



New Jersey Department of Environmental Protection
Site Remediation and Waste Management Program

TRADITIONAL/DIRECT OVERSIGHT
REPORT CERTIFICATION FORM

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Kenvil Works Facility

List All AKAs: Alliant Techsystems Inc.

Street Address: 100 Howard Boulevard

Municipality: Roxbury Township (Township Borough or City)

County: Morris Zip Code: 07847

Program Interest (PI) Number(s): 000741 Case Tracking Number(s): 849

SECTION B. REPORT INFORMATION

Report Name: Clean Closure Technical Memorandum

Report Date: 05/15/2019

Case Type:

☒ RCRA GPRA 2020

☐ CERCLA/NPL

☐ USDOD

☐ USDOE

☐ Direct Oversight

☐ Other (explain): _____

SECTION C. PERSON RESPONSIBLE FOR CONDUCTING THE REMEDIATION INFORMATION AND CERTIFICATION

Full Legal Name of the Person Responsible for Conducting the Remediation: Edward D. Meeks

Representative First Name: Edward Representative Last Name: Meeks

Title: Remediation Project Manager

Phone Number: (302) 995-3433 Ext: _____ Fax: _____

Mailing Address: Hercules Research Center, 500 Hercules Road, Building 8145

City/Town: Wilmington State: DE Zip Code: 19808

Email Address: edmeeks@ashland.com

This certification shall be signed by the person responsible for conducting the remediation who is submitting this notification in accordance with Administrative Requirements for the Remediation of Contaminated Sites rule at N.J.A.C. 7:26C-1.5(a).

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, including all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, to the best of my knowledge, I believe that the submitted information is true, accurate and complete. I am aware that there are significant civil penalties for knowingly submitting false, inaccurate or incomplete information and that I am committing a crime of the fourth degree if I make a written false statement which I do not believe to be true. I am also aware that if I knowingly direct or authorize the violation of any statute, I am personally liable for the penalties.

Signature: _____

Date: 5/20/20

Name/Title: Edward D. Meeks - Remediation Project Manager

SECTION D. LICENSED SITE REMEDIATION PROFESSIONAL INFORMATION AND STATEMENT

LSRP ID Number: 575999

First Name: Foley Last Name: Mark

Phone Numbers: (609) 512-3676 Ext.: _____ Fax: _____

Mailing Address: 2000 Lenox Drive, 3rd Floor

Municipality: Lawrenceville State: NJ Zip Code: 08648

Email Address: mark.foley@wsp.com

This statement shall be signed by the LSRP who is submitting this notification in accordance with N.J.S.A. 58:10C-14, and N.J.S.A. 58:10B-1.3b(1) and (2).

- (1) I certify, as a Licensed Site Remediation Professional authorized pursuant to N.J.S.A. 58:10C-1 et seq. to conduct business in New Jersey, that for the remediation described in this submission, and all attachments included in this submission, I personally: Managed, supervised, or performed the remediation conducted at this site that is described in this submission, and all attachments included in this submission; and/or periodically reviewed and evaluated the work performed by other persons that forms the basis for the information in this submission; and/or completed the work of another site remediation professional, licensed or not, after having: (1) reviewed all available documentation on which I relied; (2) conducted a site visit and observed the then-current conditions and verified the status of as much of the work as was reasonably observable; and (3) concluded, in the exercise of my independent professional judgment, that there was sufficient information upon which to complete any additional phase of remediation and prepare workplans and reports related thereto.
- (2) I certify:
- That I have read this submission and all attachments to this submission;
 - That in performing the professional services as the licensed site remediation professional for the entire site or each area of concern, I adhered to the professional conduct standards and requirements governing licensed site remediation professionals provided in N.J.S.A. 58:10C-16;
 - That the remediation conducted at the entire site or each area of concern, that is described in this submission and all attachments to this submission, was conducted pursuant to and in compliance with the remediation requirements in N.J.S.A. 58:10C-14.c;
 - That the remediation described in this submission, and all attachments to this submission, was conducted pursuant to and in compliance with the regulations of the Site Remediation Professional Licensing Board at N.J.A.C. 7:26f; and
 - That the information contained in this submission and all attachments to this submission is true, accurate, and complete.
- (3) I certify, when this submission includes a response action outcome, that the entire site or each area of concern has been remediated in compliance with all applicable statutes, rules, and regulations and is protective of public health and safety and the environment.
- (4) I certify that no other person is authorized or able to use any password, encryption method, or electronic signature that the Board or the Department have provided to me.
- (5) I certify that I understand and acknowledge that:
- If I knowingly make a false statement, representation, or certification in any document or information I submit to the Department I may be subject to civil and administrative enforcement pursuant to N.J.S.A. 58:10C-17.a.1(a) through (f) by the Board, including but not limited to license suspension, revocation, or denial of renewal; and
 - If I purposely, knowingly, or recklessly make a false statement, representation, or certification in any application, form, record, document or other information submitted to the Department or required to be maintained pursuant to the Site Remediation Reform Act, I shall be guilty, upon conviction, of a crime of the third degree and shall, notwithstanding the provisions of subsection b. of N.J.S.2C:43-3, be subject to a fine of not less than \$5,000 nor more than \$75,000 per day of violation, or by imprisonment, or both.
- (6) I certify that I have read this certification prior to signing, certifying, and making this submission.

LSRP Signature: _____

Date: 5/20/2020

LSRP Name: Mark Foley

Company Name: WSP USA

Completed forms should be sent to:

Assigned Case Manager
Bureau of Case Management
Site Remediation Program
NJ Department of Environmental Protection
401-05F
PO Box 420
Trenton, NJ 08625-0420

15 May 2019

Memorandum

To: Phil Cole – New Jersey Department of Environmental Protection

From: Edward D. Meeks – Hercules LLC
Scott Larew – Kennedy Jenks Consultants

Subject: Clean Closure Technical Memorandum
Hercules LLC - Kenvil Works Facility (NJD002156925)
KJ 540001*14

On behalf of Hercules LLC (Hercules), Kennedy Jenks Consultants (KJ) prepared this technical memorandum for Hercules' Kenvil Works Facility (the Facility) in Kenvil, New Jersey (**Figure 1**). This memorandum supplements information provided in the Description of Current Conditions Report (CCR; Hercules 2017), and provides data supporting clean closure of two Resource Conservation Recovery Act (RCRA) Operable Units (OUs) at the Facility (listed below).

- S01 – Drum Storage Area (15,260 gallons [gal])
- S02 – Diazo Tank (5,000 gal)

Figure 2 presents the locations of these OUs.

Background/History/Regulatory Status

The Facility operated from the 1870s through 1996 when manufacturing operations ceased. During its operational history, the Facility operated seven RCRA permitted OUs. The following table summarizes the RCRA permitted OUs and their closure status as outlined by NJDEP (2006) (**Attachment 1**).

<i>RCRA Permitted OUs</i>	<i>Unit Name</i>	<i>Current Status</i>
Storage Area (S01)	CONTAIN2	Clean closed (NJDEP 2006)
Treatment Area (T04)	OTHTRT1	Clean closed (NJDEP 2006)
Surface Impoundment (S04)	SURFIMP	Reclassified by NJDEP (2006), no longer managed as a RCRA-regulated OU
Diazo Tank (S02)	TANK	Open, pending closure
Drum Storage Area (S01)	CONTAIN1	Open, pending closure
Shooting Pond (T04)	OTHTRT3	Open
Old Burning Ground (T04)	OTHTRT2	Open

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The CCR summarized the status of the four remaining RCRA OUs at the Facility and recommended clean closure of S02 – Diazo Tank and S01 – Drum Storage Area.

The CCR also recommended evaluating clean closure of T04 – Shooting Pond after refining ecological risk estimates in aquatic exposure areas at the Facility. Ecological risk assessment activities in this OU are ongoing. Additional sampling will be completed in spring of 2019 and a memorandum summarizing the findings and closure recommendations related to this OU will be submitted to NJDEP's RCRA Coordinator. This OU is not discussed further in this memorandum.

T04 – Old Burning Ground remains a component of the NJDEP remedial program at the Facility. Remediation of this OU will be completed as part of Industrial Site Recovery Act (ISRA) activities at the Facility (under a Licensed Site Remediation Professional- [LSRP-] approved Remedial Action Work Plan and corresponding Remedial Action Permit) and will satisfy RCRA requirements. This OU is not discussed further in this memorandum.

The remainder of this technical memorandum provides information supporting clean closure at S02 – Diazo Tank and S01 – Drum Storage Area.

RCRA Unit Current Conditions

Figure 2 illustrates RCRA OUs remaining at the Facility. **Figures 3 and 4** present characterization sample locations within each of the two OUs recommended for clean closure in the memorandum. The following subsections present characterization data in support of clean closure for each of the OUs.

S01 – Drum Storage Area

Historical information

S01 - Drum Storage Area (a concrete drum storage pad) operated in the Maintenance Area from approximately 1981 until manufacturing operations ceased in December 1996. It is believed that this area was sized to hold 15,260 gallons (approximately 275 55-gallon drums) but stored less than the maximum volume during operation. The contents of drums historically stored in this AOC is unknown.

Figure 3 presents the approximate footprint and location of the former Drum Storage Area.

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Current Characterization

This RCRA unit corresponds to area of concern (AOC) G11-3 identified and investigated under ISRA. SI activities were conducted in December 1999 at the Drum Storage Area. Investigation of this AOC included installing soil borings at each of the four corners of the pad footprint and one in the approximate center of the footprint (SB-G11-3-01 through SB-G11-3-05; **Figure 3**). No evidence of releases on the concrete pad was observed during SI/RI activities. The soil samples were field screened for explosive and energetic compounds (E&E) via the Expray[®] test kit and metals via x-ray fluorescence (XRF) consistent with the SI sampling procedures. Screening results did not indicate elevated concentrations of E&E or metals.

Soil sample location (SB-G11-3-01) was selected for laboratory analysis based on professional judgement (Hercules 2004). **Table 1** presents soil analytical results for two samples collected from one boring location (SB-G11-3-01) as part of the SI for S01 – Drum Storage Area (G11-3). Volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), and metals with the exception of arsenic, lead, and mercury were either not detected, or detected at concentrations less than their corresponding Non-Residential Direct Contact Soil Remediation Standard (NRDCSRS), Residential Direct Contact Soil Remediation Standard (RDCSRS), and Impact to Groundwater Soil Remediation Standards (IGWSRS). Lead and mercury were detected at concentrations greater than their respective IGWSRS but less than either the RDCSRS or NRDCSRS. Arsenic was detected at a concentration greater than its NRDCSRS¹.

Visual assessment of the storage pad and field screening presented no evidence that a release had occurred. Arsenic, lead, and mercury concentrations are consistent with those observed throughout the SI/RI in historic fill materials (comprised of fly ash, bottom ash, and slag) emplaced during historical site development activities in the early 1900s. Historic fill has been identified throughout the Maintenance Area where the former Drum Storage Area is located (Hercules 2016). While present at concentrations that merit consideration under ISRA, arsenic, lead, and mercury are not associated with the former operation of the S01 – Drum Storage Area.

RCRA Closure

Hercules recommends RCRA clean closure for S01 – Drum Storage Area based on the following:

- Field observations and screening notes did not indicate a release(s) (e.g., staining) on the concrete pad.

¹ NJDEP establishes 19 milligrams per kilogram (mg/kg) as the NRDCSRS, RDCSRS, and IGWSSL based on natural background arsenic levels in New Jersey soils.

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Mr. Phil Cole – New Jersey Department of Environmental Protection

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- The concrete pad and associated structures historically supporting drum storage (e.g., fence) have been demolished and removed.
- SI sampling indicated constituents of potential concern (COPCs) consistent with the historic fill used during construction and expansion of the Facility.
- Facility remediation and closure under NJDEP's ISRA program will address potential human and or ecological exposures to COPCs in historic fill underlying the Drum Storage Area, where appropriate.

S02 – Diazo Tank

Historical information

S02 – Diazo Tank, a 10,000-gallon stainless steel tank, held waste water from the production of diazodinitrophenol (also known as diazo or DDNP). The Facility produced diazo from the 1950s through the 1980s. In the 1980s, Hercules divested the high explosives business and manufacturing of these products ceased at the Facility. The tank was decontaminated and removed during demolition of the diazo production plant in the 1980s and sold as used process equipment or scrap metal. The last building associated with the former diazo process was removed as part of demolition efforts in the late 1990s.

Hercules records indicate that a closure certification for this OU was accepted by the NJDEP on December 1, 1991, pending soil sampling; and that soil samples collected in the vicinity of the tank contained concentrations of arsenic and lead greater than NJDEP criteria. However, no documentation presenting these samples or remedial efforts at this unit exists in Hercules' records. The documentation was likely misplaced when operations at the Facility were transferred to a new operator (ATK) in 1995.

Current Characterization

This RCRA OU was identified and investigated under ISRA as AOC H8-2181. SI activities were conducted in June 2000 at the Diazo Plant. Investigation of this AOC included installing soil borings at each of the four corners of the building footprint (SB-H8-2181-01 through SB-H8-2181-04) and one in the approximate center of a circular brick structure located northwest of the Diazo Plant structure (SB-H8-2181-05). The building was demolished prior to sampling activities and there was no evidence of a release on the concrete or brick remains. The soil samples were field screened for E&E via the Expray[®] test kit and metals via XRF. The Expray test kit can detect polynitroaromatic compounds, including DDNP. Screening results did not indicate elevated

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concentrations of E&E or metals and therefore did not warrant biased sampling. As such, soil sample locations (SB-H8-2181-01 and SB-H8-2181-05) were selected for laboratory analysis based on professional judgement (Hercules 2004). **Figure 4** presents soil boring locations.

Table 2 presents soil analytical results for two samples (SB-H8-2181-01 and SB-H8-2181-05) collected as part of the SI for the Diazo Plant (H8-2181) that housed S02 – Diazo Tank. In addition, two soil samples (H8-9121-02 and H8-9121-04) collected less than 30 feet to the southeast of the Diazo Plant are presented in **Table 2** and on **Figure 4**. SVOCs, E&E, and metals with the exception of lead and mercury were either not detected, or detected at concentrations less than their corresponding NRDCSRS, RDCSRS, and IGWSRS. Lead and mercury were detected at concentrations greater than their respective IGWSRS but less than either the RDCSRS or NRDCSRS.

Visual assessment of the building pad and field screening showed no evidence that a release has occurred. Lead and mercury were detected in soil at concentrations greater than their respective IGWSRS in the soil adjacent to the Diazo Plant. Lead and mercury concentrations are consistent with those observed throughout the SI/RI in historic fill materials (comprised of fly ash, bottom ash, and slag) emplaced during historical site development activities in the early 1900s. Historic fill has been identified throughout the Diazo Area where the former Diazo Tank is located (Hercules 2016). While present at concentrations that merit consideration under ISRA, lead and mercury are not associated with the former operation of the Diazo Plant, or Diazo Tank.

RCRA Closure

Hercules recommends RCRA clean closure for S02 – Diazo Tank based on the following:

- Field observations during investigation and demolition of the Diazo Plant did not indicate a release(s) (e.g., staining) to environmental media.
- The brick structure and concrete pad of the Diazo Plant, within which the Diazo Tank was located, have been demolished and removed. No former operational structures associated with the Diazo Plant remain intact.
- Analytical results from sample locations around and within the Diazo Plant did not identify constituents associated with Diazo Plant or Diazo Tank operations.
- Facility remediation and closure under NJDEP's ISRA program will address potential human and or ecological exposures to COPCs in historic fill underlying the Diazo Plant, where appropriate.

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Conclusion and Recommendations

This document summarizes the history and current state of two RCRA OUs onsite, and presents data demonstrating compliance with applicable regulatory standards for each OU. As such, Hercules recommends RCRA clean closure for S01 - Drum Storage Area and S02 - Diazo Tank.

T04 – Shooting Pond and T04 - Old Burning Ground remain components of the NJDEP remedial program at the Facility. Hercules will provide milestone updates as activities related to T04 – Shooting Pond and T04 - Old Burning Ground are implemented and completed.

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Mr. Phil Cole – New Jersey Department of Environmental Protection

15 May 2019

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References:

Hercules. 2017. Description of Current Conditions Report Former Kenvil Works Facility (NJD002156925).

Hercules. 2016. Phase II Remedial Investigation Report – Volumes A through E. Hercules Incorporated. Kenvil Works Facility, Kenvil, Morris County, New Jersey. May.

Hercules. 2004. Soils Site Investigation, Hercules – Kenvil Works Facility, Kenvil, New Jersey. May 2004.

NJDEP 2006. Letter to Bruce Hough (Hercules, Inc.). Financial Assurance Documentation, Hercules Incorporated (Kenvil), 100 Howard Blvd, Kenvil, NJ, EPA ID No: NJD002156925, NJDEP Program Interest Number: 000741. 12 April 2006.

Enclosures:

Figure 1 – Facility Plan

Figure 2 – RCRA Operable Unit Location Map

Figure 3 – S01 – Drum Storage Area

Figure 4 – S02 – Diazo Tank

Table 1 – S01 – Drum Storage Area

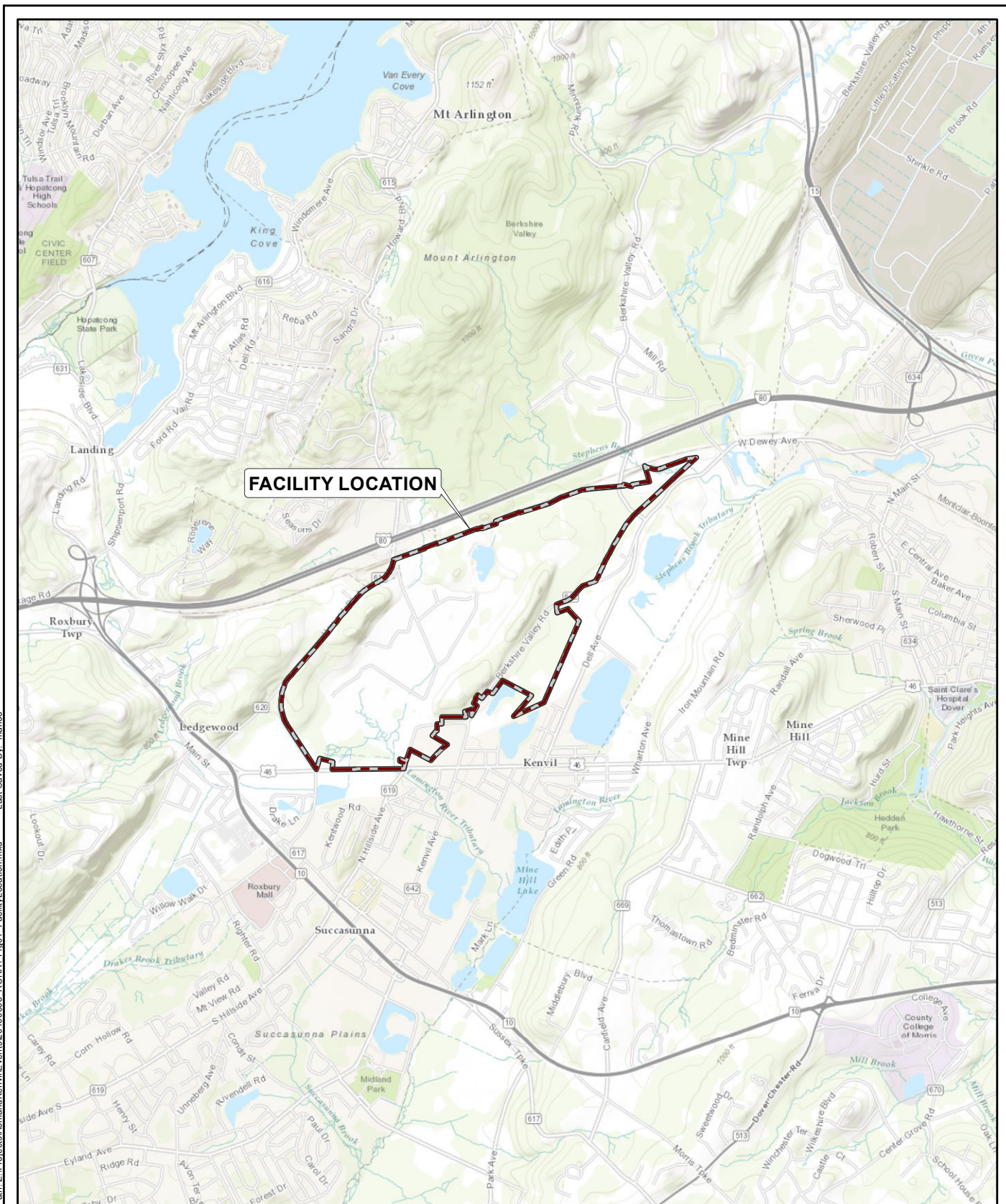
Table 2 – S02 – Diazo Tank

Attachment 1 – NJDEP Letter

cc: Mark Foley, WSP, Licensed Site Remediation Professional

Figures

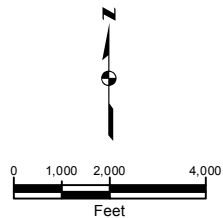
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New Jersey

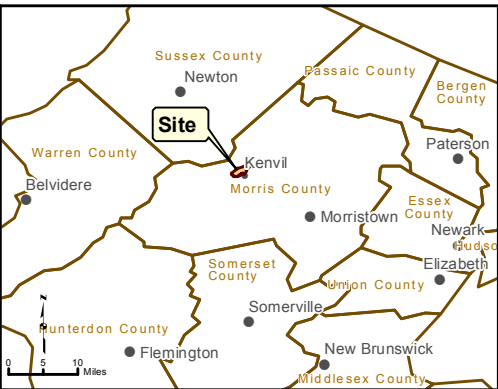
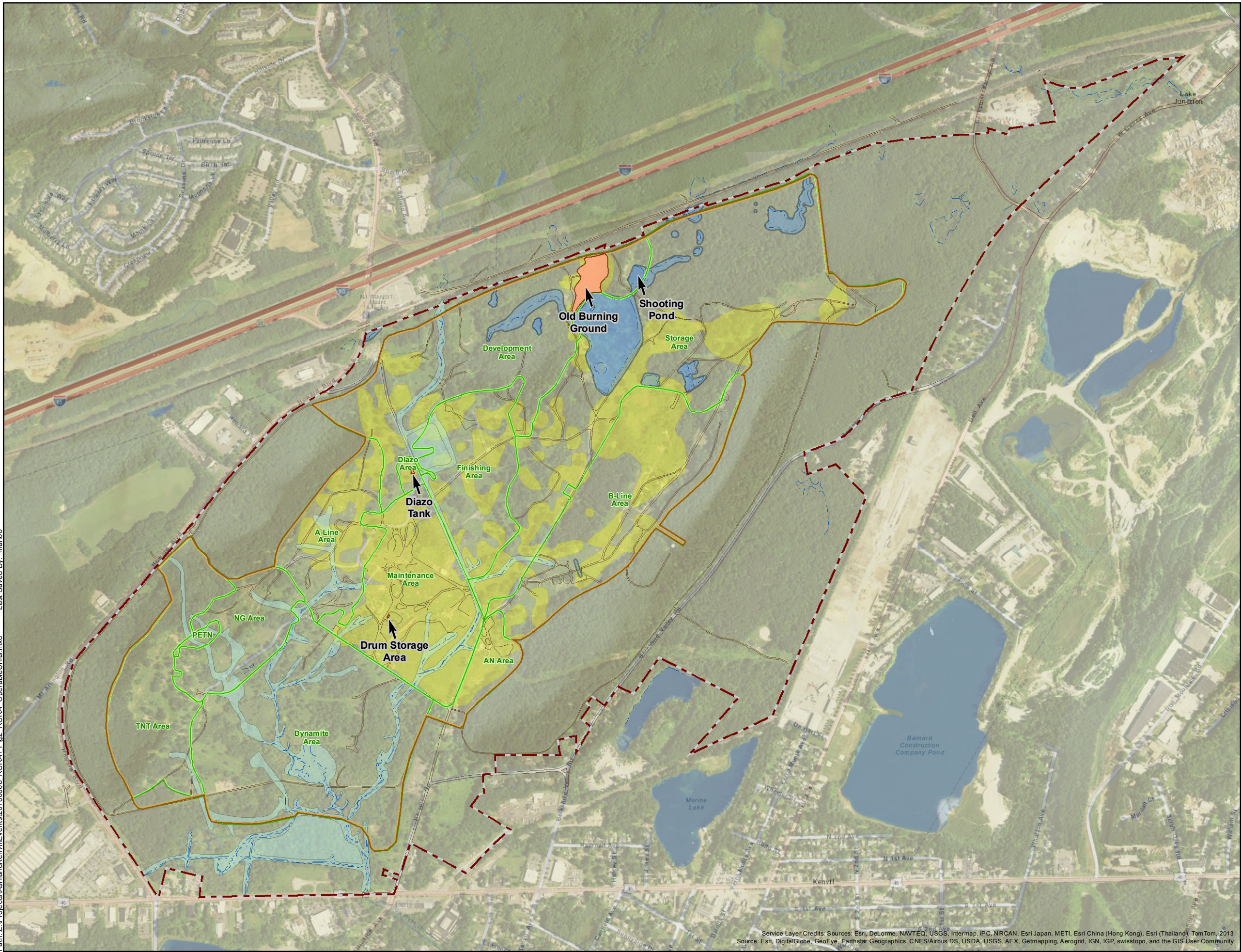


HERCULES INCORPORATED
KENVIL WORKS FACILITY
KENVIL, NEW JERSEY
CLEAN CLOSURE TECHNICAL MEMORANDUM

FACILITY PLAN

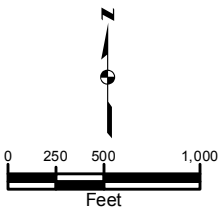
HERCULES

FIGURE
1



Index Map

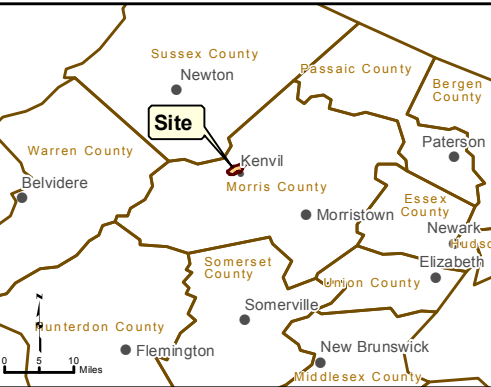
- Legend**
- RCRA Operable Units Approximate Location
 - Site Boundary
 - Remedial Area
 - Operational Area
 - Historic Fill
 - Stream/Water Feature
 - Pond
 - Road



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KENVIL WORKS FACILITY
KENVIL, NEW JERSEY
CLEAN CLOSURE TECHNICAL MEMORANDUM

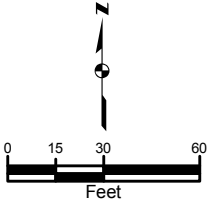
RCRA OPERABLE UNIT LOCATION MAP





Index Map

- Legend**
- Screening Soil Sample
 - AOC-Specific Soil Sample Location
 - Operational Area Boundary
 - Historic Fill
 - ~ Road
 - Grid Cell



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KENVIL WORKS FACILITY
KENVIL, NEW JERSEY

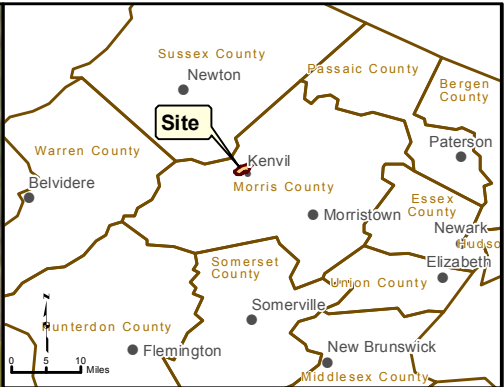
CLEAN CLOSURE TECHNICAL MEMORANDUM

S01 - DRUM STORAGE AREA



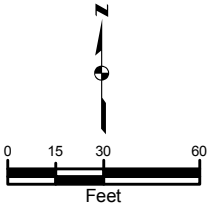
Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, iPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

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Index Map

- Legend**
- Screening Soil Sample
 - AOC-Specific Soil Sample Location
 - Operational Area
 - Historic Fill
 - Road
 - Grid Cell



HERCULES INCORPORATED
KENVIL WORKS FACILITY
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CLEAN CLOSURE TECHNICAL MEMORANDUM

S02 - DIAZO TANK



FIGURE
4

Service Layer Credits: Sources: Esri, DeLorme, NAVTEQ, USGS, Intermap, IPC, NRCAN, Esri Japan, METI, Esri China (Hong Kong), Esri (Thailand), TomTom, 2013
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, IGN, IGP, swisstopo, the GIS User Community

Tables

Table 1. S01 - Drum Storage Area (G11-3)
Clean Closure Technical Memorandum
Hercules LLC, Kenvil Works Facility
Kenvil, New Jersey

					Location Sample Date Sample Depths Sample ID	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5FD	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5N	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5FD	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5N
Chemical	CAS Number	Units	NRDCSRS	RDCSRS	IGWSSL				
VOCs									
1,1,1-Trichloroethane	71-55-6	ug/kg	4200000	290000	300	< 619	< 568	NA	NA
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	3000	1000	7	< 619	< 568	NA	NA
1,1,2-Trichloroethane	79-00-5	ug/kg	6000	2000	20	< 619	< 568	NA	NA
1,1-Dichloroethane	75-34-3	ug/kg	24000	8000	200	< 619	< 568	NA	NA
1,1-Dichloroethene	75-35-4	ug/kg	150000	11000	8	< 619	< 568	NA	NA
1,2,4-Trichlorobenzene	120-82-1	ug/kg	820000	73000	700	< 619	< 568	NA	NA
1,2-Dichlorobenzene	95-50-1	ug/kg	59000000	5300000	17000	< 619	< 568	NA	NA
1,2-Dichloroethane	107-06-2	ug/kg	3000	900	5	< 619	< 568	NA	NA
1,2-Dichloropropane	78-87-5	ug/kg	5000	2000	5	< 619	< 568	NA	NA
1,3-Dichlorobenzene	541-73-1	ug/kg	59000000	5300000	19000	< 619	< 568	NA	NA
1,4-Dichlorobenzene	106-46-7	ug/kg	13000	5000	2000	< 619	< 568	NA	NA
2-Chloroethylvinylether	110-75-8	ug/kg	NS	NS	NS	< 1238	< 1136	NA	NA
Acrolein	107-02-8	ug/kg	1000	500	500	< 2475	< 2273	NA	NA
Acrylonitrile	107-13-1	ug/kg	3000	900	500	< 619	< 568	NA	NA
Benzene	71-43-2	ug/kg	5000	2000	5	< 619	< 568	NA	NA
Bromodichloromethane	75-27-4	ug/kg	3000	1000	5	< 619	< 568	NA	NA
Bromoform	75-25-2	ug/kg	280000	81000	30	< 619	< 568	NA	NA
Bromomethane	74-83-9	ug/kg	59000	25000	40	< 1238	< 1136	NA	NA
Carbon Tetrachloride	56-23-5	ug/kg	2000	600	5	< 619	< 568	NA	NA
Chlorobenzene	108-90-7	ug/kg	7400000	510000	600	< 619	< 568	NA	NA
Chloroethane	75-00-3	ug/kg	1100000	220000	NS	< 1238	< 1136	NA	NA
Chloroform	67-66-3	ug/kg	2000	600	400	< 619	< 568	NA	NA
Chloromethane	74-87-3	ug/kg	12000	4000	NS	< 1238	< 1136	NA	NA
cis-1,2-Dichloropropene	6923-20-2	ug/kg	7000	2000	5	NA	NA	NA	NA
Cis-1,3-Dichloropropene	10061-01-5	ug/kg	7000	2000	5	< 619	< 568	NA	NA
Dibromochloromethane	124-48-1	ug/kg	8000	3000	5	< 619	< 568	NA	NA
Ethylbenzene	100-41-4	ug/kg	110000000	7800000	13000	< 619	< 568	NA	NA
Hexachlorobutadiene	87-68-3	ug/kg	25000	6000	900	< 619	< 568	NA	NA
Methylene Chloride	75-09-2	ug/kg	97000	34000	10	< 1067	< 568	NA	NA
Naphthalene	91-20-3	ug/kg	17000	6000	25000	< 619	NA	NA	NA
Tetrachloroethene	127-18-4	ug/kg	5000	2000	5	< 619	< 568	NA	NA
Toluene	108-88-3	ug/kg	91000000	6300000	7000	< 619	< 568	NA	NA
trans-1,2-Dichloroethene	156-60-5	ug/kg	720000	300000	600	< 619	< 568	NA	NA
Trichloroethene	79-01-6	ug/kg	20000	7000	10	< 619	< 568	NA	NA
Vinyl Chloride	75-01-4	ug/kg	2000	700	5	< 1238	< 1136	NA	NA

Table 1. S01 - Drum Storage Area (G11-3)
Clean Closure Technical Memorandum
Hercules LLC, Kenvil Works Facility
Kenvil, New Jersey

						Location Sample Date Sample Depths Sample ID	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5FD	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5N	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5FD	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5N
Chemical	CAS Number	Units	NRDCSRS	RDCSRS	IGWSSL					
SVOCs										
1,2,4-Trichlorobenzene	120-82-1	ug/kg	820000	73000	700	NA	NA	< 440	< 428	
1,2-Dichlorobenzene	95-50-1	ug/kg	59000000	5300000	17000	NA	NA	< 440	< 428	
1,2-Diphenylhydrazine	122-66-7	ug/kg	2000	700	700	NA	NA	< 440	< 428	
1,3-Dichlorobenzene	541-73-1	ug/kg	59000000	5300000	19000	NA	NA	< 440	< 428	
1,4-Dichlorobenzene	106-46-7	ug/kg	13000	5000	2000	NA	NA	< 440	< 428	
2,4,6-Trichlorophenol	88-06-2	ug/kg	74000	19000	200	NA	NA	< 440	< 428	
2,4-Dichlorophenol	120-83-2	ug/kg	2100000	180000	200	NA	NA	< 440	< 428	
2,4-Dimethylphenol	105-67-9	ug/kg	14000000	1200000	1000	NA	NA	< 440	< 428	
2,4-Dinitrophenol	51-28-5	ug/kg	1400000	120000	300	NA	NA	< 880	< 857	
2,4-Dinitrotoluene	121-14-2	ug/kg	3000	700	700	NA	NA	< 440	< 428	
2,6-Dinitrotoluene	606-20-2	ug/kg	3000	700	700	NA	NA	< 440	< 428	
2-Chloronaphthalene	91-58-7	ug/kg	NS	NS	NS	NA	NA	< 440	< 428	
2-Chlorophenol	95-57-8	ug/kg	2200000	310000	800	NA	NA	< 440	< 428	
2-Nitrophenol	88-75-5	ug/kg	NS	NS	NS	NA	NA	< 440	< 428	
3,3-Dichlorobenzidine	91-94-1	ug/kg	4000	1000	200	NA	NA	< 880	< 857	
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	68000	6000	300	NA	NA	< 880	< 857	
4-Bromophenyl-phenylether	101-55-3	ug/kg	NS	NS	NS	NA	NA	< 440	< 428	
4-Chloro-3-methylphenol	59-50-7	ug/kg	NS	NS	NS	NA	NA	< 440	< 428	
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	NS	NS	NS	NA	NA	< 440	< 428	
4-Nitrophenol	100-02-7	ug/kg	NS	NS	NS	NA	NA	< 880	< 857	
Acenaphthene	83-32-9	ug/kg	37000000	3400000	110000	NA	NA	< 440	< 428	
Acenaphthylene	208-96-8	ug/kg	300000000	NS	NS	NA	NA	19	< 428	
Anthracene	120-12-7	ug/kg	30000000	17000000	2400000	NA	NA	< 440	< 428	
Benzidine	92-87-5	ug/kg	700	700	700	NA	NA	< 440	< 428	
Benzo(g,h,i)fluoranthene	203-12-3	ug/kg	NS	NS	NS	NA	NA	< 440	NA	
Benzo(a)anthracene	56-55-3	ug/kg	2000	600	13000	NA	NA	120	113	
Benzo(a)pyrene	50-32-8	ug/kg	200	200	3000	NA	NA	85	102	
Benzo(b)fluoranthene	205-99-2	ug/kg	2000	600	41000	NA	NA	210	166	
Benzo(g,h,i)perylene	191-24-2	ug/kg	30000000	380000000	NS	NA	NA	NA	< 428	
Benzo(k)fluoranthene	207-08-9	ug/kg	23000	6000	25000	NA	NA	< 440	< 428	
Bis(2-Chloroethoxy)methane	111-91-1	ug/kg	NS	NS	NS	NA	NA	< 440	< 428	
Bis(2-Chloroethyl)ether	111-44-4	ug/kg	2000	400	200	NA	NA	< 440	< 428	
Bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	67000	23000	5000	NA	NA	< 440	< 428	
Bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	140000	35000	1200000	NA	NA	53	< 428	
Butylbenzylphthalate	85-68-7	ug/kg	14000000	1200000	230000	NA	NA	< 440	< 428	
Chrysene	218-01-9	ug/kg	230000	62000	80000	NA	NA	180	157	
Dibenzo(a,h)anthracene	53-70-3	ug/kg	200	200	13000	NA	NA	< 440	< 428	
Diethylphthalate	84-66-2	ug/kg	550000000	49000000	88000	NA	NA	44	< 428	
Dimethylphthalate	131-11-3	ug/kg	NS	NS	NS	NA	NA	< 440	< 428	

Table 1. S01 - Drum Storage Area (G11-3)
Clean Closure Technical Memorandum
Hercules LLC, Kenvil Works Facility
Kenvil, New Jersey

					Location Sample Date Sample Depths Sample ID	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5FD	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5N	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5FD	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5N
Chemical	CAS Number	Units	NRDCSRS	RDCSRS	IGWSSL				
Di-n-butylphthalate	84-74-2	ug/kg	68000000	6100000	760000	NA	NA	< 120	< 428
Di-n-octylphthalate	117-84-0	ug/kg	27000000	2400000	3300000	NA	NA	< 440	< 428
Fluoranthene	206-44-0	ug/kg	24000000	2300000	1300000	NA	NA	290	245
Fluorene	86-73-7	ug/kg	24000000	2300000	170000	NA	NA	< 440	< 428
Hexachlorobenzene	118-74-1	ug/kg	1000	300	200	NA	NA	< 440	< 428
Hexachlorobutadiene	87-68-3	ug/kg	25000	6000	900	NA	NA	< 440	< 428
Hexachlorocyclopentadiene	77-47-4	ug/kg	110000	45000	320000	NA	NA	< 440	< 428
Hexachloroethane	67-72-1	ug/kg	140000	35000	200	NA	NA	< 440	< 428
Indeno[1,2,3-cd]pyrene	193-39-5	ug/kg	2000	600	7000	NA	NA	< 440	< 428
Isophorone	78-59-1	ug/kg	2000000	510000	280	NA	NA	< 440	< 428
Naphthalene	91-20-3	ug/kg	17000	6000	25000	NA	NA	< 440	< 428
Nitrobenzene	98-95-3	ug/kg	340000	31000	200	NA	NA	< 440	< 428
N-Nitrosodimethylamine	62-75-9	ug/kg	700	700	700	NA	NA	< 440	< 428
N-Nitroso-Di-N-Propylamine	621-64-7	ug/kg	300	200	200	NA	NA	< 440	< 428
N-Nitrosodiphenylamine	86-30-6	ug/kg	390000	99000	6000	NA	NA	< 440	27.9
Pentachlorophenol	87-86-5	ug/kg	10000	3000	300	NA	NA	< 880	< 857
Phenanthrene	85-01-8	ug/kg	300000000	NS	NS	NA	NA	160	138
Phenol	108-95-2	ug/kg	210000000	18000000	8000	NA	NA	< 440	< 428
Pyrene	129-00-0	ug/kg	18000000	1700000	840000	NA	NA	280	298
Explosives									
1,3,5-Trinitrobenzene	99-35-4	ug/kg	10000000	2300000	NS	NA	NA	NA	NA
1,3-Dinitrobenzene	99-65-0	ug/kg	100000	7800	500	NA	NA	NA	NA
2,4,6-Trinitrotoluene	118-96-7	ug/kg	95000	21000	200	NA	NA	NA	NA
2-Amino-4,6-dinitrotoluene	35572-78-2	ug/kg	61000	4700	400	NA	NA	NA	NA
2-Nitrotoluene	88-72-2	ug/kg	10000000	780000	NS	NA	NA	NA	NA
3-Nitrotoluene	99-08-1	ug/kg	10000000	1600000	NS	NA	NA	NA	NA
4-Amino-2,6-dinitrotoluene	19406-51-0	ug/kg	61000	4700	NS	NA	NA	NA	NA
4-Nitrotoluene	99-99-0	ug/kg	10000000	780000	NS	NA	NA	NA	NA
Nitrobenzene	98-95-3	ug/kg	340000	31000	200	NA	NA	NA	NA
Nitrocellulose	9004-70-0	ug/kg	NS	NS	NS	NA	NA	NA	NA
Nitroglycerin	55-63-0	ug/kg	200000	46000	NS	NA	NA	NA	NA
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	ug/kg	10000000	3900000	NS	NA	NA	NA	NA
RDX (Cyclonite)	121-82-4	ug/kg	26000	5800	NS	NA	NA	NA	NA
Tetryl	479-45-8	ug/kg	10000000	780000	NS	NA	NA	NA	NA

Table 1. S01 - Drum Storage Area (G11-3)
Clean Closure Technical Memorandum
Hercules LLC, Kenvil Works Facility
Kenvil, New Jersey

						Location Sample Date Sample Depths Sample ID	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5FD	G11-3-01 12/9/1999 0.0-0.5 ft G11-3-010.5N	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5FD	G11-3-01 12/9/1999 0.0-1.5 ft G11-3-011.5N
Chemical	CAS Number	Units	NRDCSRS	RDCSRS	IGWSSL					
PCBs										
Aroclor-1016	12674-11-2	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1221	11104-28-2	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1232	11141-16-5	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1242	53469-21-9	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1248	12672-29-6	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1254	11097-69-1	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1260	11096-82-5	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Polychlorinated biphenyls	1336-36-3	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Metals										
Antimony	7440-36-0	mg/kg	450	31	6	NA	NA	0.34	0.23	
Arsenic	7440-38-2	mg/kg	19	19	19	NA	NA	30.9	27.6	
Beryllium	7440-41-7	mg/kg	140	16	1.08	NA	NA	0.81	0.77	
Cadmium	7440-43-9	mg/kg	78	78	2	NA	NA	< 0.32	< 0.37	
Chromium	7440-47-3	mg/kg	NS	120000	NS	NA	NA	13.7	10.9	
Copper	7440-50-8	mg/kg	45000	3100	11000.00052	NA	NA	111	91.5	
Lead	7439-92-1	mg/kg	800	400	90	NA	NA	375	327	
Mercury	7439-97-6	mg/kg	65	23	0.32	NA	NA	1.8	1.7	
Nickel	7440-02-0	mg/kg	23000	1600	48	NA	NA	16.1	10.2	
Selenium	7782-49-2	mg/kg	5700	390	11	NA	NA	3.8	3.3	
Silver	7440-22-4	mg/kg	5700	390	1	NA	NA	0.24	< 0.37	
Thallium	7440-28-0	mg/kg	79	5	3	NA	NA	0.6	< 1.2	
Zinc	7440-66-6	mg/kg	110000	23000	930.00004	NA	NA	81.3	44.6	

Notes:

NRDCSRS - Nonresidential Direct Contact Soil Remediation Standard.

RDCSRS - Residential Direct Contact Soil Remediation Standard.

IGWSSL - Impact to Groundwater Soil Screening Level.

NS - no standard

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

NA - not analyzed

Shaded concentrations exceed NRDCSRS.

Bolded concentrations exceed RDCSRS.

Underlined concentration exceed IGWSSL.

< indicates constituent not detected at shown concentration (i.e., detection limit).

Table 2. S02 - Diazo Tank (H8-2181)
Clean Closure Technical Memorandum
Hercules LLC, Kenvil Works Facility
Kenvil, New Jersey

						Location Sample Date Sample Depths Sample ID	H8-2181-01 6/2/2000 0.0-1.0 ft H8-2181-011N	H8-2181-05 6/2/2000 0.0-1.5 ft H8-2181-051.5N	H8-9121-02 6/2/2000 0.0-1.5 ft H8-9121-021.5N	H8-9121-04 9/12/2000 0.0-1.0 ft H8-9121-041N
Chemical	CAS Number	Units	NRDCSRS	RDCSRS	IGWSSL					
VOCs										
Acrylonitrile	107-13-1	ug/kg	3000	900	500		NA	NA	NA	NA
Benzene	71-43-2	ug/kg	5000	2000	5		NA	NA	NA	NA
Chlorobenzene	108-90-7	ug/kg	7400000	510000	600		NA	NA	NA	NA
Methylene Chloride	75-09-2	ug/kg	97000	34000	10		NA	NA	NA	NA
Tetrachloroethene	127-18-4	ug/kg	5000	2000	5		NA	NA	NA	NA
SVOCs										
1,2,4-Trichlorobenzene	120-82-1	ug/kg	820000	73000	700		< 368	< 437	< 368	< 358
1,2-Dichlorobenzene	95-50-1	ug/kg	59000000	5300000	17000		< 368	< 437	< 368	< 358
1,2-Diphenylhydrazine	122-66-7	ug/kg	2000	700	700		< 368	< 437	< 368	< 358
1,3-Dichlorobenzene	541-73-1	ug/kg	59000000	5300000	19000		< 368	< 437	< 368	< 358
1,4-Dichlorobenzene	106-46-7	ug/kg	13000	5000	2000		< 368	< 437	< 368	< 358
2,4,6-Trichlorophenol	88-06-2	ug/kg	74000	19000	200		< 368	< 437	< 368	< 358
2,4-Dichlorophenol	120-83-2	ug/kg	2100000	180000	200		< 368	< 437	< 368	< 358
2,4-Dimethylphenol	105-67-9	ug/kg	14000000	1200000	1000		< 368	< 437	< 368	< 358
2,4-Dinitrophenol	51-28-5	ug/kg	1400000	120000	300		< 735	< 873	< 737	< 717
2,4-Dinitrotoluene	121-14-2	ug/kg	3000	700	700		< 368	< 437	< 368	< 358
2,6-Dinitrotoluene	606-20-2	ug/kg	3000	700	500		< 368	< 437	< 368	< 358
2-Chloronaphthalene	91-58-7	ug/kg	NS	NS	NS		< 368	< 437	< 368	< 358
2-Chlorophenol	95-57-8	ug/kg	2200000	310000	800		< 368	< 437	< 368	< 358
2-Nitrophenol	88-75-5	ug/kg	NS	NS	NS		< 368	< 437	< 368	< 358
3,3-Dichlorobenzidine	91-94-1	ug/kg	4000	1000	200		< 735	< 873	< 737	< 717
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	68000	6000	300		< 735	< 873	< 737	< 717
4-Bromophenyl-phenylether	101-55-3	ug/kg	NS	NS	NS		< 368	< 437	< 368	< 358
4-Chloro-3-methylphenol	59-50-7	ug/kg	NS	NS	NS		< 368	< 437	< 368	< 358
4-Chlorophenyl-phenylether	7005-72-3	ug/kg	NS	NS	NS		< 368	< 437	< 368	< 358
4-Nitrophenol	100-02-7	ug/kg	NS	NS	NS		< 735	< 873	< 737	< 717
Acenaphthene	83-32-9	ug/kg	37000000	3400000	110000		< 368	< 437	< 368	< 358
Acenaphthylene	208-96-8	ug/kg	300000000	NS	NS		< 368	< 437	< 368	< 358
Anthracene	120-12-7	ug/kg	30000000	17000000	2400000		< 368	< 437	54.2	< 358
Benzidine	92-87-5	ug/kg	700	700	700		< 368	< 437	< 368	< 358
Benzo[a]anthracene	56-55-3	ug/kg	2000	600	13000		34.6	< 437	228	55.5
Benzo[a]pyrene	50-32-8	ug/kg	200	200	3000		< 368	< 437	160	46.6
Benzo[b]fluoranthene	205-99-2	ug/kg	2000	600	41000		< 368	< 437	295	86.7
Benzo[g,h,i]perylene	191-24-2	ug/kg	30000000	380000000	NS		< 368	< 437	81.8	< 358
Benzo[k]fluoranthene	207-08-9	ug/kg	23000	6000	25000		< 368	< 437	95.8	< 358
Bis(2-Chloroethoxy)methane	111-91-1	ug/kg	NS	NS	NS		< 368	< 437	< 368	< 358
Bis(2-Chloroethyl)ether	111-44-4	ug/kg	2000	400	200		< 368	< 437	< 368	< 358
Bis(2-Chloroisopropyl)ether	108-60-1	ug/kg	67000	23000	5000		< 368	< 437	< 368	< 358
Bis(2-Ethylhexyl)phthalate	117-81-7	ug/kg	140000	35000	1200000		< 368	< 437	< 368	< 358
Butylbenzylphthalate	85-68-7	ug/kg	14000000	1200000	230000		< 368	< 437	< 368	< 358
Chrysene	218-01-9	ug/kg	230000	62000	80000		< 368	< 437	221	91
Dibenzof[a,h]anthracene	53-70-3	ug/kg	200	200	13000		< 368	< 437	< 368	< 358
Diethylphthalate	84-66-2	ug/kg	550000000	49000000	88000		< 368	< 437	< 368	< 358
Dimethylphthalate	131-11-3	ug/kg	NS	NS	NS		< 368	< 437	< 368	< 358
Di-n-butylphthalate	84-74-2	ug/kg	68000000	6100000	760000		< 368	< 437	< 368	< 358

Table 2. S02 - Diazo Tank (H8-2181)
Clean Closure Technical Memorandum
Hercules LLC, Kenvil Works Facility
Kenvil, New Jersey

						Location Sample Date Sample Depths Sample ID	H8-2181-01 6/2/2000 0.0-1.0 ft H8-2181-011N	H8-2181-05 6/2/2000 0.0-1.5 ft H8-2181-051.5N	H8-9121-02 6/2/2000 0.0-1.5 ft H8-9121-021.5N	H8-9121-04 9/12/2000 0.0-1.0 ft H8-9121-041N
Chemical	CAS Number	Units	NRDCSRS	RDCSRS	IGWSSL					
Di-n-octylphthalate	117-84-0	ug/kg	27000000	2400000	3300000	< 368	< 437	< 368	< 358	
Fluoranthene	206-44-0	ug/kg	24000000	2300000	1300000	< 368	< 437	349	117	
Fluorene	86-73-7	ug/kg	24000000	2300000	170000	< 368	< 437	< 368	< 358	
Hexachlorobenzene	118-74-1	ug/kg	1000	300	200	< 368	< 437	< 368	< 358	
Hexachlorobutadiene	87-68-3	ug/kg	25000	6000	900	< 368	< 437	< 368	< 358	
Hexachlorocyclopentadiene	77-47-4	ug/kg	110000	45000	320000	< 368	< 437	< 368	< 358	
Hexachloroethane	67-72-1	ug/kg	140000	35000	200	< 368	< 437	< 368	< 358	
Indeno[1,2,3-cd]pyrene	193-39-5	ug/kg	2000	600	7000	< 368	< 437	91.4	< 358	
Isophorone	78-59-1	ug/kg	2000000	510000	280	< 368	< 437	< 368	< 358	
Naphthalene	91-20-3	ug/kg	17000	6000	25000	< 368	< 437	< 368	< 358	
Nitrobenzene	98-95-3	ug/kg	340000	31000	200	NA	NA	< 368	< 358	
N-Nitrosodimethylamine	62-75-9	ug/kg	700	700	700	< 368	< 437	< 368	< 358	
N-Nitroso-Di-N-Propylamine	621-64-7	ug/kg	300	200	200	< 368	< 437	< 368	< 358	
N-Nitrosodiphenylamine	86-30-6	ug/kg	390000	99000	6000	< 368	< 437	< 368	< 358	
Pentachlorophenol	87-86-5	ug/kg	10000	3000	300	< 735	< 873	< 737	< 717	
Phenanthrene	85-01-8	ug/kg	300000000	NS	NS	< 368	< 437	203	51.6	
Phenol	108-95-2	ug/kg	210000000	18000000	8000	< 368	< 437	< 368	< 358	
Pyrene	129-00-0	ug/kg	18000000	1700000	840000	< 368	< 437	249	116	
Explosives										
1,2-Dinitrobenzene	528-29-0	ug/kg	NS	NS	NS	NA	NA	NA	NA	
1,3,5-Trinitrobenzene	99-35-4	ug/kg	10000000	2300000	NS	< 250	< 238	NA	NA	
1,3-Dinitrobenzene	99-65-0	ug/kg	100000	7800	500	< 250	< 238	NA	NA	
1,4-Dinitrobenzene	100-25-4	ug/kg	NS	NS	NS	NA	NA	NA	NA	
1-Nitronaphthalene	86-57-7	ug/kg	NS	NS	NS	NA	NA	NA	NA	
2,4,6-Trinitrotoluene	118-96-7	ug/kg	95000	21000	200	< 250	< 238	NA	NA	
2,6-Dinitrotoluene	606-20-2	ug/kg	3000	700	500	NA	NA	NA	NA	
2-Amino-4,6-dinitrotoluene	35572-78-2	ug/kg	61000	4700	400	< 250	< 238	NA	NA	
2-Nitrotoluene	88-72-2	ug/kg	10000000	780000	NS	< 500	< 476	NA	NA	
3-Nitrotoluene	99-08-1	ug/kg	10000000	1600000	NS	< 500	< 476	NA	NA	
4-Amino-2,6-dinitrotoluene	19406-51-0	ug/kg	61000	4700	NS	< 250	< 238	NA	NA	
4-Nitrotoluene	99-99-0	ug/kg	10000000	780000	NS	< 250	< 238	NA	NA	
Diazodinitrophenol	87-31-0	ug/kg	NS	NS	NS	< 500	< 476	NA	NA	
Nitrobenzene	98-95-3	ug/kg	340000	31000	200	< 250	< 238	NA	NA	
Nitrocellulose	9004-70-0	ug/kg	NS	NS	NS	NA	NA	NA	NA	
Nitroglycerin	55-63-0	ug/kg	200000	46000	NS	NA	NA	NA	NA	
Octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine (HMX)	2691-41-0	ug/kg	10000000	3900000	NS	< 500	< 476	NA	NA	
Pentaerythritol Tetranitrate	78-11-5	ug/kg	NS	NS	NS	NA	NA	NA	NA	
RDX (Cyclonite)	121-82-4	ug/kg	26000	5800	NS	< 500	< 476	NA	NA	
Tetryl	479-45-8	ug/kg	10000000	780000	NS	< 500	< 476	NA	NA	

Table 2. S02 - Diazo Tank (H8-2181)
Clean Closure Technical Memorandum
Hercules LLC, Kenvil Works Facility
Kenvil, New Jersey

						Location Sample Date Sample Depths Sample ID	H8-2181-01 6/2/2000 0.0-1.0 ft H8-2181-011N	H8-2181-05 6/2/2000 0.0-1.5 ft H8-2181-051.5N	H8-9121-02 6/2/2000 0.0-1.5 ft H8-9121-021.5N	H8-9121-04 9/12/2000 0.0-1.0 ft H8-9121-041N
Chemical	CAS Number	Units	NRDCSRS	RDCSRS	IGWSSL					
PCBs										
Aroclor-1016	12674-11-2	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1221	11104-28-2	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1232	11141-16-5	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1242	53469-21-9	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1248	12672-29-6	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1254	11097-69-1	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Aroclor-1260	11096-82-5	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Polychlorinated biphenyls	1336-36-3	ug/kg	1000	200	200	NA	NA	NA	NA	NA
Phenols										
Phenolics, Total Recoverable	64743-03-9	ug/kg	NS	NS	NS	< 4760	< 4900	NA	NA	NA
Metals										
Antimony	7440-36-0	mg/kg	450	31	6	< 0.642	< 0.75	< 0.62	0.387	0.387
Arsenic	7440-38-2	mg/kg	19	19	19	6.91	6.98	5.12	5.42	5.42
Beryllium	7440-41-7	mg/kg	140	16	1.08	0.637	0.544	0.579	0.539	0.539
Cadmium	7440-43-9	mg/kg	78	78	2	0.456	0.328	0.199	0.277	0.277
Chromium	7440-47-3	mg/kg	NS	120000	NS	20	17.1	13.5	14.2	14.2
Copper	7440-50-8	mg/kg	45000	3100	11000.00052	32.1	53	27.7	34.6	34.6
Lead	7439-92-1	mg/kg	800	400	90	194	49.2	343	163	163
Mercury	7439-97-6	mg/kg	65	23	0.32	1.68	0.217	2.33	7.25	7.25
Nickel	7440-02-0	mg/kg	23000	1600	48	11	26.8	7.99	8.79	8.79
Selenium	7782-49-2	mg/kg	5700	390	11	0.776	1.95	0.733	0.403	0.403
Silver	7440-22-4	mg/kg	5700	390	1	0.076	< 0.375	< 0.31	0.245	0.245
Thallium	7440-28-0	mg/kg	79	5	3	1.15	< 1.25	0.755	< 1.06	< 1.06
Zinc	7440-66-6	mg/kg	110000	23000	930.00004	329	64.9	102	137	137

Notes:

NRDCSRS - Nonresidential Direct Contact Soil Remediation Standard.

RDCSRS - Residential Direct Contact Soil Remediation Standard.

IGWSSL - Impact to Groundwater Soil Screening Level.

NS - no standard

ug/kg - micrograms per kilogram

mg/kg - milligrams per kilogram

NA - not analyzed

Shaded concentrations exceed NRDCSRS.

Bolded concentrations exceed RDCSRS.

Underlined concentration exceed IGWSSL.

< indicates constituent not detected at shown concentration (i.e., detection limit).

Attachment 1

NJDEP Letter



State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Remedial Response Element
Bureau of Case Management
P.O. Box 028
401 East State Street
5th Floor West
Trenton, NJ 08625

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APR 21 2006
ENVIRONMENTAL

JON S. CORZINE
Governor

LISA P. JACKSON
Commissioner

April 12, 2006

Mr. Bruce Hough, Director Environmental Remediation
Building 8139
Hercules, Inc.
500 Hercules Road
Wilmington, DE 19808

RE: Financial Assurance Documentation
Hercules Incorporated (Kenvil)
100 Howard Blvd, Kenvil NJ
EPA Id No: NJD002156925
NJDEP Program Interest Number: 000741

Dear Mr. Hough:

The Division of Remediation Management & Response is currently conducting an audit of financial assurance mechanisms posted in accordance with N.J.A.C. 7:26C, and with 40 CFR Part 264 or 265, Subpart H (as incorporated by reference at N.J.A.C. 7:26G-8.1 and 9.1). The above referenced site is identified by USEPA as having RCRA regulated units that may be subject to RCRA financial assurance. According to the attached printout from USEPA, the site initially had seven (7) RCRA units. Two (2) RCRA units were "clean closed" (a determination that the RCRA unit was remediated and considered to be free of RCRA waste). One unit (Surface Impoundment) was determined not to be regulated as a RCRA Unit. The four (4) remaining RCRA regulated units were to be remediated under RCRA facility closure. These four units are identified as follows:

- Container Storage Area 1
- Container Storage Area 2
- Other Treatment 2 (Old Burning Ground)
- Other Treatment 3 (Shooting Pond)

The Department is requiring Hercules Inc, to identify if these four remaining RCRA units have been closed with RCRA waste in place. That is, if the soils at these units contain RCRA contamination that exceeds the applicable NJDEP soil cleanup criteria, then the soils are considered to contain RCRA waste. In addition, if the groundwater at these units contains RCRA contamination that exceeds the applicable NJDEP Groundwater Quality Criteria (N.J.A.C. 7:9-6) the groundwater is considered to contain RCRA waste.

If a determination is made that the unit(s) are closed with RCRA waste in place, then Hercules Inc, must submit a cost estimate for post-closure care of the RCRA unit(s) prepared in accordance with 40 CFR Part 265.144 (as incorporated by reference at N.J.A.C. 7:26G-9.1).

Any unit that has not completed RCRA closure must also be provided financial assurance for the cost of closure, in accordance with 40 CFR Part 264.142 and 265.142 (as incorporated by reference at N.J.A.C. 7:26G-8.1 and 9.1).

Hercules Inc, must establish the corresponding financial assurance for the RCRA unit(s), which utilizes the prescribed language of 40 CFR 264.151 (as incorporated by reference at N.J.A.C. 7:26G-8.1). This Division recognizes that the remediation of the above referenced site may be overseen by the Site Remediation Program, under one of the Department's oversight documents. Accordingly, Hercules Inc, may have a remediation funding source posted in conjunction with this oversight. Be advised that a remediation funding source posted with the Department in accordance with N.J.A.C. 7:26C does not preclude Hercules Inc, from meeting the requirement of 40 CFR 264 and 265, Subpart H under RCRA. Under these circumstances, the remediation funding source posted in accordance with N.J.A.C. 7:26C for a RCRA unit must be eliminated and replaced with a financial assurance mechanism, pursuant to 40 CFR 264.151 (as incorporated by reference at N.J.A.C. 7:26G-8.1). Separate financial mechanisms must be established in accordance with the implementing regulations. The NJDEP Remediation Funding Source and the RCRA Financial Assurance cannot be combined as one document.

Please submit the required cost estimate and financial assurance documentation within sixty (60) calendar days of receipt of this letter.

If you have any questions regarding this letter, do not hesitate to contact me at 609-292-0395, or by email at phil.cole@dep.state.nj.us.

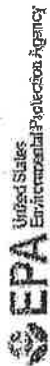
Sincerely,



Phil Cole, Post-Closure Coordinator
Bureau of Case Management

REMAILED

- c: Barty Tornick, USEPA, Region 2
- John Wilk, USEPA, Region 2
- Anthony Fontana, NJDEP-BHW&TF
- Mark Pedersen, NJDEP-BRMIN&CA
- Paul Harvey, NJDEP-BCM



Permit Unit List



HERCULES INCORPORATED

KENVIL

NJD0002156925

Select the unit you want to update:

Your search has found 7 units.

Unit Seq	Unit Name	Detail Seq.	Units	Proc Code	Leg/Op	Effective Date	Capacity	UOM	Cap Type
1	CONTAIN1	3	1	S01	ISIN	12/31/1996	15260	G	DESIGN
2	CONTAIN2	2	1	S01	ISIN	12/31/1996	110	G	DESIGN
3	OTHTRT1	4	1	T04	PICC	12/11/1991	1400	U	DESIGN
4	OTHTRT2	2	1	T04	ISIN	12/31/1996	1770	U	DESIGN
5	OTHTRT3	2	1	T04	ISIN	12/31/1996	300	U	DESIGN
6	SURFIMP	2	1	S04	LIIN	11/8/1985	10000	G	DESIGN
7	TANK	3	1	S02	ISCC	12/4/1991	5000	G	DESIGN

Go To

URL: PMT_unit_main.asp