all samples?	[✓]		
	ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2	Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		[✓]	
	NOTE: Samples are not preserved.			
	ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [✓] __

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

Holding Time Violations

YES NO

N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [Y] ___ ___
b. Soil/Solid? [Y] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	M
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		☑	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	☑		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	☑		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	0 out of 19

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in trip. [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT $\pm$ three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be $\pm$0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be $\leq$20%) ☑ [ ] ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? [✓] ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [✓] ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]		
b. soil	[✓]		
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]		

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[ ]		✓

ACTION: If hits are $\geq$ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank.
If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]		

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [✓] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]		
b. Laboratory Control Samples?	[✓]		
c. Blanks?	[✓]		
d. Matrix spikes and Matrix spike duplicates?	[✓]		
e. Lab duplicate?	[ ]		✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report?	[✓]		response only
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]		
Resolution?	[✓]		
Peak shape?	[✓]		
Full-scale graph (attenuation)?	[✓]		
Other: _____	[ ]		✓

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[✓]		

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? [✓] ___ ___

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? [✓] ___

See attached

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ [✓] ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ —
b. soils [ ] — ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] — —

	YES	NO	N/A
19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG).	✓		

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330. Were the correct analytes and were the concentrations within range?	✓		

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
_____ out of ___	5 out of 38

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
_____ out of ___	0 out of 19

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) Surface Water
Date Reviewed: 5.23.01
Sample Collection Dates:

SDG: KUL14
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-E11-2-01(0.5) DUP	2 SW-E11-2-01(0.5)	3 SW-H12-1-01(0.5)	4 SW-612-3-01(0.5)	5 TB-4/18/01	6 SW-H12-2-01(0.5)	7 SW-H12-3-01(0.5)	8 SW-612-2-01(0.5)	9 SW-E10-1-01(0.5)	10 SW-E10-1-01(0.5) DUP	11 SW-E11-1-01(0.5)	12 SW-E12-3-01(0.5)	13 SW-E11-2-01(0.5) DUP	14 SW-E11-2-01(0.5)	15 SW-E11-3-01(0.5)	16 TB-4/17/01	17 SW-E12-2-01(0.5)	18 SW-E12-1-01(0.5)	19 SW-D12-1-01(0.5)	20 SW-D12-3-01(0.5)	SW-D12-4-01(0.5)
Completeness of Analyses	A																				
Holding Times	A																				
Tuning Performance	A																				
Initial Calibration	A																				
Continuing Calibration	A																				
Method Blanks	A																				
LCS	A																				
Surrogate/ Internal %R	A																				
MS/MSD: SW-E10-1-01(0.5)	A							?	X	A											
Reporting Limits	A																				
Completeness of Analyte List	A																				
Field Duplicate Pair :	A	A											A	A							
Trip/Equip /Field Blank					A											A					

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD 2 cmpd no recovery, LCS ok. 2 cmpd est in SW-E10-1-01(0.5)

no qual. of data.

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 5.23.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL14
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-D12-2-01(0)	2 SW-D12-4-01(0)	3 SW-D12-3-01(0)	4 SW-D12-1-01(0)	5 SW-E12-1-01(0)	6 SW-E12-2-01(0)	7 SW-E11-3-01(0)	8 SW-E11-2-01(0)	9 SW-E11-2-01(0)DUP	10 SW-E12-3-01(0)	11 SW-D11-1-01(0)	12 SW-E11-1-01(0)	13 SW-E10-1-01(0)	14 SW-E10-2-01(0)	15 SW-H12-3-01(0)	16 SW-H12-2-01(0)	17 SW-G12-3-01(0)	18 SW-H12-1-01(0)	19 SW-I11-2-01(0)DUP	20
Completeness of Analyses	A																			
Holding Times	A											→	X	A				→	A X	
Tuning Performance	A																		→	
Initial Calibration	A																		→	
Continuing Calibration	A											→	X	A				→	X	
Method Blanks	A																		→	
LCS	A																		→	
Surrogate/ Internal %R	A											→	X	A				→	X	
MS/MSD:	A																		→	
Reporting Limits	A																		→	
Completeness of Analyte List	A																		→	
Field Duplicate Pair :								A	A									A	A	
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

surr HT out for SW-E10-1-01(0), SW-I11-2-01(0)DUP
CCAL 4/30 12DDNP 4/30 SW-E10-1-01(0), SW-I11-2-01(0)DUP 24DNP
~~4/25 24DNP~~ 9

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series Surface Water **SDG:** KUL14
Date Reviewed: 5.24.01 **Reviewer:** C Jensen
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-D12-2-01(6)	2 SW-D12-4-01(6)	3 SW-D12-3-01(6)	4 SW-D12-1-01(6)	5 SW-E12-1-01(6)	6 SW-G12-2-01(6)	7 SW-E11-3-01(6)	8 SW-E11-2-01(6)	9 SW-E11-2-01(6)DUP	10 SW-E12-3-01(6)	11 SW-D11-1-01(6)	12 SW-E11-1-01(6)	13 SW-E10-1-01(6)	14 SW-G12-2-01(6)	15 SW-H12-3-01(6)	16 SW-H12-2-01(6)	17 SW-G12-3-01(6)	18 SW-H12-1-01(6)	19 SW-E11-2-01(6)	20 SW-E11-2-01(6)DUP
Completeness of Analyses	A																			→
Holding Times	A																			→
Initial Calibration	A																			→
Continuing Calibration	A																			→
Method Blanks	X																			→
LCS	A																			→
Post Digestion spikes NA																				
Lab Duplicate SW-E11-1-01(6)	A																			→
Matrix Spike SW-E10-1-01(6)	A																			→
Reporting Limits	X																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :								A	A										A	A
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Cu SW-H12-1-01(6), SW-D12-1-01(6), SW-E12-1-01(6), SW-E12-2-01(6), SW-E11-2-01(6), SW-G12-3-01(6)

MB Hg 'U SW-D12-2-01(6), SW-D12-4-01(6), SW-D12-3-01(6), SW-D12-1-01(6), SW-E12-1-01(6)

Zn SW-D12-4-01(6), SW-D12-3-01(6), SW-D12-1-01(6), SW-E12-1-01(6), SW-E11-2-01(6), SW-E

cont SW-D11-1-01(6), SW-G12-2-01(6), SW-H12-3-01(6), SW-H12-2-01(6), SW-G12-3-01(6)
SW-H11-2-01(6)+DUP

MB 'U' Hg SW-E11-3-01(6), SW-E11-2-01(6), SW-E11-2-01(6)DUP, SW-E12-3-01(6), SW-E11-1-01(6)

SW-E10-1-01(6), SW-G12-2-01(6), SW-H12-3-01(6), SW-H12-2-01(6), SW-G12-3-01(6)

SW-H12-1-01(6), SW-H11-2-01(6)+DUP

RL not met for Pb

LEVEL III VALIDATION WORKSHEET

Method: Esters, Alcohols, NC
Date Reviewed: 5.24.01
Sample Collection Dates:

SDG: KVL14
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-D12-2-01(6)	2 SW-D12-4-01(6)	3 SW-D12-3-01(6)	4 SW-D12-1-01(6)	5 SW-E12-1-01(6)	6 SW-E12-2-01(6)	7 SW-E12-2-01(6.5)	8 SW-E11-2-01(2)	9 SW-E11-2-01(2)DUP	10 SW-E12-3-01(6)	11 SW-D11-1-01(6)	12 SW-E11-1-01(6)	13 SW-E10-1-01(6)	14 SW-G12-2-01(6)	15 SW-H12-3-01(6)	16 SW-H12-2-01(6)	17 SW-G12-3-01(6)	18 SW-H12-1-01(6)	19 SW-H11-2-01(6)	20 SW-H11-2-01(6)DUP
Completeness of Analyses	A																			↓
Holding Times	A																			→
Initial Calibration	A																			→
Continuing Calibration	X																			→
Method Blanks	A																			→
LCS	A																			→
Surrogate %R	NA																			
MS/MSD: SW-E10-1-01(6)	A											→	A							→
Reporting Limits	A																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :								A	A										A	A
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

NC requested on COC, only 1 spl. reported.

CCAn 4/20 butylether 3 all spls est.
4/21 "

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL14 **Date:** 6.13.01

Sample ID(s)	Qualification	Reason
SW-D12-4-01(0)	J	2,6 DNT > 25
SW-D12-3-01(0)	↓	↓
SW-D11-1-01(0)	↓	↓
SW-D11-1-01(0)	J	2,4 DNT > 25
SW-G12-3-01(0)	J	4 am 2,6 DNT, RDX

EXPLOSIVE RESIDUES
STANDARD OPERATING PROCEDURE
U.S.EPA Region II

5.24.01

Date: Sept., 1994
Revision: 1.3

N/A

YES NO

CASE NUMBER: KVL14 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	N/A	YES	NO
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?		[ ]	✓
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?		[ ]	✓
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?		[✓]	
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?		[✓]	
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?		[✓]	
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?			[✓]
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [ ] ✓

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

Holding Time Violations

YES NO

N/A

Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] — —
b. Soil/Solid? [ ] — ✓

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	M
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

Use professional judgement.
If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		☑	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	☑		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	☑		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 38	_____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate ☑ ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? ☑ ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? ☑ ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT $\pm$ three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be $\pm$0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be $\leq$20%) ☑ ☐ ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected, qualify positive hits for tetryl and

YES NO N/A

TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? [✓] ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [✓] ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive results "J" and non-detects "UJ". The "associated samples" are those which followed the last

YES NO N/A

in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

13.0 Method Blanks

	YES	NO	N/A
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]		
b. soil	[ ]		✓
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]		

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	[✓]		

ACTION: If hits are $\geq$ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]		

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [ ] ✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

5.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]		
b. Laboratory Control Samples?	[✓]		
c. Blanks?	[✓]		
d. Matrix spikes and Matrix spike duplicates?	[✓]		
e. Lab duplicate?	[ ]		✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report?	[✓]		

response only

15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]		
Resolution?	[✓]		
Peak shape?	[✓]		
Full-scale graph (attenuation)?	[✓]		
Other: _____	[ ]		✓

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[ ]	✓	

ACTION: If no, contact lab for resubmittals.

lab provides a spreadsheet

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?		☑	

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?	☑		

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?		☑	

See attached

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ [✓] ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? [✓] ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary corrections and note in data assessment.

YES NO N/A

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ —
b. soils [ ] — —

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] — —

YES NO N/A

19.2 Were the matrix spikes analyzed at the required frequency? (one per matrix and per SDG). [ ] ___ __

ACTION: If any matrix spike data are missing, contact the lab for resubmittals.

19.3 The matrix spike consists of all target analytes at concentrations 5-10 times the estimated quantitation limits listed in Table 1/Method 8330.
Were the correct analytes and were the concentrations within range? [ ] ___ __

NOTE: Field blanks cannot be used for Matrix spike analysis. If field/rinse blanks were MS/MSD, then make note under Contract non-compliance.

19.4 How many spike recoveries are outside the QC limits of 50-140%?

Water	Soil
0 out of 38	_____ out of ___

19.5 How many RPD's for Matrix Spike and Matrix Spike duplicate recoveries are outside QC limits of 20% (depending what is stated in the SAS-request)?

Water	Soil
0 out of 19	_____ out of ___

ACTION: Flag all associated data "N" for "out of control" matrix spike for the field sample used for the MS/MSD.

ACTION: No additional action is taken on MS/MSD data alone. However using informed professional judgement, the data reviewer may use the matrix spike data results in conjunction with other QC criteria and determine the need for some qualification of the data.

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 5.30.01
Sample Collection Dates:_____
The following data validation areas were reviewed:

SDG: KVL15
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-D12-2-01(6)	2 SW-D12-4-01(6)	3 SW-D12-3-01(6)	4 SW-G12-4-01(6)	5 SW-E12-2-01(6)	6 SW-E11-3-01(6)	7 SW-E11-2-01(6)	8 SW-G11-2-01(6) DUP	9 SW-E12-3-01(6)	10 SW-D12-1-01(6)	11 SW-D11-1-01(6)	12 SW-E11-1-01(6)	13 SW-G10-1-01(6)	14 SW-G12-2-01(6)	15 SW-H12-3-01(6)	16 SW-H12-2-01(6)	17 SW-G12-3-01(6)	18 SW-H12-1-01(6)	19 SW-I1-2-01(6)	20 SW-I1-1-01(6) DUP
Completeness of Analyses	A																			↓
Holding Times	A																			»
Initial Calibration	A																			
Continuing Calibration	A																			↓
Method Blanks	A																			↓
LCS	A																			↓
Post Digestion spikes																				
Lab Duplicate	A																			↓
Matrix Spike SW-G10-1-01(6)	A																			↓
Reporting Limits	X																			↓
Completeness of Analyte List	A																			
Field Duplicate Pair :							A	A											A	A
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

No qualification of data.

RL not met for Pb.

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 6.5.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL16
Reviewer: C Jensen

Validation Criteria / Sample Identification	1 SD-I5-1-01(0.5) SD-H12-2-01(0.5)	2 FB-120=SD/SW	3 TB-4/18/01	4 SD-H12-3-01(0.5)	5 SD-H11-2-01(0.5)	6 SD-H12-1-01(0.5)	7 SD-I11-2-01(0.5)	8 SD-I11-2-01(0.5)DUP	9 SD-I11-1-01(0.5)	10 SD-E11-2-01(0.5)	11 SD-E11-1-01(0.5)	12 SD-H11-1-01(0.5)	13 SD-I10-2-01(0.5)	14 SD-H8-4-01(0.5)	15 FB-I7,I-SD/SW	16 TB-4/19/01	17 SD-H7-2-01(0.5)	18 SD-H7-2-01(0.5)DUP	19 SD-H7-1-01(0.5)	20 SD-I8-1-01(0.5)	21 SD-I7-1-01(0.5)	22 SD-I5-2-01(0.5)
Completeness of Analyses	A																					
Holding Times	A																					
Tuning Performance	A																					
Initial Calibration	X X	A	X	X	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	X	X	X
Continuing Calibration	X X	X										→	X	A	X	X	X					
Method Blanks	A																					
LCS	A																					
Surrogate/ Internal %R		A																				
MS/MSD: SD-H7-2-01(0.5)	A																					
Reporting Limits	A																					
Completeness of Analyte List	A																					
Field Duplicate Pair :																	A	A			A	A
Trip/Equip /Field Blank		A	A											A	A							

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Acrolein RRF < .05 ICAL HR07566 'R' assoc. Apls.
CCAL 4/20 acrolein < .05 } most apls already 'R' no
CCAL 4/24 acrolein %D 25 } further qual.

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 6.5.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KUL16
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-H12-2-01(0)	2 FB-120-SD(SW)	3 SD-G12-3-01(0)	4 SD-H11-2-01(0)	5 SD-H12-1-01(0)	6 SD-I11-2-01(0)	7 SD-I11-2-01(0)DUP	8 SD-I11-1-01(0)	9 SD-F11-1-01(0)	10 SD-F11-2-01(0)	11 SD-H11-1-01(0)	12 SD-I10-2-01(0)	13 SD-H8-4-01(0)	14 FB-121-SD(SW)	15 SD-H7-2-01(0)	16 SD-H7-2-01(0)DUP	17 SD-H7-1-01(0)	18 SD-I8-1-01(0)	19 SD-I7-1-01(0)	20 SD-I5-2-01(0)	21 SD-I5-2-01(0)DUP	22 SD-I5-1-01(0)
Completeness of Analyses	A																					→
Holding Times	A									→	X	A					→	X	A			→
Tuning Performance	A																					→
Initial Calibration																						
Continuing Calibration																						
Method Blanks	A			→	X	A											→	X	A			→
LCS	A																					→
Surrogate/ Internal %R	A									→	X	A					→	X	A			→
MS/MSD: SD-H7-2-01(0)	A																					→
Reporting Limits See narr.	A																					→
Completeness of Analyte List	A																					→
Field Duplicate Pair :						X	X								X	X			X			
Equip /Field Blank		A												A								

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SURR + HT SD-H11-1-01(0), SD-I8-1-01(0)
4/24 bePP2100 'U' SD-I11-2-01(0), SD-I8-1-01(0)
FD pair SD-I11-2-01(0)/DUP N-nitrosodiphenylamine, phenanthrene, pyrene, anthracene, fluoranthene, benzo(a)anth, chrysene, bePP, benzo(b&k) fluor., benzo(a)pyr, indeno(123cd) dibenz(ah) anth, benzo(ghi) perylene
pair SD-H7-2-01(0)/DUP acenaphthylene, fluorene, phenanthrene, pyrene, anth, fluoranthene, benzo(a)anth, chrysene, benzo(b) flu, benz(K), benzo(a) pyr. indeno(123cd pyr), dibenz(ah)anth, benzo(ghi) perylene
pair SD-I5-2-01(0)/DUP benzo(b)fluoranthene
CLH 4/30 24DNP est. in SD-I5-1-01(0)
HP06754

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.5.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KUL16
Reviewer: C Jensen

Validation Criteria	1 SD-I5-1-01(0)	2 SD-H12-2-01(0)	3 FB-120-SD/SW	4 SD-G123-01(0)	5 SD-H11-2-01(0)	6 SD-H12-1-01(0)	7 SD-I11-2-01(0)	8 SD-I11-2-01(0)DUP	9 SD-I11-1-01(0)	10 SD-F11-1-01(0)	11 SD-G11-2-01(0)	12 SD-H11-1-01(0)	13 SD-I10-2-01(0)	14 SD-H8-4-01(0)	15 FB-121-SD/SW	16 SD-H7-2-01(0)	17 SD-H7-2-01(0)DUP	18 SD-H7-1-01(0)	19 SD-I6-1-01(0)	20 SD-I5-1-01(0)	SD-I5-2-01(0)
Completeness of Analyses	A																				
Holding Times	A																				
Initial Calibration	A																				
Continuing Calibration	A																				
Method Blanks	A							→	X	A			→	X	A					→	X
LCS	A																				
Post Digestion spikes	A	→	NA	A									→	NA	A						
Lab Duplicate	X	→	A	X									→	X	X						
Matrix Spike SD-H7-2-01(0)	X	A													X	A					
Reporting Limits	A																				
Completeness of Analyte List	A																				
Field Duplicate Pair :						X	X								X	X					
Equip /Field Blank		A												X							X

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: Cr, Cu, Ni, Zn FD pair SD-I11-2-01(0)/DUP

MB Hg 'U' FB-121-SD/SW

Se 'U' SD-I5-1-01(0)

Cd 'U' SD-F11-1-01(0)

MS/MSD Cd ↓ Cr ↑ Cu ↑ Zn ↑ post dig ok LCSoh est. Cd, Cr, Cu, Zn SD-H7-2-01(0)

MS/MSD Zn ↓ LCSoh. Zn est. in SD-I5-1-01(0)

Lab dup As, Cu, Hg est in all spls except SD-I5-1-01(0) (sediment spls)

LCS lab dup As, Be, Se, Zn in sample SD-I5-1-01(0)

Spl SD-I5-1-01(0) est. for Zn due to serial dilution

As, Cr, out for SD-H7-2-01(0)/DUP.

As, Cu, Se, Tl, Zn for pair SD-I5-2-01(0)/DUP

LEVEL III VALIDATION WORKSHEET

Method: Alcohols, Ethers, NC, TOC
Date Reviewed: 6.5.01
Sample Collection Dates: _____
SDG: KVL16
Reviewer: C Jensen
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-I5-1-01(0)	2 SD-H12-2-01(0)	3 FB-120-SD/SW	4 SD-G12-3-01(0)	5 SD-H11-2-01(0)	6 SD-H12-1-01(0)	7 SD-H11-2-01(0)DUP	8 SD-I11-2-01(0)MS/MSD	9 SD-I11-1-01(0)	10 SD-F11-1-01(0)	11 SD-I7-1-01(0)	12 SD-I7-2-01(0)	13 SD-I10-2-01(0)	14 SD-H8-4-01(0)	15 FB-121-SD/SW	16 SD-H7-2-01(0)	17 SD-H7-2-01(0)DUP	18 SD-I7-1-01(0)	19 SD-I8-1-01(0)	20 SD-I5-2-01(0)
Completeness of Analyses	A																			→
Holding Times	A																			→
Initial Calibration	A																			→
Continuing Calibration	A	X						→	A	A	A	A	A	X	A	A	X A	A A	A	A
Method Blanks	A																			→
LCS	A									D	X	A					→	X A		→
Surrogate %R	NA																			
MS/MSD: SD-H7-2-01(0)	A													→	X	A				→
Reporting Limits	A																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :						A	A								A	A			A	A
Equip /Field Blank		X												X						

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD NC MS/MSD ↓ est in SD-H7-2-01(0), TOC est in SD-H7-2-01(0)
LCS ↑ in two attempts, for NC, est. in SD-H11-H01(0), SD-I8-1-01(0)

LCS/LCSD ↑ butylether (H2O matrix) FB-120-SD/SW, FB-121-SD/SW
LCS/LCSD soil propylether, butylether. est in SD-H7-2-01(0)
4/20 butyl 1:41, 5:, 8:19, 11:01, 22:05
4/21 b. 1:42 12:13 p+b 15:29 b, 18:43 p+b 21:58 p+b 23:44 b

FB-120-SD/SW TOC .74 mg/L
FB-121 TOC .84 mg/L

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL16 **Date:** 6.7.01

Sample ID(s)	Qualification	Reason
FB-121-SD/SW	UJ	%D >15 Petro
SD-FH-1-01(0)	UJ	" "
SD-H7-2-01(0)	UJ	" "
SD-HH-1-01(0)	J	" "
SD-I8-1-01(0)	R	24DNT %D > 90
SD-HH-1-01(0)	R	PetN "

YES NO

N/A

CASE NUMBER: KVL46 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

YES NO

N/A

3.0 Data Completeness and Deliverables

3.1 Have any missing deliverables been received and added to the data package? [ ] ___ ✓

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.

3.2 Was SAS-request included with package? [ ] ___ ✓

If no, a SAS-request can be retrieved from RSCC.

4.0 Cover Letter SDG Narrative

4.1 Is the Narrative or Cover Letter Present? [✓] ___ ___

4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter? [✓] ___ ___

5.0 Traffic Reports and Laboratory Narrative

5.1 Are Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

NOTE: Samples are not preserved.

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [✓] __

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? ✓ ___ ___
b. Soil/Solid? ✓ ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A

YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ [✓] ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? [✓] ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

YES NO N/A

8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms: __ [✓] __

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab) [✓] __ __

9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix? [ ] __ __

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 38	0 out of 38

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ___ ☑ ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? [✓] ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [ ] [✓] ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive See attached

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

YES NO N/A

13.0 Method Blanks

13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices?
a. water [✓] ___ ___

b. soil [✓] ___ ___

13.2 Frequency of Analysis:

Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted. [✓] ___ ___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit? [✓] ___ ___

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s)to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ ✓ ___

14.3 Are there field/rinse/equipment blanks associated with every sample? ✓ ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ ✓ ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?	☐		☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report?	☑ response only		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____	☐		☑

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?		✓	

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

	YES	NO	N/A
16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?	✓		

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A
16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?		✓	

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

See attached for qualification

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ☑ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ☑ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ ___
b. soils [ ] ___ ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] ___ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] ___ ___

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 12.4.01
Sample Collection Dates:

SDG: KVL17
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-F11-1-01(0.5)	2 SW-F11-1-01(0.5)	3 SW-F11-2-01(0.5)	4 SW-H11-01(0.5)	5 SW-I10-1-01(0.5)	6 SW-H8-4-01(0.5)	7 SW-H8-3-01(0.5)	8 SW-H8-2-01(0.5)	9 TB-4/19/01	10 SW-H7-2-01(0.5)	11 SW-H7-2-01(0.5)	12 SW-H7-1-01(0.5)	13 SW-I10-1-01(0.5)	14 SW-I5-2-01(0.5)	15 SW-I5-2-01(0.5) DUP	16 SW-I5-1-01(0.5)	17 SW-M5-2-01(0.5)	18 SW-M5-3-01(0.5)	19 SW-M6-3-01(0.5)	20 SW-M6-2-01(0.5) SW-M6-1-01(0.5)
Completeness of Analyses	A																			→
Holding Times	A																			→
Tuning Performance	A																			→
Initial Calibration	A																			→
Continuing Calibration	A													→	X	X	X	X	X	X X
Method Blanks	A																			→
LCS	A																			→
Surrogate/ Internal %R	A																			→
MS/MSD: SW-H7-2-01(0.5)	A								→	X	A									→
Reporting Limits	A																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :														A	A					
Trip/Equip /Field Blank									A											

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD 2 clvc 1 no %R, LCSok, 2 clvc. qual. est for SW-H7-2-01(0.5)
C.C.V. 12 20 > 25 4/24 acrolein 8pts qual. est.

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 6.4.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL17
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-H11-1-01(0)	2 SW-F11-1-01(0)	3 SW-F12-01(0)	4 SW-H12-01(0)	5 SW-I10-1-01(0)	6 SW-H8-4-01(0)	7 SW-H8-3-01(0)	8 SW-H8-2-01(0)	9 SW-H7-2-01(0)	10 SW-H7-2-01(0)DUP	11 SW-H7-1-01(0)	12 SW-I10-1-01(0)	13 SW-I5-2-01(0)	14 SW-I5-2-01(0)DUP	15 SW-I5-1-01(0)	16 SW-M5-2-01(0)	17 SW-M5-3-01(0)	18 SW-M16-3-01(0)	19 SW-M16-2-01(0)	20 SW-M16-1-01(0)
Completeness of Analyses	A																			
Holding Times	A										X	X	A							
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: SW-H7-2-01(0)	A																			
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :									A	A			A	A						
Equip /Field Blank NA																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Ht out SW-I10-1-01(0), surr. out in original, all cmpds est.
CCAL 4/30 24DNP - est in SW-I10-1-01(0)

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 12.4.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL17
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-I1-1-01(6)	2 SW-F11-1-01(6)	3 SW-F11-2-01(6)	4 SW-I11-1-01(6)	5 SW-I10-1-01(6)	6 SW-I18-4-01(6)	7 SW-I18-3-01(6)	8 SW-I18-2-01(6)	9 SW-I17-2-01(6)	10 SW-I7-2-01(6)D	11 SW-I7-1-01(6)	12 SW-I16-1-01(6)	13 SW-I15-2-01(6)	14 SW-I5-2-01(6)D	15 SW-I5-1-01(6)	16 SW-M5-2-01(6)	17 SW-M5-3-01(6)	18 SW-M6-3-01(6)	19 SW-M6-2-01(6)	20 SW-M6-1-01(6)
Completeness of Analyses	A																			↓
Holding Times	A																			↓
Initial Calibration	A																			↓
Continuing Calibration	A																			↓
Method Blanks	X	X	X	X	X	X	A	X	A	A	A	A	A	X	X	X,	X	X	X	X
LCS	A																			↓
Post Digestion spikes Mn																				
Lab Duplicate	A																			↓
Matrix Spike SW-H7-2-01(6)	A																			↓
Reporting Limits /	X																			↓
Completeness of Analyte List	A																			↓
Field Duplicate Pair :									A	A			A	A						
Equip /Field Blank NN																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

RL not met for Pb
'u' in SW-I11-1-01(6), SW-F11-1-01(6) } majority of spls in SDG
'u' in SW-I11-1-01(6), " }

LEVEL III VALIDATION WORKSHEET

Method: Esters, Alcohols
Date Reviewed: 6.4.01
Sample Collection Dates:
SDG: KUL7
Reviewer: C Jensen
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-IH-1-01(0)	2 SW-FH-1-01(0)	3 SW-FH-2-01(0)	4 SW-HH-1-01(0)	5 SW-HH-2-01(0)	6 SW-HK-4-01(0)	7 SW-HK-3-01(0)	8 SW-HK-2-01(0)	9 SW-H7-2-01(0)	10 SW-H7-2-01(0)DUP	11 SW-H7-1-01(0)	12 SW-HE-1-01(0)	13 SW-IS-2-01(0)	14 SW-IS-2-01(0)DUP	15 SW-IS-1-01(0)	16 SW-MS-2-01(0)	17 SW-MS-3-01(0)	18 SW-MK-3-01(0)	19 SW-MK-2-01(0)	20 SW-MK-1-01(0)
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Continuing Calibration	X	→	→	→	→	→	→	→	→	X	A	→	→	→	→	→	→	→	→	X
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
LCS (1)	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Surrogate %R	na.																			
MS/MSD: SW-H7-2-01	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Reporting Limits	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Field Duplicate Pair :									A	A			A	A						
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

(1) Two LCS out, but proved precision other two, no qual. of data.
CCAL 4/20 22:25 b 1:42 b 4/22:13 b 15:29 b 18:43 b 21:58 b 23:44 b.
Several spls est. for butyl ether.

N/A

YES NO

CASE NUMBER: KVL17 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO	N/A
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓	
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?	[ ]	✓	
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?	✓		
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	✓		
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?	✓		
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		✓	
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ ✓ __

B. For soil/sediment samples 14 days from sample collection to extraction __ [ ] ✓

C. For all samples extracts 40 days from time of extraction to time of analysis __ ✓ __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] ___ ___
b. Soil/Solid? [ ] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ [✓] ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? [✓] ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.
** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		☑	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

	YES	NO	N/A
9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	☑		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	☑		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	_____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate — [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ☑ ☐ ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

	YES	NO	N/A
13.0 Method Blanks			
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	✓		
b. soil			✓
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	✓		
ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.			
13.3 Are the positive hits present in the blank less than detection limit?	✓		
ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.			
13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	✓		
ACTION: Use professional judgement to determine the effect on the data.			

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

all low level

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [ ] ✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?			☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report?	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____			☑

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?		✓	

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

	YES	NO	N/A
16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?	✓		

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A
16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?		✓	

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ✓ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ —
b. soils [ ] — ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] — ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] — —

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.4.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL18
Reviewer: C Jensen

Validation Criteria	1 SW-H11-4-0(6)	2 SW-F11-4-0(6)	3 SW-H11-4-0(6)	4 SW-I10-4-0(6)	5 SW-H8-4-0(6)	6 SW-H8-3-0(6)	7 SW-H8-2-0(6)	8 SW-F7-2-0(6)	9 SW-H7-2-0(6) DUP	10 SW-H7-1-0(6)	11 SW-I6-1-0(6)	12 SW-I5-2-0(6)	13 SW-I5-2-0(6) DUP	14 SW-I5-1-0(6)	15 SW-M5-2-0(6)	16 SW-M5-3-0(6)	17 SW-M6-3-0(6)	18 SW-M6-2-0(6)	19 SW-M6-1-0(6)	20
Completeness of Analyses	A																			
Holding Times	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blank	A																			
LCS	A																			
Post Digestion spikes	NA																			
Lab Duplicate	A																			
Matrix Spike SW-H7-2-0(6)	A																			
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :								A	A			A	A							
Equip /Field Blank	NA																			

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

RL not met for Pb.

No qual. of data.

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.11.01
Sample Collection Dates:

SDG: KVL21
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-H5-1-01(0)	2 SW-K4-1-01(0)	3 SW-J5-2-01(0)	4 SW-L5-1-01(0)	5 SW-P4-1-01(0)	6 SW-P4-1-01(0)DUP	7 SW-P4-2-01(0)	8 SW-Q4-1-01(0)	9 SW-R4-1-01(0)	10 SW-R4-1-01(0)DUP	11 SW-N7-6-01	12 SW-N7-7-01(0)	13 SW-N7-5-01(0)	14 SW-N7-2-01(0)	15 SW-N7-3-01(0)	16 SW-N7-4-01(0)	17 SW-M7-2-01(0)	18 SW-K4-1-01(0)	19 SW-K5-1-01(0)	20 SW-K5-1-01(0)DUP
Completeness of Analyses	A																			→
Holding Times	A																			→
Initial Calibration	A																			→
Continuing Calibration	A																			→
Method Blanks	A	A	X	X	A	→	X	X	A	X	A	→	→	→	→	→	X	X	A	→
LCS	A																			→
Post Digestion spikes NA																				
Lab Duplicate	A																			→
Matrix Spike SW-K4-1-01(0)	A																			→
Reporting Limits	X																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :					A	A			A	A									A	A
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

'W' MB Hg SW-J5-2-01(0), SW-L5-1-01(0), SW-P4-2-01(0), SW-Q4-1-01(0) SW-R4-1-01(0)DUP, SW-M7-2-01(0), SW-K4-1-01(0)

RL not met for Pb.

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 10.11.01
Sample Collection Dates:

SDG: KUL22
Reviewer: C Jensen

The following data validation areas were reviewed:

Validation Criteria	1 SW-K5-1-01(0.5)DUP	2 TB 4/20/01	3 SW-H5-1-01(0.5)	4 SW-K11-1-01(0.5)	5 SW-J5-2-01(0.5)	6 SW-L5-1-01(0.5)	7 SW-P4-1-01(0.5)	8 SW-P4-1-01(0.5)DUP	9 SW-P4-2-01(0.5)	10 SW-Q4-1-01(0.5)	11 SW-R4-1-01(0.5)	12 SW-R4-1-01(0.5)DUP	13 SW-N7-6-01(0.5)	14 SW-N7-7-01(0.5)	15 SW-N7-5-01(0.5)	16 SW-N7-2-01(0.5)	17 SW-N7-3-01(0.5)	18 SW-N7-4-01(0.5)	19 TB-4/24/01	20 SW-M7-2-01(0.5)	SW-K4-1-01(0.5)
Completeness of Analyses	A																					
Holding Times	A																					
Tuning Performance	A																					
Initial Calibration	A																					
Continuing Calibration	A																					
Method Blanks	A																					
LCS	A																					
Surrogate/ Internal %R	A																					
MS/MSD: SW-K4-1-01(0.5)	A																					
Reporting Limits	A																					
Completeness of Analyte List	A																					
Field Duplicate Pair :	A						A	A			A	A										
Trip/Equip /Field Blank	A																	A				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD 2 cove est in SW-K4-1-01(0.5)

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) **SDG:** KVL22
Date Reviewed: 6.11.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Validation Criteria	Sample Identification	1 SW-K11-1-01(0)	2 SW-J5-2-01(0)	3 SW-L5-1-01(0)	4 SW-P4-1-01(0)	5 SW-P4-1-01(0)DUP	6 SW-P4-2-01(0)	7 SW-Q4-1-01(0)	8 SW-R4-1-01(0)	9 SW-R4-1-01(0)DUP	10 SW-N7-6-01(0)	11 SW-N7-7-01(0)	12 SW-N7-5-01(0)	13 SW-N7-2-01(0)	14 SW-N7-3-01(0)	15 SW-N7-4-01(0)	16 SW-M7-2-01(0)	17 SW-K4-1-01(0)	18 SW-K5-1-01(0)	19 SW-K5-1-01(0)DUP	20
Completeness of Analyses	A																				
Holding Times	A			→	X	X	A														
Tuning Performance	A																				
Initial Calibration	A																				
Continuing Calibration	A			→	X	X	A														
Method Blanks	A																				
LCS	A																				
Surrogate/ Internal %R	A			→	X	X	A														
MS/MSD: SW-K4-1-01(0)	A																→	Y	A		
Reporting Limits	A																				
Completeness of Analyte List	A																				
Field Duplicate Pair :					A	A			A	A									A	A	
Equip /Field Blank																					

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SURR HT out - est. all cmpds SW-P4-1-01(0), SW-P4-1-01(0) DUP
MS/MSD 24DUP est in SW-K4-1-01(0)
LCS ~~bis(2chl)ether, n-nitrosodin, isoph, 4chlphenyl, est in~~ ✓ - no qual.
5/4 bis(2chl)ether, n-nitrosodin, nitrobenz, isoph, 4chlphe, 12diph.
est. in SW-P4-1-01(0)/DUP

HP06755

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6/12/01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL22
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-HS-1-01(0)	2 SW-K4-1-01(0)	3 SW-J5-2-01(0)	4 SW-L5-1-01(0)	5 SW-P4-1-01(0)	6 SW-P4-1-01(0)DUP	7 SW-P4-2-01(0)	8 SW-Q4-1-01(0)	9 SW-R4-1-01(0)	10 SW-R4-1-01(0)DUP	11 SW-N7-6-01(0)	12 SW-N7-7-01(0)	13 SW-N7-5-01(0)	14 SW-N7-2-01(0)	15 SW-N7-3-01(0)	16 SW-N7-4-01(0)	17 SW-N7-2-01(0)	18 SW-K4-1-01(0)	19 SW-K5-1-01(0)	20 SW-K5-1-01(0)DUP
Completeness of Analyses	A																			→
Holding Times	A																			→
Initial Calibration	A																			→
Continuing Calibration	A																			→
Method Blanks	A																			→
LCS	A																			
Post Digestion spikes NA																				
Lab Duplicate	A																			→
Matrix Spike SW-K4-1-01(0)	A																			→
Reporting Limits	X																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :					A	A			X	X									A	A
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Hg "W" SW-HS-1-01(0), SW-J5-2-01(0), SW-P4-1-01(0)/DUP, SW-P4-2-01(0) SW-Q4-1-01(0), SW-N7-7-01(0), SW-N7-3-01(0), SW-K5-1-01DUP

FD Cu, Pb SW-R4-1-01(0)DUP

LEVEL III VALIDATION WORKSHEET

Method: Alcohols, Ether, NC
Date Reviewed: 6.12.01
Sample Collection Dates:

SDG: KVL22
Reviewer: C Jensen

The following data validation areas were reviewed:

Validation Criteria	1 SW-45-1-01(0)	2 SW-44-1-01(0)	3 SW-35-2-01(0)	4 SW-45-1-01(0)	5 SW-R4-1-01(0)	6 SW-R4-1-01(0) DUP	7 SW-R4-2-01(0)	8 SW-R4-1-01(0)	9 SW-R4-1-01(0) DUP	10 SW-N76-01(0)	11 SW-N77-01(0)	12 SW-N75-01(0)	13 SW-N72-01(0)	14 SW-N73-01(0)	15 SW-N74-01(0)	16 SW-M7-2-01(0)	17 SW-K4-1-01(0)	18 SW-K5-1-01(0)	19 SW-K5-1-01(0) DUP	20
Completeness of Analyses	A																			
Holding Times	A																			
Initial Calibration	A																			
Continuing Calibration	A			X	X	X	X	X	X	A										
Method Blanks	A																			
LCS	A																			
Surrogate %R	NA																			
MS/MSD: SW-K4-1-01(0)	A																			
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :				A	A			A	A									A	A	
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

9:07
CCAL 4/25 dle, me, e, t 13:48 b several spls qual est. for butyl ether

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL22 **Date:** 6.11.01

Sample ID(s)	Qualification	Reason
SW-R4-1-01(0)/DUP	J	RetN CCAL
SW-R4-2-01(0)		
SW-R4-1-01(0)		
SW-R4-1-01(0)/DUP		
SW-N7-6-01(0)		
SW-N7-7-01(0)		
SW-N7-5-01(0)		
SW-N7-2-01(0)		
SW-N7-3-01(0)		
SW-N7-4-01(0)		
SW-M7-2-01(0)		
SW-K5-1-01(0)		
SW-K5-1-01(0)DUP	↓	

~~4/30 12:06~~

5/1 18:43 21:54

5/2 1:04 6:53

YES NO

N/A

CASE NUMBER: KVL22 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO
N/A		
3.0 Data Completeness and Deliverables		
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.		
3.2 Was SAS-request included with package?	[ ]	✓
If no, a SAS-request can be retrieved from RSCC.		
4.0 Cover Letter SDG Narrative		
4.1 Is the Narrative or Cover Letter Present?	[✓]	
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	[✓]	
5.0 Traffic Reports and Laboratory Narrative		
5.1 Are Traffic Report Forms present for all samples?	[✓]	
ACTION: If no, contact lab for replacement of missing or illegible copies.		
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		[✓]
NOTE: Samples are not preserved.		
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".		

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [✓] __

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] ___ ___
b. Soil/Solid? [ ] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A

YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

YES NO N/A

8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms: __ ✓1 __

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab) ✓1 __ __

9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix? ✓1 __ __

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0/0 out of 19/38	____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate ☑ ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? ☑ ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? ☑ ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ✓ ☑ ___ CJ

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R". Refer. CJ See attached.

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ~~☑~~ ✓ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive See attached.

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

	YES	NO	N/A
13.0 Method Blanks			
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	☑		
b. soil	☐		☑
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	☑		

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	☑		

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	☑		

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

all ND

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [ ] ✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?			✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____			✓

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?		✓	

ACTION: If no, contact lab for resubmittals. all ND.

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?	___	[ ]	✓

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

	YES	NO	N/A
16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?	[ ]	___	✓

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A
16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?	[ ]	___	✓

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ✓ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?

a. waters [ ] ✓ __
b. soils [ ] __ ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] __ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? ✓ __ __

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 6/16/01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KUL23
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SD-MS-2-01(0.5)	2 SD-MW-3-01(0.5)	3 FB122-SD/SW SD-MW-2-01(0.5)	4 SD-MW-1-01(0.5)	5 TB-4/20/01	6 SD-MS-1-01(0.5)	7 SD-J10-1-01(0.5)	8 SD-J10-2-01(0.5)	9 SD-K11-1-01(0.5)	10 SD-J5-1-01(0.5)	11 SD-J5-2-01(0.5)	12 SD-L5-1-01(0.5)	13 FB-123-SD/SW	14 SD-N7-1-01(0.5)	15 SD-P4-1-01(0.5)	16 SD-P4-1-01(0.5) Dup	17 SD-P4-2-01(0.5)	18 SD-G4-1-01(0.5)	19 SD-I24-1-01(0.5)	20 SD-I24-1-01(0.5) Dup SD-N7-6-01(0.5)
Completeness of Analyses A																				
Holding Times A																				
Tuning Performance A																				
Initial Calibration A																				
Continuing Calibration A																				
Method Blanks A																				
LCS A																				
Surrogate/ Internal %R X	A												→	X	A					→ X
MS/MSD: SD-N71-01(0.5)																				
Reporting Limits A																				
Completeness of Analyte List A																				
Field Duplicate Pair :															A	A			A	A
Trip/Equip /Field Blank													A							

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

TIC Search for dimethyl ether.

TICs for SD-P4-1-01(0.5) lab notes are carryover or contamination, qualified 'U' not qualified, just noted in narrative

SURR: out SD-MS-2-01(0.5), SD-N7-1-01(0.5), SD-N7-6-01(0.5)

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 6.11.01
Sample Collection Dates:
The following data validation areas were reviewed:

SDG: KVL23
Reviewer: C Jensen

Validation Criteria	1 SD-MS-2-01(0)	2 SD-MS-3-01(0)	3 SD-M6-3-01(0)	4 SD-M4-2-01(0)	5 SD-M6-1-01(0)	6 FB-122 SD/SW	7 SD-H5-1-01(0)	8 SD-J10-1-01(0)	9 SD-J10-2-01(0)	10 SD-K11-1-01(0)	11 SD-J5-1-01(0)	12 SD-J5-2-01(0)	13 SD-L5-1-01(0)	14 FB-123 SD/SW	15 SD-N7-1-01(0-2)	16 SD-P4-1-01(0-2)	17 SD-P4-1-01(0-2)DUP	18 SD-P4-2-01(0-2)	19 SD-R4-1-01(0-1)	20 SD-R4-1-01(0-1)DUP
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	~~X~~	~~X~~	~~X~~	X	X	A	X	X	X	X	X	X	X	A	A	X	X	A		
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: SD-N7-1-01(0-2)	A												→	X	A					
Reporting Limits	X																			
Completeness of Analyte List	A																			
Field Duplicate Pair :															A	A			A	A
Equip /Field Blank					A															

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

dinitroglycol scanned as TICs.
MS/MSD H2O matrix- no qual. MS/MSD hexachlorocyclop. & acenapth & ~~fluor.~~ & pyrene benzidine
33'dich, ~~benzo(a)anth~~, ~~chrysene~~, ~~benzo(b)fluor~~, ~~benzo(k)fluor~~, ~~benzo(a)pyr~~, Ind(123cd)pyr
dibenz(ah)anth, benzo(ghi)pery LCSon. These cmpds est. in SD-N7-1-01(0-2)

HP06754
LCAL 5/24 DUP 5/2 eff SD-MS-2-01(0), SD-MS-3-01(0), SD-M4-3-01(0), SD-M6-2-01(0)
SD-M6-1-01(0), SD-H5-1-01(0), SD-J10-1-01(0), SD-J10-2-01(0), SD-K11-1-01(0), SD-J5-1-01(0)
SD-J5-2-01(0), SD-L5-1-01(0), SD-P4-1-01(0), SD-P4-1-01(0)DUP.

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.11.01
Sample Collection Dates:

SDG: KVL23
Reviewer: C Jensen

The following data validation areas were reviewed:

Validation Criteria	1 SD-MS-2-01(0)	2 SD-MS-3-01(0)	3 SD-MB-3-01(0)	4 SD-MB-2-01(0)	5 SD-MB-1-01(0)	6 FB-122 SD/SW	7 SD-45-1-01(0)	8 SD-JD-1-01(0)	9 SD-JD-2-01(0)	10 SD-KL-1-01(0)	11 SD-JS-1-01(0)	12 SD-JS-2-01(0)	13 SD-LS-1-01(0)	14 FB-123 - SD/SW	15 SD-NZ-1-01(0-2)	16 SD-PZ-1-01(0-2)	17 SD-PZ-1-01(0-2)DUP	18 SD-PZ-2-01(0-1)	19 SD-QZ-1-01(0-1)	20 SD-RZ-1-01(0-1)	SD-RZ-1-01(0-1)DUP	SD-NZ-1-01(0-2)
Completeness of Analyses	A																					
Holding Times	A																					
Initial Calibration	A																					
Continuing Calibration	A																					
Method Blanks	A			→	X	A																
LCS	X			→	A	X						→	A	X								
Post Digestion spikes	A			→	NA	A						→	NA	A								
Lab Duplicate	A																					
Matrix Spike SD-NZ-1-01(0-2)	A												→	X	A							
Reporting Limits	A																					
Completeness of Analyte List	A																					
Field Duplicate Pair :															A	A			A	A		
Equip /Field Blank					A								A									

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MB 'A' Hg FB-122 SD/SW
MS/MSD Cu, Zn ref. in SD-NZ-1-01(0-2)

LCS + Sb - all soil ref. for Sb.

LEVEL III VALIDATION WORKSHEET

Method: Alcohol, Ether, TOC
Date Reviewed: 6.7.10
Sample Collection Dates:

SDG: KVL23
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-MS-2-01(0)	2 SD-MS-3-01(0)	3 SD-M6-3-01(0)	4 SD-M6-2-01(0)	5 SD-M6-1-01(0)	6 FB-122 SD/SW	7 SD-L5-1-01(0)	8 SD-J6-1-01(0)	9 SD-J6-2-01(0)	10 SD-K11-1-01(0)	11 SD-J5-1-01(0)	12 SD-J5-2-01(0)	13 SD-L5-1-01(0)	14 FB-123 SD/SW	15 SD-N7-1-01(0-2)	16 SD-R4-1-01(0-2) DUP	17 SD-R4-2-01(0-1)	18 SD-Q4-1-01(0-1)	19 SD-R4-1-01(0-1)	20 SD-N7-1-01(0-2) DUP
Completeness of Analyses	A																			↓
Holding Times	A																			↓
Initial Calibration	A																			↓
Continuing Calibration	A																			↓
Method Blanks	A																			↓
LCS	A																			↓
Surrogate %R	na																			↓
MS/MSD: SD-N7-1-01(0-2)	A												↓	X	A					↓
Reporting Limits	A																			↓
Completeness of Analyte List	A																			↓
Field Duplicate Pair :															A	A			A	A
Equip /Field Blank					X								X							

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

AC MS/MSD ↓ } SD-N7-1-01(0-2)
TOC ↓ MS/MSD diethyl ether, propyl ether, butyl ether est in SD-N7-1-01(0-2)

FB-122 SD/SW TOC .46 mg/L FB-123 SD/SW TOC .43 mg/L
4/26 9:02 dee, me, e, bo

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL23 **Date:** 6.11.01

Sample ID(s)	Qualification	Reason
SD-MS-2-01(0)	J	NG %D>25
SD-J10-1-01(0)	J	2,4-DNT >25, 2,6-DNT
SD-N7-1-01(0)	R	NG >90 %D HMX

YES NO

N/A

CASE NUMBER: KUL23 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO
N/A		
3.0 Data Completeness and Deliverables		
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.		
3.2 Was SAS-request included with package?	[ ]	✓
If no, a SAS-request can be retrieved from RSCC.		
4.0 Cover Letter SDG Narrative		
4.1 Is the Narrative or Cover Letter Present?	✓	
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	✓	
5.0 Traffic Reports and Laboratory Narrative		
5.1 Are Traffic Report Forms present for all samples?	✓	
ACTION: If no, contact lab for replacement of missing or illegible copies.		
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		✓
NOTE: Samples are not preserved.		
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".		

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ ✓ __

B. For soil/sediment samples 14 days from sample collection to extraction __ ✓ __

C. For all samples extracts 40 days from time of extraction to time of analysis __ ✓ __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? ☑ ___ ___
b. Soil/Solid? ☑ ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

YES NO N/A

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		✓	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

	YES	NO	N/A
9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	✓		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	✓		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
_____ out of ___	0 out of 19

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not triplicate ☑ ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? ☑ ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? ☑ ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ☐ ☐

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ☑ ☐ ☐

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ☐ ☑ ☐

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

YES NO N/A

13.0 Method Blanks

13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices?
a. water ☑ ___ ___

b. soil ☑ ___ ___

13.2 Frequency of Analysis:

Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted. ☑ ___ ___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit? ☑ ___ ___

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank.
If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable? ☑ ___ ___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ ✓ ___

14.3 Are there field/rinse/equipment blanks associated with every sample? ✓ ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ ✓ ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?			☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____			☑

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? ☑ ___ ___

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? ___ ☑ ___

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

See attached.

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ☑ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ☑ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?

a. waters [ ] ✓ ✓
b. soils [ ] ___ ___

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] ___ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? ✓ ___ ___

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 6.12.01
Sample Collection Dates:

SDG: KUL24
Reviewer: C Jensen

The following data validation areas were reviewed:

Validation Criteria	1 FB-125-SD/SW FB-4/25/01 SD-N7-7-01(0.5)	2 FB-126-SD/SW SD-N7-3-01(0.5)	3 SD-N7-2-01(0.5)	4 SD-N7-3-01(0.5)	5 SD-N7-4-01(0.5)	6 FB-124-SD/SW FB-4/24/01	7	8 SD-K4-1-01(0.5)	9 SD-K5-1-01(0.5)	10 SD-K5-1-01(0.5)DUP	11 SD-H10-1-01(4.5)	12 SD-H9-1-01(4.5)	13 SD-H8-1-01(2.5)	14 SD-H6-1-01(2.5)	15 SD-M7-2-01(0.5)	16 SD-E8-2-01(4.0)	17 SD-E8-1-01(0.5)	18 SD-E9-1-01(0.5)	19 SD-C10-1-01(0.5) SD-C9-1-01(0.5)	20 SD-N5-2-01(0.5)
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A	A	A	X	X	X	A	X	X	X	X	X	X	X	X	X	A			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A	A	A	→	X	X	A	→	X	X	A								→	A X A
MS/MSD: SD-K4-1-01(0.5)	A																			
Reporting Limits	A	A	X	A	X	→	A	A	A											
Completeness of Analyte List	A																			
Field Duplicate Pair :									A	A										
Trip/Equip /Field Blank	A	A	A				A	A												

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

SD-N7-4-01(0.5) all cmpds est. since lab noted Spl weight outside NJ requirements.

Surr out for SD-N7-7-01(0.5), SD-N7-3-01(0.5), SD-N7-4-01(0.5), SD-K4-1-01(0.5), SD-K5-1-01(0.5), SD-N5-2-01(0.5)

ICAL ~~Acetone~~ RRF < .05

CCAL 4/26 10:03 bromo. qual. est. in several samples

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) **SDG:** KVL24
Date Reviewed: 6.12.01 **Reviewer:** C Jensen
Sample Collection Dates:_____
The following data validation areas were reviewed:

Validation Criteria / Sample Identification	1 SD-N17-7-01(0)	2 SD-N17-5-01(0)	3 SD-N17-2-01(0)	4 SD-N17-3-01(0)	5 SD-N17-4-01(0)	6 FB-124-SD/SW	7 SD-K24-1-01(0)	8 SD-K25-1-01(0)	9 SD-K25-1-01(0)DUP	10 SD-H10-1-01(4)	11 SD-H9-1-01(4)	12 SD-H8-1-01(2)	13 SD-H6-1-01(2)	14 SD-M7-2-01(0)	15 SD-F8-2-01(4-5)	16 SD-F8-1-01(0-2)	17 SD-F9-1-01(0-1.5)	18 SD-C10-1-01(0-2)	19 SD-C9-1-01(0-1)	20 SD-B8-1-01(0-1)	SD-N5-2-01(0-2)	SD-M5-1-01(0-1.5)	FB-125-SD/SW	FB-126-SD/SW
Completeness of Analyses	A																							
Holding Times	A																							
Tuning Performance	A																							
Initial Calibration	A																							
Continuing Calibration	A				X	X	X	X	X	X	X	X	X	X	X	X								X
Method Blanks	A																							
LCS	A																							
Surrogate/ Internal %R	A																							
MS/MSD: SD-K41-01(0)	A		→	X	A																		→	
Reporting Limits	X		→	A	X																		A	A
Completeness of Analyte List	A																							
Field Duplicate Pair :					A	A																		
Equip /Field Blank																							A	A

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD Benzidine est in SD-K24-1-01(0) LCS ok.
Soil LCS 1 2-Nitroph., 246 Trichlph. 2nd LCS ok. no qual.
CCAL 5/4 20:35 24DNP
4/30 9:58 24DNP 22:33 24DNP } assoc. ~~Coupled~~ spls. qlf for 24DNP
5/1 10:17 24DNP

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.12.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL24
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 FB-125-SD/SW SD-N7-7-01(0)	2 FB-126-SD/SW SD-N7-5-01(0)	3 SD-N7-2-01(0)	4 SD-N7-3-01(0)	5 SD-N7-4-01(0)	6 FB-124-SD/SW	7 SD-KL4-1-01(0)	8 SD-KK9-1-01(0)	9 SD-KK5-1-01(0)	10 SD-H10-1-01(4)	11 SD-H9-1-01(4)	12 SD-H8-1-01(2)	13 SD-H6-1-01(2)	14 SD-M7-2-01(0)	15 SD-F8-2-01(1-3)	16 SD-F8-1-01(6-2)	17 SD-F9-1-01(6-5)	18 SD-C10-1-01(6-2)	19 SD-C9-1-01(6-1)	20 SD-B8-1-01(6-1)	21 SD-M9-2-01(6-2)
Completeness of Analyses	A																				
Holding Times	A																				
Initial Calibration	A																				
Continuing Calibration	A																				
Method Blanks	A																				
LCS	A X	A X	→		A	X															
Post Digestion spikes	A																				
Lab Duplicate	A																				
Matrix Spike SD-MS-1-01(0-1.5)	A				→	X	A														
Reporting Limits	X																				
Completeness of Analyte List	A																				
Field Duplicate Pair :																					
Equip /Field Blank	A NA X				A																

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: MB 'W' Hg FB-125-SD/SW

Estimated concentrations due to interference: Pb, Zn in ~~SD-N7-7-01(0)~~ several spls.
Cu, Ni, Zn for other spls.
FB-126-SD/SW Cd (.95 ug/L); Pb (10.5 ug/L)
MS/MSD ↓ Sb est in SD-MS-1-01(0-1.5)
↓ Pb " " SD-KL4-1-01(0)

Two lab dups, one analyte out in each set, overall lab precision demonstrated. No qual.
LCS Sb ↓, all soil est. for Sb.
Serial D out for Zn. in both serial d spls - est in all soil spls.
2 Serial D's in batch, lab demonstrated ~~prec~~ accuracy in other analytes

LEVEL III VALIDATION WORKSHEET

Method: Alcohol, Ether, TOC, NC
Date Reviewed: 6.12-01
Sample Collection Dates:
SDG: ICUL24
Reviewer: C Jensen
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-N7-2-01(0)	2 SD-N5-2-01(0)	3 SD-N7-3-01(0)	4 FB-124-SD/SW	5 SD-K4-1-01(0)	6 SD-K5-1-01(0) DUP	7 SD-H10-1-01(4)	8 SD-H9-1-01(4)	9 SD-H8-1-01(2)	10 SD-H6-1-01(2)	11 SD-M7-2-01(0)	12 SD-F8-2-01(1-3)	13 SD-F8-1-01(0-2)	14 SD-F9-1-01(0-1.5)	15 SD-C10-1-01(0-2)	16 SD-C9-1-01(0-1)	17 SD-B8-1-01(0-1)	18 SD-N5-2-01(0-2)	19 SD-M5-1-01(0-1.5)	20 FB-125-SD/SW	21 FB-126-SD/SW
Completeness of Analyses	A																				→
Holding Times	A													→	X	A	X	A			→
Initial Calibration	A	→																			→
Continuing Calibration	A	→	X	A																	→
Method Blanks	A	→	X	A															D	X	X
LCS	A																				→
Surrogate %R	NA		B																		
MS/MSD: SD-K4-1-01A	→	→	X	A																	→
Reporting Limits	A																				→
Completeness of Analyte List	A																				→
Field Duplicate Pair :				A	A																
Equip /Field Blank			A																	A	A

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

HT out for TOC for SD-C9-1-01(0-1), SD-N5-2-01(0-2)
TOC 'W FB-125-SD/SW, FB-126-SD/SW, SD-H10-1-01(4)
MS/MSD TOC & LCS OK, TOC est in SD-K4-1-01(0)

4/27 13:48 b 21:38 b FB-124-SD/SW

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KUL24 **Date:** 6.12.01

Sample ID(s)	Qualification	Reason
SD-F9-1-01(0-1.5)	J	24DNT >25 %D

YES NO

N/A

CASE NUMBER: KVL24 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

YES NO

N/A

3.0 Data Completeness and Deliverables

3.1 Have any missing deliverables been received and added to the data package? [ ] ___ ✓

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.

3.2 Was SAS-request included with package? [ ] ___ ✓

If no, a SAS-request can be retrieved from RSCC.

4.0 Cover Letter SDG Narrative

4.1 Is the Narrative or Cover Letter Present? [✓] ___ ___

4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter? [✓] ___ ___

5.0 Traffic Reports and Laboratory Narrative

5.1 Are Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

NOTE: Samples are not preserved.

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ ✓ __

B. For soil/sediment samples 14 days from sample collection to extraction __ ✓ __

C. For all samples extracts 40 days from time of extraction to time of analysis __ ✓ __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? ☑ ___ ___
b. Soil/Solid? ☑ ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

N/A

YES NO

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ [✓] ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? [✓] ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		✓	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

	YES	NO	N/A
9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	✓		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	✓		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	0 out of 19

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not triplicate ☑ ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? ☑ ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? ☑ ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ☐ ☐

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ☑ ☐ ☐

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ☐ ☑ ☐

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

YES NO N/A

13.0 Method Blanks

13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices?
a. water ☑ ___ ___

b. soil ☑ ___ ___

13.2 Frequency of Analysis:

Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted. ☑ ___ ___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit? ☑ ___ ___

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable? ☑ ___ ___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? ☑ ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ ☑ ___

14.3 Are there field/rinse/equipment blanks associated with every sample? ☑ ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ ☑ ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ ✓

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?			☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____			☑

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? ☑ ___ ___

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? [ ] ☑ ___

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

See attached for qualification

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ✓ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ ___
b. soils [ ] ___ ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] ___ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [ ] ✓ ___ ___

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) **SDG:** KUL25
Date Reviewed: 6.15.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Validation Criteria	Sample Identification	1 SW-L9-1-01(0.5)	2 SW-BS-1-01(0.5)	3 SW-NS-2-01(0.5)	4 SW-MS-1-01(0.5)	5 TB 4/25/01	6 SW-NS-4-01 (0.5)	7 SW-NS-5-01(0.5)	8 SW-NS-5-01(0.5) DUP	9 SW-N51-01(0.5)	10 SW-NS-3-01(0.5	11 SW-DU4-2-01(0.5)	12 SW-KS-2-01(0.5)	13 SW-LS-4-01(0.5)	14 SW-LS-3-01(0.5)	15 TB-4/26/01	16	17	18	19	20
Completeness of Analyses	SW-N7-1-01(0.5)	A																			
Holding Times		A																			
Tuning Performance		A																			
Initial Calibration		A																			
Continuing Calibration		A																			
Method Blanks		A																			
LCS		~~X~~ A																			
Surrogate/ Internal %R		~~X~~ A	A																		
MS/MSD:		~~X~~ A	A																		
Reporting Limits		A																			
Completeness of Analyte List		A																			
Field Duplicate Pair :								A	A												
Trip/Equip /Field Blank						A										A					

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD 2 clue. No recovery, LCS Ok. 2 clue est in SW-N7-1-01(0.5)

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) **SDG:** KVL25
Date Reviewed: 6.25.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-N7-1-01(0)	2 SW-T9-1-01(0)	3 SW-B8-1-01(0)	4 SW-N5-2-01(0)	5 SW-W5-1-01(0)	6 SW-N5-4-01(0)	7 SW-N5-5-01(0)	8 SW-N5-5-01(0)DUP	9 SW-N5-1-01(0)	10 SW-N5-3-01(0)	11 SW-N4-2-01(0)	12 SW-K5-2-01(0)	13 SW-K5-4-01(0)	14 SW-K5-3-01(0)	15	16	17	18	19	20
Completeness of Analyses	A	→																		
Holding Times	A	→																		
Tuning Performance	A	→																		
Initial Calibration	A	→																		
Continuing Calibration	A	→																		
Method Blanks	A	→																		
LCS	A	→																		
Surrogate/ Internal %R	A	→																		
MS/MSD: SW-N7-01(0)	X	A	→																	
Reporting Limits	A	→																		
Completeness of Analyte List	A	→																		
Field Duplicate Pair :							A	A												
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MS Dimethylphthalate, diethylph. est. in SW-N7-1-01(0

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.25.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KUL25
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-N7-1-01(0)	2 SW-C9-1-01(0) SW-N7-1-01(0)	3 SW-BS1-01(0)	4 SW-N5-2-01(0)	5 SW-MS-1-01(0)	6 SW-N5-4-01(0)	7 SW-N5-5-01(0)	8 SW-N5-5-01(0)DUP	9 SW-N5-1-01(0)	10 SW-N5-3-01(0)	11 SW-D14-2-01(0)	12 SW-K5-2-01(0)	13 SW-K5-4-01(0)	14 SW-K5-3-01(0)	15	16	17	18	19	20
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Continuing Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Method Blanks	X	A	A	A	X	X	X	X	X	X	X	X	X	X						
LCS	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Post Digestion spikes	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Lab Duplicate	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Matrix Spike SW-N7-1-01(0)	X	A	→	→	→	→	→	→	→	→	→	→	→	→						
Reporting Limits	X	→	→	→	→	→	→	→	→	→	→	→	→	→						
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Field Duplicate Pair :							X	X												
Equip /Field Blank NA																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: Pb RL

Sb, As, Cu, Zn 'U' in several spls for MB.

Hg, Ni MS/MSD est in SW-N7-1-01(0)

FD pair out for Cr, Ni SW-N5-5-01(0)/DUP

LEVEL III VALIDATION WORKSHEET

Method: Alcohols / Ethers / TOC, NC
Date Reviewed: 6.25.01
Sample Collection Dates:
The following data validation areas were reviewed:

SDG: KUL25
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-N7-1-01(0)	2 SW-C9-1-01(0)	3 SW-B8-1-01(0)	4 SW-N5-2-01(0)	5 SW-M5-1-01(0)	6 SW-N5-4-01(0)	7 SW-N5-5-01(0)	8 SW-N5-5-01(0)DUP	9 SW-N5-1-01(0)	10 SW-N5-3-01(0)	11 SW-D14-2-01(0)	12 SW-KS-2-01(0)	13 SW-KS-4-01(0)	14 SW-KS-3-01(0)	15	16	17	18	19	20
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Continuing Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
LCS	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Surrogate %R NA																				
MS/MSD:	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Reporting Limits	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Field Duplicate Pair :							A	A												
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

NC LCS ↑ all ND, no qual.

4/27 21:38 b no qual.

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KUL25 **Date:** 6.15.01

Sample ID(s)	Qualification	Reason
SW-K5-2-01(0)	J, UJ	Perm >15 CCR
SW-K5-4-01(0)	↓	↓
SW-K5-3-01(0)	↓	↓
SW-N7-1-01(0)	J	NG MS/MSD %R.

YES NO

N/A

CASE NUMBER: KUL25 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

YES NO

N/A

3.0 Data Completeness and Deliverables

3.1 Have any missing deliverables been received and added to the data package? [ ] ___ ✓

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.

3.2 Was SAS-request included with package? [ ] ___ ✓

If no, a SAS-request can be retrieved from RSCC.

4.0 Cover Letter SDG Narrative

4.1 Is the Narrative or Cover Letter Present? [✓] ___ ___

4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter? [✓] ___ ___

5.0 Traffic Reports and Laboratory Narrative

5.1 Are Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

NOTE: Samples are not preserved.

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [ ] ✓

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? ☑ ___ ___
b. Soil/Solid? ☐ ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

YES NO N/A

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ✓ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ✓ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:	__	✓	__

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 OC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	✓	__	__
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	[ ]	__	__

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate — [ ] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ✓ [ ] ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ✓ [ ] ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ✓ [ ] ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? [✓] ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [ ] [✓] ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

See attached

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

	YES	NO	N/A
13.0 Method Blanks			
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	[✓]		
b. soil	[ ]		✓
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	[✓]		
ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.			
13.3 Are the positive hits present in the blank less than detection limit?	[✓]		
ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.			
13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	[✓]		
ACTION: Use professional judgement to determine the effect on the data.			

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [ ] ✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?			☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____			☑

ACTION: Use professional judgement to determine the acceptability of the data.

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?		☑	

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

	YES	NO	N/A
16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?	☑		

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A
16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?	☑		

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ☑ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ☑ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?

a. waters [ ] ✓ ___
b. soils [ ] ___ ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] ___ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] ___ ___

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.15.01
Sample Collection Dates: _____
SDG: KVL26
Reviewer: C Jensen
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-N7-1-0(0)	2 SW-C9-1-0(0)	3 SW-B8-1-0(0)	4 SW-N5-2-0(0)	5 SW-N5-1-0(0)	6 SW-N5-4-0(0)	7 SW-N5-5-0(0)	8 SW-N5-5-0(0)DUP	9 SW-N5-1-0(0)	10 SW-N5-3-0(0)	11 SW-94-2-0(0)	12 SW-K5-2-0(0)	13 SW-K5-4-0(0)	14 SW-K5-3-0(0)	15	16	17	18	19	20
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Continuing Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
LCS	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Post Digestion spikes NA																				
Lab Duplicate S	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Matrix Spike SW-N7-1-01	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Reporting Limits	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→						
Field Duplicate Pair :							A	A												
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

No qual. of data.

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) **SDG:** KUL29
Date Reviewed: 6/13/01 **Reviewer:** C Jensen
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-NS-4-01(0.5)	2 SD-NS-6-01(0.5)	3 SD-NS-5-01(0.5)	4 SD-NS-5-01(0.5) DUP	5 SD-NS-1-01(0.5)	6 SD-NS-3-01(0.5)	7 SD-014-2-01(0.5)	8 SD-K5-2-01(0.5)	9 SD-K5-4-01(0.5)	10 SD-K5-3-01(0.5)	11 FB-103-SD(SW) TB-571101 TB-471201	12 SD-B13-3-01(0.5)	13 SD-B13-4-01(1)	14 SD-B13-2-01(0.5)	15 SD-C13-1-01(0.5-2)	16 SD-C11-4-01(1.5-2)	17 SD-E10-1-01(0.5-2)	18 SD-E10-2-01(0.5-2) DUP	19 SD-C12-1-01(0.5-2)	20 SD-FB-131-SD(SW)
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	A
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A					→	X	X	X	A										
MS/MSD: SD-E10-1-01(0.5-2)	A																			
Reporting Limits (1)	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :			A	A													A	A		
Trip/Equip /Field Blank										A	A									A

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: RL not met for acrolein

Spk SD-C11-4-01(0.5-2) qual est → outside NJ Weight criteria
SURR - SD-D14-2-01(0.5), SD-K5-2-01(0.5), SD-K5-4-01(0.5)
acrolein RPF < .05 'R' HP07566 (both) assoc spls est.

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) **SDG:** KVL29
Date Reviewed: 6.13.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Validation Criteria / Sample Identification	1 SD-NS-4-01(0-2) SD-NS-6-01(0-1.5) SD-NS-5-01(0-2)DUP	2 SD-NS-1-01(0-3)	3 SD-NS-3-01(0-2)	4 SD-014-2-01(0-2)	5 SD-K5-2-01(0-2)	6 SD-K5-4-01(0-4)	7 SD-K5-3-01(0-4)	8 FB-127-SOIL	9 SD-B13-3-01(0-.5)	10 SD-B13-4-01(0-2)	11 SD-B13-2-01(0-2)	12 SD-C13-1-01(0-2)	13 SD-C11-4-01(0-2)	14 TB-SOIL	15 SD-F10-1-01(0-2)	16 SD-F10-1-01(0-2)DUP	17 SD-F10-2-01(0-1.5)	18 SD-C12-1-01(0-2)	19 SD-D1-2-01(0-2)	20 SD-D1-2-01(0.5-2)
Completeness of Analyses	A																			
Holding Times	A				→	X	X	A									→	X	A	
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A X	XX	X	X	X	X	X	X	A											→
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A				→	X	X	A									→ X	X	A	
MS/MSD: SD-F10-1-01(0-2)	A																			
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :	AA														X	X				
Equip /Field Blank								A						A						

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

HT out + surr SD-K5-4-01(0-4), SD-K5-3-01(0-4), SD-C12-1-01(0-2)
Internal → one internal out - assoc. cmpds est. for SD-F10-2-01(0-1.5)
~~ICAL 24DNP 5/9 12:50~~ CCAL 5/7 14:43 HP06780 n-nitrosodimethylamine, 24DNP
ICAL 5/4 12:33 6:56 bis(2-chloroethyl)ether, n-nitrosodipropylamine, nitrobenzene, isophorone, 4-chlorophenyl ether, 1,2-Dichlorobenzene,
5/4 19:19 " " " " " "
5/7 15:43 " "

FD pair SD-F10-1-01(0-2) out for n-nitrosodiphenylamine

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6/13/01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVLZ9
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 FB-13-SD/SW	2 SD-N5-4-01(0-2) SD-N5-6-01(0-1.5)	3 SD-N5-5-01(0-2) SD-N5-5-01(0-2)	4 SD-N5-1-01(0-3)	5 SD-N5-3-01(0-2)	6 SD-D14-2-01(0-2)	7 SD-K5-2-01(0-2)	8 SD-K5-4-01(0-4)	9 SD-K5-3-01(0-4)	10 FB-127-SD/SW	11 SD-B13-3-01(0-0.5')	12 SD-B13-4-01(0-2)	13 SD-B13-2-01(0-2)	14 SD-C13-1-01(0-2)	15 SD-C11-4-01(0-2)	16 SD-F10-1-01(0-2)	17 SD-F10-2-01(0-2)	18 SD-F10-1-01(0-2)	19 SD-C12-1-01(0-2)	20 SD-D11-2-01(0-2)
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Holding Times	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Continuing Calibration	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Method Blanks	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
LCS	A	X	→	→	→	→	→	→	A	X	→	→	→	→	→	→	→	→	→	→
Post Digestion spikes	A																			
Lab Duplicate	A	X	→	→	→	→	→	→	A	X	→	→	→	→	→	→	→	→	→	→
Matrix Spike	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
SD-F10-1-01	A																			
Reporting Limits	X	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→	→
Field Duplicate Pair :																				
Equip /Field Blank	A								A											

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments: 'As is' for SD-B13-3-01(0-0.5') - no moisture due to ↑ explosives in spl.

Hg soil - SD, H2O Pb.

Hg 'W' FB-127-SD/SW

~~Cd 'W'~~ ~~SD-N5-4-01(0-2), SD-N5-6-01(0-1.5), SD-N5-5-01(0-2)~~ ✓
~~SD-N5-5-01(0-2), SD-N5-1-01(0-3), SD-N5-3-01(0-2), SD-D14-2-01(0-2)~~ ✓
~~SD-K5-2-01(0-2), SD-K5-3-01(0-4), SD-C11-4-01(0-2), SD-F10-1-01(0-2)~~ ✓
~~SD-F10-1-01(0-2), SD-F10-2-01(0-1.5), SD-C12-1-01(0-2), SD-D11-2-01(0-2)~~ ✓

~~Pb 'W'~~ ~~SD-N5-4-01(0-2), SD-N5-6-01(0-1.5)~~ ✓

~~Ni 'W'~~ ~~SD-N5-4-01(0-2), SD-N5-6-01(0-1.5)~~ ✓

Lab dup out for Zn - est in all soil spls.

LCS Sb b, est in all ~~soils~~ soil spls

LEVEL III VALIDATION WORKSHEET

Method: Alcohols, Ethers
Date Reviewed: 6.13.01
Sample Collection Dates:

SDG: KUL29
Reviewer: C Jensen

The following data validation areas were reviewed:

Validation Criteria / Sample Identification	1 SD-N5-4-01(0-2) / SD-N5-5-01(0-1.5)	2 SD-N5-1-01(0-2) / SD-N5-5-01(0-2)DUP	3 SD-N5-3-01(0-2)	4 SD-N4-2-01(0-2)	5 SD-K5-2-01(0-2)	6 SD-K5-4-01(0-4)	7 SD-K5-3-0(0-4)	8 FB-127-SD/SW	9 SD-B13-3-01(0-0.5)	10 SD-B13-4-01(0-2)	11 SD-B13-2-01(0-2)	12 SD-C13-1-01(0-2)	13 SD-C11-4-01(0-2)	14 SD-F10-1-01(0-2)	15 SD-F10-1-01(0-2)DUP	16 SD-F10-2-01(0-1.5)	17 SD-C12-1-01(0-2)	18 SD-D11-2-01(0-2)	19 SD-D11-2-01(0.5-2)	20 FB-131-SD/SW
Completeness of Analyses	A																			→
Holding Times	A																			→
Initial Calibration	A																			→
Continuing Calibration	A																			→
Method Blanks	A																			→
LCS	X							→	X	X	X	X	X	X	X	X	X	A	A	
Surrogate %R	NA																			
MS/MSD: SD-F10-1-01(0-2)	A																			→
Reporting Limits	A																			→
Completeness of Analyte List	A																			→
Field Duplicate Pair :	AA													X	X					
Equip /Field Blank								X												A

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD TOC LCS ok, est in SD-N5-4-01(0-2), SD-F10-1-01(0-2)

NC one LCS out one in, MW goal
NC est in SD-B13-3-01(0-0.5), SD-B13-4-01(0-2), SD-B13-2-01(0-2), SD-C13-1-01(0-2) SD-C11-4-01(0-2), SD-F10-1-01(0-2), SD-F10-1-01(0-2)DUP, SD-F10-2-01(0-1.5) SD-C12-1-01(0-2), SD-D11-2-01(0-2)

FB-127 SD/SW TOC .55 J mg/L
pair SD-F10-1-01(0-2)/DUP for TOC

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KVL29 **Date:** 6.13.01

Sample ID(s)	Qualification	Reason
SD-C12-1-01(0-2)	J	24DNT >25 246TNT
		~~246TNS~~

5/2 6:53 Petn 12:47

~~5/4 8:09~~

5/7 14:17 Petn

YES NO

N/A

CASE NUMBER: KV229 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO
N/A		
3.0 Data Completeness and Deliverables		
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.		
3.2 Was SAS-request included with package?	[ ]	✓
If no, a SAS-request can be retrieved from RSCC.		
4.0 Cover Letter SDG Narrative		
4.1 Is the Narrative or Cover Letter Present?	✓	
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	✓	
5.0 Traffic Reports and Laboratory Narrative		
5.1 Are Traffic Report Forms present for all samples?	✓	
ACTION: If no, contact lab for replacement of missing or illegible copies.		
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		✓
NOTE: Samples are not preserved.		
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".		

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [✓] __

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? ☑ ___ ___
b. Soil/Solid? ☑ ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

YES NO N/A

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ✓ [ ] ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ✓ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

Surr out (high) for one blank, NO qualification of data

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		☑	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

	YES	NO	N/A
9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	☑		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	☑		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 8	0 out of 19

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

not in triplicate

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? ☑ ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? ☑ ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? ☑ ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ☐ ☐

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ☑ ☐ ☐

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ☐ ☑ ☐

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

YES NO N/A

13.0 Method Blanks

13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices?
a. water [✓] ___ ___

b. soil [ ] ___ ___

13.2 Frequency of Analysis:

Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted. [✓] ___ ___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit? [✓] ___ ___

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank.
If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? ☑ ___ ___

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

all low level

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ ☑ ___

14.3 Are there field/rinse/equipment blanks associated with every sample? ☑ ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ ☑ ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]	___	___
b. Laboratory Control Samples?	[✓]	___	___
c. Blanks?	[✓]	___	___
d. Matrix spikes and Matrix spike duplicates?	[✓]	___	___
e. Lab duplicate?	[ ]	___	✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report?	[✓] response only	___	___
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]	___	___
Resolution?	[✓]	___	___
Peak shape?	[✓]	___	___
Full-scale graph (attenuation)?	[✓]	___	___
Other: _____	[ ]	___	✓

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[✓]	___	___

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? ☑ ___ ___

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? ☑ ✓ ___

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

9
See attached for qual.

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ✓ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?

a. waters [ ] ✓ ___
b. soils [ ] ___ ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] ___ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] ___ ___

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260)
Date Reviewed: 6.24.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL30
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 GW-L1-1(57-60)	2 GW-L1-1(20-23)	3 GW-L10-1(17-20)	4 GW-L11-1(37-40)	5 GW-L11-1(25-28)	6 GW-L10-1(14-21)	7 TB 4/30/01	8 GW-N9-1(15-18)	9 GW-N8-1(37-40)	10 GW-07-1(52-55)	11 GW-07-1(25-28)	12 EB-130-GW	13 TB 5/1/01	14 GW-M6-1(17-20)	15 GW-M6-1(17-20)DUP	16 GW-L5-1(12-15)	17 GW-L4-1(12-15)	18 GW-M5-1(42-45)	19 GW-M5-1(15-18)	20 GW-M4-1(42-45)	21 TB 5/2/01	22 GW-M4-1(20-23)	23 EB-131-GW
Completeness of Analyses	A																						
Holding Times																							
Tuning Performance	A																						
Initial Calibration	A																						
Continuing Calibration	A											→	X	X	X	X	X	X	X	X	X	X	
Method Blanks	A																						
LCS	A																						
Surrogate/ Internal %R	A	A																					
MS/MSD: GW-L4-1(12-15)	A															→	X	A					
Reporting Limits	A																						
Completeness of Analyte List	A																						
Field Duplicate Pair :													A	A									
Trip/Equip /Field Blank						A					A	A									A	A	

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD recve. ext. GW-L4-1(12-15)
~~CCAL 5/3 8:26 hexachlb.~~ &
5/6 11:11 acrolein RFc.05 R' GW-M6-1(17-20) & DUP, GW-L5-1(12-15)
GW-M5-1(42-45), GW-M5-1(15-18), GW-M4-1(42-45), GW-M4-1(20-23)
FB-131-GW, GW-L4-1(12-15)

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) **SDG:** 1CUL30
Date Reviewed: 6.24.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 GW-K11-1(57-60)	2 GW-K10-1(17-20)	3 GW-L11-1(37-40)	4 GW-L11-1(25-28)	5 GW-L11-1(18-21)	6 GW-N9-1(15-18)	7 GW-N8-1(37-40)	8 GW-O7-1(52-55)	9 GW-O7-1(25-28)	10 FB-130-GW	11 GW-M6-1(17-20)	12 GW-M6-1(17-20) DUP	13 GW-L5-1(12-15)	14 GW-L4-1(12-15)	15 GW-M5-1(42-45)	16 GW-M5-1(15-18)	17 GW-M4-1(12-15)	18 GW-M4-1(20-23)	19 FB-131-GW	20
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A						X	X	X	X	X	A							X	
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: GW-L4-1(12-15)	A																			
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :											X	X								
Equip /Field Blank										A									A	

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

LCAL 5/4 6:56 bis(2chlor)eth, nnitroso dinprop, nbenz, isoph, 4chlphenyeth, 120HP H

FD pair GW-M6-1(17-20)/Dup cnt for fluoranthene, pyrene, benzo(a)anth, chrysene, BEHP, benzo(b)fluor, benzo(k)fluor, benzo(a)pyr, indeno(123cd)pyr.

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.24.01
Sample Collection Dates: _____
The following data validation areas were reviewed:

SDG: KVL30
Reviewer: C Jensen

Sample Identification / Validation Criteria	GW-K11-1(57-60)	1 GW-K11-1(20-23)	2 GW-K10-1(17-20)	3 GW-L11-1(37-40)	4 GW-L11-1(25-28)	5 GW-L10-1(18-21)	6 GW-N9-1(15-18)	7 GW-N8-1(37-40)	8 GW-D7-1(25-28)	9 GW-D7-1(25-28)	10 FB-120-GW	11 GW-M6-1(17-20)	12 GW-M6-1(17-20)DUP	13 GW-L5-1(12-15)	14 GW-L4-1(12-15)	15 GW-M5-1(42-45)	16 GW-M5-1(15-18)	17 GW-M4-1(42-45)	18 GW-M4-1(20-23)	19 FB-131-GW	20
Completeness of Analyses	A																			→	
Holding Times	A																			→	
Initial Calibration	A																			→	
Continuing Calibration	A																			→	
Method Blanks	A	A	X	X	X	X	X	X	A	X	A	X	X	X	X	A	→		X	A	
LCS	A																			→	
Post Digestion spikes	NA																				
Lab Duplicate	A																			→	
Matrix Spike (GW-L4-1(12-15))	A																			→	
Reporting Limits	A																			→	
Completeness of Analyte List	A																			→	
Field Duplicate Pair :												A	A								
Equip /Field Blank											A									A	

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS 'W' GW GW-K10-1(17-20), GW-L4-1(12-15) & GW-M4-1(20-23)
M GW-L11-1(37-40), GW-L11-1(25-28), GW-L10-1(18-21) GW-N9-1(15-18), GW-D7-
ZN GW-L10-1(18-21)

ZN GW-N8-1(37-40), GW-L4-1(12-15)

M GW-M6-1(17-20), GW-M6-1(17-20)DUP, GW-L5-1(12-15), GW-L4-1(12-15)
GW-M4-1(20-23)

Hg 'W' GW-K11-1(57-60), GW-L11-1(37-40), GW-L11-1(25-28), GW-N9-1(15-18)
GW-N8-1(37-40), GW-D7-1(25-28), FB-130-GW, GW-M6-1(17-20)
GW-L5-1(12-15), GW-M5-1(42-45), GW-M5-1(15-18)

LEVEL III VALIDATION WORKSHEET

Method: Alcohol
Date Reviewed: 6.24.01
Sample Collection Dates:

SDG: KVL30
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 GW-L1-1(57-60)	2 GW-L11-1(20-23)	3 GW-L10-1(17-20)	4 GW-L4-1(37-40)	5 GW-L11-1(25-28)	6 GW-L11-1(18-21)	7 GW-M9-1(15-18)	8 GW-M8-1(37-40)	9 GW-07-1(52-55)	10 GW-07-1(25-28)	11 FB-130-GW	12 GW-M6-1(17-20)	13 GW-M6-1(17-20)DUP	14 GW-L5-1(12-18)	15 GW-L4-1(12-15)	16 GW-M5-1(42-45)	17 GW-M5-1(15-18)	18 GW-M4-1(42-45)	19 GW-M4-1(20-23)	20 FB-131-GW
Completeness of Analyses	A																			↓
Holding Times	A							→	X	A	→	X	X	A	→	X	X	A		→
Initial Calibration	A																			↓
Continuing Calibration	A													→	X	X	X	A		→
Method Blanks	A																			↓
LCS	A																			↓
Surrogate %R NA																				
MS/MSD: GW-L4-1	A																			↓
Reporting Limits	A																			↓
Completeness of Analyte List	A																			↓
Field Duplicate Pair :												A	A							
Equip /Field Blank											A									A

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Headspace in GW-07-1(52-55), GW-M8-1(17-20), GW-M6-1(17-20)DUP GW-M5-1(42-45), GW-M5-1(15-18) all cmpds est.

CCAL 5/9 19:09 h GW-L4-1(12-15), GW-M5-1(42-45), GW-M5-1(15-18)

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KUL30 **Date:** 6.26.01

Sample ID(s)	Qualification	Reason
GW-LI1-1(37-40)	R	RDX 246TNT, 2am46DNT, 3-nitrotol
"	J	24DNT
GW-LI1-1(25-28)	R	3-nitrotol.
"	J	24DNT, 2am46DNT
GW-07-1(25-28)	J	HMX
GW-M4-1(42-45)	R	RDX
GW-M4-1(20-23)	J	RDX, HMX

YES NO

N/A

CASE NUMBER: KVL30 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO
N/A		
3.0 Data Completeness and Deliverables		
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.		
3.2 Was SAS-request included with package?	[ ]	✓
If no, a SAS-request can be retrieved from RSCC.		
4.0 Cover Letter SDG Narrative		
4.1 Is the Narrative or Cover Letter Present?	[✓]	
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	[✓]	
5.0 Traffic Reports and Laboratory Narrative		
5.1 Are Traffic Report Forms present for all samples?	[✓]	
ACTION: If no, contact lab for replacement of missing or illegible copies.		
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		[✓]
NOTE: Samples are not preserved.		
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".		

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ __

Are the chromatograms free of interferences? [ ] __ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction __ [✓] __

B. For soil/sediment samples 14 days from sample collection to extraction __ [ ] ✓

C. For all samples extracts 40 days from time of extraction to time of analysis __ [✓] __

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] ___ ___
b. Soil/Solid? [ ] ___ [✓]

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

YES NO N/A

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ [✓] ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? [✓] ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* **Use professional judgement.**

** **If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.**

YES NO N/A

8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms: __ ☑ __

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab) ☑ __ __

9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix? ☑ __ __

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	_____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

not in triplicate

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? [✓] ___ ___

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] ___ ___

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] ___ ___

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? ___ [✓] ___

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ✓ [ ] ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? [✓] ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [✓] ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? [✓] ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? [✓] ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? [✓] ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

YES NO N/A

13.0 Method Blanks

13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices?
a. water [✓] ___ ___

b. soil [ ] ___ [✓]

13.2 Frequency of Analysis:

Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted. [✓] ___ ___

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit? [✓] ___ ___

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts.

Is the chromatographic performance (baseline stability) for each instrument acceptable? [✓] ___ ___

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ [✓]

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ [✓] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [✓] ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [✓] ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?			☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____			☑

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☐		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?	☐		☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____	☐		☑

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

YES NO N/A

16.2 Are there any transcription/calculation errors between raw data and Forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses? ☑ ___ ___

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%? ☐ ☑ ___

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

See attached for qualification.

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ✓ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ✓ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ ___
b. soils [ ] ___ ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] ___ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? ✓ ___ ___

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.18.01
Sample Collection Dates:

SDG: KUL31
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-F10-1-01(0-0.5)	2 SW-F10-1-01(0-0.5)DUP	3 SW-C12-1-01(0-0.5)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A	→	→																	
Holding Times	A	→	→																	
Initial Calibration	A	→	→																	
Continuing Calibration	A	→	→																	
Method Blanks	X		X																	
LCS	A	→	→																	
Post Digestion spikes	Nu																			
Lab Duplicate	A	→	→																	
Matrix Spike SW-F10-1-01(0-0.5)	A	→	→																	
Reporting Limits	X	→	→																	
Completeness of Analyte List	A	→	→																	
Field Duplicate Pair :	A	A																		
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MB's w/ Hg SW-F10-1-01(0-0.5), SW-C12-1-01(0-0.5)

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) **SDG:** KUL32
Date Reviewed: 6.18.01 **Reviewer: C Jensen**
Sample Collection Dates:
The following data validation areas were reviewed:

Validation Criteria	Sample Identification 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	SD-FA-2-01(0.5-4.5')	SD-D10-1-01(0.5')	SD-B12-1-01(0.5')	SD-C10-2-01(0.5-1.5')	SD-C10-3-01(0.5')	SD-C10-4-01(0-1')	SD-C11-4-01(0.5-2')	SD-C11-4-01(0.5-2') DUP	SD-C11-2-01(0.5-2')	SD-C11-3-01(0.5-1.5')	FB-130-SD/SW	TB-5/24/01								
Completeness of Analyses	A																			
Holding Times	A																			
Tuning Performance	A																			
Initial Calibration	A																			
Continuing Calibration	A																			
Method Blanks	A																			
LCS	A																			
Surrogate/ Internal %R	A																			
MS/MSD: C11-4-01(0.5-2)	A																			
Reporting Limits	A																			
Completeness of Analyte List	A																			
Field Duplicate Pair :						A	A													
Trip/Equip /Field Blank										A	A									

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

Spl. SD-C10-3-01(0.5) lst due to spl weight outside NJ limits.

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270)
Date Reviewed: 6.18.01
Sample Collection Dates:

SDG: KVL32
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-FA-2-01(0-1.5')	2 SD-D10-4-01(0-1)	3 SD-B27-4-01(0-1.5')	4 SD-C10-2-01(0-2.5')	5 SD-C10-3-01(0-1.5')	6 SD-C10-4-01(0-2)	7 SD-C11-4-01(0-2)	8 SD-C11-4-01(0-2)DUP	9 SD-C11-7-01(0-2)	10 SD-C11-3-01(0-1.5')	11 FB-130 SD/SW	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→									
Holding Times	A	→	→	→	→	→	→	→	→	→	→									
Tuning Performance	A	→	→	→	→	→	→	→	→	→	→									
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→									
Continuing Calibration	A	→	→	→	→	→	→	→	→	→	X									
Method Blanks	A	→	→	→	→	→	→	→	→	→	→									
LCS	A	→	→	→	→	→	→	→	→	→	→									
Surrogate/ Internal %R	A	→	→	→	→	→	→	→	→	→	→									
MS/MSD: batch	A	→	→	→	→	→	→	→	→	→	→									
Reporting Limits	A	→	→	→	→	→	→	→	→	→	→									
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→									
Field Duplicate Pair :							A	A												
Equip /Field Blank											A									

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD batch, no qual

CCAL 5/4 6:56 bis(2-chloroisopropyl)ether, n-nitrosodipropyl, nitrobenz, isophr, 4-phenylphenylether, 12DHP est in FB130

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.18.01
Sample Collection Dates:

SDG: KUL32
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-F9-2-01(0-1.5)	2 SD-D10-F9(6-1)	3 SD-B13-4-01(0-1.5)	4 SD-C10-2-01(0-2.5)	5 SD-C10-3-01(0-1.5)	6 SD-C10-4-01(0-2)	7 SD-C11-4-01(0-2)	8 SD-C11-4-01(0-2)DUP	9 SD-C11-2-01(0-2)	10 SD-C11-3-01(0-1.5)	11 FB-180 SD/SW	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A	→																		
Holding Times	A	→																		
Initial Calibration	A	→																		
Continuing Calibration	A	→																		
Method Blanks	A	→																		
LCS	X	→								→	A									
Post Digestion spikes	A	→																		
Lab Duplicate	X	→								→	NA									
Matrix Spike SD-F9-2-01(0-1.5)	X	A	→																	
Reporting Limits	A	→																		
Completeness of Analyte List	A	→																		
Field Duplicate Pair :							A	A												
Equip /Field Blank											A									

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD Cr, + ξ est. in SD-F9-2-01(0-1.5)
Zn, Cu ?

Lab duplicate:
Cr out in ~~FD~~ - qual. est. in all sed. spls.
9

LCS S/S +, est in all sed
Serial D out for Cu - est. in all sed.

LEVEL III VALIDATION WORKSHEET

Method: Alcohol Ether · TOC, NC
Date Reviewed: 6.18.01
Sample Collection Dates: _____
SDG: KUL32
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SD-E9-2-01(0-1.5)	2 SD-D10-1-01(0-1)	3 SD-B13-1-01(0-1.5)	4 SD-C10-2-01(0-2.5)	5 SD-C10-3-01(0-1.5)	6 SD-C10-4-01(0-2)	7 SD-C11-4-01(0-2)	8 SD-C11-4-0(0-2) DUP	9 SD-C11-2-01(0-2)	10 SD-C11-3-01(0-1.5)	11 FB-130 SD/SW	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A	→	→	→	→	→	→	→	→	→	→									
Holding Times	A	→	→	→	→	→	→	→	→	→	→									
Initial Calibration	A	→	→	→	→	→	→	→	→	→	→									
Continuing Calibration	A	→	→	→	→	→	→	→	→	→	→									
Method Blanks	A	→	→	→	→	→	→	→	→	→	→									
LCS	X	→	→	→	→	→	→	→	→	→	A									
Surrogate %R NA																				
MS/MSD:	A	→	→	→	→	→	→	→	→	X	A									
Reporting Limits	A	→	→	→	→	→	→	→	→	→	→									
Completeness of Analyte List	A	→	→	→	→	→	→	→	→	→	→									
Field Duplicate Pair :																				
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

~~TOC~~
~~MS/MSD TOC out, EA. in SD-E9-2-01(0-1.5)~~ Batch. no qual.
" " TOC out in SD-C11-3-01(0-1.5)
LCS↓, MSMSD Low for NC, all sed est. for NC.
LCS↑ in water matrix- no qual.

FB-130 SD/SW TOC .57 mg/L

Data Qualification Summary for Explosives Residues
Hercules Kenvil Project

SDG: KUL32 **Date:** 6.18.01

Sample ID(s)	Qualification	Reason
SD-B13-1-01(0-1.5')	R	24DNT
"	J	2am46DNT, 246TNT
SD-C11-2-01(0-2)	J	24DNT, 246TNT
SD-C11-3-01(0-1.5)	J	24DNT
SD-C11-2-01(0-2)	J	surr%R↑ nbenz, 246TNT, 26DNT
		4am26DNT, 2am46DNT, 24DNT

YES NO

N/A

CASE NUMBER: KUL32 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

YES NO

N/A

3.0 Data Completeness and Deliverables

3.1 Have any missing deliverables been received and added to the data package? [ ] ___ ✓

ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.

3.2 Was SAS-request included with package? [ ] ___ ___

If no, a SAS-request can be retrieved from RSCC.

4.0 Cover Letter SDG Narrative

4.1 Is the Narrative or Cover Letter Present? [✓] ___ ___

4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter? [✓] ___ ___

5.0 Traffic Reports and Laboratory Narrative

5.1 Are Traffic Report Forms present for all samples? [✓] ___ ___

ACTION: If no, contact lab for replacement of missing or illegible copies.

5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data? ___ [✓] ___

NOTE: Samples are not preserved.

ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ ___

Are the chromatograms free of interferences? [ ] ___ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction ___ ✓ [ ] ___

B. For soil/sediment samples 14 days from sample collection to extraction ___ ✓ [ ] ___

C. For all samples extracts 40 days from time of extraction to time of analysis ___ ✓ [ ] ___

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] ___ ___
b. Soil/Solid? [✓] ___ ___

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

YES NO N/A

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ✓ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		☑	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	☑		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	☑		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	0 out of 19

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate — [✓] — —

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? [✓] — —

10.4 Are modified Forms present and completed for each analytical sequence and each column? [✓] — —

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? — [✓] —

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ✓ ☐ ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? [✓] ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ [✓] ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). [✓] ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? [✓] ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? [✓] ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

	YES	NO	N/A
13.0 Method Blanks			
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	☑		
b. soil	☑		
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	☑		
ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.			
13.3 Are the positive hits present in the blank less than detection limit?	☑		
ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.			
13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	☑		
ACTION: Use professional judgement to determine the effect on the data.			

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? ☑ ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ ☑ ___

14.3 Are there field/rinse/equipment blanks associated with every sample? ☑ ___ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ ☑ ___

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	[✓]	___	___
b. Laboratory Control Samples?	[✓]	___	___
c. Blanks?	[✓]	___	___
d. Matrix spikes and Matrix spike duplicates?	[✓]	___	___
e. Lab duplicate?	[ ]	___	✓

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report?	response only [✓]	___	___
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	[✓]	___	___
Resolution?	[✓]	___	___
Peak shape?	[✓]	___	___
Full-scale graph (attenuation)?	[✓]	___	___
Other: _____	[ ]	___	✓

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	[✓]	___	___

ACTION: If no, contact lab for resubmittals.

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?		☑	

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

	YES	NO	N/A
16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?	☑		

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A
16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?		☑	

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

See attached.

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ☑ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ☑ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters [ ] ✓ __
b. soils [ ] __ ✓

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%). [ ] __ ✓

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present? [✓] __ __

LEVEL III VALIDATION WORKSHEET

Method: Volatile Organic Compounds (EPA 8260) **SDG:** KVL33
Date Reviewed: 6.21.01 **Reviewer: C Jensen**
Sample Collection Dates: 5.1 + 5.2.01
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-F10-1-01(0.5)	2 SW-F10-1-01(0.5)DUP	3 TB 5/2/01	4 SW-C12-1-01(0.5)	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A	→	→	→																
Holding Times	A	→	→	→																
Tuning Performance	A	→	→	→																
Initial Calibration	A	→	→	→																
Continuing Calibration	A	→	→	→																
Method Blanks	A	→	→	→																
LCS	A	→	→	→																
Surrogate/ Internal %R	A	→	→	→																
MS/MSD: SW-F10-1-01(0.5)	X	A	A	A																
Reporting Limits	A	→	→	→																
Completeness of Analyte List	A	→	→	→																
Field Duplicate Pair :	A	A																		
Trip/Equip /Field Blank			A																	

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MS/MSD 2 CWE in %R, LCS ok, 2 CWE est. in SW-F10-1-01(0.5)

LEVEL III VALIDATION WORKSHEET

Method: Semivolatile Organic Compounds (EPA 8270) **SDG:** KUL33
Date Reviewed: 6.21.01 **Reviewer: C Jensen**
Sample Collection Dates: 5.1 + 5.2.01
The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-F10-1-01(0-0.5)	2 SW-F10-1-01(0-0.5)DUP	3 SW-C12-1-01(0-0.5)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A		→																	
Holding Times	A		→																	
Tuning Performance	A		→																	
Initial Calibration	A		→																	
Continuing Calibration	X	X	X																	
Method Blanks	A		→																	
LCS	A		→																	
Surrogate/ Internal %R	A		→																	
MS/MSD: SW-F10-1-01(0.5)	A		→																	
Reporting Limits	A		→																	
Completeness of Analyte List	A		→																	
Field Duplicate Pair :	A	A																		
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

LCS - high rec, ND in spls, no qual. of data.

5/4 6:56
CCV: bis(2 chloroisopropyl)ether, n-nitrosodipropylamine, nbenz, isophr, 4chlorophenyl ether, 12DHP
" 19:19 " " " " " " , benzidine
est. in assoc. samples

LEVEL III VALIDATION WORKSHEET

Method: EPA 6010/7000 Series
Date Reviewed: 6.21.01
Sample Collection Dates: 5.1, 5.2.01
The following data validation areas were reviewed:

SDG: KVL33
Reviewer: C Jensen

Sample Identification / Validation Criteria	1 SW-F10-1-01(0-0.5)	2 SW-F10-1-01(0-0.5)	3 SW-C12-1-01(0-0.5)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A →																			
Holding Times	A →																			
Initial Calibration	A →																			
Continuing Calibration	A →																			
Method Blanks	A	X	A																	
LCS	A →																			
Post Digestion spikes NA →																				
Lab Duplicate	A →																			
Matrix Spike SW-F10-1-01(0.5) A →																				
Reporting Limits	A →																			
Completeness of Analyte List	A →																			
Field Duplicate Pair :	A	A																		
Equip /Field Blank																				

Note:X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

MB Hg 'U' SW-F10-101(0-0.5)DUP

LEVEL III VALIDATION WORKSHEET

Method: Alcohol, Ether / NC
Date Reviewed: 6.2.01
Sample Collection Dates: 5.1 + 5.2.01

SDG: KUL33
Reviewer: C Jensen

The following data validation areas were reviewed:

Sample Identification / Validation Criteria	1 SW-F10-1-01(0.0-0.5)	2 SW-F10-1-01(0.0-0.5)DUP	3 SW-CR2-1-01(0.0-0.5)	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Completeness of Analyses	A →		→																	
Holding Times	A →		→																	
Initial Calibration	A →		→																	
Continuing Calibration	A →		→																	
Method Blanks	A →		→																	
LCS	A →		→																	
Surrogate %R	No →																			
MS/MSD: SW-F10-1-01(0.0-0.5)	A →		→																	
Reporting Limits	A →		→																	
Completeness of Analyte List	A →		→																	
Field Duplicate Pair :	A	A																		
Equip /Field Blank																				

Note: X = Criteria were evaluated and not met. A = Criteria were evaluated and met. N = Data was not available for review. NA = Not applicable.

Comments:

No qualification of data

YES NO

N/A

CASE NUMBER: KUL33 LAB: Lancaster

SITE: Kenvil

1.0 Introduction

1.1 The attached Standard Operating Procedure (SOP) is applicable to nitro substituted aromatics and nitro substituted amines by High Performance Liquid Chromatography (HPLC) data. Its scope is not only to facilitate the data validation process of the data reported by the contracting laboratory but also to ensure that the data is being reviewed in a uniform manner.

1.2 The SOP is based upon the quality control and quality assurance requirement specified in the analytical **Method 8330, November 1992 (Revision 0).**

2.0 Responsibilities

2.1 The reviewer must be knowledgeable of the analytical method and its QC criteria.

2.2 The reviewer must complete and/or file the following:

Data Assessment Checklist- The data reviewer evaluates each criterion carefully and checks if data is in compliance, non-compliance or not applicable.

Data Assessment Narrative- The data reviewer must present professional judgement, address areas of concern and comment on the validity of the overall data package. The reviewer must explain the reasons for rejecting and/or qualifying the data.

Rejection Summary Form-The reviewer must submit a completed form using a ratio format.

Organic Regional Data Assessment Summary- A completed form must be submitted.

Telephone Record Log-All phone conversations must be transcribed by the reviewer. Upon completion of the data review, the original telephone log is attached to the data assessment narrative.

	YES	NO	N/A
3.0 Data Completeness and Deliverables			
3.1 Have any missing deliverables been received and added to the data package?	[ ]	✓	
ACTION: Call lab for explanation/resubmittal of any missing deliverables. If lab cannot provide them, note the effect on review of the package under the "Contract Problems/Non-Compliance" section of reviewer narrative.			
3.2 Was SAS-request included with package?	[ ]	✓	
If no, a SAS-request can be retrieved from RSCC.			
4.0 Cover Letter SDG Narrative			
4.1 Is the Narrative or Cover Letter Present?	[✓]		
4.2 Are Case Number and/or SAS number contained in the Narrative or Cover letter?	[✓]		
5.0 Traffic Reports and Laboratory Narrative			
5.1 Are Traffic Report Forms present for all samples?	[✓]		
ACTION: If no, contact lab for replacement of missing or illegible copies.			
5.2 Do Traffic Reports or Lab Narrative indicate any problems with sample receipt, condition of samples, analytical problems or special circumstances affecting the quality of the data?		[✓]	
NOTE: Samples are not preserved.			
ACTION: If samples were not iced upon receipt at the laboratory, flag all positive results "J" and all non-detects "UJ".			

YES NO

N/A

NOTE: Samples must be kept below 4°C from the time of collection through analysis. Degradation of some compounds occurs with heat. Samples should not be exposed to sunlight or temperatures above room temperature.

6.0 Special QC

6.1 Prior to preparation of stock solutions, acetonitrile, methanol, and water should be analyzed to determine possible interferences with analyte peaks. A different batch of solvent should be used if contamination is present.

6.2 Chromatograms are to be submitted showing that there are no interferences with analyte peaks.

Are these chromatograms present in package? [ ] ✓ ___

Are the chromatograms free of interferences? [ ] ___ ✓

ACTION: Ask lab for resubmittals. If deliverables are unavailable, judge the effect on the validity of the data. If questionable, contact SMO and note in data assessment.

7.0 Holding Times

7.1 Have any technical holding times, determined from date of collection to date of analysis, been exceeded?

A. For aqueous samples 7 days from sample collection to extraction ___ [✓] ___

B. For soil/sediment samples 14 days from sample collection to extraction ___ [ ] ✓

C. For all samples extracts 40 days from time of extraction to time of analysis ___ [✓] ___

YES NO

N/A

Holding Time Violations
Table 1

(See Traffic Report)

Sample ID	Date Sampled	Date Received	Date Lab Extracted	Date Analyzed

ACTION: If technical holding times are exceeded, flag all positive results as estimated ("J") and sample quantitation limits as estimated ("UJ"), and document in the narrative that holding times were exceeded. The reviewer must use professional judgement to determine the reliability of the data and the effects of additional storage on the sample results. At a minimum, all results must be qualified "J", but the reviewer may determine that non-detect data are unusable (R).

8.0 Surrogate Recovery

8.1 Are the Organic Analysis Data Sheets (Form I) present and complete with surrogate recoveries for each of the following matrices:

a. Water? [✓] ___ ___
b. Soil/Solid? [ ] ___ ✓

ACTION: Call lab for explanation/resubmittals. If missing deliverables or information are unavailable document the effect in the data assessment.

YES NO N/A

8.2 Was the surrogate % recovery out of specifications for any field sample, method blank or QC sample? ___ ☑ ___

8.3 Were surrogate retention times (RT) within ± 1.0% of the mean surrogate RT calculated from the initial calibration? ☑ ___ ___

ACTION: Circle outliers in red.

ACTION: If the retention time shift (RTS) or % recovery of the surrogate in the field or QC samples is out of specification, then all associated sample data should be qualified. Use **Table 2** below as a guide.

Surrogate Recovery

TABLE 2

The following table summarizes the surrogate recovery criteria and the data qualification guidelines for all associated field samples.

SURROGATE	NOT QUALIFIED	J	R	N
% RECOVERY - FIELD SAMPLES				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 10%	< 10%*	< 10%*	
% RECOVERY - BLANKS AND QC SAMPLES **				
Detects	50 - 125%	< 50%; > 125%		
Non-detects	≥ 20%	10 - 19%	< 10%	
RTS - field samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *
RTS - QC samples	± 1.0%		> 1.5%; < -1.5% *	± 1.1 - 1.5% *

* Use professional judgement.

** If the surrogate recovery in a QC sample or blank was less than 50 percent or greater than 125 percent, then the field sample data should be qualified if the surrogate in the field sample is outside 50 - 125 percent recovery.

	YES	NO	N/A
8.4 Are there any transcription/calculation errors between raw data and surrogate recoveries on Forms:		✓	

ACTION: If large errors exist, call lab for explanation/ resubmittal, make necessary corrections and note errors in the data assessment.

9.0 QC Check Reference Sample

	YES	NO	N/A
9.1 Is the QC Check Reference Sample Recovery Form present? (Created by Lab)	✓		
9.2 Was the QC Check Reference Sample analyzed at the required frequency (once per SDG or every 20 samples, for each matrix?	✓		

NOTE: The QC Check Form has to be created by the Lab. Concentration of the spiking solution is 5-10 times the estimated quantitation limits for all analytes listed in section 12 of the SAS.

NOTE: QC Check Reference Sample information is important, data is used to judge extraction efficiency.

ACTION: If any QC Check data are missing, call the lab for explanation/resubmittal. If the lab cannot provide missing deliverables, document the effect on the validity of the data in the data assessment. Positive hits should be flagged "J" and non-detects should be flagged "R".

9.3 How many QC check recoveries are outside QC limits of 70-125%?

Water	Soil
0 out of 19	_____ out of ___

ACTION: If any recovery is greater than 125%, positive results should be flagged "J" for the affected compound.

YES NO N/A

When two or more analytes have recoveries above 10% but below 70% all associated data should be flagged "J" (positive and non-detects).

When one or more analytes have recoveries below 10% qualify all associated data "R".

Note in data assessment. If further assistance is required, contact SMO for instructions.

It should be noted for TPO action, if a laboratory fails to analyze a QC Check Reference Sample or if a laboratory consistently fails to generate acceptable recoveries.

10.0 Calibration Data

10.1 Initial Calibration

The initial calibration standards must be analyzed daily prior to any sample analysis. The lab may have to create two sets of initial standard solutions if several analytes coelute.

The initial calibration curve must be injected in triplicate for each of the 5 levels.

10.2 Are the chromatograms and data system printouts (Quant reports) present for initial and triplicate calibrations? not in triplicate — ☑ — —

10.3 Are the modified Initial Calibration Forms (Pest VI-1, VI-2 Forms) present? — ☑ — —

10.4 Are modified Forms present and completed for each analytical sequence and each column? — ☑ — —

ACTION: If any Calibration Standard chromatograms and forms are missing, contact the lab for resubmittals.

10.5 Are there any transcription/calculation errors between raw data and Forms? — — ☑ —

YES NO N/A

ACTION: If large errors exist, call lab for explanation/resubmittal. Make necessary corrections and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

10.6 Do all standard retention times, including each compound in each level, fall within the windows established during the initial calibration analytical sequence? ☑ ___ ___

NOTE: All injections are taken into account: A total of 15 injections (three injections for each of the five levels). If the lab had to run two sets of standards there would be a total of 30 injections.

ACTION: The average retention time (RT) for each analyte is determined from the mean of the triplicate injection for each 5 point level of the initial calibration. The RT window for each analyte is equal to the average RT ± three (3) times the standard deviation. If the standard deviation comes out to equal zero, the window will be ±0.08. The (Pest form VI-1) Form should be modified to include the average of the three injections for each of the 5 levels.

10.7 Are the linearity criteria for the initial analyses within limits for both columns? (%RSD must be ≤20%) ☑ ☐ ___

ACTION: If no, qualify all associated positive results generated during the sequence "J" and all non-detects "UJ". When %RSD >90%, flag all non-detects results for that analyte as unusable "R".

10.8 Do the standards show degradation products of tetryl? ___ ☑ ___

NOTE: Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: If degradation is detected or suspected,

YES NO N/A

qualify positive hits for tetryl and TNT as "J". If degradation is suspected, and tetryl is reported as non-detected, qualify the analyte as "UJ". Note in data assessment.

11.0 Continuing Calibration

11.1 Are Forms (Modified Pest VII-2) present for each continuing calibration? ☑ ___ ___

11.2 Are there any transcription/calculation errors between raw data and forms? ___ ☑ ___

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections, and document effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

11.3 Were continuing calibrations analyzed at the required frequency? (standard should bracket every 10 samples). ☑ ___ ___

ACTION: Criteria must be met. Determine effect on data. At a minimum, all data should be qualified "J", but the reviewer may determine that data are unusable "R". Document the data qualifications in data assessment.

11.4 Do all standard retention times for each continuing calibration fall within the windows established by the initial calibration? ☑ ___ ___

ACTION: If no, beginning with the samples which followed the last in-control standard, check to see if the chromatograms contain interfering peaks. If peaks are present, qualify positive results and non-detects for analytes outside their respective windows as unusable "R".

11.5 Are the RPD values for all continuing calibration standards ≤15%? ☑ ___ ___

ACTION: If the %RPD is >15% for the analyte being quantitated, qualify all associated positive

YES NO N/A

results "J" and non-detects "UJ". The "associated samples" are those which followed the last in-control standard up to the next passing standard. If the %RPD is >90%, flag all non-detects for that analyte unusable "R".

11.6 Compare the peak heights of continuing calibration checks obtained during the day with peak heights obtained from first calibration check of the sequence.

Is the percent RPD for peak heights less than 20% for each of the analytes of each of the Continuing Calibration Checks? ☑ ___ ___

ACTION: Use professional judgement to verify the reliability of the data.

12.0 Analytical Sequence

12.1 Is Form VIII present and completed for each column and each period of analyses? ☑ ___ ___

ACTION: If no, contact lab for resubmittals.

12.2 Was the proper analytical sequence followed for each initial calibration and subsequent analyses? ☑ ___ ___

NOTE: Sequence is as follows: 5 point Initial Calibration, Method Blank, Laboratory Control Sample (LCS), Continuing Calibration, 10 sample extracts, Continuing Calibration, 10 sample extracts and so on. The sequence must always end with a Continuing Calibration. All sample extracts, Method Blanks, LCS, and continuing calibrations must be analyzed within 24 hours after the analysis of the Initial Calibration Standards and the calculation of the RT windows.

ACTION: Flag "J" all data generated outside an acceptable twenty-four hour sequence starting after the calculation of the RT windows resulting from the initial calibration unless the daily calibration meets the calibration criteria for all target analytes. If the daily calibration standard does not meet the criteria for some analytes the reviewer might reject those values. In any case, if the 24 hour sequence is exceeded it should be noted in the data assessment under contract non-compliance.

	YES	NO	N/A
13.0 Method Blanks			
13.1 Is the Method Blank Summary (Form IV) present for each of the following matrices? a. water	☑		
b. soil	☐		✓
13.2 Frequency of Analysis: Has a Method/Prep blank been analyzed at the same time for each batch of samples extracted.	☑		

ACTION: If any method blank data are missing, call lab for explanation/resubmittal. If method blank data are not available, reject "R" all associated positive data.

13.3 Are the positive hits present in the blank less than detection limit?	☑		

ACTION: If hits are ≥ detection limits, analysis should be discontinued. All associated samples must be re-prepared and re-analyzed with a new blank. If lab did not follow this action, note in data assessment. Follow guidelines under contamination section.

13.4 Chromatography: review the method blank raw data chromatograms, quant reports or data system printouts. Is the chromatographic performance (baseline stability) for each instrument acceptable?	☑		

ACTION: Use professional judgement to determine the effect on the data.

YES NO N/A

14.0 Contamination

NOTE: "Water blanks", "drill blanks", and distilled water blanks" are validated like any other sample, and are not used to qualify data. Do not confuse them with the other QC blanks discussed below.

14.1 Did the lab run an instrument blank following a sample analysis which contained an analyte(s) at high concentration(s) to evaluate possible sample cross-contamination? [ ] ___ ✓

ACTION: Sample analysis results after the high concentration sample must be evaluated for carryover. Sample cross-contamination should be noted for TPO action if an effect on the data is suspected. An Instrument Blank is not required in the methodology.

14.2 Do any Method Blanks have positive results (TCL)? When applied as described below, the contaminant concentration in these blanks are multiplied by the sample dilution factor. ___ ✓ [ ] ___

14.3 Are there field/rinse/equipment blanks associated with every sample? [ ] ✓ ___

ACTION: Note in data assessment that there is no associated field/rinse/equipment blank.

14.4 Do any field/rinse blanks have positive results (TCL)? ___ [ ] ✓

ACTION: Prepare a list of the samples associated with each of the contaminated blanks. (Attach a separate sheet.)

NOTE: All field blank results associated with a particular group of samples (may exceed one per case) must be used to qualify data. Blanks may not be qualified because of contamination in another blank. Field blanks must be qualified for surrogate recovery, instrument performance criteria, or calibration QC problems.

YES NO N/A

ACTION: Follow the directions in **Table 3** below to qualify TCL results due to contamination. Use the largest value from all the associated blanks. If any blanks are grossly contaminated, all associated data should be qualified as unusable (R) (see item # 12.3).

Sample conc > CRQL but < 5x blank	Sample conc < CRQL & is < 5x blank value	Sample conc > CRQL & > 5x blank value
Flag sample result with a "U"	Report CRQL & qualify "U"	No qualification is needed

NOTE: Analytes qualified "U" for blank contamination are still considered as "hits" when qualifying for calibration or other QC criteria.

15.0 Target Compound List (TCL) Analytes (Form I)

15.1 Are the Organic Analysis Data Sheets (Form I) present with required header information on each page, for each of the following:

a. Samples ? [✓] ___ ___

b. Laboratory Control Samples? [✓] ___ ___

c. Blanks? [✓] ___ ___

d. Matrix spikes and matrix spike duplicates? [✓] ___ ___

e. Lab duplicate? [ ] ___ [✓]

	YES	NO	N/A
15.2 Are the Chromatograms, and the data system printouts (Quant Reports) included in the sample package for each of the following:			
a. Samples?	☑		
b. Laboratory Control Samples?	☑		
c. Blanks?	☑		
d. Matrix spikes and Matrix spike duplicates?	☑		
e. Lab duplicate?			☑

ACTION: If any data are missing, Contact Lab for resubmittals.

15.3 Are the response factors shown in the Quant Report? (response only)	☑		
15.4 Is chromatographic performance acceptable with respect to:			
Baseline stability?	☑		
Resolution?	☑		
Peak shape?	☑		
Full-scale graph (attenuation)?	☑		
Other: _____			☑

ACTION: Use professional judgement to determine the acceptability of the data..

16.0 Compound Identification

16.1 Is Form X completed for every sample in which an analyte was detected?	☑		

ACTION: If no, contact lab for resubmittals.

	YES	NO	N/A
16.2 Are there any transcription/calculation errors between raw data and Forms?		✓	

ACTION: If large errors exist, call lab for explanation/resubmittals. Make any necessary corrections and note effect in data assessment. Check at least 2-3 values from each calibration standard and more if errors are found.

	YES	NO	N/A
16.3 Are retention times (RT) of sample analytes within the established RT windows for both analyses?	✓		

ACTION: Qualify as unusable "R" all positive results which were not confirmed by second HPLC column analysis. Also qualify as unusable "R" all positive results not meeting RT window unless associated standard compounds are similarly biased. The reviewer should use professional judgement to assign an appropriate quantitation limit.

	YES	NO	N/A
16.4 Is the percent difference (%D) calculated for the positive sample results on the two HPLC columns <25%?	✓		

ACTION: If the reviewer finds neither column shows interference for the positive hits, the data should be flagged as follows:

% Difference	Qualifier
25-90%	J
>90%	R

NOTE: The lower of the two values is reported on Form I. If using professional judgement, the reviewer determines that the higher result was more acceptable, the reviewer should replace the value and indicate the reason for the change in the data assessment.

YES NO N/A

16.5 Check chromatograms for false negatives, interferences and degradation. Tetryl decomposes rapidly in methanol/water solutions as well as with heat. All samples expected to contain tetryl should not be exposed to temperatures above room temperature. Degradation products of tetryl appear as a shoulder on the TNT peak. Peak heights rather than peak areas should be used when tetryl is present in concentrations that are significant relative to the concentration of TNT.

ACTION: Use professional judgement to determine qualification of analytes.

17.0 Compound Quantitation and Reported Detection Limits

17.1 Are there any transcription/calculation errors in Form I results? Check at least two positive values. Verify that the calculations were adjusted for percent moisture. Were any errors found? ___ ☑ ___

NOTE: Single peak analyte results can be checked for rough agreement between quantitative results obtained on the two HPLC columns. The reviewer should use professional judgement to decide whether a much larger concentration obtained on one column versus the other indicates the presence of an interfering compound. If an interfering compound is indicated, the lower of the two values should be reported and qualified as presumptively present at an approximated quantity "JN". This necessitates a determination of an estimated concentration on the confirmation column. The narrative should indicate that the presence of interferences has interfered with the evaluation of the second column confirmation.

17.2 Are the CRQLs adjusted to reflect sample dilutions for each Form I? ☑ ___ ___

ACTION: If errors are large, call lab for explanation/resubmittal, make any necessary

YES NO N/A

corrections and note in data assessment.

ACTION: When a sample is analyzed at more than one dilution, the lowest CRQLs are used (unless a QC exceedance dictates the use of the higher CRQL data from the diluted sample analysis). Replace concentrations that exceed the calibration range in the original analysis by crossing out the "E" and its associated value on the original Form I and substituting the data from the analysis of the diluted sample. Specify which Form I is to be used, then draw a red "X" with a red pencil across the entire page of all Form I's that should not be used, including any in the summary package.

18.0 Lab Duplicates

18.1 Were any lab duplicates submitted for for each extraction batch?
a. waters
b. soils

[ ] [✓] —
[ ] — —

18.2 Are the Relative Percent Difference (RPD) values for the analytes reported in the duplicate samples <20%? (depending on the SAS-request; the criteria might be <40%).

[ ] — [✓]

ACTION: Compare the reported results for lab duplicates and calculate the relative percent difference.

ACTION: Any gross variation between duplicate results must be addressed in the reviewer narrative. However, if large differences exist, identification of lab duplicates should be confirmed by contacting the lab.

ACTION: Flag all associated data with an * for "out of control" duplicate.

19.0 Matrix Spikes

19.1 Is the Matrix Spike/Matrix Spike Duplicate recovery Form present?

[✓] — —