

DEPARTMENT OF THE ARMY

OFFICE OF THE DEPUTY CHIEF OF STAFF, G-9 600 ARMY PENTAGON WASHINGTON, DC 20310-0600

6 April 2020

Mr. Ashish Joshi New Jersey Department of Environmental Protection Division of Remediation Management & Response Northern Bureau of Field Operations 7 Ridgedale Avenue (2nd Floor) Cedar Knolls, NJ 07927-1112

SUBJECT: Amended Site Investigation Report

Gosselin Area of Parcel 71 Fort Monmouth, New Jersey

PI G00000032

Dear Mr. Joshi:

The U.S. Army Fort Monmouth (FTMM) Team has prepared this Amended Site Investigation (ASI) Report to summarize recent investigations related to pesticides conducted at the Gosselin Area within Parcel 71 (**Figure 1**).

1.0 OBJECTIVES

The objectives of this ASI Report are to verify the occurrence of pesticides in soil described in the SI Report (U.S. Army 2019) and to address New Jersey Department of Environmental Protection (NJDEP) comments (06 January 2020 letter, **Attachment A, Correspondence 2**) on the SI Report.

2.0 SITE DESCRIPTION

The Gosselin Area is located south of the residential area along Gosselin Avenue, and north-northwest of the FTMM-14 landfill (**Figure 1**). An approximately 60-ft by 60-ft area was evaluated in 2009 for possible future use as a playground. The construction plans subsequently changed and this area was never used as a playground.

3.0 PREVIOUS INVESTIGATIONS

Nine soil borings (1A through 9A) were drilled and sampled in May 2009 within the Gosselin Area and analyzed for pesticides and PCBs (**Figure 2**). Soil samples were collected from three depth intervals at each boring: 0 to 0.5, 0.5 to 1, and either 1 to 1.5 or 1.5 to 2 feet (ft) below ground surface (bgs).

There were NJDEP Residential Direct Contact Soil Remediation Standard (RDCSRS) exceedances of the pesticides DDT, DDD, and DDE in near surface (0 to 0.5 and 0.5 to 1 ft bgs) soil samples, which were attributed to the historical proper application of pesticides. These analytical results were summarized in a November 2009 Work Plan (presented in **Attachment A, Correspondence 1**) prepared by the Army and submitted to NJDEP for

Ashish Joshi, NJDEP Gosselin Area Amended Site Investigation Report 6 April 2020 Page 2 of 3

concurrence prior to conducting additional near-surface soil sampling with full-suite analysis including PCBs and pesticides in the FTMM-14 area south of the Gosselin Avenue housing.

The additional soil sampling proposed in the November 2009 Work Plan (**Attachment A, Correspondence 1**) was conducted in January through May 2010. Unpublished analytical results from the January through May 2010 sampling indicated one detection of DDT near the Gosselin Area which exceeded the NJDEP RDCSRS. This detection was in sample D-29 (0-0.5 ft bgs) just north of the 2009 exceedances (**Attachment B**).

The detection of PCBs in excess of NJDEP RDCSRS was addressed under separate cover (U.S. Army 2019, Parsons 2019). In NJDEP's comment letter (**Attachment A, Correspondence 2**) written in response to this 2019 Gosselin Area SI Report (U.S. Army 2019) NJDEP acknowledged the completeness of the delineation of pesticide contamination but requested that past pesticide detections greater than the NJDEP RDCSRS be addressed.

4.0 CURRENT INVESTIGATION

On 30 January 2020 a total of ten primary soil borings (GOSS-SB-01 through GOSS-SB-09 and D29) were advanced at the same locations as the nine historical (May 2009) soil borings and the D29 April 2010 soil boring to verify the presence of pesticides in soil. The locations of the soil borings are shown on **Figure 2**.

Each boring was advanced using a hand auger. Soil samples were collected from 0 to 0.5 ft bgs at each soil boring for analysis. Soil samples were analyzed for pesticides by SW-846 Method 8081B.

5.0 CURRENT INVESTIGATION RESULTS

The soil analytical results are presented in **Table 1** with comparison to NJDEP RDCSRS criteria. Field notes are provided in **Attachment C.**

In the January 2020 samples there were no detections of pesticides that exceeded the NJDEP RDCSRS (**Table 1**). Historical RDCSRS exceedances were encountered in samples from each of the nine soil borings from the May 2009 sample event and the single boring in April 2010, but not in the co-located borings from the January 2020 event. Pesticides were not detected above NJDEP RDCSRS in any of the soil samples collected in January 2020.

6.0 RECOMMENDATIONS

No Further Action is recommended to address pesticides in soil at the Gosselin Area because all recent detections are less than the NJDEP RDCSRS.

Thank you for reviewing this request; we look forward to your concurrence and/or comments. Our technical Point of Contact is Kent Friesen; kent.friesen@parsons.com. I can be reached at (732) 383-5104; william.r.colvin18.civ@mail.mil.

Ashish Joshi, NJDEP Gosselin Area Amended Site Investigation Report 6 April 2020 Page 3 of 3

Sincerely,

William R. Colvin

Fort Monmouth BRAC Environmental Coordinator

Diam & Colil

cc: Ashish Joshi (e-mail and 2 hard copies)
William Colvin, BEC (e-mail and 1 hard copy)
Joseph Pearson, Calibre (e-mail)
James Moore, USACE (e-mail)
Jim Kelly, USACE (e-mail)
Joseph Fallon, FMERA (e-mail)
Kent Friesen, Parsons (e-mail)

References:

- Parsons 2019. Action Memorandum for FTMM-14 Careveout (Gosselin Area of Parcel 71), Fort Monmouth, Oceanport, Monmouth County, New Jersey. November.
- U.S. Army 2009. Sampling Plan for Near-Surface Soils, Fort Monmouth M-14 Landfill (Main Post), Fort Monmouth, NJ 07703. Prepared by Headquarters, U.S. Army Garrison Fort Monmouth. November 24.
- U.S. Army 2019. Site Investigation Report, Gosselin Area of Parcel 71, Fort Monmouth, Monmouth County, Oceanport, New Jersey. Prepared by the Office of the Assistant Chief of Staff for Installation Management, Fort Monmouth, New Jersey. October 8.

Attachments:

Figure 1 – Gosselin Area Location

Figure 2 - Gosselin Area 2009, 2010, and 2020 Sample Locations

Table 1 – Soil Sampling Results - Comparison to NJDEP Soil Remediation Standards

Attachment A – Correspondence

Attachment B - Unpublished Results of 2010 Sampling

Attachment C - Field Notes



New Jersey Department of Environmental Protection Site Remediation Program

Report Certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites

These certifications are to be used for reports submitted for RCRA GPRA 2020, CERCLA, and Federal Facility Sites. The Department has developed guidance for report certifications for RCRA GPRA 2020, CERCLA, and Federal Facility Sites under traditional oversight. The "Person Responsible for Conducting the Remediation Information and Certification" is required to be submitted with each report. For those sites that are required or opt to use a Licensed Site Remediation Professional (LSRP) the report must also be certified by the LSRP using the "Licensed Site Remediation Professional Information and Statement". For additional guidance regarding the requirement for LSRPs at RCRA GPRA 2020, CERCLA and Federal Facility Sites see http://www.nj.gov/dep/srp/srra/training/matrix/quick_ref/rcra_cercla_fed_facility_sites.pdf.

Document:

 "Amended Site Investigation Report, Gosselin Area of Parcel 71, Fort Monmouth, New Jersey" (6 April 2020)

| PERSON RESPONSIBLE FOR CONDUCTING THE REI | MEDIAT | ION INFOR | MATION AND CERTIF | FICATION |
|---|-----------|---------------|--------------------------|----------------------------|
| Full Legal Name of the Person Responsible for Conductin | ng the R | emediation: | William R. Colvin | |
| Representative First Name: William | 0 | | Last Name: Colvin | |
| Title: Fort Monmouth BRAC Environmental Coordinato | r (BEC) | | | |
| Phone Number: (732) 383-5104 | Ext: | | Fax: | |
| Mailing Address: P.O. Box 148 | | | | |
| City/Town: Oceanport | State: | NJ | Zip Code: | 07757 |
| Email Address: william.r.colvin18.civ@mail.mil | | | | |
| This certification shall be signed by the person responsible | e for cor | nducting the | remediation who is su | bmitting this notification |
| in accordance with Administrative Requirements for the R | Remediat | tion of Conta | aminated Sites rule at I | N.J.A.C. 7:26C-1.5(a). |
| | | | | |
| I certify under penalty of law that I have personally examin | | | | |
| including all attached documents, and that based on my in | | | | |
| the information, to the best of my knowledge, I believe that | | | | |
| aware that there are significant civil penalties for knowing | | | | |
| am committing a crime of the fourth degree if I make a wr | | | | |
| aware that if I knowingly direct or authorize the violation o | f any sta | atute, I am p | ersonally liable for the | penalties. |
| Signature: William & Color | | Date: | 6 April 2020 | |
| Name/Title: William R. Colvin | | | | |
| Fort Monmouth BRAC Environmental Coord | dinator | | | |
| | | | | |

Completed form should be sent to:

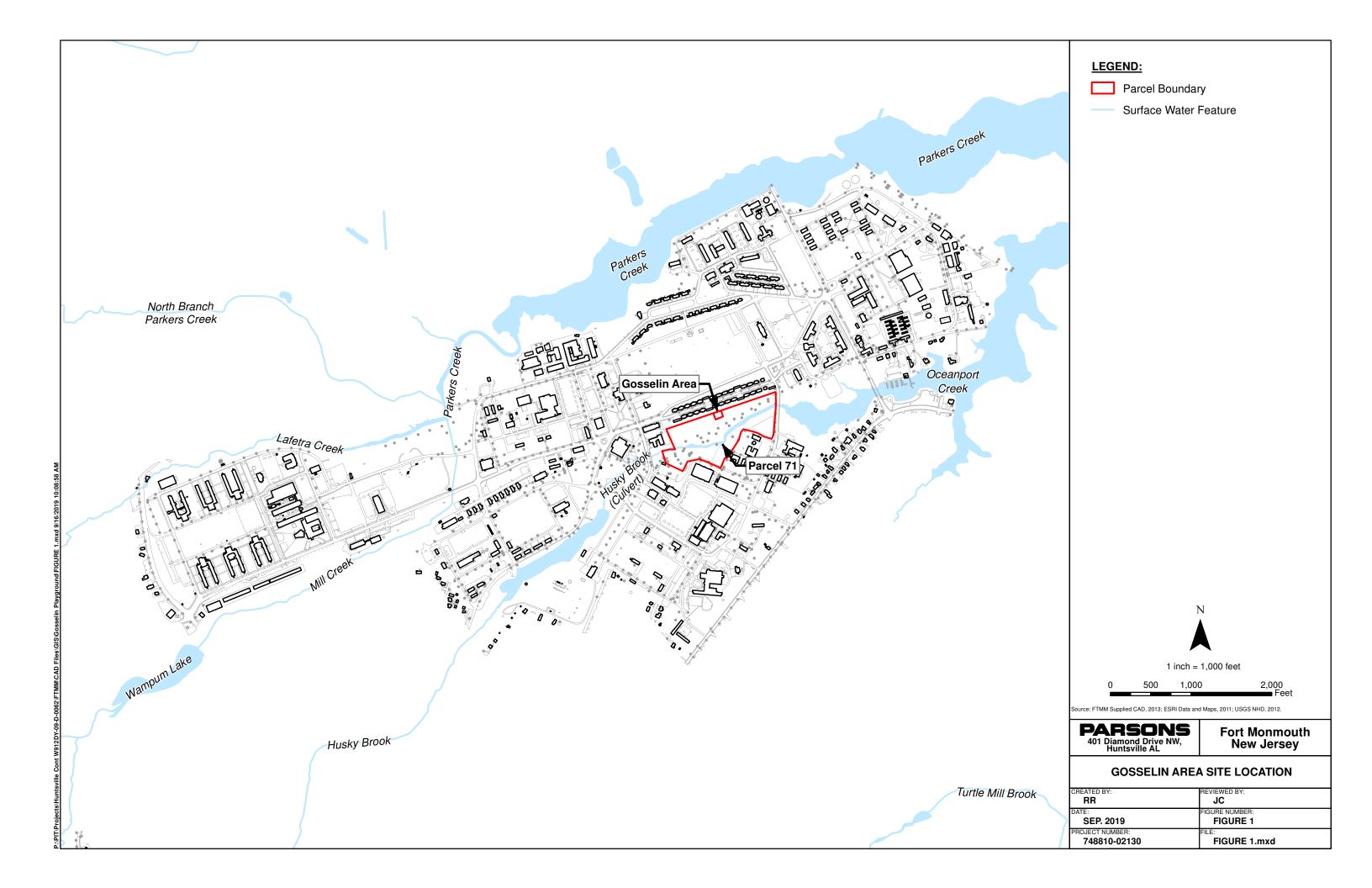
Mr. Ashish Joshi

New Jersey Department of Environmental Protection Office of Brownfield & Community Revitalization

401 East State St Mail Code: 401-05K P.O. Box 420 Trenton, NJ 08625

FIGURES

Figure 1 – Gosselin Area Location Figure 2 – 2009, 2010, and 2020 Sample Locations at Gosselin Area



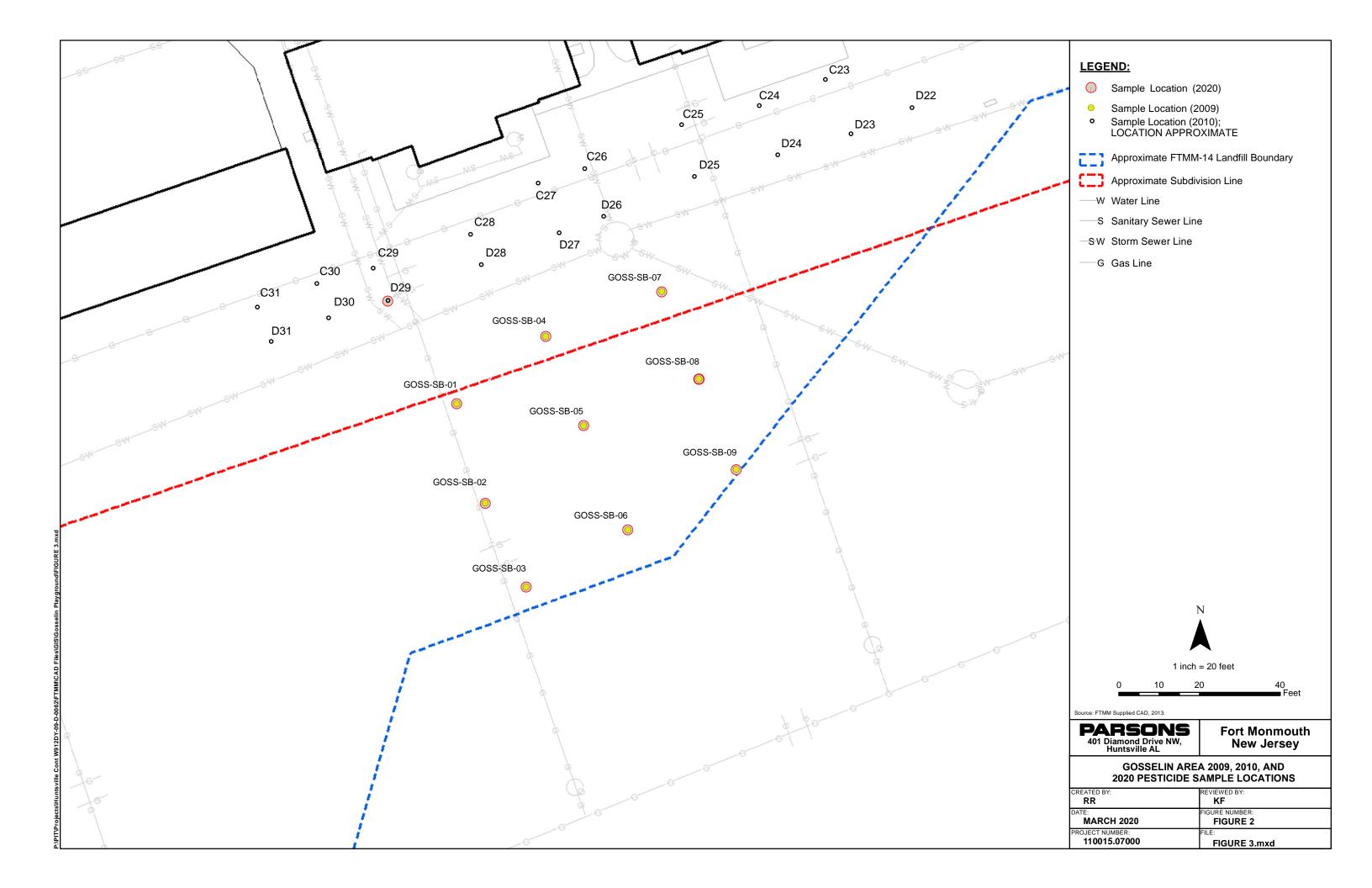




TABLE 1 SOIL SAMPLING RESULTS - COMPARISON TO NJDEP RSCSRS SITE GOSSELIN AREA FORT MONMOUTH, NEW JERSEY

| Loc ID | NJ Residential Direct Contact | GOSS-SB-01 | GOSS-SB-02 | GOSS-SB-03 | GOSS | -SB-04 | GOSS-SB-05 | GOSS-SB-06 | GOSS-SB-07 | GOSS | S-SB-08 | GOSS-SB-09 | D29 |
|-----------------------|----------------------------------|--------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|--------------------|---------------------|--------------------|-------------|
| Sample ID | SRS | GOSS-SB-01-0.0-0.5 | GOSS-SB-02-0.0-0.5 | GOSS-SB-03-0.0-0.5 | GOSS-SB-04-0.0-0.5 | GOSS-SB-104-0-0.5 | GOSS-SB-05-0.0-0.5 | GOSS-SB-06-0.0-0.5 | GOSS-SB-07-0.0-0.5 | GOSS-SB-08-0.0-0.5 | GOSS-SB-108-0.0-0.5 | GOSS-SB-09-0.0-0.5 | D29-0.0-0.5 |
| Sample Date | | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 | 1/30/2020 |
| Pesticides & PCBs (mg | g/kg) | | | | | | | | | | | | |
| 4,4'-DDD | 3 | 0.0049 | 0.0076 | 0.039 | 0.01 | NA | 0.0044 | 0.035 | 0.0093 | 0.007 | 0.011 | 0.0064 | 0.0012 J |
| 4,4'-DDE | 2 | 0.15 | 0.1 | 0.62 | 0.39 | NA | 0.32 | 0.64 | 0.29 | 0.26 | 0.35 | 0.17 | 0.044 |
| 4,4'-DDT | 2 | 0.077 | 0.047 | 0.77 | 0.2 | NA | 0.13 | 0.65 | 0.2 | 0.13 | 0.19 | 0.15 | 0.048 |
| Aldrin | 0.04 | < 0.0007 | < 0.0007 | < 0.0007 | < 0.0007 | NA | < 0.0007 | < 0.0007 | < 0.0007 | < 0.0007 | < 0.0007 | < 0.0006 | < 0.0007 |
| Alpha-BHC | 0.1 | < 0.0003 | 0.001 J | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Alpha-Chlordane | NLE | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Beta-BHC | 0.4 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Delta-BHC | NLE | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Dieldrin | 0.04 | < 0.0005 | < 0.0005 | 0.014 JN | < 0.0005 | NA | < 0.0005 | 0.0017 J | < 0.0005 | < 0.0005 | < 0.0005 | < 0.0004 | < 0.0005 |
| Endosulfan I | NLE | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Endosulfan II | NLE | < 0.0009 | < 0.0008 | < 0.0008 | < 0.0008 | NA | < 0.0008 | < 0.0008 | < 0.0009 | < 0.0009 | < 0.0009 | < 0.0008 | < 0.0009 |
| Endosulfan sulfate | 470 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Endrin | 23 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Endrin aldehyde | NLE | < 0.0005 | < 0.0004 | < 0.0004 | < 0.0004 | NA | < 0.0004 | < 0.0004 | < 0.0004 UJ | < 0.0005 UJ | < 0.0005 UJ | < 0.0004 UJ | < 0.0005 UJ |
| Endrin ketone | NLE | < 0.0006 | < 0.0006 | < 0.0006 | < 0.0006 | NA | < 0.0006 | < 0.0006 | < 0.0006 | < 0.0006 | < 0.0006 | < 0.0005 | < 0.0006 |
| Gamma-BHC/Lindane | 0.4 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Gamma-Chlordane | NLE | 0.0005 J | 0.0018 J | < 0.0004 | < 0.0004 | NA | 0.0012 J | 0.0014 JN | < 0.0004 | < 0.0004 | < 0.0004 | 0.0004 J | < 0.0004 |
| Heptachlor | 0.1 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Heptachlor epoxide | 0.07 | < 0.0003 | 0.0011 J | < 0.0003 | < 0.0003 | NA | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 | < 0.0003 |
| Methoxychlor | 390 | < 0.0006 | < 0.0005 | < 0.0005 | < 0.0005 | NA | < 0.0005 | < 0.0005 | < 0.0006 | < 0.0006 | < 0.0006 | < 0.0005 | < 0.0006 |
| Toxaphene | 0.6 | < 0.013 | < 0.012 | < 0.012 | < 0.012 | NA | < 0.012 | < 0.012 | < 0.013 | < 0.013 | < 0.013 | < 0.012 | < 0.013 |

Footnote:

1) NLE = no limit established.

3) Chemical dectection
3) Chemical result qualifiers are assigned by the laboratory and are evaluated and modified (if necessary) during the data validation. J = estimated detected value due to a concetration below the reporting limit or due to discrepancies in meeting certain analyte-specific quality control.

JN = Tentatively identified compound, estimated concentration.

U = non-detect, i.e. not detected at or above this value.

UJ=The compound was not detected: however, the results is estimated because of discrepancies in meeting certain analyte-specific QC criteria.

4) The NJ Residential Direct Contact Soil Remediation Standard refers to the NJDEP's Sept 18, 2017 Remediation Standards

http://www.nj.gov/dep/rules/rules/njac7_26d.pdf

Attachment A Correspondence

- 1. Army letter to NJDEP dated 24 November 2009. Subject: Sampling Plan for Near-surface Soils, Fort Monmouth M-14 Landfill (Main Post), *Fort Monmouth*, *NJ*, 07703
- 2. NJDEP letter to the Army dated 6 January 2020. Re: Site Investigation Report (SIR) Gosselin Area Parcel 71, Fort Monmouth, Oceanport, Monmouth County, SRP *PI # G000000032*



DEPARTMENT OF THE ARMY

HEADQUARTERS, U.S. ARMY GARRISON FORT MONMOUTH FORT MONMOUTH, NEW JERSEY 07703-5000

REPLY TO ATTENTION OF

Directorate of Public Works

November 24, 2009

HAND DELIVERED

Larry Quinn, Site Manager New Jersey Department of Environmental Protection Bureau of Investigation, Design and Construction 401 East State Street, P.O Box 413 Trenton, New Jersey 08625-0413

Subject: Sampling Plan for Near-surface Soils

Fort Monmouth - M-14 Landfill (Main Post)

Fort Monmouth, NJ 07703

Dear Mr. Quinn:

The U.S. Army Fort Monmouth, Directorate of Public Works (DPW) is pleased to submit this Soil Sampling Plan (SSP) for New Jersey Department of Environmental Protection (NJDEP) approval. The DPW proposes to collect soil samples on-site in an effort to better characterize near-surface soil quality conditions between the landfill (non-residential) and single-family structures (residential area). The SSP includes the collection of soil samples at various depths to determine the presence of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), pesticides, and Target Analyte List (TAL) metals. These data will be evaluated to determine if any contaminant concentrations exceed the NJDEP Residential Direct Contact Soil Remediation Standards (RDCSRS).

Background

On behalf of the DPW, Versar, Inc. (VERSAR), submitted the final *Remedial Investigation Report for Near Surface Soils* (RIR/NSS) dated March 17, 2004 to the NJDEP. In the RIR/NSS, VERSAR presents a compilation of results from the Remedial Investigation (RI) for near-surface soils conducted at the M-14 Landfill. The objective of the RI was to define shallow surface soil conditions as proposed in DPW's July 7, 1998 letter and approved by NJDEP in correspondence dated August 10, 1998. The RI included:

- Completion of 119 soil borings on-site from December 1998 to January 1999
- Analysis of all collected soil samples for Target Compound List Organics + 30 parameters and TAL metals.
- Preparation of the RIR/NSS

VERSAR reported that the concentrations of SVOCs, pesticides and metals exceeded the NJDEP RDCSRC. The results of this sampling effort did not define a "source area" or level of contamination requiring the identification and evaluation of potential remedial actions. VERSAR also reported that either the calculated compliance average of contaminants was less than the respective RDCSRS or the exceedances were considered marginal. VERSAR concluded that based on "...the inactive and undisturbed status of the landfill, the continued performance of long-term surface water and groundwater monitoring proximate to the M-14 Landfill Site, the minimal potential for environmental and/or human health impacts, the lack of groundwater uses at or downgradient of the site, and the distribution,

Mr. Larry Quinn, Site Manager November 24, 2009 Page 2 of 6

occurrence and relatively low concentrations of contaminants of concern (COCs), No Further Action is recommended for the near-surface soils at the M-14 Landfill site."

In correspondence dated July 25, 2007, the NJDEP commented that VERSAR's approach to compliance averaging of soil sample results was conducted incorrectly in several cases. In addition, compliance averaging determined for arsenic and several polyaromatic hydrocarbons is not permitted because the health-based soil cleanup criteria is more stringent than the RDCSRS.

The DPW is currently preparing a response to the NJDEP July 25, 2007 correspondence which will compare the findings in VERSAR's RIR/NSS to the NJDEP Non-Residential Direct Contact Soil Remediation Standards. In 2009, the M-14 area has been delineated via trench exploration to redefine the physical boundaries of the landfill. Furthermore, an area west of the landfill has been assessed via near-surface soil sampling and analysis in preparation of the construction of a proposed children's play area. The results show that soil within this area contain contaminants at concentrations exceeding the NJDEP RDCSRS (Table 1).

Introduction

This SSP specifically describes proposed soil sampling activities for the M-14 landfill located on the Main Post, on the north side of Husky Brook, west of Murphy Drive as shown on **Figures 1** and **2**. The 6.9-acre landfill operated from 1965 until 1966. The types of materials disposed of in the landfill reportedly include construction debris, scrap metal, asbestos containing material, vegetative waste, unwashed containers that previously stored hazardous materials/wastes, outdated photographic chemicals, small quantities of outdated drugs, sludge from the sewage treatment plant, soot and boiler scale, incinerator ash, oil spill debris, oil filters, batteries, fluorescent tubes, and electronic components. Metal, concrete, and other types of landfill debris were previously observed protruding from the stream bank along Husky Brook. The stream bank has recently been stabilized with rip-rap.

Purpose

The purpose of this soil sampling effort is to define the boundary between the landfill (non-residential area) and the residential homes by delineating near-surface soils to the NJDEP RDCSRS.

Sampling Rationale

To better define the boundary limits of M-14 and to determine near-surface soil quality conditions, soil borings will be advanced near or outside of the presumed boundary of the landfill (proposed locations are shown on **Figure 3**). Note that the proposed soil boring locations are not proximate to subsurface utilities because soils in this area are non-native (disturbed). All sample locations are biased toward undisturbed soil. At each boring location, soil samples will be collected at two depth intervals: zero to six and 18 to 24 inches below grade surface (bgs). All soil samples will be analyzed for SVOCs, PCBs, pesticides, and TAL metals. In addition, the soil sample collected from the 18 to 24-inch depth interval will be analyzed for VOCs.

Soil samples collected for VOC analysis will be collected pursuant to the N.J.A.C. 7:26E-3.6(a)4 which is summarized as follows:

- A bulk sampling device will be used to collect an intact core (e.g., split-spoon) to minimize contaminant loss during sampling
- Each core will be field screened with a properly calibrated direct reading instrument such as a photoionization detector (PID) or Flame Ionization Detector (FID)

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If PID/FID readings exceed ambient air background concentrations, then the coring will be extended until either ambient air background readings are achieved or ground water is encountered and an undisturbed sample from the 6-inch interval registering the highest PID/FID reading will be collected.

If all sample intervals register the same PID/FID reading or all field measurement readings do not exceed ambient air background concentrations, then

- The coring will be extended to ground water or 10 feet, whichever is encountered first; and
- an undisturbed sample from the six-inch interval at the bottom of the soil boring will be collected for VOC analysis.

If PID/FID readings exceeding ambient air background concentration are observed in any of the soil borings, an additional soil boring will be advanced no greater than 30 feet away. This process will be repeated until PID/FID readings indicate the absence of VOCs in the soil boring or there are physical limitations to advancing additional soil borings, e.g., subsurface utilities.

Eighty-eight soil borings are proposed in the M-14 area at the approximate locations shown on **Figure 3**. These locations were chosen based on the results of soil sampling activities conducted to date as reported in VERSAR's RIR/NSS. As in the previous soil sampling episode, the DPW proposes to collect soil samples at locations based on a grid-like pattern where the soil borings will be completed every 30 feet. Note that a groundwater quality evaluation is not proposed as part of this investigation.

Field Methods and Procedures

Near-surface soil samples will be collected using a Geoprobe® Model 6400 equipped with 2.125-inch outer diameter dual tubes. The dual tube contains a 1.25-inch diameter acetate sleeve, which permits collection of soil samples at 4-foot depth intervals. The lithology encountered at each borehole will be recorded in a weather-resistant field notebook. Upon completion, each borehole will be backfilled with removed soil to existing grade. Each soil boring location will be marked, identified, and surveyed for location by Fort Monmouth personnel. Additional information regarding Geoprobe Sampling Methods and sampling handling is provided in **Attachment A**.

Quality Assurance and Quality Control Plan

The sampling techniques to be employed at the site are described herein. All efforts will be made to eliminate possible sample contamination and maximize the reliability of the analytical results. These efforts include, without limitation, proper use and cleaning of sampling equipment and sample containers to eliminate sample contamination; use of a quality assurance program to maximize accuracy and precision of the analytical results; and use of chain-of-custody procedures to track the samples from source to analysis and minimize the opportunity for tampering.

Project Scope

The scope of this project is to collect soil samples for laboratory analysis.

Data Quality Objective

The objective of this SSP is to define the lateral edge of the adjacent residential area by delineating near-surface soils to the NJDEP RDCSRS.

Laboratory Analysis of Samples

Fort Monmouth's Environmental Testing Laboratory [FMETL] (NJDEP Certified Laboratory Identification Number 13461) will analyze all soil samples collected from the site. FMETL is located at 173 Riverside Avenue, Fort Monmouth, NJ 07703. The laboratory is capable of analyzing the samples and producing a report in a manner consistent with the *Technical Requirements for Site Remediation* (N.J.A.J. 7:26E). All collected soil samples will be analyzed via U.S. Environmental Protection Agency (USEPA) approved test methods. The samples will be analyzed for the parameters listed in **Table 1**.

Table 1. Analytical Method, Sampling Container, Preservation Method, and Sample Holding Times for Various Analyses

| Analytical Parameter | Sample Matrix | Method Name (Test Method) | Container Type and Volume | Preservation Method | Sample Holding Time |
|----------------------------|------------------|------------------------------|--|------------------------|---|
| VOCs | Soil | GC/MS (8260B) | Glass vial, Teflon septum, methanol preservation 40-mL | Cool, 4 °C | 14 days analysis |
| SVOCs | Soil | GC/MS (8270C) | Glass, 4-ounce jar | Cool, 4°C | 14 days extraction, 40 days analysis |
| PCBs, Pesticides | Soil | GC/MS (8270C) | Glass, 125-mL jar | Cool, 4 °C | 14 days extraction, 40 days analysis |
| TAL Metals, except mercury | Soil | GC (8081A) | Glass, 4-ounce jar | Cool, 4 °C | 6 months analysis |
| Mercury | Soil | ICP | Glass, Teflon cap, 4-ounce amber jar | Cool, 4 °C | 28 days analysis |

Note: GC = gas chromatography; mL = milliliter; MS = mass spectroscopy

Project Coordination and Oversight

The people responsible for the coordination and oversight of this project are as follows:

| Responsibility | Personnel | Phone Number |
|---------------------------------------|---|----------------|
| Installation Destauration Durangement | Charles Appleby (U.S. Army) | 732-532-2692 |
| Installation Restoration Program | John H. Montgomery (TECOM-Vinnell Services) | 732-532-7979 |
| C-11 D-11 - 0 C - 11 - A-11 - 11 | George Boyce (NJ Licensed Well Driller) | Not applicable |
| Soil Boring & Sampling Activities | John H. Montgomery (TECOM-Vinnell Services) | 732-532-7979 |
| Laboratory Activities | Jacqueline A. Hamer (Quality Assurance Officer) | 732-532-4359 |

Sampling Methodology

All sample collection activities will be conducted so as to obtain reliable information regarding subsurface conditions and representative soil samples for analysis. All sampling will be conducted qualified DPW personnel.

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To prevent contamination of the sample bottles, each bottle will remain sealed until placed beneath the sampling tool for sample collection.

After a sufficient amount of the sample has been collected, the sample jar will be sealed with a screw cap. Each sample jar will have the following information recorded on its label:

- Project Name
- Sample Identification
- Date and Time of Sampling
- Type of Preservative
- Analysis to be Performed
- Sampler's name

Immediately following collection, the sample will be placed in a cooler and kept at \leq 4 °C until its arrival at the certified laboratory. This procedure will be repeated at each sample location.

Soil samples will be collected in accordance with Standard Operating Procedure (SOP) No. SAM-0204 (**Attachment 1**). Soil samples removed from the sampling device will be transferred directly to the sample container. All field procedures for the decontamination of sampling equipment will follow the guidelines set forth in the August 2005 NJDEP *Field Sampling Procedures Manual* as described in the attached SOP SAM-0204.

Duplicate Samples

Duplicate soil samples will be collected at a minimum rate of one for every 20 samples (5% of total) and will be submitted to FMTEL as "blind" samples. Given that the proposed SSP will last more than one day, the DPW proposes to collect field blanks at a rate of 10% of the total number of samples collected throughout the event. All duplicate soil samples will be analyzed for VOCs, SVOCs, PCBs, pesticides, and TAL metals. All field blanks will be analyzed for VOCs only. All analyses will be conducted by FMTEL using USEPA approved test methods.

Chain of Custody Procedures

The purpose of monitoring the Chain of Custody (COC) of a sample shuttle is to ensure that proper handling requirements have been met for representative samples prior to their analysis. The handling requirements are set forth in the current NJDEP *Field Sampling Procedures Manual* (August 2005). These requirements include guidelines such as sample preservation techniques and sample holding times.

As per the requirements of the *Field Sampling Procedures Manual*, COC Record will be maintained and will accompany the laboratory shuttle from the moment of the containers dedication until the time of the corresponding analyses. A laboratory's delivery of a sample container shuttle to the sampler therefore requires that a COC be initiated by the authorized laboratory representative relinquishing the shuttle, and time and date of the transfer be documented. The record of this transfer is proof that the containers which were used for sample storage have been dedicated by the laboratory prior to their delivery, and in accordance with the quality controls governing the analyses of the samples to be collected.

After their collection and storage, the necessary field and quality assurance samples will be preserved in the shuttle until their transfer to the lab for analysis. The transfer will be accompanied by the same COC Record, which will be completed to identify the ID numbers, quantities and physical description of the samples, and the particular analyses requested. The name of the sampler who relinquished the shuttle, the time and date of the transfer, and the laboratory representative assuming responsibility for transporting the shuttle to the lab will be recorded.

Mr. Larry Quinn, Site Manager November 24, 2009 Page 6 of 6

Sample Storage Procedures

Immediately upon collection, samples will be placed in a cooler and maintained at \leq 4 °C until delivery to the laboratory. Samples will be submitted to the laboratory no later than 24 hours after sample collection for a one day sampling event.

Laboratory Deliverables Format

The laboratory reduced deliverables format, including the electronic data deliverable, will follow the requirements set forth in N.J.A.C. 7:26E.

Notification and Schedule

The DPW will provide the minimum two-week notification to the NJDEP prior to initiating soil sampling activities. Upon approval of this SSP, the DPW will provide a schedule of field sampling activities.

Reporting

All field sampling activities, including analytical results, will be included in a RAPR.

Thank you for your favorable response to this request. If you have any questions or require additional information, please contact me at charles apple by (@us.army.ini) or (732) 532-2692.

I

Charles Appleby
Environmental Protect on Specialist

Directorate of Public Works

c: file enclosures

| Round No. | | | 1: | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 4 | 5 |
|--------------------|-----------|-------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| WELL ID | NDJEP | | Playground 1A1 | Playground 1A1 | Playground IA1 | Playground 1A2 | Playground 1A2 | Playground 1A3 | Playground 1A3 | Playground 2A1 | Playground 2A1 | Playground 2A1 | Playground 2A |
| Date Collected | RDCSRS | Units | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 |
| ANALYTE / Lab ID | Criterion | 10174023540 | 9021301 | 9021301 | 9021401 | 9021302 | 9021302 | 9021303 | 9021303 | 9021304 | 9021304 | 9021402 | 9021305 |
| Sample Depth | | 0.0 | 0-6" | 0-6* | 0-6" | 6-12" | 6-12" | 12-18" | 12-18" | 0-6" | 0-6" | 0-6" | 6-12" |
| Pesticides | | | | | | | | | | | | 0-0 | 0-12 |
| 4,4' - DDD | 3 | mg/kg | 0.155 | 0.016 | 0:0117 J | 0,043 | 0.004 | 0.027 | 0.003 | 0.400 | 0.040 | 0.039 | 0.046 |
| 4,4' - DDE | 2. | mg/kg | 6.278 | 0.628 | 0.544 | 0,409 | 0.041 | ND | ND | 9.340 | 0.934 | 1.140 | 0.401 |
| 4.4' - DDT | 2 | mg/kg | 4.961 | 0.496 | 0.278 | 0,389 | 0.039 | ND | ND | 8.192 | 0.819 | 0.801 | 0.415 |
| alpha-Chlordane | 0.2 | mg/kg | 0.035 | 0.004 | ND | ND | ND | ND. | ND | 0.032 | 0.003 | ND | ND. |
| gamma-Chlordane | 0.2 | mg/kg | 0.038 | 0.004 | . ND | ND | ND | .ND | ND | ND | ND | ND | ND |
| Diedrin | 0.04 | mg/kg | 0.041 | 0.004 | ND | ND | ND | ND | ND | 0.064 | 0.006 | ND | ND |
| Methoxychlor | 390 | mg/kg | 0.353 | 0.035 | ND | 0.182 | 0.017 | ND | ND | - ND | ND | ND | ND |
| Aldrin | 0.04 | mg/kg | 0.040 | 0.004 | ND | ND. | ND | ND: | ND | ND | ND | ND | ND |
| Heptachlor epoxide | 0.07 | mg/kg | 0.032 | 0,003 | ND | ND | ND | ND | ND | 0.041 | 0.004 | ND · | ND |
| Endrin aldehyde | NLE | mg/kg | ND . | 0.006 | ND. | ND: | ND | ND: | ND | 0.345 | 0.034 | ND | 0.039 |
| Endrin | 23 | mg/kg | ND | ND. | ND. | :ND | ND. | .ND | . ND | 0.031 | 0.003 | ND | ND |
| Endosulfan sulfate | 470 | mg/kg | ND | ND | ND | ND | ND | ND: | ND | 0.111 | 0.011 | ND | 0:073 |
| Endrin ketone | NLE | mg/kg | ND. | ND | ND | ND | ND | ND: | ND. | 0.052 | 0.005 | ND | ND |
| Heptachlor | 0.1 | mg/kg | ND | ND. | ND | ND |
| gamma-BHC | 0.4 | mg/kg | ND | ND | ND | ND | ND | ND. | ND | ND: | ND: | ND | ND |
| Endosulfan I | 470 | mg/kg | ND | ND |
| beta-BHC | 0.4 | mg/kg | ND: | ND | ND | ND | ND | ND | ND | . ND | ND | ND | ND: |
| delta-BHC | NLE | mg/kg | :ND: | ·ND: | ND. | ND | ND. |
| alpha-BHC | 0.1 | mg/kg | · ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Endosulfan II | 470. | mg/kg | ND- | ND | ND |
| PCBs | | Permittee State Control | | | | | I Total | | | 3,100 | 1 110 | 110 | ND |
| Arochlor 1016 | 0:20 | mg/kg | ND. | ND | ND | ND | ND | ND- | ND | ND | ND | ND | ND |
| Arochlor 1260 | 0.20 | mg/kg | 1.020 | 0,130 | 0.069 | 1,060 | 0.126 | ND: | ND | 2,300 | 0.278 | 0.346 | 0,530 |
| Notes: | | | - | | | | | | | 2000 | U.L.IU | Uadrett | 0,550 |

Exceedences of RDCSRS are shaded and bold

as per N.J.A.C. 7:26D (06/02/2008)

I - Estimated concentration exceeds the MDL and is less than the RL

mg/kg - Milligrams per killogram NA - Not analyzed

ND - Not detected

NLE - No limit established

RDCSRS: Residential Direct Contact Soil Remediation Standards

Updated lab data

| Round No. | | | 5 | .6 | 6 | 7 | 7 | 7 | 8 | 8 | 9 | 9 | 10 |
|--------------------|-----------|--------|----------------|--------------------|----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|
| WELL ID | NDJEP | | Playground 2A2 | Playground 2A3 | Playground 2A3 | Playground 3A1 | Playground 3A1 | Playground 3A1 | Playground 3A2. | Playground 3A2 | Playground 3A3 | Pinyground 3A3 | Playground 4A1 |
| Date Collected | RDCSRS | Units | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 |
| ANALYTE / Lab ID | Criterion | | . 9021305 | 9021306 | 9021306 | 9021307 | 9021307 | 9021403 | 9021308 | 9021308 | 9021309 | 9021309 | 9021310 |
| Sample Depth | | | 6-12" | 12-18 ⁿ | 12-18" | 0-6" | 0-6" | 0-6" | 6-12" | 6-12" | 12-18" | 12-18" | 0-6" |
| Pesticides | - | | | | | | | | | | | | |
| 4,4' - DDD | 3 | mg/kg | 0.005 | ND | ND | 9.962 | 0.996 | 0.137 | 0.283 | 0.028 | 0.061 | 0.006 | 0.404 |
| 4.4' - DDE | 2 | mg/kg | 0.040 | 0.067 | 0.007 | 31.466 | 3.146 | 2.650 | 4.487 | 0.448 | 0.402 | 0.040 | 8.632 |
| 4,4' - DDT | 2 | mg/kg | 0.042 | 0.082 | 0.008 | 32.595 | 3.259 | 3.290 | 5.644 | 0.565 | 0.480 | 0.048 | 8.155 |
| alpha-Chlordane | 0.2 | mg/kg | ND | ND | ND | 0.169 | 0.017 | ND | 0.038 | 0.003 | .ND | ND. | ND |
| gamma-Chlordane | 0.2 | mg/kg | ND: | ND | ND. | 0.158 | 0.016 | ND | ND. | ND | ND | ND: | ND |
| Diedrin. | 0.04 | mg/kg | ND | ND | ND. | 0.120 | 0.012 | ND | ND | ND | ND | ND | 0.050 |
| Methoxychlor | 390 | mg/kg | ND | ND | ND | ND | ND. | ND | ND | 'ND | ND | ND | 0.050 |
| Aldrin | 0.04 | mg/kg | ND | ND | ND | - ND | ND | ND | ND . | ND | ND | ND | ND |
| Heptachlor epoxide | 0.07 | mg/kg | ND | .ND | ND | 0.502 | 0.050 | ND | ND | ND | ND | ND | 0.053 |
| Endrin aldehyde | NLE | mg/kg | ND | ND: | . ND | 0.302 | .0,030 | ND | 0.063 | 0.006 | .ND | ND | 0.129 |
| Endrin | 23: | mg/kg | ND . | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Endosulfan sulfate | 470 | mg/kg | 0.007 | ND. | ND | 0.230 | .0.023 | :ND | 0.060 | 0.006 | ND | ND | 0.062 |
| Endrin ketone | NLE | mg/kg | ND. | . ND | ND | ND. | ND- | ND . | . ND | ND | ND | .ND. | 0,036 |
| Heptachlor | 0.1 | mg/kg. | ND | 0.045 | 0.005 | ND . | ND | ND | ND | . ND | 0.044 | 0.004 | 0.026 |
| gamma-BHC | 0.4 | mg/kg | ND | ND | ND. | 0.049 | 0.005 | . ND . | . ND | ND | ND | ND | ND |
| Endosulfan I | 470 | mg/kg | ND | ND. | ND | 0.045 | 0.004 | ND | ND | ND | ND | ND | ND |
| beta-BHC | 0.4 | mg/kg | ND | ND | , ND | ND | ND | ND | ND | ND. | ND | ND- | 0.043 |
| delta-BHC | NLE | mg/kg | ND. | ND. | ND | ND | ND | ND | ND | ND | ND | ND | 0.029 |
| alpha-BHC | 0.1 | mg/kg | ND | . ND- | :ND | .ND | ND | ND | ND | . ND | ND | ND. | ND |
| Endosulfan II | 470 | mg/kg | ND | ND | ND | ND | ND | ND . | ND | ND | ND | ND | ND |
| PCBs | | | | | 19 | | | ec., | | | | | |
| Arochlor 1016 | 0.20 | mg/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND. | ND | ND |
| Arochlor 1260 | 0.20 | mg/kg | 0.062 | ND | ND | 2.400 | 0.339 | 0.240 | 0.585 | 0.075 | ND | ND | 1.730 |

Notes:

Exceedences of RDCSRS are shaded and bold

as per N.J.A.C. 7:26D (06/02/2008)

J - Estimated concentration exceeds the MDL and is less than the RL

mg/kg - Milligrams per killogram NA - Not analyzed

ND - Not detected

NLE - No limit established

RDCSRS: Residential Direct Contact Soil Remediation Standards

Updated lab data

| Round No. | | | 10 | 10 | 11. | 11 | 12 | 12 | 13 | 13 | 13 | 14 | 14 |
|--------------------|-----------|-------|----------------|----------------|----------------|------------------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------|
| WELL ID | NDJEP | | Playground 4A1 | Playground 4A1 | Playground 4A2 | Playground 4A2 | Playground 4A3 | Playground 4A3 | Playground SA1 | Playground 5A1 | Playground 5A1 | Playground 5A2 | |
| Date Collected | RDCSRS | Units | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 |
| ANALYTE / Lab ID | Criterion | | 9021310 | 9021404 | 9021311 | 9021311 | 9021312 | 9021312 | 9021313 | 9021313 | 9021405 | 9021314 | 9021314 |
| Sample Depth | | X | 0-6" | 0-6" | :6-12" | 6-12" | 12-18" | .12-18" | 0-6" | 0-6* | 0-6" | 6-12" | 6-12" |
| Pesticides | | | | 2332000 | | | | | | | | 0.2 | 0-12 |
| 4,4' - DDD | 3. | mg/kg | 0.040 | 0.024 | 0.547 | 0.055 | 0.186 | 0,019 | 0.497 | 0.050 | 0,022 | 0.477 | 0.048 |
| 4,4' - DDE | 2 | mg/kg | 0.863 | 0.842 | 6.722 | 0.672 | 1.608 | 0.161 | 8.262 | 0.826 | 0.795 | 8,485 | 0.849 |
| 4,4' - DDT | 2 | mg/kg | 0.815 | 0.454 | 5.831 | 0.583 | 0.875 | 0.087 | 6.067 | 0.607 | 0.402 | 5.096 | 0.509 |
| alpha-Chlordane | 0.2 | mg/kg | ND | . ND | ND | ND | ND | ND | 0.051 | 0.005 | ND | ND | ND |
| gamma-Chlordane: | 0.2 | mg/kg | ND. | ND | ND | ND | ND: | ND | ND | ND | ND | ND | ND |
| Diedrin | 0.04 | mg/kg | 0.005 | . ND | 0.035 | 0.004 | .ND | ND | ND | ND: | ND | ND | ND |
| Methoxychlor | 390 | mg/kg | 0.005 | 9.85 J | 0.079 | 0.008 | ND | ND | ND | ND | ND | 0.081 | 0.008 |
| Aldrin | 0.04 | mg/kg | ND. | ND . | ND | -ND | ND | ND | 0.027 | 0.003 | ND | ND | ND |
| Heptachlor epoxide | 0.07 | mg/kg | 0.005 | ND | ND: | ND | - ND | ND | ND | ND | ND | ND | ND |
| Endrin aldehyde | NLE | mg/kg | 0.013 | ND | 0.089 | 0.009 | 0.036 | ND | 0.087 | 0.009 | ND | 0.036 | ND: |
| Endrin | 23 | mg/kg | ND . | ND | • .ND | ND- | ND | ND: | ND | ND | ND | ND | ND |
| Endosulfan sulfate | 470 | mg/kg | 0.006 | . ND | 0.053 | 0.005 | 0.029 | 0:003 | 0.054 | . 0.006 | ND | 0.033 | 0.003 |
| Endrin ketone | NLE. | mg/kg | 0.004 | ND · | ND | N.D. | ND | ND | 0.115 | 0.011 | ND | 0.033 | 0.003 |
| Heptachlor | 0.1 | mg/kg | 0.003 | ND | . ND . | ND. | ND | ND | ND | ND | ND | ND | ND |
| gamma-BHC | 0.4 | mg/kg | . ND . | . ND | ND | ND. | ·ND | ND | 0.030 | 0.003 | ND | ND | ND. |
| Endosulfan I | 470 | mg/kg | ND | ND | ND | ND | ND | ND . | ND | ·ND | ND | ND | ND |
| beta-BHC | 0.4 | mg/kg | ND | ND | ND | ND | ND | ND | ND | ND | . ND | ND | ND |
| delta-BHC | NLE | mg/kg | 0.003 | ND | 0:029 | 0.003 | 0.027 | 0.003 | 0.027 | 0.003 | ND. | 0.025 | 0.002 |
| alpha-BHC | 0.1 | mg/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND- |
| Endosulfan II | :470 | mg/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND. |
| PCBs | | | 201 | | | Limited and the second | | | | | .10 | 140 | |
| Arochlor 1016 | 0.20 | mg/kg | ND · | ND | ND | ND | ND | ND | ND | ND . | ND | ND | ND |
| Arochlor 1260 | 0.20 | mg/kg | 0.201 | 0.241 | 1,270 | 0.143 | 0,646 | 0.075 | 0.601 | 0.073 | 0.0137 J | ND | 0.045 |

Notes:

Exceedences of RDCSRS are shaded and bold

as per N.J.A.C. 7:26D (06/02/2008)

J - Estimated concentration exceeds the MDL and is less than the RL

mg/kg - Milligrams per killogram

NA - Not analyzed ND - Not detected

NLE - No limit established

RDCSRS: Residential Direct Contact Soil Remediation Standards

Updated lab data

| Round No. | | | 15 | 15 | 16 | 16 | 16 | 17 | 17 | 18 | 18 | 19- | 19 |
|--------------------|-----------|---------|----------------|----------------|----------------|----------------------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| WELL ID | NDJEP | | Playground 5A3 | Playground 5A3 | Playground 6A1 | Playground 6A1 | Playground 6A1 | Playground 6A2 | Playground 6A2 | Playground 6A3 | Playground 6A3 | Playground Dup | Playground Du |
| Date Collected | RDCSRS | Units | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 |
| ANALYTE / Lab ID | Criterion | E2 | 9021315 | 9021315 | 9021316 | 9021316 | 9021406 | 9021317 | 9021317 | 9021318 | 9021318 | 9021319 | 9021319 |
| Sample Depth | 4 | | 12-18" | 12-18" | 0-6" | 0-6" | 0-6" | .6-12" | 6-12" | 12-18" | 12-18" | 0-6" | 0-6" |
| Pesticides | | | | | | Verification of the second | | | | 12.10 | 12-10 | 0-0 | 0-0 |
| 4,4' - DDD | 3 | mg/kg | 0.096 | 0.010 | 5.074 | 0.507 | 0:077 | 11.019 | 1,102 | 0.133 | 0.013 | 5,270 | 0,527 |
| 4,4' - DDE | 2: | mg/kg | 1.086 | 0.109 | 13.872 | 1.384 | 1.710 | 16.971 | 1.692 | 0.568 | 0.057 | 15.163 | 1.520 |
| 4.4' - DDT | 2 | mg/kg | 0.360 | 0.036 | 13.497 | 1,347 | 1,670 | 33.943 | 3,393 | 0.397 | 0.040 | 14.417 | 1.440 |
| alpha-Chlordane | 0.2 | mg/kg | ND . | ND | 0.147 | 0.015 | . ND | 0:043 | ND | ND | ND | 0.062 | 0.006 |
| gamma-Chlordane | 0.2 | mg/kg | ND | ND | 0.081 | 0.008 | ND | 0.036 | ND. | ND | ND | 0.061 | 0.006 |
| Diedrin | 0.04 | mg/kg | ND: | ND | ND | ND | ND | ND | ND | ND | ND | ND. | ND |
| Methoxychlor | 390 | mg/kg | ND | ND | 0.112 | 0.011 | ND | 0.088 | ND | ND | ND | ND ND | ND |
| Aldrin | 0.04 | mg/kg | ND | ND | 0,032 | 0.003 | ND | ND | ND | ND | ND | 0.031 | 0.003 |
| Heptachlor epoxide | 0.07 | mg/kg | ND . | ND | 0.052 | 0.005 | ND. | ND | ND | ND | ND | 0.133 | 0.003 |
| Endrin aldehyde | NLE | mg/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | 0.060 | ND |
| Endrin | .23 | mg/kg | ND | ND | ND | ND. | ND | ND | ND. | ND | ND | ND | ND |
| Endosulfan sulfate | 470 | mg/kg | ND . | ND | 0.492 | 0.049 | ND | 0,109 | ND | ND | ND | 0.103 | 0.010 |
| Endrin ketone | NLE - | mg/kg | ND | ND: | 0.085 | 0.009 | ND | ND | ND | ND | ND | 0.103 | 0.007 |
| Heptachlor | 0.1 | mg/kg | ND | ND | ND | ND | ND | ND | ND | 0.044 | 0.005 | ND | ND |
| gamma-BHC | 0.4 | mg/kg | 0.029 | 0.003 | ND | ND . | ND | 0.031 | ND | ND | ND . | ND | ND ND |
| Endosulfan I | 470 | mg/kg | . ND . | ND | 0.027 | 0.003 | ND | ND | ND | ND | ND . | ND | ND |
| beta-BHC | 0.4 | mg/kg | ND | ND | ND | ND | ND | ND. | ND | ND | ND | ND ND | ND |
| delta-BHC | NLE | mg/kg | 0.023 | 0.002 | 0.031 | 0.003 | ND | ND | ND | ND | ND | 0.031 | 0.003 |
| alpha-BHC | 0.1 | mg/kg | ND | ND | ND. | ND: | ND | ND | ND | ND | ND | ND | ND |
| Endosulfan II | 470 | mg/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| PCBs | | a weeks | | | | | | 4.0 | 110 | 140 | IND | טא | ND |
| Arochlor 1016 | 0.20 | ·mg/kg | ND | ND. | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arochlor 1260 | 0.20 | mg/kg | ND | ND | 1.050 | 0.131 | 0.041 | 1,200 | 0,143 | .ND | ND | 0.647 | |
| Notes: | | | | | | | 7.3.12 | 11200 | 0.145 | .110 | IND | 0.04/ | 0.080 |

Notes:

Exceedences of RDCSRS are shaded and bold

as per N.J.A.C. 7:26D (06/02/2008)

J - Estimated concentration exceeds the MDL and is less than the RL

mg/kg - Milligrams per killogram

NA - Not analyzed ND - Not detected

NLE - No limit established

RDCSRS: Residential Direct Contact Soil Remediation Standards

Updated lab data

| Round No. | | | 19 | 20 | 20 | 20 | 21 | 21 | 22 | 22 | 23 | 23 | 23 |
|--------------------|-----------|-------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|
| WELL ID | NDJEP | | Playground Dup | Playground 7A1 | Playground 7A1 | Playground 7A1 | Playground 7A2 | Playground 7A2 | Playground 7A3 | Playground 7A3 | Playground 8A1 | Playground 8A1 | Playground 8A |
| Date Collected | RDCSRS | Units | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/14/2009 | 5/14/2009 | 5/29/2009 | 5/29/2009 | .5/29/2009 | 5/29/2009 | 5/29/2009 |
| ANALYTE / Lab ID | Criterion | | 9021407 | 9021320 | 9021320 | 9021408 | 9021321 | 9021321 | 9021322 | 9021322 | 9021323 | 9021323 | 9021409 |
| Sample Depth | | | 0-6" | 0-6" | 0-6" | 0-6" | 6-12" | 6-12" | 18-24" | 18-24" | 0-6" | 0-6" | 0-6" |
| Pesticides | | | | | | | | N 16 1 | | | 340 | | |
| 4,4' - DDD | 3. | mg/kg | 0.114 | 1.019 | 0.102 | 0.019 | 0.113 | 0.011 | 0.035 | 0.004 | 1.464 | 0.146 | 0.030 |
| 4,4' - DDE | 2 | mg/kg | 1,740 | 1.663 | 0.167 | 0.130 | 0.413 | 0.041 | 0.133 | 0.013 | 8.270 | 0.827 | 0.563 |
| 4,4' - DDT | 2 | mg/kg | 1.830 | 4.670 | 0.467 | 0.221 | 0.182 | 0.018 | 0.053 | -0.005 | 6.184 | 0.619 | 0.327 |
| alpha-Chlordane | 0.2 | mg/kg | ND | 0.072 | 0.007 | ND | ND | ND | . ND | . ND | ND | ND | ND |
| gamma-Chlordane | 0.2 | mg/kg | ND | 0.041 | 0.004 | ND | ND | ND: | ND | ND. | 0.035 | ND | ND |
| Diedrin | 0.04 | mg/kg | ND: | ND | ND | ND | ND | ND. | ND | ND | ND | ND | ND. |
| Methoxychlor | 390 | mg/kg | ND . | ND | ND | ND | ND | ND | ND | ND: | 0.082 | 0.008 | ND |
| Aldrin | 0.04 | mg/kg | ND | ND | ND: | ND . | ND | ND | ND | ND | ND | ND . | ND |
| Heptachlor epoxide | 0.07 | mg/kg | . ND | 0.029 | 0.003 | ND: | ND | ND | ND | ND: | 0.049 | 0.005 | ND |
| Endrin aldehyde | NLE | mg/kg | ND: | . 0.057 | 0.006 | ND | ND | ND | ND | ND | 0.068 | 0.007 | ND |
| Endrin | 23 | mg/kg | ND: | 0.039 | 0.004 | ND | .ND . | ND: | ND | ND. | ND: | ND | ND |
| Endosulfan sulfate | 470 | mg/kg | ND | 0.245 | ND: | ND | ND | - ND | ND | ND . | ND. | ND | ND |
| Endrin ketone | NLE | mg/kg | ND- | 0.035 | 0.004 | ND. | . ND | ND. | ND | ND: | 0.052 | 0.005 | ND |
| Heptachlor | 0,1 | mg/kg | ND | ND | . ND | ND. | .ND | ND: | ND | ND | ND | ND | ND. |
| gamma-BHC | 0.4 | mg/kg | ND | ND | ND | N.D | ND | ND | 0.024 | 0,002 | ND | 0.004 | ND |
| Endosulfan I | 470 | mg/kg | ND . | ND | ND . | ND: | ND | ND | ND | · ND | ND | ND | ND |
| beta-BHC | 0.4 | mg/kg | ND. | ND. | ND | ND | ND | ND | ND | ND. | 0.033 | ND | ND |
| delta-BHC | NLE | mg/kg | .ND. | 0.028 | 0.003 | ND | ND | ND | 0.022 | 0.002 | 0.030 | 0.003 | ND |
| alpha-BHC | -0.1 | mg/kg | · ND: | ND | ND | ND | ND | ND | ND | ND. | ND: | ND | ND |
| Endosulfan II | 470 | mg/kg | ND | ND | ND | ND. | ND | ND | ND | ND. | ND . | ND. | ND |
| PCBs | | | | Yes | | | | | | | to a constant | | |
| Arochlor 1016 | 0.20 | mg/kg | ND- | ND | .ND | ND | ND | .ND | ND | . ND | ND | .ND· | ND- |
| Arochlor 1260 | 0.20 | mg/kg | 0.049 | 0.663 | .0.078 | 0.041 | ND | ND | . ND | ND- | 1.140 | 0.139 | 0.027 |

Exceedences of RDCSRS are shaded and bold

as per N.J.A.C. 7:26D (06/02/2008)

J - Estimated concentration exceeds the MDL and is less than the RL

mg/kg - Milligrams per killogram

NA - Not analyzed ND - Not detected

NLE - No limit established

RDCSRS: Residential Direct Contact Soil Remediation Standards

Updated lab data

| Round No. | | | 24 | 24 | 25 | 25 | 26 | 26 | 26 | 27 | 27 | -28 | 28 |
|--------------------|------------|-------|----------------|----------------|-----------------|----------------|----------------|--|----------------|----------------|----------------|----------------|----------------|
| WELL ID | NDJEP | | Playground 8A2 | Playground 8A2 | Playground \$A3 | Playground 8A3 | Playground 9A1 | Playground 9A1 | Playground 9A1 | Playground 9A2 | Playground 9A2 | Playground 9A3 | Playground 9A3 |
| Date Collected | RDCSRS | Units | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 |
| ANALYTE / Lab-ID | Criterion | | 9021324 | 9021324 | 9021325 | 9021325 | 9021326 | 9021326 | 9021410 | 9021327 | 9021327 | 9021328 | 9021328 |
| Sample Depth | - Cintanon | | 6-12" | 6-12" | 18-24" | 18-24" | 0-6" | 0-6" | 0-6" | 6-12" | 6-12" | 18-24" | 18-24" |
| Pesticides | | | | | | | | | (4.1.6) | | | | |
| 4,4' - DDD | 3. | mg/kg | 0.077 | 0.008 | 0.027 | 0.003 | 2.103 | 0.211 | 0.027 | 0.441 | 0.044 | 0.252 | 0.025 |
| 4.4' - DDE | 2 | mg/kg | 0.341 | 0.034. | 0.210 | 0.02.1 | 8.203 | 0.818 | 0.869 | 1.793 | 0.179 | . 0.829 | 0.083 |
| 4.4' - DDT | 2 | mg/kg | 0.135 | 0.014 | 0.042 | 0.004 | 10.131 | 1.014 | 0.815 | 0.300 | 0.003 | 0.255 | 0.025 |
| alpha-Chlordane | 0.2 | mg/kg | ND | ND . | .ND | ND | ND | ND | ND | ND | ND | ND | ND |
| gamma-Chlordane | 0.2 | mg/kg | . ND | ND | ND | ND | ND: | ND | ND | ND | ND | ND | ND |
| Diedrin | 0.04 | mg/kg | ND | ND | ND | ND | ND | ND | . ND | ND | ND | ND | ND. |
| Methoxychlor | 390 | mg/kg | ND | ND | ND | ND | 0.077 | 0.008 | ND | 0.046 | 0.005 | 0.038 | 0.004 |
| Aldrin | 0.04 | mg/kg | ND | ND | ND | ND | ND | ND | ND . | ND | ND | ND | ND: |
| Heptachlor epoxide | 0.07 | mg/kg | ND | ND | ND | ND | ND | ND | ND: | ND . | ND | ND- | ND |
| Endrin aldehyde | NLE | mg/kg | ND | ND | ND. | ND. | ND- | ND | ND. | ND | ND. | ND | ND |
| Endrin | 23 | mg/kg | ND | ND | ND | ND | ND. | ND | ND . | ND. | ND | ND. | ND |
| Endosulfan sulfate | 470 | mg/kg | ND: | ND | .ND | ND | 2,086 | ND. | . ND | 0.577 | ND | ND | ND |
| Endrin ketone | NLE | mg/kg | ND. | ND | ND . | ND | ND- | ND | ND | ND | ND | ND | ND. |
| Heptachlor | 0.1 | mg/kg | ND | ND | ND | ND | ND | ND | ND. | ND | ND | ND | ND |
| gamma-BHC | 0.4 | mg/kg | 0.031 | 0.003 | 0.025 | 0.003 | 0.046 | 0.005 | ND | 0.029 | 0.003 | 0.030 | 0.003 |
| Endosulfan I | 470 | mg/kg | ND | ND | ND | ND | ND | ND. | ND | ND | ND. | ND | ND |
| beta-BHC | 0.4 | mg/kg | ,ND | ND | ND. | ND | ND. | ND | ND | ND | ND | ND | ND |
| delta-BHC | NLE | mg/kg | .0.026 | 0.003 | ND. | ND: | ND | ND: | ND | ND | ND | 0.026 | 0.003 |
| alpha-BHC | 0.1 | mg/kg | ND. | ND . | ND: | ND | ND | ND. | ND | ND | ND: | ND | ND |
| Endosulfan II | 470: | mg/kg | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| PCBs | | | -10 | | | | | - James - Jame | | | A LANGE VE | | |
| Arochlor 1016 | 0.20 | mg/kg | ND | ND | ND | ND | ND: | ND | ND. | ND . | ND | ND | ND |
| Arochlor 1260 | 0.20 | mg/kg | 0.623 | 0.075 | ND | ND | 0.837 | 0.147 | 0.031 | ND | ND. | ND | ND |

Notes:

Exceedences of RDCSRS are shaded and bold

as per NJ.A.C. 7:26D (06/02/2008)

J - Estimated concentration exceeds the MDL and is less than the RL

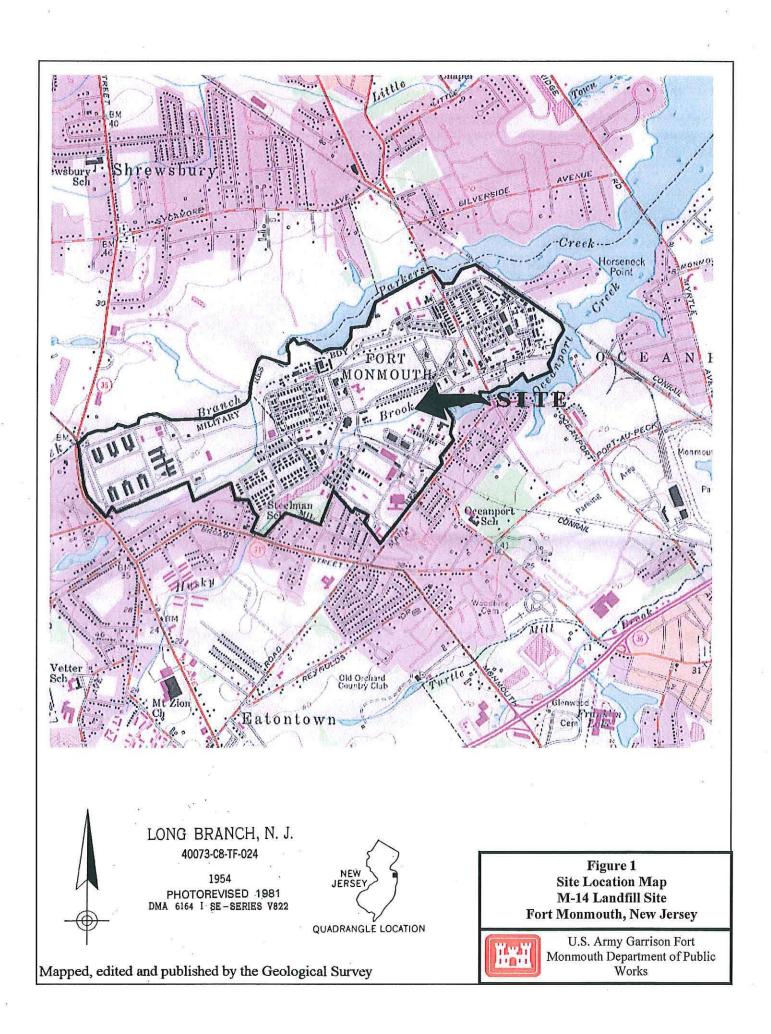
mg/kg - Milligrams per killogram

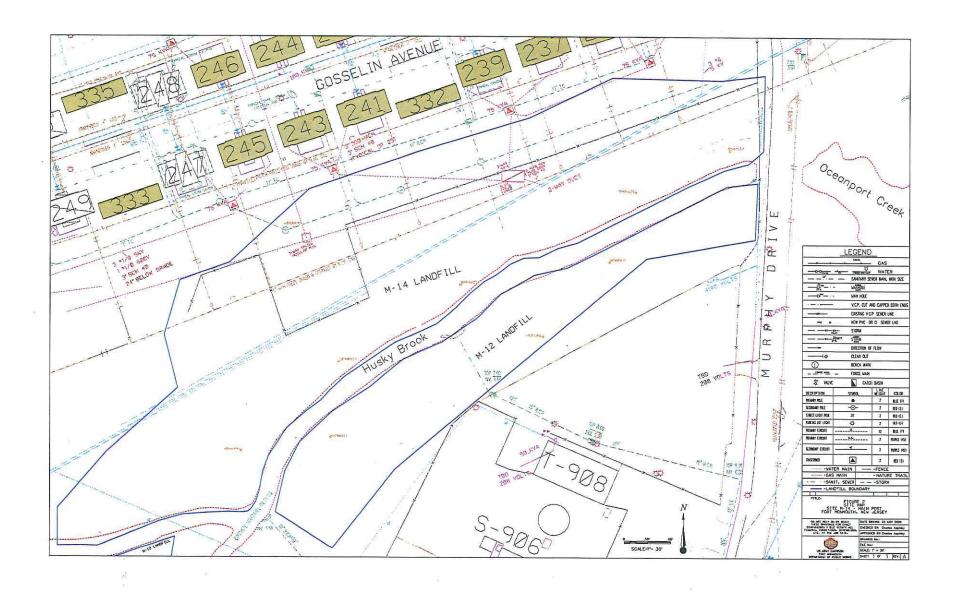
NA - Not analyzed

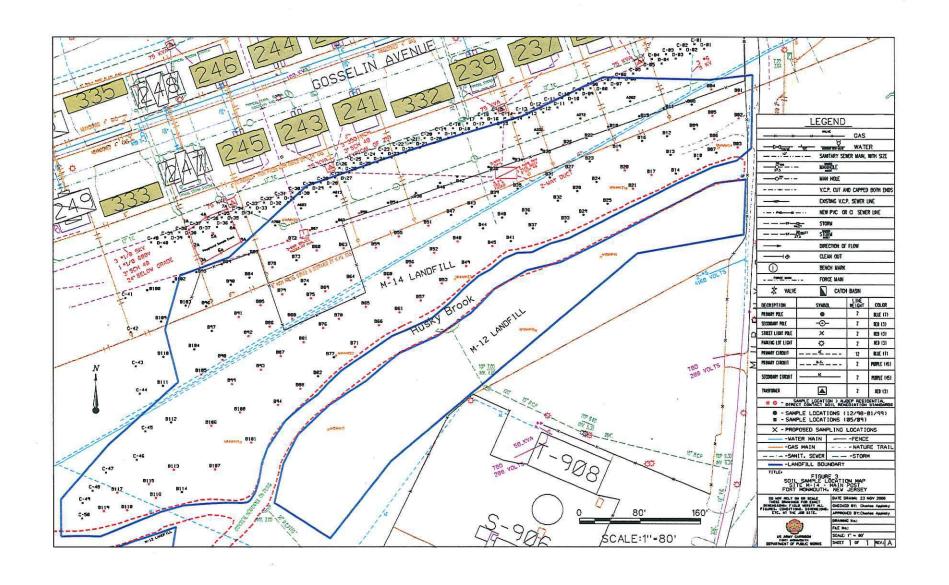
ND - Not detected NLE - No limit established

RDCSRS: Residential Direct Contact Soil Remediation Standards

Updated lab data







Attachment A

Geoprobe Sampling Methods (SOP No. SAM-0204)

SOP No.: SAM-0204

Revision No.: 4

Date Revised: 01/03/08

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CATEGORY: Sample Handling TITLE: Geoprobe® Sampling Methods

1 PURPOSE:

1.1 To document the current procedures for sample collection with a Geoprobe®.

2 RESPONSIBILITY:

2.1 It is the responsibility of designated field samplers who have been properly instructed and trained in field sampling protocol and techniques.

3 SAMPLE COLLECTION, PRESERVATION AND HANDLING:

3.1 For sample collection, preservation and handling, please refer to SOP No. SAM-0200.

4 REFERENCES:

- 4.1 Field Sampling Procedures Manual, August 2005, New Jersey Department of Environmental Protection.
- 4.2 Geoprobe® Tools and Equipment Catalog 2002/2003.

5 SUMMARY:

5.1 This SOP represents the general field sampling requirements as required by the NJDEP. It specifically addresses the proper use of protective equipment, collection of QA/QC samples, field documentation procedures, proper documentation of all field activities, collection of samples into proper containers (with the proper preservation) and the techniques for collecting each type of sample.

6 DEFINITIONS:

- 6.1 PETG: Glycolised Polyester.
- 6.2 FID: Flame Ionization Detector.
- 6.3 PID: Photo Ionization Detector.
- 6.4 ORC/HRC: Oxygen Releasing Compounds/Hydrogen Releasing Compounds.

7 SAFETY:

7.1 For safety, please refer to the CTSC Fort Monmouth, NJ Health and Safety Plan (HASP).

| Prepared By Wal | try furb | Date: 01/03/08 |
|----------------------|------------|----------------|
| Laboratory Director: | Akansandhu | Date: U 30 OK |
| QA/QC Manager: | Maria | Date collow |
| | | 1 , |

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CATEGORY: Sample Handling

TITLE: Geoprobe® Sampling Methods

- 7.2 Employees must use personal protective equipment (PPE) for adequate protection and to limit the level of exposure on site. The equipment selected must be appropriate to protect against all known and potential hazards. All field personnel are required to be familiar with the potential hazards that may be encountered on site prior to entry.
- 7.3 At a minimum, all field personnel are required to have work boots (steel toe construction), safety glasses or goggles, a hard hat and gloves available for all sampling activities. Standard latex surgical gloves will be worn at all times when samples are collected or handled.

8 EQUIPMENT AND MATERIALS:

- 8.1 Geoprobe ® Model 5400 Vehicle.
- 8.2 Geoprobe ® Macro Core Sampler.
- 8.3 Geoprobe ® Large Bore Sampler.
- 8.4 Geoprobe ® DT-21 Dual Tube Sampler.
- 8.5 Geoprobe ® GP-15 Groundwater Sampler.
- 8.6 Bedrock Brand 1" PVC .10 Slot Screen and Riser.
- 8.7 R.B. Rupė ORC/HRC Injection Pump.
- 8.8 Cole Palmer Peristaltic Pump.
- 8.9 Methanol Extraction Kit.
- 8.10Depth to Water Indicator.
- 8.11Small Diameter Bailer.
- 8.12Food Grade Polyethylene Bailer.
- 8.13Foxboro TVA 100B Dual FID/PID Gas Analyzer.
- 8.14Hnu PID Gas Analyzer.

9 STANDARDS/REAGENTS:

- 9.1 Methanol Extraction Solvent.
- 9.2 Deionized Water.
- 9.3 Potable Tap Water.
- 9.4 Isobutylene Calibration Gas.
- 9.5 Methane Calibration Gas.
- 9.6 Zero Air Calibration Gas.

10 QUALITY CONTROL:

- 10.1QA/QC samples are intended to provide control over the collection of environmental measurements and subsequent validation, review and interpretation of generated analytical data.
- 10.2The Trip Blanks are used exclusively for volatile organic analysis. For aqueous sampling, 2 40-ml vials are filled with deionized water and preserved with HCl. For soil samples, a 2-ounce soil jar is filled with 25-ml methanol and surrogates. The

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TITLE: Geoprobe® Sampling Methods

purpose of the Trip Blank is to measure any possible cross contamination during shipping to and from the site. It is never opened and it travels to the site with the empty sample bottles and back from the site with the collected samples. Contaminated Trip Blanks may also indicate that the bottle cleaning procedure or the blank water is of questionable quality. Trip Blanks must be included at the rate of one per sample shipment (not to exceed two consecutive field days).

- 10.3The purpose of a Field Blank is to place a mechanism of control on sampling equipment, handling, preparation, storage and shipment. The Field Blank travels and is stored with the sample bottles. It is a representative of the bottle shipment effects on sample quality. Field Blanks are collected in the following manner:
 - 10.3.1Two identical sets of bottles are prepared.
 - 10.3.1.1 One set is filled with laboratory demonstrated analyte free water (the same water used for the Trip and Method Blanks).
 - 10.3.2The filled bottles are shipped with all of the empty bottles.
 - 10.3.3At the field location, in an area where contamination is suspected, the water is passed from the full set of like-bottles through the dedicated or field decontaminated sampling device and into the empty set of like-bottles.
 - 10.3.4Field Blanks are collected and analyzed for all of the same parameters as the collected samples.
- 10.4Field Duplicate samples may be required on a contract or site-specific basis. For aqueous samples, Duplicates are taken by alternating filling the containers from the same sampling device for each of the required parameters. For non-aqueous matrices, obtaining duplicates requires homogenization of the sample aliquot prior to filling the sample containers. If this cannot be performed in the field, the aliquot is returned to the laboratory and the homogenization is performed there. Regardless, volatile organic samples must always be taken from discrete locations or intervals without compositing or mixing.
- 10.5The laboratory must be supplied with field designated Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples every twenty locations. Triple volume must be collected for aqueous samples.

11 CALIBRATION:

11.1The TVA 1000B and the Hnu Instruments are calibrated when used according to the manufacturers' specifications. The instruments are sent to the various manufacturers or an authorized representative for a factory calibration on an annual basis.

12 PROCEDURE:

- 12.1 Geoprobe® Sampling for Soils:
 - 12.1.1Sampling with the Macro Core Sampler:

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CATEGORY: Sample Handling

TITLE: Geoprobe® Sampling Methods

12.1.1.1 The Macro Core Sampler is a steel tube that measures two inches in diameter by forty-eight inches in length. The complete assembly consists of the tube, a cutter shoe, a liner tube and a drive head that is connected to a drill rod and advanced into the soil strata. The liner is manufactured of PETG material as well as other materials. The liner is one and a half inches in diameter and forty-six inches long. It can hold up to approximately thirteen hundred milliliters of soil when full recovery is obtained. The device is decontaminated, put together and introduced into the soil from zero grade and is driven to the desired depth. The tool is meant to be used mainly as an open advanced borehole system. Other devices available to the operator allow this device to be advanced in minimally sloughed material. The sampler is pushed or percussion hammered into the soil, extracted out of the soil and opened up.

12.1.2Sampling with the Large Bore Soil Sampler:

12.1.2.1 The Large Bore sampler is a solid barrel, piston sealed, direct pushed device for collecting discrete interval samples of unconsolidated materials at depth. The sampler is one and a half inches in diameter and thirty inches in length. The complete assembly consists of the tube, a cutter shoe, a piston assembly, a liner and a drive head that is connected to a drill rod and advanced into the soil strata to discreet sample depths. A lock pin is backed out inside the drill rod, the tool is advanced two additional feet pushing the piston point into the sampler allowing soil to be introduced into the device. The sampler is extracted out of the soil and opened up.

12.1.3Sampling Procedures:

12.1.3.1 After the sampler is extracted out of the borehole, the liner is removed, cut open and screened with a PID and/or FID device (Hnu/OVA). If a volatile sample is to be taken, the sample should be taken as soon as possible so that the soil will not volatilize. Depending upon the sampling plan, additional organic samples may be required for sections with detectable readings. Field notes will be written as to note soil structure, colors and any other materials in field notebooks. Odors and any other factors regarding the sample shall also be noted.

12.2Geoprobe® Sampling for Groundwater:

12.2.1Groundwater Sampling with the use of a Passively Placed Narrow Diameter Point (PPNDP). A narrow diameter point (PPNDP) is a small diameter («-1 inch outer diameter, OD) screened casing passively placed in a borehole. Schedule forty PVC is used for collection of groundwater samples. No filter or gravel pack is used in the installation. Installation is for temporary use (less than 48

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CATEGORY: Sample Handling

TITLE: Geoprobe® Sampling Methods

hours). A solid push rod (bull point0 is used to create a narrow diameter hole to a depth below the water table. This can be performed by hand or with a rotary hammer. A piece of schedule 40 PVC screen with 0.010-inch slots and an end cap is placed to the bottom of the hole.

- 12.2.2Installation: Pre-drill a borehole with a diameter slightly larger than the casing using a bull point drive rod. The hole should be made to a depth of 1-3 feet below the water table. The screened section of PVC is placed into the borehole so the screened section is across the groundwater table. Prior to installation of any PPNDP, knowledge of the depth to water should be known by previous site data for proper placement of the probe. Caution should be used when using the passively placed slotted PVC casing in areas of contaminated soil. Possible cross contamination may be introduced to the casing as it passes through the zone of contamination. Installation of the tool is required to comply with all permit, license, sealing and grouting requirements. Any tool left in the ground longer than 48 hours is considered a monitor well and therefore must comply with the permit, installation and license requirements for monitor wells.
- 12.2.3Sampling Procedure: Three to five volumes of the standing water in the PPNDP must be purged. This is due to the potential for cross contamination of the screen from upper soil horizons. This can be accomplished utilizing a peristaltic pump, inertial pump or a small centrifugal pump. The tubing used for the well purging is food grade polyethylene and silicon surgical tubing that is discarded after each well. Disposable Teflon TM bailers are used to extract the sample for volatile organics and base neutrals. Other aqueous samples can be taken out of the pump tubing at a low flow rate. The acquisition of samples and water level measurements must be performed by one of several recommended methodologies described in the August 2005 edition of the NJDEP Field Sampling Procedures Manual.
- 12.2.4Quality Assurance/Quality Control: The PPNDP and associated equipment (bull point, riser pipe, etc.) must be decontaminated between borings using the following procedure:
 - 12.2.4.1 Remove all adherent soil material.
 - 12.2.4.2 Wash with a laboratory grade glassware detergent.
 - 12.2.4.3 Rinse with potable water and/or steam clean.
 - 12.2.4.4 Rinse with distilled and deionized ASTM Type II water.
 - 12.2.4.5 Field Blanks must be obtained in the same manner as the sample. The blank water must pass through the sample device and PPNDP prior to installation and then into the sample container. The parameters and frequency for Field Blanks are designated in the August 2005 edition of the NJDEP Field Sampling Procedures Manual.

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- 12.2.5Groundwater sampling with the use of a Small Diameter Direct Push Point (SDDPP): A small diameter direct push point (SDDPP) is a «-1 inch outer diameter, OD casing (slotted or blank) which can be driven or pushed through the soil into the groundwater. It is used for the collection of a groundwater sample or estimating piezometeric data. The casing can be constructed of stainless steel or carbon steel. No filter or gravel pack is used in the installation. Installation is for temporary use (less than 48 hours).
- 12.2.6Installation: SDDPPs constructed of blank stainless steel or carbon steel casing with a sacrificial tip or a telescoping screen with a sacrificial tip is employed by driving the point to the desired depth with hydraulics or a rotary hammer. The probe is placed a minimum of 2 feet below the water table. Once at depth, the casing is pulled back leaving the point in place and exposing the telescoping screen. Groundwater fills the screen for sample acquisition.
- 12.2.7Sampling Procedures: Purging for slotted SDDPPs, three to five volumes of the standing water must be purged. This can be accomplished utilizing a peristaltic pump, inertial pump or a small centrifugal pump. Purging is not required for SDDPPs that are sealed until they are opened at the target depth for sample acquisition. Sampling due to the small diameter of a SDDPP, the sampling tools are limited. The acquisition of samples and water level measurements must be performed by one of several recommended groundwater-sampling methodologies described in the August 2005 edition of the NJDEP Field Sampling Procedures Manual.
- 12.2.8Quality Assurance/Quality Control: The SDDPP and associated equipment (points, casing, etc.) must be decontaminated between borings using the following procedure:
 - 12.2.8.1 Remove all adherent soil material.
 - 12.2.8.2 Wash with a laboratory grade detergent.
 - 12.2.8.3 Rinse with potable water and/or steam clean.
 - 12.2.8.4 Rinse with distilled and deionized ASTM Type II water.
 - 12.2.8.5 Field Blanks must be obtained in the same manner as the sample. The blank water must pass through the sample device and SDDPP prior to installation and then into the sample container. The parameters and frequency for Field Blanks are designated in the August 2005 edition of the NJDEP Field Sampling Procedures Manual.
 - 12.2.8.6 Rod sealing is important when using the SDDPP below the water table. The drive rod/casing joints must be sealed. This will prevent fluid from entering the rods and potentially contaminating the sample. The rods are sealed with O-rings at the threads for sealing and the tool also has O-rings that seal off fluids in the borehole. These all must be removed and changed out with new O-rings before starting a new borehole.

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CATEGORY: Sample Handling
TITLE: Geoprobe® Sampling Methods

13 POLLUTION PREVENTION:

13.1A spill prevention kit is available on the Geoprobe® Unit. For further information, please refer to SOP No. SAM-0222.

14 WASTE MANAGEMENT:

14.1For sample disposal, please refer to SOP No. SAM-0220.



State of New Jersey

PHIL MURPHY Governor

DEPARTMENT OF ENVIRONMENTAL PROTECTION
Site Remediation and Waste Management Program
401 EAST STATE STREET
MAIL CODE 401-05F
Trenton, New Jersey 08625

CATHERINE R. McCABE Commissioner

SHEILA OLIVER

Lt. Governor

January 6, 2020

Mr. William Colvin BRAC Environmental Coordinator OACSIM – U.S. Army Fort Monmouth PO Box 148 Oceanport, NJ 07757

Re: Site Investigation Report (SIR) – Gosselin Area Parcel 71 Fort Monmouth, Oceanport, Monmouth County SRP PI# G000000032

Dear Mr. Colvin:

The New Jersey Department of Environmental Protection (Department) has reviewed the SIR for Gosselin Area Parcel 71 submitted by the Department of the Army. This submittal was in reference to the further evaluation, delineation and removal of PCBs in soil. The Department offers the following comments with regards to the completed evaluation.

PCBs

The Department concurs with the Department of Army and approves the excavation and removal of PCB contaminated soil at boring location GOSS-SB-08.

Pesticides

Results from the 2009 soil samples show that pesticide contamination remains at Gosselin Area Parcel 71. Please note that the pesticide contamination will need to be addressed. It is noted that delineation of pesticide contamination has been completed however, remediation to residential criteria must be met to current regulations. You may utilize various methods as presented in the Department's August 2016 Historically Applied Pesticide Site Technical Guidance to meet current requirement(s).

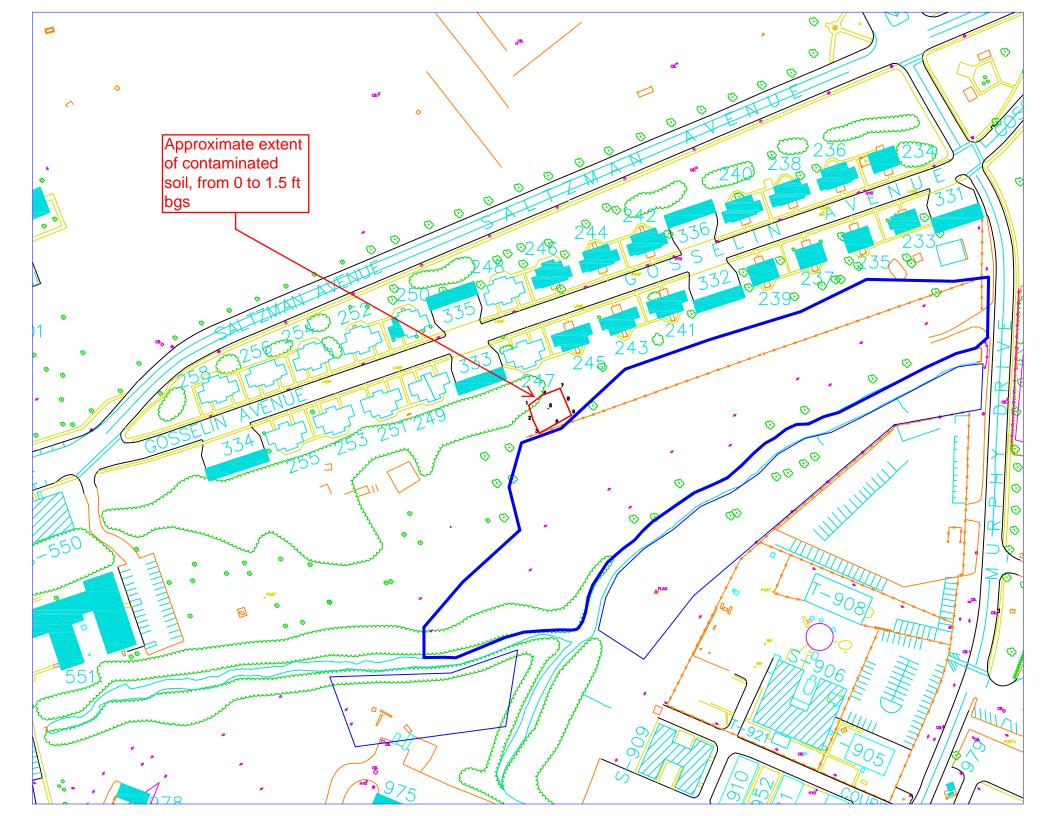
If you have any questions regarding this matter, please feel free to contact me at (609) 433-8735.

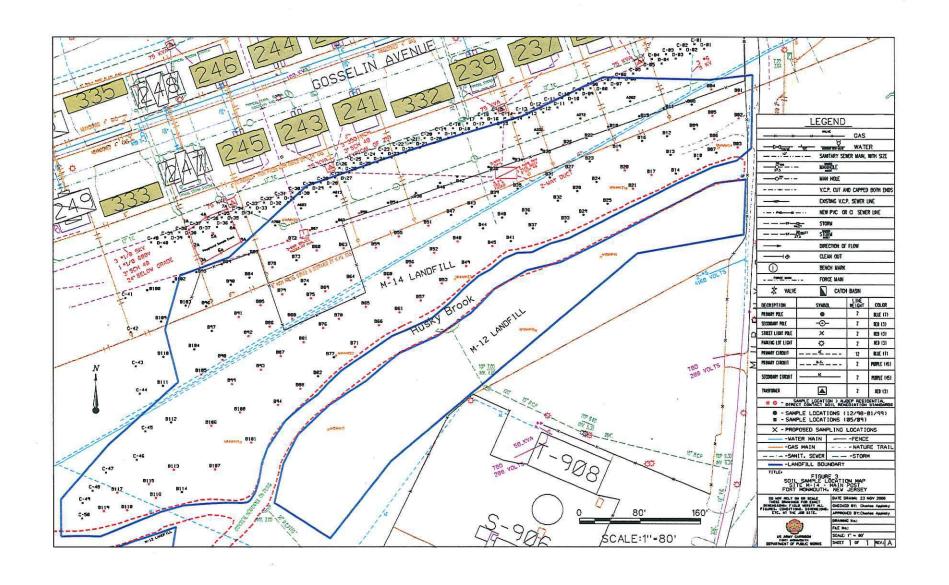
A I Joshi

C: James Moore, USACE Joe Fallon, FMERA

File

Attachment B
Unpublished Results of 2010 Sampling







| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 10040.01 D-01 (0-6") 1/29/2010 | 10040.02 D-01 (18-24") 1/29/2010 | 10040.03 D-01 (30-36") 1/29/2010 | 10040.05 C-01 (0-6") 1/29/2010 | 10040.06 C-01 (18-24") 1/29/2010 | 10040.07 C-01 (30-36") 1/29/2010 | 10040.08 C-02 (0-6") 1/29/2010 | 10040.09 C-02 (18-24") 1/29/2010 | 10040.10 C-02 (30-36") 1/29/2010 | 10040.11 C-03 (0-6") 1/29/2010 | 10040.12 C-03 (18-24") 1/29/2010 | 10040.13 C-03 (30-36") 1/29/2010 | 10050.02 C-04 (0-6") 2/4/2010 | 10050.03 C-04 (18-24") 2/4/2010 | 10050.04 C-04 (66-72") 2/4/2010 | 10050.05 D-05 (0-6") 2/4/2010 | 10050.06 D-05 (18-24") 2/4/2010 | 10050.07 D-05 (66-72") 2/4/2010 | 10050.08 C-05 (0-6") 2/4/2010 | 10050.09 C-05 (18-24") 2/4/2010 |
|---|------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| | (mg/kg) | , ., | , ., | , , , , , | , ., | , ., | , ., | , . | , ,, , , | , , , , , | , , , , , | , ., | , ,, , , | ,,,,, | ,,,,, | | , , | ,,,, | ,,,,, | , , | |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Butanone | 44000 | | ND | ND | | ND | ND | | 3.46 | 3.61 | | 3.26 | 3.22 | | ND | ND | | ND | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Hexanone | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Methyl-2-pentanone | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acetone | NLE | | ND | ND | | ND | ND | | 1.4 | 1.43 | | 1.31 | 1.25 | | ND | ND | | ND | ND | | ND |
| Acrolein | 1 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acrylonitrile | 3 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzene | 5 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Bromodichloromethane | 3 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Bromoform | 280 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Bromomethane | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Carbon disulfide | 110000 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chlorobenzene | 7400 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chloroethane | 1100 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chloroform | 2 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chloromethane | 12 | | ND | ND | | ND | ND | | ND | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND | ND | | ND | ND | | ND | ND | | ND |
| cis-1,3-Dichloropropene | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Dibromochloromethane | 8 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Dichlorodifluoromethane | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Diisopropyl ether | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Ethylbenzene | 110000 | | ND | ND | | ND | ND | | ND | ND | | ND |
| m+p-Xylenes | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Methyl tert-butyl ether | 320 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Methylene chloride | 97 | | ND | ND | | ND | ND | | ND | ND | | ND |
| o-Xylene | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Styrene | 260 | | ND | ND | | ND | ND | | ND | ND | | ND |
| tert-Butyl alcohol | 11000 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Tetrachloroethene | 5 | | ND | ND | | ND | ND | | ND | ND | | ND |
| TICs | NLE | | ND | ND | | ND | ND | | 630 | 640 | | 580 | 580 | | ND | ND | | ND | ND | | ND |
| Toluene | 91000 | | ND | ND | | ND | ND | | ND | ND | | ND |
| trans-1,2-Dichloroethene | 720 | | ND | ND | | ND | ND | | ND | ND | | ND |
| trans-1,3-Dichloropropene | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Trichloroethene | 20 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Trichlorofluoromethane | 340000 | | ND | ND | | ND | ND | | ND | ND | | ND |
| Vinyl Acetate | NLE | | ND | ND | | ND | ND | | ND | ND | | ND |
| Vinyl chloride | 2 | | ND | ND | | ND | ND | | ND | ND | | ND |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10040.01 D-01 (0-6") 1/29/2010 | 10040.02 D-01 (18-24") 1/29/2010 | 10040.03 D-01 (30-36") 1/29/2010 | 10040.05 C-01 (0-6") 1/29/2010 | 10040.06 C-01 (18-24") 1/29/2010 | 10040.07 C-01 (30-36") 1/29/2010 | 10040.08 C-02 (0-6") 1/29/2010 | 10040.09 C-02 (18-24") 1/29/2010 | 10040.10 C-02 (30-36") 1/29/2010 | 10040.11 C-03 (0-6") 1/29/2010 | 10040.12 C-03 (18-24") 1/29/2010 | 10040.13 C-03 (30-36") 1/29/2010 | 10050.02 C-04 (0-6") 2/4/2010 | 10050.03 C-04 (18-24") 2/4/2010 | 10050.04 C-04 (66-72") 2/4/2010 | 10050.05 D-05 (0-6") 2/4/2010 | 10050.06 D-05 (18-24") 2/4/2010 | 10050.07 D-05 (66-72") 2/4/2010 | 10050.08 C-05 (0-6") 2/4/2010 | 10050.09 C-05 (18-24") 2/4/2010 |
|---|---|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichlorobenzene | 59000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,3-Dichlorobenzene | 59000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,4-Dichlorobenzene | 13 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4,5-Trichlorophenol | 68000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4,6-Trichlorophenol | 74 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dichlorophenol | 2100 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dimethylphenol | 14000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dinitrophenol | 1400 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dinitrotoluene | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,6-Dinitrotoluene | 3 | ND | ND | | ND | ND | | -0.46 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Chloronaphthalene | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Chlorophenol | 2200 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Methylnaphthalene | 2400 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Methylphenol | 3400 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Nitroaniline | 23000 | ND | ND | | ND | ND | _ | ND | ND | | ND | ND | _ | ND | ND | | ND | ND | | ND | ND |
| 2-Nitrophenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 3,3'-Dichlorobenzidine | 4 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 3-Nitroaniline | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4,6-Dinitro-2-methylphenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Bromophenyl Phenyl ether | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Chloro-3-methylphenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Chloroaniline | 66 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Chlorophenyl phenyl ether | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Methylphenol | 340 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Nitroaniline | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Nitrophenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acenaphthene | 37000 | ND | ND | | ND | ND | | 3.43 D | ND | | ND | ND |
| Acenaphthylene | 300000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Aniline | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Anthracene | 30000 | ND | ND | | ND | ND | | 11.29 D | ND | | ND | ND |
| Azobenzene | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Benzidine | 0.7 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Benzo(a)anthracene | 2 | ND | ND | | ND | ND | | 17.95 D | ND | | ND | ND |
| benzo(a)pyrene | 0.2 | ND | ND | | 0.58 JD | ND | | 12.36 D | ND | | ND | ND |
| Benzo(b)fluoranthene | 2 | ND | ND | | 0.75 JD | ND | | 14.73 D | ND | | ND | 0.31 J |
| Benzo(g,h,i)perylene | 30000 | ND | ND | | 0.57 JD | ND | | 8.17 D | ND | | ND | ND |
| Benzo(k)fluoranthene Benzoic Acid | 23 | ND | ND ND | | ND | ND | | ND | ND ND | | ND ND | ND | | ND ND | ND ND | | 5.75 D | ND | | ND ND | ND ND |
| Benzoic Acid Benzyl alcohol | NLE | ND | ND | | ND | ND ND | | ND | ND | | ND | ND |
| bis(2-Chloroethoxy)methane | NLE NLE | ND | ND ND | | ND ND | ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| bis(2-Chloroethoxy)methane | | ND ND | | | | ND ND | | ND ND | ND | | ND ND | | | ND ND | ND ND | | ND ND | | | ND ND | ND ND |
| bis(2-chloroisopropyl)ether | 67 | ND ND | ND ND | | ND ND | ND ND | | | ND ND | | ND ND | ND ND |
| bis(2-ethylhexyl) phthalate | 140 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Butyl benzyl phthalate | | | ND ND | | | | | | | | | | | | | | | | | ND ND | |
| Chrysene | 14000 | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | | ND 16 E2 D | ND | | | ND |
| Dibenz(a,h)anthracene | 230 0.2 | ND ND | ND ND | | ND ND | ND ND | | 16.52 D 2.05 D | ND ND | | ND ND | ND ND |
| Dibenz(a,n)antinacene | NLE | | | | ND ND | ND ND | | ND ND | | | ND ND | | | ND ND | | | | | | ND ND | ND ND |
| Diethyl phthalate | 550000 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Dimethyl phthalate | NLE | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Difficulty philialate | NLE | שוו | עא | | NU | ND | | ND | NU | | ND | שא | | NU | ND | | ND | ND | | ND | שאו |

| | | 40040.04 | 40040.00 | 40040.00 | 40040.05 | 40040.04 | 40040.07 | 40040.00 | 40040.00 | 4004040 | 4004044 | 4004040 | 4004040 | 40050.00 | 40050.00 | 40050.04 | 40050.05 | 40000.05 | 40050.07 | 40050.00 | 40050.00 |
|---|---|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10040.01 D-01 (0-6") 1/29/2010 | 10040.02 D-01 (18-24") 1/29/2010 | 10040.03 D-01 (30-36") 1/29/2010 | 10040.05 C-01 (0-6") 1/29/2010 | 10040.06 C-01 (18-24") 1/29/2010 | 10040.07 C-01 (30-36") 1/29/2010 | 10040.08 C-02 (0-6") 1/29/2010 | 10040.09 C-02 (18-24") 1/29/2010 | 10040.10 C-02 (30-36") 1/29/2010 | 10040.11 C-03 (0-6") 1/29/2010 | 10040.12 C-03 (18-24") 1/29/2010 | 10040.13 C-03 (30-36") 1/29/2010 | 10050.02 C-04 (0-6") 2/4/2010 | 10050.03 C-04 (18-24") 2/4/2010 | 10050.04 C-04 (66-72") 2/4/2010 | 10050.05 D-05 (0-6") 2/4/2010 | 10050.06 D-05 (18-24") 2/4/2010 | 10050.07 D-05 (66-72") 2/4/2010 | 10050.08 C-05 (0-6") 2/4/2010 | 10050.09 C-05 (18-24") 2/4/2010 |
| Di-n-butylphthalate | 68000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Di-n-octyl phthalate | 27000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Fluoranthene | 24000 | ND | ND | | ND | ND | | 37.72 D | ND | | ND | ND |
| Fluorene | 24000 | ND | ND | | ND | ND | | 5.39 D | ND | | ND | ND |
| Hexachlorobenzene | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Hexachlorobutadiene | 25 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Hexachlorocyclopentadiene | 110 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Hexachloroethane | 140 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Indeno(1,2,3-cd)pyrene | 2 | ND | ND | | 0.55 JD | ND | _ | 7.72 D | ND | | ND | ND |
| Isophorone | 2000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Naphthalene | 17 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Nitrobenzene | 340 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| N-nitrosodimethylamine | 0.7 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| n-Nitrosodi-n-propylamine | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| n-Nitrosodiphenylamine | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Pentachlorophenol | 10 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Phenanthrene | 300000 | ND | ND | | ND | ND | | 36.54 D | ND | | ND | ND |
| Phenol | 210000 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Pyrene | 18000 | ND | ND | | ND | ND | _ | 28.93 D | ND | | ND | ND |
| Pyridine | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| TICs | NLE | 69420 | 54050 | | 73020 | 58470 | | 63770 | 49110 | | 57920 | 50600 | | 372500 | 132410 | | 233300 | 136740 | | 146800 | ND |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | ND | .0047 | | .0016 | .0011 | | .0093 | .0012 | | .0054 | .0386 | | .0046 | .002 | | .0032 | ND | | .0165 | .0646 |
| 4,4'-DDE | 9 | .0286 | .1392 E | | .0458 | .0209 | | .1129 | .0141 | | .0448 | .435 D | | .0692 | .0147 | | .011 | .0027 | | .0423 | .039 |
| 4,4'-DDT | 8 | 0.0422 | 0.0214 | | 0.047 | 0.0088 | | 0.1928 | 0.0061 | | 0.0335 | 0.2567 | | 0.0819 | 0.0134 | | 0.014 | 0.0014 | | 0.0856 | 0.0122 |
| Aldrin | 0.2 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-BHC | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-Chlordane | NLE | .1985 | ND | | .101 | ND | | .0058 | ND | | ND | ND | | .0027 | ND | | .0015 | ND | | ND | ND |
| Arochior 1016 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochior 1221 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1232 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1242 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1248 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1254 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1260 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| beta-BHC | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| delta-BHC | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dieldrin | 0.2 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan I | NLE | ND | ND | | ND | ND | | ND | .0017 | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan II | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan-Sulfate | 6800 | ND | ND | | .0021 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | .0012 | .0023 |
| Endrin | 340 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endrin Aldehyde | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| gamma-BHC | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| gamma-Chlordane | NLE | .2255 | ND | | .0947 | ND | | .0046 | ND | | ND | ND | | .0022 | ND | | ND | ND | | ND | .002 |
| Heptachlor | 0.7 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Heptachlor Epoxide | 0.3 | .0461 | ND | | .0246 | ND | | .0023 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Toxaphene | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10040.01 D-01 (0-6") 1/29/2010 | 10040.02 D-01 (18-24") 1/29/2010 | 10040.03 D-01 (30-36") 1/29/2010 | 10040.05 C-01 (0-6") 1/29/2010 | 10040.06 C-01 (18-24") 1/29/2010 | 10040.07 C-01 (30-36") 1/29/2010 | 10040.08 C-02 (0-6") 1/29/2010 | 10040.09 C-02 (18-24") 1/29/2010 | 10040.10 C-02 (30-36") 1/29/2010 | 10040.11 C-03 (0-6") 1/29/2010 | 10040.12 C-03 (18-24") 1/29/2010 | 10040.13 C-03 (30-36") 1/29/2010 | 10050.02 C-04 (0-6") 2/4/2010 | 10050.03 C-04 (18-24") 2/4/2010 | 10050.04 C-04 (66-72") 2/4/2010 | 10050.05 D-05 (0-6") 2/4/2010 | 10050.06 D-05 (18-24") 2/4/2010 | 10050.07 D-05 (66-72") 2/4/2010 | 10050.08 C-05 (0-6") 2/4/2010 | 10050.09 C-05 (18-24") 2/4/2010 |
|---|---|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 10900 | 18800 | | 11300 | 20800 | | 7570 | 1160 | | 1250 | 4020 | | 5110 | 5890 | | 1870 | 10100 | | 4380 | 5250 |
| Antimony | 450 | 0.942 | ND | | 0.867 | ND | | 1.04 | 1.48 | | 1.33 | 1.23 | | 0.789 | 0.788 | | 0.684 | ND | | 0.759 | 1.28 |
| Arsenic | NLE | 7.29 | 9.9 | | 6.97 | 11.6 | | ND | ND | | 9.69 | 5.57 | | 5.51 | 14.3 | | 2.54 | 6.64 | | 9.98 | 7.85 |
| Barium | 59000 | 30.4 | 46.2 | | 31.8 | 54 | | 22.5 | 5.62 | | 15.2 | 24.6 | | 19 | 14.9 | | 9.69 | 30.4 | | 32.5 | 40.7 |
| Beryllium | 140 | 0.89 | 1.24 | | 0.946 | 1.44 | | 0.389 | 0.096 | | 0.094 | 0.395 | | 0.455 | 0.333 | | 0.11 | 1.17 | | 0.857 | 0.899 |
| Cadmium | 78 | 0.76 | 1.47 | | 1.05 | 1.87 | | 0.335 | ND | | 0.512 | 0.398 | | 0.455 | ND | | ND | 1.32 | | 0.487 | 1.21 |
| Calcium | NLE | 1600 | 937 | | 2230 | 1200 | | 861 | 224 | | 1760 | 725 | | 862 | 195 | | 658 | 477 | | 972 | 1130 |
| Chromium | NLE | 76.7 | 89.6 | | 80.3 | 104 | | 40.2 | 10.2 | | 9.39 | 34 | | 42.2 | 28.5 | | 10.4 | 125 | | 39.9 | 43.2 |
| Cobalt | 590 | 2.3 | 6.17 | | 2.45 | 7.04 | | 2.57 | 0.51 | | 0.359 | 1.47 | | 1.81 | 0.635 | | 0.432 | 5.51 | | 1.31 | 1.58 |
| Copper | 45000 | 14.8 | ND | | 11.1 | ND | | 12.6 | ND | | 5.43 | 5.1 | | 5.52 | 7.66 | | 5.68 | ND | | 11.8 | 13.2 |
| Iron | NLE | 29100 E | 62700 E | | 31400 | 80600 E | | 16700 | 5320 | | 5060 | 16100 | | 19000 | 12000 | | 5620 | 55700 E | | 13700 | 16000 |
| Lead | 800 | 37.5 | 16.2 | | 28.6 | 20.4 | | 22.7 | 7.32 | | 14.7 | 36.8 | | 43.4 | 24.2 | | 16.7 | 11.5 | | 24.6 | 32.8 |
| Magnesium | NLE | 3350 | 2660 | | 3410 | 2750 | | 1260 | 179 | | 323 | 872 | | 988 | 842 | | 285 | 977 | | 962 | 984 |
| Manganese | 5900 | 70.6 | 195 | | 75.0 | 241 | | 69.7 | 25.6 | | 47.3 | 86.8 | | 75.9 | 15.1 | | 27.4 | 128 | | 19.3 | 17.2 |
| Nickel | 23000 | 7.47 | 18.7 | | 9.32 | 24 | | 7.62 | 2.17 | | 1.97 | 6.2 | | 5.95 | 2.87 | | 2.17 | 20.1 | | 6.82 | 9.33 |
| Potassium | NLE | 6670 | 4300 | | 6800 | 4140 | | 2160 | 348 | | 508 | 1220 | | 1640 | 1170 | | 403 | 1290 | | 1700 | 1520 |
| Selenium | 5700 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Silver | 5700 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Sodium | NLE | 209 | ND | | ND | ND | | ND | 285 | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Thallium | 79 | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vanadium | 1100 | 55.1 | 145 | | 59.8 | 180 | | 37.1 | 13.2 | | 12.1 | 39.2 | | 47.4 | 22.9 | | 12.6 | 179 | | 24.7 | 32.6 |
| Zinc | 110000 | 66.0 | 80.6 | | 77.3 | 195 | | 65.9 | 26 | | 24.8 | 75.2 | | 64.25 | 27.4 | | 22.5 | 97.9 | | 67.8 | 56.6 |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10050.10 C-05 (78-84") 2/4/2010 | 10050.11 D-06 (0-6") 2/4/2010 | 10050.12 D-06 (18-24") 2/4/2010 | 10050.13 D-06 (18-24") Duplicate 2/4/2010 | 10050.14 D-06 (78-84") 2/4/2010 | 10123.02 D-02 (0-6") 4/5/2010 | 10123.03 D-02 (18-24") 4/5/2010 | 10123.04 D-02 (60-66") 4/5/2010 | 10123.05 D-03 (0-6") 4/5/2010 | 10123.06 D-03 (18-24") 4/5/2010 | 10123.07 D-03 (60-66") 4/5/2010 | 10123.08 D-04 (0-6") 4/5/2010 | 10123.09 D-04 (18-24") 4/5/2010 | 10123.10 D-04 (60-66") 4/5/2010 | 10123.11 C-04.1 (0-6") 4/5/2010 | 10123.12 C-04.1 (18- 24") 4/5/2010 | 10123.13 C-04.1 (60- 66") 4/5/2010 | 10123.14 C-06 (0-6") 4/5/2010 | 10123.15 C-06 (18-24") 4/5/2010 | 10123.16 C-06 (60-66") 4/5/2010 |
|---|---|---------------------------------------|-------------------------------------|---------------------------------------|--|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---|---|-------------------------------------|---------------------------------------|---------------------------------------|
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,1-Trichloroethane | 4200 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,2,2-Tetrachloroethane | 3 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,2-Trichloroethane | 6 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1-Dichloroethene | 150 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichloroethane | 3 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichloropropane | 5 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Butanone | 44000 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Chloroethyl vinyl ether | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Hexanone | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Methyl-2-pentanone | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acetone | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acrolein | 1 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acrylonitrile | 3 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Benzene | 5 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromodichloromethane | 3 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromoform | 280 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromomethane | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Carbon disulfide | 110000 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Carbon Tetrachloride | 2 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chlorobenzene | 7400 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloroethane | 1100 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloroform | 2 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloromethane | 12 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| cis-1,2-Dichloroethene | 560 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| cis-1,3-Dichloropropene | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dibromochloromethane | 8 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dichlorodifluoromethane | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Diisopropyl ether | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Ethylbenzene | 110000 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| m+p-Xylenes | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Methyl tert-butyl ether | 320 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Methylene chloride | 97 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| o-Xylene | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Styrene | 260 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| tert-Butyl alcohol | 11000 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Tetrachloroethene | 5 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| TICs | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Toluene | 91000 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| trans-1,2-Dichloroethene | 720 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| trans-1,3-Dichloropropene | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Trichloroethene | 20 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Trichlorofluoromethane | 340000 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vinyl Acetate | NLE | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vinyl chloride | 2 | ND | | ND | | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| rinyi chioriue | | NU | | טא | | ND | | ND | NU | | ND | טא | | ND | ND | | ND | NU | | IND | ND |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 10050.10 C-05 (78-84") 2/4/2010 | 10050.11 D-06 (0-6") 2/4/2010 | 10050.12 D-06 (18-24") 2/4/2010 | 10050.13 D-06 (18-24") Duplicate | 10050.14 D-06 (78-84") 2/4/2010 | 10123.02 D-02 (0-6") 4/5/2010 | 10123.03 D-02 (18-24") 4/5/2010 | 10123.04 D-02 (60-66") 4/5/2010 | 10123.05 D-03 (0-6") 4/5/2010 | 10123.06 D-03 (18-24") 4/5/2010 | 10123.07 D-03 (60-66") 4/5/2010 | 10123.08 D-04 (0-6") 4/5/2010 | 10123.09 D-04 (18-24") 4/5/2010 | 10123.10 D-04 (60-66") 4/5/2010 10123.11 C-04.1 (0-6") 4/5/2010 | 10123.12 C-04.1 (18- 24") 4/5/2010 | 10123.13 C-04.1 (60- 66") | 10123.14 C-06 (0-6") 4/5/2010 | 10123.15 C-06 (18-24") 4/5/2010 | 10123.16 C-06 (60-66") 4/5/2010 |
|---|------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|--|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|--|---|---------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|
| | (mg/kg) | | | | 2/4/2010 | | | | | | | | | | | 4/5/2010 | 4/5/2010 | | | |
| Semi-Volatiles | | | NB | ND | ND | | NB | NB | | NB | ND | | N/D | ND. | | NB | | ND | ND. | |
| 1,2,4-Trichlorobenzene | 820 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 1,2-Dichlorobenzene | 59000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 1,3-Dichlorobenzene | 59000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 1,4-Dichlorobenzene | 13 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 2,4,5-Trichlorophenol | 68000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 2,4,6-Trichlorophenol | 74 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 2,4-Dichlorophenol | 2100 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 2,4-Dimethylphenol | 14000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| 2,4-Dinitrophenol 2.4-Dinitrotoluene | 1400 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| 2,6-Dinitrotoluene | 3 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| 2-Chloronaphthalene | 3 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | ND ND | ND ND | | ND | ND | |
| 2-Chlorophenol 2-Methylnaphthalene | 2200 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| 2-Methylnaphthalene 2-Methylphenol | 2400 | | ND | ND | ND ND | | ND | ND | | ND | ND | | ND ND | ND ND | ND ND | ND ND | | ND | ND | |
| 2-Metnyipnenoi 2-Nitroaniline | 3400 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | ND ND | ND | | ND | ND | |
| 2-Nitrophenol | 23000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 3,3'-Dichlorobenzidine 3-Nitroaniline | 4 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND ND | | ND | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | ND ND | ND | | ND | ND | |
| 4-Bromophenyl Phenyl ether | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| 4-Chloro-3-methylphenol 4-Chloroaniline | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| 4-Chlorophenyl phenyl ether | 66 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| 4-Methylphenol | NLE 340 | | ND | ND | ND | | ND | ND ND | | ND | ND | | ND | ND ND | ND ND | ND | | ND | ND | |
| 4-Nitroaniline | NLE | | ND | ND ND | ND | | ND | ND ND | | ND | ND | | ND ND | ND ND | | ND ND | | ND ND | ND ND | |
| 4-Nitrophenol | NLE | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | ND ND | ND ND | | ND ND | ND ND | |
| Acenaphthene | 37000 | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | ND ND | ND ND | | ND ND | ND ND | |
| Acenaphthylene | 300000 | | ND | ND ND | ND ND | | ND | ND ND | | ND | ND | | ND ND | ND ND | ND ND | ND ND | | ND | ND ND | |
| Aniline | NLE | | ND ND | ND ND | ND ND | | ND | ND ND | | ND ND | ND | | ND ND | ND ND | ND ND | ND ND | | ND ND | ND ND | |
| Anthracene | 30000 | | ND | ND ND | ND | | ND | ND ND | | ND | ND ND | | ND ND | ND ND | ND ND | ND ND | | ND | ND ND | |
| Azobenzene | NLE | | ND | ND ND | ND | | ND | ND ND | | ND | ND | | ND ND | ND | ND ND | ND ND | | ND | ND | |
| Benzidine | 0.7 | | ND | ND ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND | ND ND | ND ND | ND ND | | ND | ND ND | |
| Benzo(a)anthracene | 2 | | ND | ND | ND | | ND | ND | | ND | ND | | 0.45 J | ND | ND ND | ND ND | | ND | ND | |
| benzo(a)pyrene | 0.2 | | ND | ND ND | ND | | ND | ND | | ND | ND | | 0.43 J | ND ND | ND ND | ND | | ND | ND | |
| Benzo(b)fluoranthene | 2 | | ND | ND ND | ND | | ND | ND ND | | 0.27 J | 0.29 J | | 0.56 J | ND | ND ND | ND | | ND | ND | |
| Benzo(g,h,i)perylene | 30000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| Benzo(k)fluoranthene | 23 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| Benzoic Acid | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| Benzyl alcohol | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| bis(2-Chloroethoxy)methane | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| bis(2-Chloroethyl)ether | 2 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND ND | ND | | ND | ND | |
| bis(2-chloroisopropyl)ether | 67 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| bis(2-ethylhexyl) phthalate | 140 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| Butyl benzyl phthalate | 14000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| Chrysene | 230 | | ND | ND | ND | | ND | ND | | ND | ND | | 0.47 J | ND | ND | ND | | ND | ND | |
| Dibenz(a,h)anthracene | 0.2 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| Dibenzofuran | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| Diethyl phthalate | 550000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |
| Dimethyl phthalate | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | |

| Lab Sample ID | NJDEP | 10050.10 | 10050.11 | 10050.12 | 10050.13 | 10050.14 | 10123.02 | 10123.03 | 10123.04 | 10123.05 | 10123.06 | 10123.07 | 10123.08 | 10123.09 | 10123.10 | 10123.11 | 10123.12 | 10123.13 | 10123.14 | 10123.15 | 10123.16 |
|---|--------------------------------|---------------------------|-------------------------|---------------------------|--|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|---------------------------|---------------------------------|---------------------------------|-------------------------|---------------------------|---------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | C-05 (78-84") 2/4/2010 | D-06 (0-6") 2/4/2010 | D-06 (18-24") 2/4/2010 | D-06 (18-24") Duplicate 2/4/2010 | D-06 (78-84") 2/4/2010 | D-02 (0-6") 4/5/2010 | D-02 (18-24") 4/5/2010 | D-02 (60-66") 4/5/2010 | D-03 (0-6") 4/5/2010 | D-03 (18-24") 4/5/2010 | D-03 (60-66") 4/5/2010 | D-04 (0-6") 4/5/2010 | D-04 (18-24") 4/5/2010 | D-04 (60-66") 4/5/2010 | C-04.1 (0-6") 4/5/2010 | C-04.1 (18- 24") 4/5/2010 | C-04.1 (60- 66") 4/5/2010 | C-06 (0-6") 4/5/2010 | C-06 (18-24") 4/5/2010 | C-06 (60-66") 4/5/2010 |
| Di-n-butylphthalate | 68000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Di-n-octyl phthalate | 27000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Fluoranthene | 24000 | | ND | ND | ND | | ND | ND | | 0.34 J | 0.46 J | | 0.99 | ND | | ND | ND | | ND | ND | |
| Fluorene | 24000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorobenzene | 1 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorobutadiene | 25 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorocyclopentadiene | 110 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachloroethane | 140 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Isophorone | 2000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Naphthalene | 17 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Nitrobenzene | 340 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| N-nitrosodimethylamine | 0.7 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodi-n-propylamine | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodiphenylamine | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Pentachlorophenol | 10 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Phenanthrene | 300000 | | ND | ND | ND | | ND | ND | | ND | ND | | 0.56 | ND | | ND | ND | | ND | ND | |
| Phenol | 210000 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Pyrene | 18000 | | ND | ND | ND | | ND | ND | | ND | 0.4 J | | 0.83 | ND | | ND | ND | | ND | ND | |
| Pyridine | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| TICs | NLE | | 380200 | 145070 | 148150 | | 289500 | 102330 | | 103900 | 1200 | | ND | 81690 | | 578000 | 81600 | | 103620 | 35770 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | | .0179 | .0538 | .0567 | | 0.0251 | 0.1036 | | 0.1667 | 0.0635 | | 0.0753 | 0.248 | | 0.0122 | 0.0033 | | 0.0257 | 0.0007 | |
| 4,4'-DDE | 9 | | .0335 | .0449 | .0512 | | 0.0371 | 0.0649 | | 0.0907 | 0.0711 | | 0.0495 | 0.1643 | | 0.026 | 0.0043 | | 0.0738 | 0.0041 | |
| 4,4'-DDT | 8 | | 0.0596 | 0.0469 | 0.0558 | | 0.0954 | 0.0435 | | 0.0414 | 0.1574 | | 0.0349 | 1.1141 | | 0.0389 | 0.0065 | | 0.0669 | 0.0017 | |
| Aldrin | 0.2 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| alpha-BHC | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| alpha-Chlordane | NLE | | ND | ND | ND | | ND | ND | | ND | 0.0024 | | 0.0078 | ND | | 0.0137 | ND | | 0.0039 | ND | |
| Arochlor 1016 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1221 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1232 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1242 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1248 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1254 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1260 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| beta-BHC | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| delta-BHC | NLE | | ND | ND | ND | | ND | ND | | ND | ND 0.0024 | | ND | ND | | ND | ND | | ND | ND | |
| Dieldrin Endosulfan I | 0.2 | | ND | ND ND | ND | | ND | ND ND | | ND | 0.0024 | | ND ND | ND | | ND ND | ND ND | | ND | ND | |
| Endosulfan II | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan 11 Endosulfan-Sulfate | NLE | | ND | ND 0017 | ND ND | | ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND | ND | | ND ND | ND ND | |
| Endosuiran-Suirate Endrin | 6800 | | ND | .0017 | ND ND | | ND | ND | | ND | ND | | ND | ND | | ND ND | ND ND | | ND | ND | |
| Endrin Endrin Aldehyde | 340 NUE | | ND | ND ND | ND | | ND | ND ND | | ND | ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND | |
| gamma-BHC | NLE | | ND | ND ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND ND | ND | | ND ND | ND ND | |
| gamma-Bric gamma-Chlordane | NLE | | ND | ND ND | ND ND | | ND ND | ND 0.0033 | | ND 0.0037 | ND 0.004 | | ND 0.0000 | ND 0.00F | | ND 0.0127 | ND | | ND | ND ND | |
| Heptachlor | NLE 0.7 | | ND | | ND | | | 0.0022 | | 0.0027 | 0.004 | | 0.0099 | 0.005 | | 0.0127 | ND | | 0.0034 | ND | |
| Heptachlor Epoxide | 0.7 | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND 0.004 | ND ND | | ND 0.0044 | ND ND | | ND 0.0017 | ND ND | |
| Toxaphene | | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | 0.004 ND | ND ND | | 0.0044 ND | ND ND | | 0.0017 ND | ND ND | |
| TOXUPITEILE | 3 | | ND | ND | ND | | ND | NU | | שא | ND | | שאו | ND | | ND | שא | | ND | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10050.10 C-05 (78-84") 2/4/2010 | 10050.11 D-06 (0-6") 2/4/2010 | 10050.12 D-06 (18-24") 2/4/2010 | 10050.13 D-06 (18-24") Duplicate 2/4/2010 | 10050.14 D-06 (78-84") 2/4/2010 | 10123.02 D-02 (0-6") 4/5/2010 | 10123.03 D-02 (18-24") 4/5/2010 | 10123.04 D-02 (60-66") 4/5/2010 | 10123.05 D-03 (0-6") 4/5/2010 | 10123.06 D-03 (18-24") 4/5/2010 | 10123.07 D-03 (60-66") 4/5/2010 | 10123.08 D-04 (0-6") 4/5/2010 | 10123.09 D-04 (18-24") 4/5/2010 | 10123.10 D-04 (60-66") 4/5/2010 | 10123.11 C-04.1 (0-6") 4/5/2010 | 10123.12 C-04.1 (18- 24") 4/5/2010 | 10123.13 C-04.1 (60- 66") 4/5/2010 | 10123.14 C-06 (0-6") 4/5/2010 | 10123.15 C-06 (18-24") 4/5/2010 | 10123.16 C-06 (60-66") 4/5/2010 |
|---|---|---------------------------------------|-------------------------------------|---------------------------------------|--|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---|---|-------------------------------------|---------------------------------------|---------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | | 5140 | 12200 | 8970 | | 6750 | 4790 | | 5890 | 4570 | | 6880 | 6460 | | 4850 | 5010 | | 5280 | 4180 | |
| Antimony | 450 | | 3.14 | 2.03 | ND | | 2.08 | 2.9 | | 1.65 | 2.06 | | 1.44 | 1.49 | | 2.19 | 1.46 | | 1.99 | 2.61 | |
| Arsenic | NLE | | 14.7 | 45.6 | 43.4 | | 11.6 | 5.68 | | 8.78 | 10.1 | | 10.8 | 8.61 | | 9.01 | 7.37 | | 9.31 | 7.19 | |
| Barium | 59000 | | 42.1 | 74 | 58 | | 37.1 | 31 | | 36 | 46.9 | | 32.2 | 42.7 | | 26.4 | 19.3 | | 23.8 | 9.3 | |
| Beryllium | 140 | | 0.852 | 1.3 | 0.983 | | 1.09 | 0.789 | | 0.954 | 0.58 | | 0.905 | 0.971 | | 0.482 | 0.641 | | 0.479 | 0.366 | |
| Cadmium | 78 | | 0.953 | 1.02 | 0.788 | | 1.11 | 0.438 | | 0.891 | 0.59 | | 0.739 | 0.478 | | 0.414 | 0.394 | | 0.386 | 0.206 | |
| Calcium | NLE | | 1760 | 1320 | 1160 | | 1200 | 485 | | 969 | 975 | | 972 | 1060 | | 1620 | 403 | | 1350 | 344 | |
| Chromium | NLE | | 54.3 | 144 | 116 | | 77.2 | 47.2 | | 73.1 | 49 | | 67.9 | 72.1 | | 32.6 | 48.6 | | 40.3 | 121 | |
| Cobalt | 590 | | 2.06 | 2.23 | 1.32 | | 1.82 | 1.47 | | 1.42 | 1.24 | | 1.61 | 1.78 | | 1.31 | 1.51 | | 1.21 | 0.934 | |
| Copper | 45000 | | 12 | 10.1 | 6.27 | | 12.2 | 23.2 | | 15.6 | 11.8 | | 11.1 | 8.25 | | 17 | 3 | | 20.8 | 13 | |
| Iron | NLE | | 17600 | 38000 | 30500 | | 20400 | 14600 | | 18200 | 16100 | | 20400 | 18700 | | 16100 | 22100 | | 16000 | 15900 | |
| Lead | 800 | | 31.6 | 32.3 | 44.6 | | 28.4 | 30.7 | | 34.3 | 29.4 | | 31.5 | 22.4 | | 45.3 | 16.4 | | 57 | 33.9 | |
| Magnesium | NLE | | 1480 | 4740 | 3510 | | 2230 | 1230 | | 1760 | 1280 | | 1870 | 1940 | | 805 | 526 | | 909 | 537 | |
| Manganese | 5900 | | 42.8 | 45.1 | 19.7 | | 32.6 | 9.45 | | 23.5 | 18.9 | | 49.3 | 26.6 | | 82.1 | 94.6 | | 64.8 | 65.9 | |
| Nickel | 23000 | | 9.13 | 7.39 | 6.24 | | 9.16 | 5.54 | | 9.46 | 6.52 | | 9.43 | 7.65 | | 5.42 | 6.18 | | 5.61 | 6.61 | |
| Potassium | NLE | | 3090 | 11000 | 7750 | | 4680 | 2540 | | 3650 | 2660 | | 3860 | 3900 | | 867 | 443 | | 998 | 711 | |
| Selenium | 5700 | | ND | ND | ND | | 3.29 | 2.16 | | 6.31 | 4.14 | | 3.5 | 3.41 | | 5.24 | 4.53 | | 4.48 | 3.42 | |
| Silver | 5700 | | ND | ND | ND | | 1.3 | 1.01 | | 1.2 | 1.25 | | 1.25 | 1.28 | | 1.25 | 1.32 | | 1.14 | 0.911 | |
| Sodium | NLE | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Thallium | 79 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Vanadium | 1100 | | 32.5 | 76 | 55.9 | | 34.8 | 25 | | 29.3 | 24.2 | | 31.9 | 33.7 | | 31.2 | 48.6 | | 29.9 | 32.8 | |
| Zinc | 110000 | | 68.9 | 67.6 | 54.9 | | 71 | 55 | | 61.3 | 56 | | 57.5 | 59.8 | | 53.7 | 43.2 | | 53.4 | 34.7 | |

| Lab Sample ID | NJDEP | 10123.17 | 10123.18 | 10123.19 | 10123.20 | 10123.21 | 10123.22 | 10123.23 | 10123.24 | 10123.25 | 10123.26 | 10123.27 | 10123.28 | 10123.29 | 10123.30 | 10123.31 | 10123.32 | 10123.33 | 10123.34 | 10123.35 | 10131.02 |
|---|--------------------------------|---------------------------|---------------------------------|---------------------------------|-------------------------|---------------------------|--|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | D-04.1 (0-6") 4/5/2010 | D-04.1 (18- 24") 4/5/2010 | D-04.1 (60- 66") 4/5/2010 | C-07 (0-6") 4/5/2010 | C-07 (18-24") 4/5/2010 | C-07 (18-24") Duplicate 4/5/2010 | C-07 (60-66") 4/5/2010 | D-07 (0-6") 4/5/2010 | D-07 (18-24") 4/5/2010 | D-07 (60-66") 4/5/2010 | D-08 (0-6") 4/5/2010 | D-08 (18-24") 4/5/2010 | D-08 (60-66") 4/5/2010 | C-08 (0-6") 4/5/2010 | C-08 (18-24") 4/5/2010 | C-08 (60-66") 4/5/2010 | D-09 (0-6") 4/5/2010 | D-09 (18-24") 4/5/2010 | D-09 (60-66") 4/5/2010 | C-09 (0-6") 4/6/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | ND | | ND | | ND | | ND | ND | |
| 1,1,1-Trichloroethane | 4200 | | ND | ND | | ND | | ND | | ND | ND | |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | ND | | ND | | ND | | ND | ND | |
| 1,1,2-Trichloroethane | 6 | | ND | ND | | ND | | ND | | ND | ND | |
| 1,1-Dichloroethene | 150 | | ND | ND | | ND | | ND | | ND | ND | |
| 1,2-Dichloroethane | 3 | | ND | ND | | ND | | ND | | ND | ND | |
| 1,2-Dichloropropane | 5 | | ND | ND | | ND | | ND | | ND | ND | |
| 2-Butanone | 44000 | | ND | ND | | ND | | ND | | ND | ND | |
| 2-Chloroethyl vinyl ether | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| 2-Hexanone | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| 4-Methyl-2-pentanone | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Acetone | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Acrolein | 1 | | ND | ND | | ND | | ND | | ND | ND | |
| Acrylonitrile | 3 | | ND | ND | | ND | | ND | | ND | ND | |
| Benzene | 5 | | ND | ND | | ND | | ND | | ND | ND | |
| Bromodichloromethane | 3 | | ND | ND | | ND | | ND | | ND | ND | |
| Bromoform | 280 | | ND | ND | | ND | | ND | | ND | ND | |
| Bromomethane | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Carbon disulfide | 110000 | | ND | ND | | ND | | ND | | ND | ND | |
| Carbon Tetrachloride | 2 | | ND | ND | | ND | | ND | | ND | ND | |
| Chlorobenzene | 7400 | | ND | ND | | ND | | ND | | ND | ND | |
| Chloroethane | 1100 | | ND | ND | | ND | | ND | | ND | ND | |
| Chloroform | 2 | | ND | ND | | ND | | ND | | ND | ND | |
| Chloromethane | 12 | | ND | ND | | ND | | ND | | ND | ND | |
| cis-1,2-Dichloroethene | 560 | | ND | ND | | ND | | ND | | ND | ND | Į l |
| cis-1,3-Dichloropropene | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Dibromochloromethane | 8 | | ND | ND | | ND | | ND | | ND | ND | Į l |
| Dichlorodifluoromethane | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Diisopropyl ether | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Ethylbenzene | 110000 | | ND | ND | | ND | | ND | | ND | ND | |
| m+p-Xylenes | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Methyl tert-butyl ether | 320 | | ND | ND | | ND | | ND | | ND | ND | |
| Methylene chloride | 97 | | ND | ND | | ND | | ND | | ND | ND | |
| o-Xylene | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Styrene | 260 | | ND | ND | | ND | | ND | | ND | ND | |
| tert-Butyl alcohol | 11000 | | ND | ND | | ND | | ND | | ND | ND | |
| Tetrachloroethene | 5 | | ND | ND | | ND | | ND | | ND | ND | |
| TICs | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Toluene | 91000 | | ND | ND | | ND | | ND | | ND | ND | |
| trans-1,2-Dichloroethene | 720 | | ND | ND | | ND | | ND | | ND | ND | |
| trans-1,3-Dichloropropene | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Trichloroethene | 20 | | ND | ND | | ND | | ND | | ND | ND | |
| Trichlorofluoromethane | 340000 | | ND | ND | | ND | | ND | | ND | ND | |
| Vinyl Acetate | NLE | | ND | ND | | ND | | ND | | ND | ND | |
| Vinyl chloride | 2 | | ND | ND | | ND | | ND | | ND | ND | |

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 10123.17 D-04.1 (0-6") | 10123.18 D-04.1 (18- | 10123.19 D-04.1 (60- | 10123.20 C-07 (0-6") 4/5/2010 | 10123.21 C-07 (18-24") | 10123.22 C-07 (18-24") | 10123.23 C-07 (60-66") 4/5/2010 | 10123.24 D-07 (0-6") | 10123.25 D-07 (18-24") | 10123.26 D-07 (60-66") | 10123.27 D-08 (0-6") 4/5/2010 | 10123.28 D-08 (18-24") | 10123.29 D-08 (60-66") 4/5/2010 | 10123.30 C-08 (0-6") 4/5/2010 | 10123.31 C-08 (18-24") | 10123.32 C-08 (60-66") 4/5/2010 | 10123.33 D-09 (0-6") 4/5/2010 | 10123.34 D-09 (18-24") | 10123.35 D-09 (60-66") 4/5/2010 | 10131.02 C-09 (0-6") 4/6/2010 |
|-------------------------------------|------------------------------|---------------------------|-------------------------|-------------------------|-------------------------------------|---------------------------|---------------------------|---------------------------------------|-------------------------|---------------------------|---------------------------|-------------------------------------|---------------------------|---------------------------------------|-------------------------------------|---------------------------|---------------------------------------|-------------------------------------|---------------------------|---------------------------------------|-------------------------------------|
| Sample Date | (mg/kg) | 4/5/2010 | 24") 4/5/2010 | 66") 4/5/2010 | 4/5/2010 | 4/5/2010 | Duplicate 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/5/2010 | 4/6/2010 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,2-Dichlorobenzene | 59000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,3-Dichlorobenzene | 59000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,4-Dichlorobenzene | 13 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4,5-Trichlorophenol | 68000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4,6-Trichlorophenol | 74 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4-Dichlorophenol | 2100 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4-Dimethylphenol | 14000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4-Dinitrophenol | 1400 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4-Dinitrotoluene | 3 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,6-Dinitrotoluene | 3 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Chloronaphthalene | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Chlorophenol 2-Methylnaphthalene | 2200 | ND | ND | | ND | ND | ND ND | | ND | ND ND | | ND | ND | | ND ND | ND | | ND | ND | | ND |
| 2-Methylphenol | 2400 3400 | ND ND | ND ND | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| 2-Nitroaniline | 23000 | ND ND | ND ND | | ND | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND |
| 2-Nitrophenol | NLE | ND | ND | | ND | ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND |
| 3,3'-Dichlorobenzidine | 4 | ND ND | ND ND | | ND | ND | ND | | ND | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND |
| 3-Nitroaniline | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4,6-Dinitro-2-methylphenol | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Bromophenyl Phenyl ether | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Chloro-3-methylphenol | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Chloroaniline | 66 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Chlorophenyl phenyl ether | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Methylphenol | 340 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Nitroaniline | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Nitrophenol | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acenaphthene | 37000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acenaphthylene | 300000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Aniline Anthracene | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Azobenzene | 30000 | ND | ND | | ND ND | ND | ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND |
| Benzidine | 0.7 | ND ND | ND ND | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Benzo(a)anthracene | 2 | ND ND | 0.41 J | | ND ND | ND ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND |
| benzo(a)pyrene | 0.2 | ND | 0.33 J | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzo(b)fluoranthene | 2 | ND | 0.6 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | 0.49 | ND | | ND |
| Benzo(g,h,i)perylene | 30000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzo(k)fluoranthene | 23 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzoic Acid | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzyl alcohol | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-Chloroethoxy)methane | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-Chloroethyl)ether | 2 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-chloroisopropyl)ether | 67 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-ethylhexyl) phthalate | 140 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Butyl benzyl phthalate | 14000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chrysene | 230 | ND | 0.36 J | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Dibenz(a,h)anthracene Dibenzofuran | 0.2 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Diethyl phthalate | NLE | ND ND | ND ND | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Diethyl phthalate | 550000 NLE | ND ND | ND ND | | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Difficulty photoarace | INLE | שוו | ND | | ND | ND | טא | | ND | שוו | | NU | ND | | ND | ND | | שא | ND | | ND |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 10123.17 D-04.1 (0-6") 4/5/2010 | 10123.18 D-04.1 (18- 24") | 10123.19 D-04.1 (60- 66") | 10123.20 C-07 (0-6") 4/5/2010 | 10123.21 C-07 (18-24") 4/5/2010 | 10123.22 C-07 (18-24") Duplicate | 10123.23 C-07 (60-66") 4/5/2010 | 10123.24 D-07 (0-6") 4/5/2010 | 10123.25 D-07 (18-24") 4/5/2010 | 10123.26 D-07 (60-66") 4/5/2010 | 10123.27 D-08 (0-6") 4/5/2010 | 10123.28 D-08 (18-24") 4/5/2010 | 10123.29 D-08 (60-66") 4/5/2010 | 10123.30 C-08 (0-6") 4/5/2010 | 10123.31 C-08 (18-24") 4/5/2010 | 10123.32 C-08 (60-66") 4/5/2010 | 10123.33 D-09 (0-6") 4/5/2010 | 10123.34 D-09 (18-24") 4/5/2010 | 10123.35 D-09 (60-66") 4/5/2010 | 10131.02 C-09 (0-6") 4/6/2010 |
|---|------------------------------|---------------------------------------|---------------------------------|---------------------------------|-------------------------------------|---------------------------------------|--|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|
| | (mg/kg) | | 4/5/2010 | 4/5/2010 | | | 4/5/2010 | | | | | | | | | | | | | | |
| Di-n-butylphthalate | 68000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Di-n-octyl phthalate | 27000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Fluoranthene | 24000 | ND | 0.68 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Fluorene | 24000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachlorobenzene | 1 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachlorobutadiene | 25 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachlorocyclopentadiene | 110 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachloroethane | 140 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Indeno(1,2,3-cd)pyrene | 2 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Isophorone Naphthalene | 2000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| ., | 17 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Nitrobenzene N. nitrosodimethylamine | 340 | ND | ND | | ND | ND ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| N-nitrosodimethylamine | 0.7 N. F | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| n-Nitrosodi-n-propylamine | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| n-Nitrosodiphenylamine | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Pentachlorophenol Phenanthrene | 10 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Phenol | 300000 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Pyrene | 210000 | ND | ND 0.61 | | ND | ND | ND ND | | ND | ND | | ND |
| , | 18000 | ND | 0.61 | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Pyridine TICs | NLE | ND 200400 | ND 00400 | | ND 100300 | ND | ND | | ND 201200 | ND 271700 | | ND 224400 | ND 101400 | | ND 227100 | ND | | ND | ND 146300 | | ND |
| | NLE | 286400 | 99400 | | 109300 | 350000 | 111800 | | 261200 | 271700 | | 234100 | 181400 | | 227100 | 250100 | | 226800 | 146200 | | 98100 |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.0117 | 0.02 | | | 0.0389 | 0.0395 | | 0.0204 | 0.042 | | 0.0757 | 0.0865 | | 0.0687 | 0.0316 | | 0.0654 | 0.0977 | | 0.0189 |
| 4,4'-DDE | 9 | 0.0242 | 0.0097 | | | 0.0476 | 0.0286 | | 0.0108 | 0.0193 | | 0.0444 | 0.0267 | | 0.0418 | 0.0205 | | 0.0456 | 0.0698 | | 0.0188 |
| 4,4'-DDT | 8 | 0.0455 | 0.1116 | | | 0.1111 | 0.0706 | | 0.0125 | 0.0076 | | 0.0597 | 0.0072 | | 0.0522 | 0.0165 | | 0.0498 | 0.2839 | | 0.0209 |
| Aldrin | 0.2 | ND | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| alpha-BHC | NLE | ND | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| alpha-Chlordane | NLE | 0.0029 | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1016 | NLE | ND | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1221 | NLE | ND | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1232 | NLE | ND | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1242 Arochlor 1248 | NLE | ND | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| | NLE | ND | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1254 Arochlor 1260 | NLE NLE | ND ND | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| beta-BHC | | | | | | | | | | | | | ND ND | | | ND ND | | | | | ND ND |
| delta-BHC | NLE NLE | ND ND | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Dieldrin | | ND ND | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Endosulfan I | 0.2 NLE | ND ND | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Endosulfan II | NLE | ND ND | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Endosulfan-Sulfate | 6800 | ND ND | ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Endrin | 340 | ND ND | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Endrin Aldehyde | NLE | ND ND | ND | | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND |
| gamma-BHC | NLE | ND ND | ND ND | | | ND ND | ND ND | | | ND ND | | | ND ND | | ND ND | ND ND | | | ND ND | | ND ND |
| gamma-Chlordane | NLE | 0.0036 | ND ND | | | 0.0016 | ND ND | | ND ND | ND ND | | ND 0.0018 | 0.0022 | | ND ND | ND ND | | ND ND | 0.0024 | | ND ND |
| Heptachlor | 0.7 | 0.0036 ND | ND ND | | | 0.0016 ND | ND ND | | ND ND | ND ND | | 0.0018 ND | 0.0022 ND | | ND ND | ND ND | | ND ND | 0.0024 ND | | ND ND |
| Heptachlor Epoxide | 0.7 | 0.0011 | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| | | 0.0011 | שמו | | l . | שוו | שאו | | עווו ן | I IND | 1 | IND | IND | 1 | עוו ו | I ND | 1 | NU | עווו ו | | ND |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10123.17 D-04.1 (0-6") 4/5/2010 | 10123.18 D-04.1 (18- 24") 4/5/2010 | 10123.19 D-04.1 (60- 66") 4/5/2010 | 10123.20 C-07 (0-6") 4/5/2010 | 10123.21 C-07 (18-24") 4/5/2010 | 10123.22 C-07 (18-24") Duplicate 4/5/2010 | 10123.23 C-07 (60-66") 4/5/2010 | 10123.24 D-07 (0-6") 4/5/2010 | 10123.25 D-07 (18-24") 4/5/2010 | 10123.26 D-07 (60-66") 4/5/2010 | 10123.27 D-08 (0-6") 4/5/2010 | 10123.28 D-08 (18-24") 4/5/2010 | 10123.29 D-08 (60-66") 4/5/2010 | 10123.30 C-08 (0-6") 4/5/2010 | 10123.31 C-08 (18-24") 4/5/2010 | 10123.32 C-08 (60-66") 4/5/2010 | 10123.33 D-09 (0-6") 4/5/2010 | 10123.34 D-09 (18-24") 4/5/2010 | 10123.35 D-09 (60-66") 4/5/2010 | 10131.02 C-09 (0-6") 4/6/2010 |
|---|---|---------------------------------------|---|---|-------------------------------------|---------------------------------------|--|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 2480 | 2500 | | 2350 | 2310 | 2720 | | 2120 | 10900 | | 10300 | 10400 | | 9970 | 9690 | | 11900 | 11400 | | 9810 |
| Antimony | 450 | 1.33 | 1.94 | | 2.23 | 1.68 | 1.97 | | 1.65 | 4.02 | | 3.41 | 4.36 | | 3 | 3 | | 3.29 | 3.59 | | 2.14 |
| Arsenic | NLE | 12.6 | 27.7 | | 14.5 | 11.1 | 9.56 | | 12.1 | 11.7 | | 11.2 | 65.7 | | 10.5 | 9.72 | | 10.5 | 17.4 | | 13.1 |
| Barium | 59000 | 41.9 | 76.5 | | 80.4 | 26.8 | 18.4 | | 82.2 | 72.5 | | 62.5 | 80.1 | | 42.6 | 53.7 | | 53.5 | 73.5 | | 41.5 |
| Beryllium | 140 | 0.352 | 0.563 | | 0.119 | 0.189 | 0.318 | | 0.304 | 1.81 | | 1.59 | 1.5 | | 1.31 | 1.37 | | 1.62 | 1.77 | | 1.09 |
| Cadmium | 78 | 0.473 | 0.388 | | 0.226 | 0.221 | 0.227 | | 0.363 | 2.4 | | 0.917 | 0.995 | | 0.672 | 0.582 | | 0.909 | 0.87 | | 1.05 |
| Calcium | NLE | 1460 | 1760 | | 1700 | 750 | 838 | | 1820 | 7160 | | 1430 | 7500 | | 966 | 1110 | | 1950 | 5670 | | 2450 |
| Chromium | NLE | 39.2 | 22.3 | | 21.7 | 29.6 | 116 | | 23.5 | 138 | | 153 | 153 | | 131 | 132 | | 174 | 167 | | 99.8 |
| Cobalt | 590 | 1.04 | 1.53 | | 0.803 | 0.932 | 1.31 | | 1.53 | 2.11 | | 0.995 | 0.967 | | 0.843 | 1.36 | | 0.697 | 1.14 | | 1.47 |
| Copper | 45000 | 14.9 | 9.14 | | 7.29 | 10.2 | 12.9 | | 5.67 | 7.58 | | ND | ND | | 3.35 | ND | | ND | ND | | 11.6 |
| Iron | NLE | 10300 | 11900 | | 14100 | 11000 | 11000 | | 12600 | 34600 | | 36300 | 40200 | | 34200 | 31400 | | 39800 | 37200 | | 30600 |
| Lead | 800 | 23.2 | 13 | | 11.3 | 22.2 | 21.5 | | 11.1 | 24.1 | | 19.9 | 23.5 | | 33.5 | 15.7 | | 21.8 | 14.1 | | 25.1 |
| Magnesium | NLE | 567 | 492 | | 1220 | 534 | 513 | | 530 | 4520 | | 5060 | 4860 | | 4710 | 4270 | | 5670 | 5650 | | 3310 |
| Manganese | 5900 | 28.1 | 21.1 | | 18.6 | 15.8 | 22.5 | | 15.5 | 43.8 | | 20.6 | 20.8 | | 29.6 | 32.6 | | 22.8 | 22.9 | | 82.7 |
| Nickel | 23000 | 6.45 | 5.14 | | 3.96 | 3.68 | 9.66 | | 4.59 | 16.8 | | 7.6 | 8.54 | | 6.09 | 5.93 | | 7.6 | 15 | | 7.77 |
| Potassium | NLE | 1470 | 1090 | | 2280 | 933 | 735 | | 1150 | 9600 | | 11400 | 12000 | | 10800 | 9130 | | 13000 | 13000 | | 7110 |
| Selenium | 5700 | 6.04 | 8.94 | | 9.61 | 5.21 | 4.52 | | 6.77 | 17.7 | | 7.61 | 13.3 | | 6.92 | 8.66 | | 10.3 | 15.7 | | 13.7 |
| Silver | 5700 | 0.678 | 0.824 | | 0.85 | 0.744 | 0.664 | | 0.857 | 2.74 | | 2.04 | 2.1 | | 1.74 | 1.77 | | 2.09 | 2.03 | | 4.61 |
| Sodium | NLE | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Thallium | 79 | ND | ND | | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Vanadium | 1100 | 15.1 | 14 | | 8.32 | 13.4 | 17 | | 11.1 | 64.7 | | 62.4 | 64.4 | | 54.1 | 56.4 | | 69.8 | 70.4 | | 59.7 |
| Zinc | 110000 | 55 | 76.1 | | 54.9 | 46.9 | 50.2 | | 59.1 | 88.7 | | 63.8 | 53.7 | | 71 | 65.4 | | 66.4 | 80.2 | | 62.9 |

| Lab Sample ID | NJDEP | 10131.03 | 10131.04 | 10131.05 | 10131.06 | 10131.07 | 10131.08 | 10131.09 | 10131.10 | 10131.11 | 10131.12 | 10131.13 | 10131.14 | 10131.15 | 10131.16 | 10131.17 | 10131.18 | 10131.19 | 10131.20 | 10131.21 | 10131.22 |
|---|--------------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|
| Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | C-09 (18-24") 4/6/2010 | C-09 (60-66") 4/6/2010 | D-10 (0-6") 4/6/2010 | D-10 (18-24") 4/6/2010 | D-10 (48-54") 4/6/2010 | C-10 (0-6") 4/6/2010 | C-10 (18-24") 4/6/2010 | C-10 (60-66") 4/6/2010 | D-11 (0-6") 4/6/2010 | D-11 (18-24") 4/6/2010 | D-11 (60-66") 4/6/2010 | C-11 (0-6") 4/6/2010 | C-11 (18-24") 4/6/2010 | C-11 (60-66") 4/6/2010 | D-12 (0-6") 4/6/2010 | D-12 (18-24") 4/6/2010 | D-12 (60-66") 4/6/2010 | C-12 (0-6") 4/6/2010 | C-12 (18-24") 4/6/2010 | C-12 (60-66") 4/6/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | ND | ND | | ND | ND |
| 1,1,1-Trichloroethane | 4200 | ND | ND | | ND | ND |
| 1,1,2,2-Tetrachloroethane | 3 | ND | ND | | ND | ND |
| 1,1,2-Trichloroethane | 6 | ND | ND | | ND | ND |
| 1,1-Dichloroethene | 150 | ND | ND | | ND | ND |
| 1,2-Dichloroethane | 3 | ND | ND | | ND | ND |
| 1,2-Dichloropropane | 5 | ND | ND | | ND | ND |
| 2-Butanone | 44000 | ND | ND | | ND | ND |
| 2-Chloroethyl vinyl ether | NLE | ND | ND | | ND | ND |
| 2-Hexanone | NLE | ND | ND | | ND | ND |
| 4-Methyl-2-pentanone | NLE | ND | ND | | ND | ND |
| Acetone | NLE | ND | ND | | ND | ND |
| Acrolein | 1 | ND | ND | | ND | ND |
| Acrylonitrile | 3 | ND | ND | | ND | ND |
| Benzene | 5 | ND | ND | | ND | ND |
| Bromodichloromethane | 3 | ND | ND | | ND | ND |
| Bromoform | 280 | ND | ND | | ND | ND |
| Bromomethane | NLE | ND | ND | | ND | ND |
| Carbon disulfide | 110000 | ND | ND | | ND | ND |
| Carbon Tetrachloride | 2 | ND | ND | | ND | ND |
| Chlorobenzene | 7400 | ND | ND | | ND | ND |
| Chloroethane | 1100 | ND | ND | | ND | ND |
| Chloroform | 2 | ND | ND | | ND | ND |
| Chloromethane | 12 | ND | ND | | ND | ND |
| cis-1,2-Dichloroethene | 560 | ND | ND | | ND | ND |
| cis-1,3-Dichloropropene | NLE | ND | ND | | ND | ND |
| Dibromochloromethane Dichlorodifluoromethane | 8 | ND | ND | | ND | ND |
| | NLE | ND | ND | | ND | ND ND |
| Diisopropyl ether Ethylbenzene | 110000 | ND | ND ND | | ND ND | ND ND |
| m+p-Xvlenes | NLE | ND ND | ND ND | | ND ND | ND ND |
| Methyl tert-butyl ether | 320 | ND ND | ND ND | | ND ND | ND ND |
| Methylene chloride | 97 | ND ND | ND ND | | ND ND | ND ND |
| o-Xylene | NLE | ND ND | ND ND | | ND ND | ND ND |
| Styrene | 260 | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND |
| tert-Butyl alcohol | 11000 | ND | ND ND | | ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND | | ND ND | ND | | ND | ND ND |
| Tetrachloroethene | 5 | ND | ND | | ND | ND ND | | ND ND | ND | | ND | ND |
| TICs | NLE | ND | ND | | ND | ND |
| Toluene | 91000 | ND | ND | | ND. | ND | | ND. | ND | | ND | ND ND | | ND ND | ND | | ND ND | ND | | ND | ND |
| trans-1,2-Dichloroethene | 720 | ND | ND | | ND | ND |
| trans-1,3-Dichloropropene | NLE | ND | ND | | ND | ND |
| Trichloroethene | 20 | ND | ND | | ND | ND |
| Trichlorofluoromethane | 340000 | ND | ND | | ND | ND |
| Vinyl Acetate | NLE | ND | ND | | ND | ND |
| Vinyl chloride | 2 | ND | ND | | ND | ND |
| | | | | l . | | | L | | _ | | <u> </u> | _ | l . | - | = | 1 | | | l . | | |

Notes

| Lab Sample ID Field Sample Location | NJDEP | 10131.03 | 10131.04 | 10131.05 | 10131.06 | 10131.07 | 10131.08 | 10131.09 | 10131.10 | 10131.11 | 10131.12 | 10131.13 | 10131.14 | 10131.15 | 10131.16 | 10131.17 | 10131.18 | 10131.19 | 10131.20 | 10131.21 | 10131.22 |
|---|--------------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|
| Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | C-09 (18-24") 4/6/2010 | C-09 (60-66") 4/6/2010 | D-10 (0-6") 4/6/2010 | D-10 (18-24") 4/6/2010 | D-10 (48-54") 4/6/2010 | C-10 (0-6") 4/6/2010 | C-10 (18-24") 4/6/2010 | C-10 (60-66") 4/6/2010 | D-11 (0-6") 4/6/2010 | D-11 (18-24") 4/6/2010 | D-11 (60-66") 4/6/2010 | C-11 (0-6") 4/6/2010 | C-11 (18-24") 4/6/2010 | C-11 (60-66") 4/6/2010 | D-12 (0-6") 4/6/2010 | D-12 (18-24") 4/6/2010 | D-12 (60-66") 4/6/2010 | C-12 (0-6") 4/6/2010 | C-12 (18-24") 4/6/2010 | C-12 (60-66") 4/6/2010 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | ND | |
| 2,6-Dinitrotoluene | 3 | ND | | ND | ND | |
| 2-Chloronaphthalene | NLE | ND | | ND | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | ND | |
| 2-Methylphenol | 3400 | ND | | ND | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | ND | |
| 2-Nitrophenol | NLE | ND | | ND | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | ND | |
| 3-Nitroaniline | NLE | ND | | ND | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | ND | |
| 4-Chloroaniline | 66 | ND | | ND | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | ND | |
| 4-Methylphenol | 340 | ND | | ND | ND | |
| 4-Nitroaniline | NLE | ND | | ND | ND | |
| 4-Nitrophenol | NLE | ND | | ND | ND | |
| Acenaphthene | 37000 | ND | | ND | ND | |
| Acenaphthylene | 300000 | ND | | ND | ND | |
| Aniline | NLE | ND | | ND | ND | |
| Anthracene | 30000 | ND | | ND | ND | |
| Azobenzene | NLE | ND | | ND | ND | |
| Benzidine | 0.7 | ND | | ND | ND | |
| Benzo(a)anthracene | 2 | 1.06 | | ND | ND | |
| benzo(a)pyrene | 0.2 | 1.03 | | ND | ND | |
| Benzo(b)fluoranthene | 2 | 1.21 | | ND | ND | |
| Benzo(g,h,i)perylene | 30000 | 0.75 | | ND | ND | |
| Benzo(k)fluoranthene | 23 | ND | | ND | ND | |
| Benzoic Acid | NLE | ND | | ND | ND | |
| Benzyl alcohol | NLE | ND | | ND | ND | | ND | ND | | ND ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | ND | |
| bis(2-Chloroethyl)ether | 2 | ND | | ND | ND | | ND | ND | | ND ND | ND | | ND ND | ND | | ND | ND ND | | ND | ND ND | |
| bis(2-chloroisopropyl)ether | 67 | ND | | ND | ND | |
| bis(2-ethylhexyl) phthalate Butyl benzyl phthalate | 140 | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND | ND ND | |
| | 14000 | ND | | ND | ND | |
| Chrysene Dibenz(a h)anthracene | 230 | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND | ND ND | |
| Dibenz(a,h)anthracene Dibenzofuran | 0.2 | ND | | ND | ND | |
| | NLE | ND ND | | ND | ND | | ND | ND | | ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND | ND ND | |
| Diethyl phthalate | 550000 | ND | | ND | ND ND | | ND | ND | |
| Dimethyl phthalate | NLE | ND | | ND | ND | |

| Lab Sample ID Field Sample Location | NJDEP Cleanup | 10131.03 C-09 (18-24") | 10131.04 C-09 (60-66") | 10131.05 | 10131.06 | 10131.07 D-10 (48-54") | 10131.08 | 10131.09 | | | 10131.12 -11 (18-24") | 10131.13 | 10131.14 | 10131.15 | 10131.16 | 10131.17 | 10131.18 D-12 (18-24") | 10131.19 | 10131.20 | 10131.21 | 10131.22 |
|--|---------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|------------------------------------|-------------|--------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|
| Sample Date | Criteria (mg/kg) | 4/6/2010 | 4/6/2010 | D-10 (0-6") 4/6/2010 | D-10 (18-24") 4/6/2010 | 4/6/2010 | C-10 (0-6") 4/6/2010 | C-10 (18-24") 4/6/2010 | C-10 (60-66") D-11 4/6/2010 4/6 | | 4/6/2010 | D-11 (60-66") 4/6/2010 | C-11 (0-6") 4/6/2010 | C-11 (18-24") 4/6/2010 | C-11 (60-66") 4/6/2010 | D-12 (0-6") 4/6/2010 | 4/6/2010 | D-12 (60-66") 4/6/2010 | C-12 (0-6") 4/6/2010 | C-12 (18-24") 4/6/2010 | C-12 (60-66") 4/6/2010 |
| Di-n-butylphthalate | 68000 | ND | | ND | ND | | ND | ND | N | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Di-n-octyl phthalate | 27000 | ND | | ND | ND | | ND | ND | N | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Fluoranthene | 24000 | 3.44 | | ND | ND | | ND | ND | N | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Fluorene | 24000 | ND | | ND | ND | | ND | ND | N | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorobenzene | 1 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorobutadiene | 25 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachloroethane | 140 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | 0.67 | | ND | ND | | ND | ND | N | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Isophorone | 2000 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Naphthalene | 17 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Nitrobenzene | 340 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Pentachlorophenol Phenanthrene | 10 | ND 2.00 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND 0.60 | |
| Phenanthrene | 300000 | 3.09 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | 0.69 | |
| Pyrene | 210000 | ND 2.66 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND 0.76 | |
| Pyridine | 18000 | 2.66 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | 0.76 | |
| TICs | NLE | ND 239800 | | ND 134600 | ND 130000 | | ND 67490 | ND 103600 | | ND 89600 | ND 244400 | | ND 255300 | ND 185500 | | ND 139500 | ND 209400 | | ND 229200 | ND 236100 | |
| L | NLE | 239000 | | 134000 | 130000 | | 6/490 | 103600 | 13: | 9600 | 244400 | | 255300 | 165500 | | 139300 | 209400 | | 229200 | 230100 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | ı | |
| 4,4'-DDD | 13 | 0.0566 | | 0.0364 | 0.0525 | | 0.057 | ND | | 0499 | 0.039 | | 0.0458 | ND | | 0.0465 | 0.0297 | | 0.0307 | 0.0426 | |
| 4,4'-DDE | 9 | 0.0522 | | 0.0452 | 0.0567 | | 0.0546 | 0.2973 | | 0525 | 0.0414 | | 0.0366 | ND 0.4050 | | 0.058 | 0.0559 | | 0.0255 | 0.0247 | |
| 4,4'-DDT Aldrin | 8 | 0.069 | | 0.0678 | 0.0547 | | 0.0501 | 1.6782 | | .062 | 0.0456 | | 0.1387 | 0.4353 | | 0.0488 | 0.0346 | | 0.0243 | 0.0155 | |
| alpha-BHC | 0.2 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| alpha-Chlordane | NLE NLE | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Arochlor 1016 | NLE | ND ND | | ND | ND ND | | ND ND | ND | | ND | ND | | ND | ND | | ND | ND ND | | ND | ND ND | |
| Arochlor 1221 | NLE | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND | ND ND | |
| Arochlor 1232 | NLE | ND | | ND | ND ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | | ND | ND ND | |
| Arochlor 1242 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | | ND | ND | |
| Arochlor 1248 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1254 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1260 | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| beta-BHC | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| delta-BHC | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dieldrin | 0.2 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan I | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan II | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endrin | 340 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endrin Aldehyde | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| gamma-BHC | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| gamma-Chlordane | NLE | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | 0.0026 | |
| Heptachlor | 0.7 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Toxaphene | 3 | ND | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10131.03 C-09 (18-24") 4/6/2010 | 10131.04 C-09 (60-66") 4/6/2010 | 10131.05 D-10 (0-6") 4/6/2010 | 10131.06 D-10 (18-24") 4/6/2010 | 10131.07 D-10 (48-54") 4/6/2010 | 10131.08 C-10 (0-6") 4/6/2010 | 10131.09 C-10 (18-24") 4/6/2010 | 10131.10 C-10 (60-66") 4/6/2010 | 10131.11 D-11 (0-6") 4/6/2010 | 10131.12 D-11 (18-24") 4/6/2010 | 10131.13 D-11 (60-66") 4/6/2010 | 10131.14 C-11 (0-6") 4/6/2010 | 10131.15 C-11 (18-24") 4/6/2010 | 10131.16 C-11 (60-66") 4/6/2010 | 10131.17 D-12 (0-6") 4/6/2010 | 10131.18 D-12 (18-24") 4/6/2010 | 10131.19 D-12 (60-66") 4/6/2010 | 10131.20 C-12 (0-6") 4/6/2010 | 10131.21 C-12 (18-24") 4/6/2010 | 10131.22 C-12 (60-66") 4/6/2010 |
|---|---|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 7960 | | 10800 | 11200 | | 11600 | 13200 | | 5860 | 7200 | | 6240 | 5970 | | 5930 | 5640 | | 7310 | 5740 | |
| Antimony | 450 | ND | | 2.19 | 2.24 | | 2.4 | 2.72 | | 1.31 | 1.75 | | 1.3 | 1.06 | | 1.56 | 1.55 | | 2.01 | 1.3 | |
| Arsenic | NLE | 12.9 | | 14.8 | 13 | | 11.6 | 12.6 | | 17.4 | 12 | | 19.2 | 10.3 | | 14.2 | 13.6 | | 18.6 | 15.5 | |
| Barium | 59000 | 40.5 | | 53.6 | 51 | | 48.3 | 42.2 | | 48.2 | 51.9 | | 55 | 53.4 | | 41.3 | 46.2 | | 60.6 | 72.5 | |
| Beryllium | 140 | 1.22 | | 1.52 | 1.62 | | 1.5 | 1.52 | | 0.921 | 1.1 | | 0.934 | 0.86 | | 0.978 | 1.06 | | 1.21 | 0.867 | |
| Cadmium | 78 | 0.846 | | 1.09 | 1.23 | | 1.2 | 1.12 | | 0.665 | 0.831 | | 0.79 | 0.69 | | 0.792 | 0.873 | | 0.93 | 0.833 | |
| Calcium | NLE | 1120 | | 1200 | 1240 | | 820 | 989 | | 1040 | 1070 | | 1160 | 1570 | | 1520 | 1880 | | 1620 | 1770 | |
| Chromium | NLE | 119 | | 153 | 150 | | 173 | 129 | | 79.6 | 108 | | 89.8 | 86 | | 79.3 | 78.9 | | 109 | 89.7 | |
| Cobalt | 590 | 1.07 | | 0.986 | 1.7 | | 0.807 | 1.49 | | 1.26 | 1.06 | | 0.943 | 1.2 | | 1.49 | 1.8 | | 1.11 | 1 | |
| Copper | 45000 | 8.09 | | 9.36 | 9.23 | | 11.1 | 10.8 | | 9.22 | 9.11 | | 9.98 | 11.4 | | 10.4 | 9.64 | | 10.4 | 8.48 | |
| Iron | NLE | 29800 | | 37200 | 35400 | | 41100 | 39100 | | 22600 | 27600 | | 26200 | 24400 | | 22000 | 22200 | | 30500 | 30000 | |
| Lead | 800 | 19.3 | | 22.2 | 22 | | 21.7 | 38.4 | | 58.9 | 19.6 | | 22.8 | 18.2 | | 22.2 | 17.2 | | 25.2 | 15.3 | |
| Magnesium | NLE | 3950 | | 5190 | 4810 | | 5730 | 4960 | | 2540 | 3340 | | 3070 | 3060 | | 2520 | 2530 | | 3880 | 3040 | |
| Manganese | 5900 | 21.7 | | 27.1 | 31.2 | | 26 | 56.1 | | 22.6 | 19.1 | | 19.3 | 26.3 | | 28.5 | 26.8 | | 25.5 | 25.3 | |
| Nickel | 23000 | 5.45 | | 6.54 | 8.51 | | 5.92 | 7.25 | | 5.25 | 5.18 | | 4.67 | 4.6 | | 6.87 | 7.51 | | 5.77 | 4.5 | |
| Potassium | NLE | 8820 | | 11800 | 11000 | | 13300 | 11300 | | 6140 | 8040 | | 7020 | 6940 | | 5900 | 6870 | | 9440 | 8570 | |
| Selenium | 5700 | 13.3 | | 16.7 | 15.7 | | 18.7 | 15.3 | | 10.9 | 15.3 | | 13.4 | 13.8 | | 12.4 | 13.6 | | 15.2 | 13.8 | |
| Silver | 5700 | 3.7 | | 4.41 | 4.11 | | 4.82 | 4.45 | | 2.66 | 3.25 | | 3.13 | 3.03 | | 2.76 | 2.58 | | 3.75 | 3.5 | |
| Sodium | NLE | ND | | ND | ND | |
| Thallium | 79 | ND | | ND | ND | |
| Vanadium | 1100 | 47.9 | | 63.8 | 63.8 | | 69.4 | 63.3 | | 33.1 | 39.6 | | 36.7 | 24.7 | | 32.6 | 30.6 | | 37.7 | 28.3 | |
| Zinc | 110000 | 57.4 | | 64.4 | 66.5 | | 54.9 | 65.5 | | 57.4 | 59.5 | | 54.2 | 71.3 | | 61.3 | 69 | | 79.7 | 54.8 | |

| Lab Sample ID | NJDEP | 10131.23 | 10131.24 | 10131.25 | 10135.02 | 10135.03 | 10135.04 | 10135.05 | 10135.06 | 10135.07 | 10135.08 | 10135.09 | 10135.10 | 10135.11 | 10135.12 | 10135.13 | 10135.14 | 10135.15 | 10135.16 | 10135.17 | 10135.18 |
|---|--------------------------------|-------------------------|---------------------------|---------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|---------------------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | D-13 (0-6") 4/6/2010 | D-13 (18-24") 4/6/2010 | D-13 (60-66") 4/6/2010 | C-13 (0-6") 4/12/2010 | C-13 (18-24") 4/12/2010 | C-13 (66-72") 4/12/2010 | D-14 (0-6") 4/12/2010 | D-14 (18-24") 4/12/2010 | D-14 (66-72") 4/12/2010 | C-14 (0-6") 4/12/2010 | C-14 (18-24") 4/12/2010 | C-14 (66-72") 4/12/2010 | D-15 (0-6") 4/12/2010 | D-15 (18-24") 4/12/2010 | D-15 (66-72") 4/12/2010 | C-15 (0-6") 4/12/2010 | C-15 (18-24") 4/12/2010 | C-15 (66-72") 4/12/2010 | D-16 (0-6") 4/12/2010 | D-16 (0-6") Duplicate 4/12/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 1,1,1-Trichloroethane | 4200 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 1,1,2-Trichloroethane | 6 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 1,1-Dichloroethene | 150 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 1,2-Dichloroethane | 3 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 1,2-Dichloropropane | 5 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 2-Butanone | 44000 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 2-Chloroethyl vinyl ether | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 2-Hexanone | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| 4-Methyl-2-pentanone | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Acetone | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Acrolein | 1 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Acrylonitrile | 3 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Benzene | 5 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Bromodichloromethane | 3 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Bromoform | 280 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Bromomethane | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Carbon disulfide | 110000 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Carbon Tetrachloride | 2 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Chlorobenzene | 7400 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Chloroethane | 1100 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Chloroform | 2 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Chloromethane | 12 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| cis-1,2-Dichloroethene | 560 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| cis-1,3-Dichloropropene | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Dibromochloromethane | 8 | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Dichlorodifluoromethane | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Diisopropyl ether | NLE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| Ethylbenzene m.t.n. Vylonos | 110000 | | ND | ND | | ND | ND ND | | ND | ND ND | | ND | ND | | ND | ND | | ND ND | ND | | |
| m+p-Xylenes Methyl tert-butyl ether | NLE | | ND | ND | | ND | ND ND | | ND | ND | | |
| Methylene chloride | 320 | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND | | |
| o-Xylene | 97 NLE | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | |
| Styrene | 260 | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | |
| tert-Butyl alcohol | 11000 | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | |
| Tetrachloroethene | 5 | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | |
| TICs | NLE | | ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND | ND | | ND ND | ND ND | | |
| Toluene | 91000 | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND | | |
| trans-1,2-Dichloroethene | 720 | | ND | ND | | ND | ND ND | | ND | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | |
| trans-1,3-Dichloropropene | NLE | | ND | ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND | ND | | ND ND | ND | | |
| Trichloroethene | 20 | | ND ND | ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND | | ND ND | ND ND | | |
| Trichlorofluoromethane | 340000 | | ND | ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND | ND | | ND ND | ND | | |
| Vinyl Acetate | NLE | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | |
| Vinyl chloride | 2 | | ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND | | ND ND | ND | | |
| , | | | ND | IID | 1 | HD | IID | | HD | 110 | 1 | ND. | ND. | | IID. | NO | | 110 | IIID | 1 | |

Notes

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10131.23 D-13 (0-6") 4/6/2010 | 10131.24 D-13 (18-24") 4/6/2010 | 10131.25 D-13 (60-66") 4/6/2010 | 10135.02 C-13 (0-6") 4/12/2010 | 10135.03 C-13 (18-24") 4/12/2010 | 10135.04 C-13 (66-72") 4/12/2010 | 10135.05 D-14 (0-6") 4/12/2010 | 10135.06 D-14 (18-24") 4/12/2010 | 10135.07 D-14 (66-72") 4/12/2010 | 10135.08 C-14 (0-6") 4/12/2010 | 10135.09 C-14 (18-24") 4/12/2010 | 10135.10 C-14 (66-72") 4/12/2010 | 10135.11 D-15 (0-6") 4/12/2010 | 10135.12 D-15 (18-24") 4/12/2010 | 10135.13 D-15 (66-72") 4/12/2010 | 10135.14 C-15 (0-6") 4/12/2010 | 10135.15 C-15 (18-24") 4/12/2010 | 10135.16 C-15 (66-72") 4/12/2010 | 10135.17 D-16 (0-6") 4/12/2010 | 10135.18 D-16 (0-6") Duplicate 4/12/2010 |
|---|---|-------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|---|
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichlorobenzene | 59000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,3-Dichlorobenzene | 59000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,4-Dichlorobenzene | 13 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4,5-Trichlorophenol | 68000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4,6-Trichlorophenol | 74 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dichlorophenol | 2100 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dimethylphenol | 14000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dinitrophenol | 1400 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,4-Dinitrotoluene | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2,6-Dinitrotoluene | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Chloronaphthalene | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Chlorophenol | 2200 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Methylnaphthalene | 2400 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Methylphenol | 3400 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Nitroaniline | 23000 | ND | ND | | ND | ND | _ | ND | ND | | ND | ND | _ | ND | ND | | ND | ND | _ | ND | ND |
| 2-Nitrophenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 3,3'-Dichlorobenzidine | 4 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 3-Nitroaniline | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4,6-Dinitro-2-methylphenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Bromophenyl Phenyl ether | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Chloro-3-methylphenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Chloroaniline | 66 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Chlorophenyl phenyl ether | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Methylphenol | 340 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Nitroaniline | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Nitrophenol | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acenaphthene | 37000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acenaphthylene | 300000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Aniline | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Anthracene Azobenzene | 30000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Benzidine | NLE | ND | ND ND | | ND ND | ND | | ND | ND | | ND | ND ND | | ND | ND ND | | ND ND | ND | | ND ND | ND |
| Benzo(a)anthracene | 0.7 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| benzo(a)pyrene | 0.2 | ND ND | ND ND | | ND ND | ND | | ND ND | ND | | ND | ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND |
| Benzo(b)fluoranthene | 2 | ND ND | ND ND | | ND | ND ND | | ND ND | ND | | ND | ND | | ND | ND | | ND ND | ND | | ND ND | ND |
| Benzo(g,h,i)perylene | 30000 | ND | ND ND | | ND | ND ND | | ND ND | ND | | ND | ND | | ND | ND | | ND ND | ND | | ND ND | ND ND |
| Benzo(k)fluoranthene | 23 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND |
| Benzoic Acid | NLE | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND |
| Benzyl alcohol | NLE | ND | ND ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND ND | ND | | ND | ND |
| bis(2-Chloroethoxy)methane | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| bis(2-Chloroethyl)ether | 2 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| bis(2-chloroisopropyl)ether | 67 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| bis(2-ethylhexyl) phthalate | 140 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Butyl benzyl phthalate | 14000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chrysene | 230 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dibenz(a,h)anthracene | 0.2 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dibenzofuran | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Diethyl phthalate | 550000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dimethyl phthalate | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10131.23 D-13 (0-6") 4/6/2010 | 10131.24 D-13 (18-24") 4/6/2010 | 10131.25 D-13 (60-66") 4/6/2010 | 10135.02 C-13 (0-6") 4/12/2010 | 10135.03 C-13 (18-24") 4/12/2010 | 10135.04 C-13 (66-72") 4/12/2010 | 10135.05 D-14 (0-6") 4/12/2010 | 10135.06 D-14 (18-24") 4/12/2010 | 10135.08 C-14 (0-6") E/12/2010 | 10135.09 C-14 (18-24") 4/12/2010 | 10135.10 C-14 (66-72") 4/12/2010 | 10135.11 D-15 (0-6") 4/12/2010 | 10135.12 D-15 (18-24") 4/12/2010 | 10135.13 D-15 (66-72") 4/12/2010 | 10135.14 C-15 (0-6") 4/12/2010 | 10135.15 C-15 (18-24") 4/12/2010 | 10135.16 C-15 (66-72") 4/12/2010 | 10135.17 D-16 (0-6") 4/12/2010 | 10135.18 D-16 (0-6") Duplicate 4/12/2010 |
|---|---|-------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|---|
| Di-n-butylphthalate | 68000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Di-n-octyl phthalate | 27000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Fluoranthene | 24000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Fluorene | 24000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Hexachlorobenzene | 1 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Hexachlorobutadiene | 25 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Hexachlorocyclopentadiene | 110 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Hexachloroethane | 140 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Indeno(1,2,3-cd)pyrene | 2 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Isophorone | 2000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Naphthalene | 17 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Nitrobenzene | 340 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| N-nitrosodimethylamine | 0.7 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| n-Nitrosodi-n-propylamine | NLE | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| n-Nitrosodiphenylamine | NLE | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Pentachlorophenol | 10 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Phenanthrene | 300000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Phenol | 210000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Pyrene | 18000 | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Pyridine | NLE | ND | ND | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| TICs | NLE | 255800 | 77200 | | 161800 | 128690 | | 178900 | 144900 | 966300 | 124450 | | 230300 | 842100 | | 634000 | 112660 | | 270100 | 185900 |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | 1 |
| 4,4'-DDD | 13 | 0.0557 | | | 0.0105 | 0.0137 | | 0.0804 | 0.0312 | 0.0098 | 0.0756 | | 0.0083 | 0.007 | | 0.0086 | 0.0019 | | 0.0192 | 0.0177 |
| 4,4'-DDE | 9 | 0.0536 | | | 0.0502 | 0.0172 | | 0.0974 | 0.0222 | 0.0334 | 0.2509 | | 0.0094 | 0.0037 | | 0.0533 | 0.004 | | 0.0199 | 0.025 |
| 4,4'-DDT | 8 | 0.0504 | | | 0.1389 | 0.0431 | | 0.1818 | 0.0634 | 0.067 | 1.8723 | | 0.0105 | 0.0029 | | 0.0875 | 0.0026 | | 0.0235 | 0.0559 |
| Aldrin | 0.2 | ND ND | | | ND ND | ND ND | | ND | ND | ND | ND ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-BHC | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-Chlordane | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1016 | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1221 | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1232 | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1242 | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1248 | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1254 | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1260 | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| beta-BHC | NLE | ND ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND ND | ND |
| delta-BHC | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dieldrin | 0.2 | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan I | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan II | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan-Sulfate | 6800 | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endrin | 340 | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endrin Aldehyde | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| gamma-BHC | NLE | ND | | | ND | ND | | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| gamma-Chlordane | NLE | ND ND | | | ND. | ND ND | | 0.0018 | ND ND | ND | 0.0021 | | ND | ND ND | | ND | ND ND | | ND ND | ND ND |
| Heptachlor | 0.7 | ND | | | ND | ND | | ND | ND | ND | ND ND | | ND | ND | | ND | ND ND | | ND ND | ND |
| Heptachlor Epoxide | 0.3 | ND ND | | | ND. | ND | | ND | ND ND | ND ND | ND | | ND | ND | | ND | ND. | | ND ND | ND |
| | 1 0.0 | | | | ٠٥ | 1 | | | | | | | | 1 | 1 | | 1 | | | 1 |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10131.23 D-13 (0-6") 4/6/2010 | 10131.24 D-13 (18-24") 4/6/2010 | 10131.25 D-13 (60-66") 4/6/2010 | 10135.02 C-13 (0-6") 4/12/2010 | 10135.03 C-13 (18-24") 4/12/2010 | 10135.04 C-13 (66-72") 4/12/2010 | 10135.05 D-14 (0-6") 4/12/2010 | 10135.06 D-14 (18-24") 4/12/2010 | 10135.07 D-14 (66-72") 4/12/2010 | 10135.08 C-14 (0-6") 4/12/2010 | 10135.09 C-14 (18-24") 4/12/2010 | 10135.10 C-14 (66-72") 4/12/2010 | 10135.11 D-15 (0-6") 4/12/2010 | 10135.12 D-15 (18-24") 4/12/2010 | 10135.13 D-15 (66-72") 4/12/2010 | 10135.14 C-15 (0-6") 4/12/2010 | 10135.15 C-15 (18-24") 4/12/2010 | 10135.16 C-15 (66-72") 4/12/2010 | 10135.17 D-16 (0-6") 4/12/2010 | 10135.18 D-16 (0-6") Duplicate 4/12/2010 |
|---|---|-------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|---|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 6820 | 8270 | | 7660 | 13300 | | 10400 | 15000 | | 14900 | 13200 | | 13900 | 12200 | | 12400 | 16700 | | 12000 | 11000 |
| Antimony | 450 | 2.38 | 1.52 | | 3.45 | 4.99 | | 3.34 | 5.6 | | 5.29 | 4.38 | | 5.31 | 5.31 | | 2.8 | 5.86 | | 4.07 | 4.5 |
| Arsenic | NLE | 14.3 | 10.9 | | 15.6 | 25.4 | | 11.4 | 147 | | 14.9 | 10.5 | | 11.3 | 14.2 | | 10.3 | 13 | | 51.4 | 73.4 |
| Barium | 59000 | 46 | 36.2 | | 47.6 | 80.1 | | 49.3 | 84.6 | | 70.2 | 89.9 | | 74.4 | 83.7 | | 45.4 | 99.7 | | 76.2 | 64.5 |
| Beryllium | 140 | 1.15 | 1.07 | | 1.2 | 2.04 | | 1.71 | 2.31 | | 2.07 | 1.86 | | 1.99 | 1.92 | | 1.08 | 2.37 | | 1.75 | 1.52 |
| Cadmium | 78 | 0.895 | 0.721 | | 0.966 | 1.88 | | 1.27 | 2.35 | | 1.81 | 1.73 | | 1.65 | 1.46 | | 1.06 | 2.04 | | 1.64 | 1.4 |
| Calcium | NLE | 1590 | 877 | | 963 | 1860 | | 1110 | 6170 | | 1480 | 1880 | | 1680 | 7070 | | 3360 | 2070 | | 1510 | 1290 |
| Chromium | NLE | 98.2 | 75.6 | | 116 | 227 | | 152 | 262 | | 227 | 216 | | 220 | 217 | | 106 | 278 | | 194 | 168 |
| Cobalt | 590 | 1.23 | 1.2 | | 0.809 | 0.306 | | 0.977 | 0.493 | | 0.953 | 0.792 | | 0.866 | 0.583 | | 1.67 | 0.715 | | 0.514 | 0.504 |
| Copper | 45000 | 11.1 | 10.3 | | ND | ND | | 3.28 | ND | | ND | ND | | ND | ND | | 10.8 | ND | | ND | ND |
| Iron | NLE | 26700 | 28200 | | 29100 | 61500 | | 37000 | 76800 | | 57200 | 53900 | | 52000 | 48700 | | 30900 | 68800 | | 51200 | 44700 |
| Lead | 800 | 29.4 | 40.1 | | 26.4 | 14 | | 27.2 | 16.8 | | 30.1 | 12.4 | | 20.2 | 20.5 | | 40.1 | 14.3 | | 29.8 | 26.9 |
| Magnesium | NLE | 3200 | 2850 | | 3850 | 8050 | | 5020 | 9500 | | 8270 | 7830 | | 7610 | 7320 | | 4150 | 10400 | | 6710 | 5660 |
| Manganese | 5900 | 23.7 | 26.9 | | 21.5 | 21.5 | | 21.1 | 23.3 | | 34.2 | 34.9 | | 26.3 | 20.3 | | 73.6 | 36 | | 22.7 | 20 |
| Nickel | 23000 | 6.21 | 5.7 | | 5.54 | 6 | | 7.12 | 7.36 | | 7.44 | 6.56 | | 7.2 | 6.11 | | 9.73 | 8.55 | | 6.35 | 5.92 |
| Potassium | NLE | 7520 | 6290 | | 9480 | 21400 | | 11500 | 26700 | | 20000 | 18900 | | 17900 | 18000 | | 8690 | 25300 | | 16800 | 14300 |
| Selenium | 5700 | 13.4 | 12.9 | | 6.36 | 8.36 | | 9.87 | 18.4 | | 10.4 | 11.2 | | 10.2 | 15 | | 8.68 | 14.4 | | 9.94 | 6.99 |
| Silver | 5700 | 3.2 | 3.36 | | 3.6 | 7.31 | | 4.52 | 9.3 | | 6.84 | 6.43 | | 6.35 | 5.92 | | 3.6 | 8.5 | | 6.23 | 5.3 |
| Sodium | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Thallium | 79 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vanadium | 1100 | 39.6 | 41.9 | | 44.9 | 65.1 | | 60.8 | 82 | | 78.6 | 60.9 | | 82 | 70 | | 55.2 | 81.4 | | 75.9 | 71.4 |
| Zinc | 110000 | 62.1 | 49.3 | | 57.3 | 67.9 | | 70.4 | 91.8 | | 89.6 | 75.8 | | 83.9 | 63.3 | | 70.8 | 91.4 | | 65.5 | 54.9 |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup | 10135.19 D-16 (18-24") | 10135.20 D-16 (66-72") | 10135.21 C-16 (0-6") | 10135.22 C-16 (18-24") | 10135.23 C-16 (66-72") | 10135.24 D-17 (0-6") | 10135.25 D-17 (18-24") | 10135.26 D-17 (66-72") | 10139.02 C-17 (0-6") | 10139.03 C-17 (18-24") | 10139.04 C-17 (66-72") | 10139.05 D-18 (0-6") | 10139.06 D-18 (18-24") | 10139.07 D-18 (60-66") | 10139.08 C-18 (0-6") | 10139.09 C-18 (18-24") | 10139.10 C-18 (66-72") | 10139.11 D-19 (0-6") | 10139.12 D-19 (18-24") | 10139.13 D-19 (66- |
|---|---------------------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|--------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|--------------------------|---------------------------|-----------------------|
| Sample Date | Criteria (mg/kg) | 4/12/2010 | 4/12/2010 | C-16 (0-6") 4/12/2010 | 4/12/2010 | 4/12/2010 | 4/12/2010 | 4/12/2010 | 4/12/2010 | C-17 (0-6") 4/14/2010 | 4/14/2010 | 4/14/2010 | D-18 (0-6") 4/14/2010 | 4/14/2010 | 4/14/2010 | 4/14/2010 | 4/14/2010 | 4/14/2010 | D-19 (0-6") 4/14/2010 | 4/14/2010 | 72") 4/14/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,1-Trichloroethane | 4200 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,2,2-Tetrachloroethane | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,2-Trichloroethane | 6 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1-Dichloroethene | 150 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichloroethane | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichloropropane | 5 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Butanone | 44000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Chloroethyl vinyl ether | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Hexanone | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Methyl-2-pentanone | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acetone | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acrolein | 1 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acrylonitrile | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Benzene | 5 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromodichloromethane | 3 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromoform | 280 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromomethane | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Carbon disulfide | 110000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Carbon Tetrachloride | 2 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chlorobenzene | 7400 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloroethane | 1100 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloroform | 2 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloromethane | 12 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| cis-1,2-Dichloroethene | 560 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| cis-1,3-Dichloropropene | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dibromochloromethane | 8 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dichlorodifluoromethane | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Diisopropyl ether | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Ethylbenzene | 110000 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| m+p-Xylenes | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Methyl tert-butyl ether Methylene chloride | 320 | ND | ND ND | | ND | ND | | ND | ND ND | | ND ND | ND | | ND | ND | | ND ND | ND | | ND | ND ND |
| | 97 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| o-Xylene Styrene | NLE 260 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| tert-Butyl alcohol | 11000 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Tetrachloroethene | 5 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| TICs | NLE | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Toluene | 91000 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| trans-1,2-Dichloroethene | 720 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| trans-1,3-Dichloropropene | NLE | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Trichloroethene | 20 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Trichlorofluoromethane | 340000 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Vinyl Acetate | NLE | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Vinyl chloride | 2 | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| , | | שאו | ND | <u> </u> | ND | IND | | ND | ND | | ND | ND | | IAD | IND | 1 | ND | IND | | IAD | שאו |

Notes:

| Lab Sample ID Field Sample Location Sample Date NIDE Clean Clean Clean Criteri (mg/k) Semi-Volatiles 1,2,4-Trichlorobenzene 820 1,2-Dichlorobenzene 5900 1,3-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 13 13 | D NE | 2010 4/12/201 | 2") C-16 (0-6") 4/12/2010 | C-16 (18-24") 4/12/2010 | C-16 (66-72") 4/12/2010 | D-17 (0-6") 4/12/2010 | D-17 (18-24") 4/12/2010 | D-17 (66-72") 4/12/2010 | C-17 (0-6") 4/14/2010 | C-17 (18-24") 4/14/2010 | C-17 (66-72") 4/14/2010 | D-18 (0-6") 4/14/2010 | D-18 (18-24") 4/14/2010 | D-18 (60-66") 4/14/2010 | C-18 (0-6") 4/14/2010 | C-18 (18-24") | C-18 (66-72") 4/14/2010 | D-19 (0-6") 4/14/2010 | D-19 (18-24") 4/14/2010 | D-19 (66- |
|--|--------|---------------|------------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|---------------|----------------------------|--------------------------|----------------------------|-------------------|
| 1,2,4-Trichlorobenzene 820 1,2-Dichlorobenzene 5900 1,3-Dichlorobenzene 5900 1,4-Dichlorobenzene 13 | 00 NI | | ND | | | | | | | , , | 1,711,2010 | , ,==== | ,, , , , , , , , | 4/14/2010 | 4/14/2010 | 4/14/2010 | 4/14/2010 | 4/14/2010 | 4/14/2010 | 72") 4/14/2010 |
| 1,2-Dichlorobenzene 5900 1,3-Dichlorobenzene 5900 1,4-Dichlorobenzene 13 | 00 NI | | ND | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene 5900 1,4-Dichlorobenzene 13 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,4-Dichlorobenzene 13 | 00 NI | J | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| | | D | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| | NE NE |) | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4,5-Trichlorophenol 6800 | 00 NI | D | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4,6-Trichlorophenol 74 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dichlorophenol 210 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dimethylphenol 1400 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dinitrophenol 140 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dinitrotoluene 3 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,6-Dinitrotoluene 3 | NI | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Chloronaphthalene NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Chlorophenol 220 2-Methylnaphthalene 240 | - | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | |
| 2-Methylnaphthalene 2400 2-Methylphenol 3400 | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| | | | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline 2300 2-Nitrophenol NLE | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| 3,3'-Dichlorobenzidine 4 | _ | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| 3-Nitroaniline NLE | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND | | ND ND | ND | | ND ND | ND | | ND | ND ND | |
| 4,6-Dinitro-2-methylphenol NLE | | | ND | ND | | ND | ND | | ND | ND | | ND ND | ND | | ND | ND | | ND | ND ND | |
| 4-Bromophenyl Phenyl ether NLE | | | ND ND | ND | | ND | ND | | ND ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Chloro-3-methylphenol NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Chloroaniline 66 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Chlorophenyl phenyl ether NLE | E NI | D | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Methylphenol 340 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Nitroaniline NLE | E NI | D | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Nitrophenol NLE | E NI | D | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Acenaphthene 3700 | 00 NE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Acenaphthylene 3000 | 000 NE |) | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Aniline NLE | E NE |) | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Anthracene 3000 | 00 NE |) | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Azobenzene NLE | E NE | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Benzidine 0.7 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Benzo(a)anthracene 2 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| benzo(a)pyrene 0.2 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Benzo(b)fluoranthene 2 | | | ND | ND | | ND 0.04 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Benzo(g,h,i)perylene 3000 Benzo(k)fluoranthene 23 | | | ND | ND | | 0.04 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Benzo(k)fluoranthene 23 Benzoic Acid NLE | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Benzyl alcohol NLE | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| bis(2-Chloroethoxy)methane | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| bis(2-Chloroethyl)ether 2 | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| bis(2-chloroisopropyl)ether 67 | | | ND ND | ND ND | | ND | ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND | | ND | ND ND | |
| bis(2-ethylhexyl) phthalate 140 | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | |
| Butyl benzyl phthalate 1400 | | | ND | ND | | ND | ND | | ND ND | ND | | ND | ND | | ND | ND | | ND | ND ND | |
| Chrysene 230 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dibenz(a,h)anthracene 0.2 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dibenzofuran NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Diethyl phthalate 5500 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dimethyl phthalate NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10135.19 D-16 (18-24") 4/12/2010 | 10135.20 D-16 (66-72") 4/12/2010 | 10135.21 C-16 (0-6") 4/12/2010 | 10135.22 C-16 (18-24") 4/12/2010 | 10135.23 C-16 (66-72") 4/12/2010 | 10135.24 D-17 (0-6") 4/12/2010 | 10135.25 D-17 (18-24") 4/12/2010 | 10135.26 D-17 (66-72") 4/12/2010 | 10139.02 C-17 (0-6") 4/14/2010 | 10139.03 C-17 (18-24") 4/14/2010 | 10139.04 C-17 (66-72") 4/14/2010 | 10139.05 D-18 (0-6") 4/14/2010 | 10139.06 D-18 (18-24") 4/14/2010 | 10139.07 D-18 (60-66") 4/14/2010 | 10139.08 C-18 (0-6") 4/14/2010 | 10139.09 C-18 (18-24") 4/14/2010 | 10139.10 C-18 (66-72") 4/14/2010 | 10139.11 D-19 (0-6") 4/14/2010 | 10139.12 D-19 (18-24") 4/14/2010 | 10139.13 D-19 (66- 72") 4/14/2010 |
|---|---|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|
| Di-n-butylphthalate | 68000 | ND | | ND | ND | 4/14/2010 |
| Di-n-octyl phthalate | 27000 | ND ND | | ND ND | ND ND | |
| Fluoranthene | 24000 | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Fluorene | 24000 | | | | ND ND | | | ND ND | | ND ND | ND ND | |
| Hexachlorobenzene | 1 | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Hexachlorobutadiene | 25 | ND ND | | ND ND | ND ND | |
| | | | | ND ND | | | ND ND | | | | | | | | | | ND ND | | ND ND | | |
| Hexachlorocyclopentadiene Hexachloroethane | 110 | ND | | | ND | | | ND | | ND | ND | | ND | ND | | ND | | | | ND | |
| Indeno(1,2,3-cd)pyrene | 140 | ND | | ND | ND ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND ND | | ND | ND ND | |
| Isophorone | 2 | ND | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | | | ND | | |
| Naphthalene | 2000 | ND | | ND | ND | |
| | 17 | ND | | ND | ND | |
| Nitrobenzene | 340 | ND | | ND | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | ND | |
| Pentachlorophenol | 10 | ND | | ND | ND | |
| Phenanthrene | 300000 | ND | | ND | ND | |
| Phenol | 210000 | ND | | ND | ND | |
| Pyrene | 18000 | ND | | ND | ND | |
| Pyridine | NLE | ND | | ND | ND | |
| TICs | NLE | 121400 | | 255600 | 229200 | | 216500 | 67030 | | 153800 | 71630 | | 238000 | 126000 | | 135700 | 33070 | | 152100 | 56530 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.0036 | | 0.0234 | 0.0071 | | 0.0055 | 0.1104 | | 0.0107 | 0.0039 | | 0.0145 | 0.0065 | | 0.0234 | 0.0018 | | 0.0034 | 0.023 | |
| 4,4'-DDE | 9 | 0.0024 | | 0.1211 | 0.0128 | | 0.0073 | 0.0507 | | 0.2406 | 0.0502 | | 0.0498 | 0.0194 | | 0.114 | 0.0086 | | 0.01 | 0.018 | |
| 4,4'-DDT | 8 | 0.002 | | 0.3788 | 0.0164 | | 0.0116 | 0.1144 | | 0.2522 | 0.0177 | | 0.1625 | 0.0269 | | 0.3875 | 0.0112 | | 0.0155 | 0.0086 | |
| Aldrin | 0.2 | ND | | ND | ND | |
| alpha-BHC | NLE | ND | | ND | ND | |
| alpha-Chlordane | NLE | ND | | 0.0065 | ND | | ND | ND | |
| Arochlor 1016 | NLE | ND | | ND | ND | |
| Arochlor 1221 | NLE | ND | | ND | ND | |
| Arochlor 1232 | NLE | ND | | ND | ND | |
| Arochlor 1242 | NLE | ND | | ND | ND | |
| Arochlor 1248 | NLE | ND | | ND | ND | |
| Arochlor 1254 | NLE | ND | | ND | ND | |
| Arochlor 1260 | NLE | ND | | ND | ND | |
| beta-BHC | NLE | ND | | ND | ND | |
| delta-BHC | NLE | ND | | ND | ND | |
| Dieldrin | 0.2 | ND | | ND | ND | | 0.0369 | ND | | ND | ND | |
| Endosulfan I | NLE | ND | | ND | ND | |
| Endosulfan II | NLE | ND | | ND | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | ND | |
| Endrin | 340 | ND | | ND | ND | |
| Endrin Aldehyde | NLE | ND | | ND | ND | |
| gamma-BHC | NLE | ND | | ND | ND | |
| gamma-Chlordane | NLE | ND | | 0.0052 | ND | | ND | 0.0021 | | ND | ND | |
| Heptachlor | 0.7 | ND | | ND | ND | |
| Heptachlor Epoxide | 0.3 | ND | | 0.0016 | ND | | ND | ND | |
| Toxaphene | 3 | ND | | ND | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10135.19 D-16 (18-24") 4/12/2010 | 10135.20 D-16 (66-72") 4/12/2010 | 10135.21 C-16 (0-6") 4/12/2010 | 10135.22 C-16 (18-24") 4/12/2010 | 10135.23 C-16 (66-72") 4/12/2010 | 10135.24 D-17 (0-6") 4/12/2010 | 10135.25 D-17 (18-24") 4/12/2010 | 10135.26 D-17 (66-72") 4/12/2010 | 10139.02 C-17 (0-6") 4/14/2010 | 10139.03 C-17 (18-24") 4/14/2010 | 10139.04 C-17 (66-72") 4/14/2010 | 10139.05 D-18 (0-6") 4/14/2010 | 10139.06 D-18 (18-24") 4/14/2010 | 10139.07 D-18 (60-66") 4/14/2010 | 10139.08 C-18 (0-6") 4/14/2010 | 10139.09 C-18 (18-24") 4/14/2010 | 10139.10 C-18 (66-72") 4/14/2010 | 10139.11 D-19 (0-6") 4/14/2010 | 10139.12 D-19 (18-24") 4/14/2010 | 10139.13 D-19 (66- 72") 4/14/2010 |
|---|---|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 15700 | | 9990 | 13600 | | 10600 | 14600 | | 13200 | 12600 | | 11500 | 14300 | | 12300 | 13200 | | 3340 | 2590 | |
| Antimony | 450 | 6.64 | | 3.3 | 4.41 | | 4.3 | 5.18 | | 3.85 | 2.51 | | 3.77 | 4.56 | | 4.31 | 4.04 | | 2.08 | 1.06 | |
| Arsenic | NLE | 12.1 | | 16.8 | 11.8 | | 17.5 | 13.3 | | 7.75 | 11.1 | | 14.7 | 10.1 | | 11.1 | 15.7 | | 10.4 | 11.3 | |
| Barium | 59000 | 107 | | 51.2 | 66.7 | | 91 | 94.8 | | 47.3 | 26.8 | | 57.5 | 56.1 | | 46.2 | 55.1 | | 66.2 | 65.8 | |
| Beryllium | 140 | 2.23 | | 1.4 | 1.95 | | 1.77 | 2.23 | | 1.47 | 1.24 | | 1.72 | 2.13 | | 1.47 | 1.94 | | 0.368 | 0.282 | |
| Cadmium | 78 | 1.82 | | 1.19 | 1.53 | | 1.39 | 1.81 | | 1.23 | 1.05 | | 1.26 | 1.68 | | 1.26 | 1.56 | | 0.457 | 0.296 | |
| Calcium | NLE | 7870 | | 1910 | 1660 | | 1770 | 1890 | | 2310 | 634 | | 1850 | 1810 | | 1590 | 1200 | | 1100 | 1460 | |
| Chromium | NLE | 266 | | 138 | 225 | | 182 | 258 | | 142 | 99.6 | | 167 | 242 | | 142 | 213 | | 36.3 | 34.3 | |
| Cobalt | 590 | 0.545 | | 1.04 | 0.502 | | 0.709 | 0.233 | | 2.25 | 1.67 | - | 0.971 | 0.846 | | 1.1 | 0.703 | | 1.14 | 0.749 | |
| Copper | 45000 | ND | | 7.5 | ND | | ND | ND | | 11.2 | ND | | 3.77 | ND | | 4.7 | ND | | 6.63 | 4.7 | |
| Iron | NLE | 62900 | | 36800 | 53500 | | 48300 | 63300 | | 40300 | 38400 | | 42400 | 57300 | | 39000 | 51400 | | 14100 | 12600 | |
| Lead | 800 | 15.8 | | 29.3 | 17.4 | | 14.9 | 12.7 | | 45.4 | 11.7 | | 29 | 14.5 | | 40.9 | 18.9 | | 22.9 | 17.8 | |
| Magnesium | NLE | 9370 | | 5020 | 7940 | | 6460 | 9070 | | 5400 | 4130 | | 5630 | 8480 | | 5170 | 7470 | | 1000 | 874 | |
| Manganese | 5900 | 32.7 | | 37.9 | 28.3 | | 22.9 | 17.5 | | 71.5 | 58.6 | | 27.1 | 30.8 | | 48.1 | 27 | | 25.6 | 15.2 | |
| Nickel | 23000 | 7.91 | | 12 | 6.96 | | 5.71 | 6.74 | | 7.87 | 7.16 | | 7.37 | 6.81 | | 6.73 | 6 | | 3.64 | 3 | |
| Potassium | NLE | 22900 | | 11500 | 18900 | | 16300 | 23000 | | 12500 | 9450 | | 13300 | 20400 | | 11700 | 18700 | | 2440 | 2130 | |
| Selenium | 5700 | 20 | | 11.4 | 16.4 | | 18 | 17.6 | | 15.3 | 11.1 | | 20.9 | 24 | | 16 | 18 | | 8.12 | 8.74 | |
| Silver | 5700 | 7.42 | | 4.32 | 6.45 | | 5.91 | 7.61 | | 4.83 | 4.33 | | 5.27 | 6.83 | | 4.77 | 5.81 | | 1.76 | 1.5 | |
| Sodium | NLE | ND | | ND | ND | | ND | ND | | ND | 329 | | ND | 934 | | ND | ND | | ND | ND | |
| Thallium | 79 | ND | | ND | ND | |
| Vanadium | 1100 | 81.3 | | 54.2 | 75.1 | | 56 | 77.9 | | 68.4 | 56.1 | | 65.2 | 71.9 | | 66.2 | 81.1 | | 15.7 | 13.2 | |
| Zinc | 110000 | 82.8 | | 75.6 | 78.1 | | 72.8 | 76.3 | | 123 | 56.1 | | 79.8 | 85.7 | | 74.7 | 73.1 | | 58.3 | 48.3 | |

| l ah Sample ID | NJDEP | 10139.14 | 10139.15 | 10139.17 | 10139.18 | 10139.19 | 10139.20 | 10143.02 | 10143.03 | 10143.04 | 10143.05 | 10143.06 | 10143.07 | 10143.08 | 10143.09 | 10143.10 | 10143.11 | 10143.12 | 10143.13 | 10143.14 | 10143.15 |
|---|--------------------------------|--------------------------|----------------------------|--------------------------|---|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | C-19 (0-6") 4/14/2010 | C-19 (18-24") 4/14/2010 | D-20 (0-6") 4/14/2010 | D-20 (18-24") Duplicate 4/14/2010 | D-20 (18-24") 4/14/2010 | D-20 (60-66") 4/14/2010 | C-20 (0-6") 4/16/2010 | C-20 (18-24") 4/16/2010 | C-20 (66-72") 4/16/2010 | D-21 (0-6") 4/16/2010 | D-21 (18-24") 4/16/2010 | D-21 (48-56") 4/16/2010 | C-21 (0-6") 4/16/2010 | C-21 (18-24") 4/16/2010 | C-21 (66-72") 4/16/2010 | D-22 (0-6") 4/16/2010 | D-22 (18-24") 4/16/2010 | D-22 (48-54") 4/16/2010 | C-22 (0-6") 4/16/2010 | C-22 (18-24") 4/16/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Butanone | 44000 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Hexanone | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Methyl-2-pentanone | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acetone | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acrolein | 1 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acrylonitrile | 3 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzene | 5 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Bromodichloromethane | 3 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Bromoform | 280 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Bromomethane | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Carbon disulfide | 110000 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chlorobenzene | 7400 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chloroethane | 1100 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chloroform | 2 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chloromethane | 12 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| cis-1,3-Dichloropropene | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Dibromochloromethane | 8 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Dichlorodifluoromethane | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Diisopropyl ether | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Ethylbenzene | 110000 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| m+p-Xylenes | NLE | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Methyl tert-butyl ether | 320 | | ND | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Methylene chloride o-Xylene | 97 NLE | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Styrene | 260 | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| tert-Butvi alcohol | 11000 | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Tetrachloroethene | 5 | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| TICs | NLE | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Toluene | 91000 | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND |
| trans-1,2-Dichloroethene | 720 | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| trans-1,3-Dichloropropene | NLE | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Trichloroethene | 20 | | ND ND | | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Trichlorofluoromethane | 340000 | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| Vinyl Acetate | NLE | | ND ND | | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND |
| Vinyl chloride | 2 | | ND ND | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND |
| , | <u> </u> | <u> </u> | IND | | 1 | 110 | 110 | | IND | 110 | | 140 | 110 | | IND | שויו | | HD | 110 | | 110 |

Notes

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10139.14 C-19 (0-6") 4/14/2010 | 10139.15 C-19 (18-24") 4/14/2010 | 10139.17 D-20 (0-6") 4/14/2010 | 10139.18 D-20 (18-24") Duplicate 4/14/2010 | 10139.19 D-20 (18-24") 4/14/2010 | 10139.20 D-20 (60-66") 4/14/2010 | 10143.02 C-20 (0-6") 4/16/2010 | 10143.03 C-20 (18-24") 4/16/2010 | 10143.04 C-20 (66-72") 4/16/2010 | 10143.05 D-21 (0-6") 4/16/2010 | 10143.06 D-21 (18-24") 4/16/2010 | 10143.07 D-21 (48-56") 4/16/2010 | 10143.08 C-21 (0-6") 4/16/2010 | 10143.09 C-21 (18-24") 4/16/2010 | 10143.10 C-21 (66-72") 4/16/2010 | 10143.11 D-22 (0-6") 4/16/2010 | 10143.12 D-22 (18-24") 4/16/2010 | 10143.13 D-22 (48-54") 4/16/2010 | 10143.14 C-22 (0-6") 4/16/2010 | 10143.15 C-22 (18-24") 4/16/2010 |
|---|---|--------------------------------------|--|--------------------------------------|---|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 1,2-Dichlorobenzene | 59000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 1,3-Dichlorobenzene | 59000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 1,4-Dichlorobenzene | 13 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2,4,5-Trichlorophenol | 68000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2,4,6-Trichlorophenol | 74 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2,4-Dichlorophenol | 2100 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2,4-Dimethylphenol | 14000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2,4-Dinitrophenol | 1400 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2,4-Dinitrotoluene | 3 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2,6-Dinitrotoluene | 3 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2-Chlorophenol | 2200 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2-Methylnaphthalene | 2400 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2-Methylphenol | 3400 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2-Nitroaniline | 23000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 2-Nitrophenol | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 3,3'-Dichlorobenzidine 3-Nitroaniline | 4 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| | NLE | ND | ND ND | ND | ND ND | ND ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 4-Bromophenyl Phenyl ether 4-Chloro-3-methylphenol | NLE NLE | ND ND | ND ND | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | | | | | | | |
| 4-Chloroaniline | 66 | ND | ND ND | ND | ND ND | ND ND | | ND | ND ND | | ND | ND | | ND ND | | | | | | | |
| 4-Chlorophenyl phenyl ether | NLE | ND ND | ND ND | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | | | | | | | |
| 4-Methylphenol | 340 | ND | ND ND | ND | ND | ND ND | | ND | ND. | | ND | ND | | ND | | | | | | | |
| 4-Nitroaniline | NLE | ND | ND ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| 4-Nitrophenol | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Acenaphthene | 37000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Acenaphthylene | 300000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Aniline | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Anthracene | 30000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Azobenzene | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Benzidine | 0.7 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Benzo(a)anthracene | 2 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| benzo(a)pyrene | 0.2 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Benzo(b)fluoranthene | 2 | 1.92 | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Benzo(g,h,i)perylene | 30000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Benzo(k)fluoranthene | 23 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Benzoic Acid | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Benzyl alcohol | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| bis(2-Chloroethoxy)methane | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| bis(2-Chloroethyl)ether | 2 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| bis(2-chloroisopropyl)ether | 67 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| bis(2-ethylhexyl) phthalate | 140 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Butyl benzyl phthalate | 14000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Chrysene | 230 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Dibenz(a,h)anthracene | 0.2 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Dibenzofuran | NLE | ND | ND ND | ND | ND | ND | | ND | ND ND | | ND | ND | | ND | | | | | | | |
| Diethyl phthalate | 550000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Dimethyl phthalate | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 10139.14 C-19 (0-6") 4/14/2010 | 10139.15 C-19 (18-24") 4/14/2010 | 10139.17 D-20 (0-6") 4/14/2010 | 10139.18 D-20 (18-24") Duplicate 4/14/2010 | 10139.19 D-20 (18-24") 4/14/2010 | 10139.20 D-20 (60-66") 4/14/2010 | 10143.02 C-20 (0-6") 4/16/2010 | 10143.03 C-20 (18-24") 4/16/2010 | C-20 (66-72") D-21 | | 10143.06 D-21 (18-24") 4/16/2010 | 10143.07 D-21 (48-56") 4/16/2010 | 10143.08 C-21 (0-6") 4/16/2010 | 10143.09 C-21 (18-24") 4/16/2010 | 10143.10 C-21 (66-72") 4/16/2010 | 10143.11 D-22 (0-6") 4/16/2010 | 10143.12 D-22 (18-24") 4/16/2010 | 10143.13 D-22 (48-54") 4/16/2010 | 10143.14 C-22 (0-6") 4/16/2010 | 10143.15 C-22 (18-24") 4/16/2010 |
|---|------------------------------|--------------------------------------|--|--------------------------------------|---|--|--|--------------------------------------|--|--------------------|-------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|
| | (mg/kg) | | | | , , | | | | | | | | | | | | | | | | |
| Di-n-butylphthalate | 68000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Di-n-octyl phthalate | 27000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Fluoranthene | 24000 | 1.66 | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Fluorene | 24000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Hexachlorobenzene | 1 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Hexachlorobutadiene | 25 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Hexachlorocyclopentadiene | 110 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Hexachloroethane | 140 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | 4 |
| Indeno(1,2,3-cd)pyrene | 2 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Isophorone | 2000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Naphthalene | 17 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Nitrobenzene | 340 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| N-nitrosodimethylamine | 0.7 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| n-Nitrosodi-n-propylamine | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| n-Nitrosodiphenylamine | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Pentachlorophenol | 10 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Phenanthrene | 300000 | ND | ND | ND | ND | ND | | ND | ND | I | ND | ND | | ND | | | | | | | |
| Phenol | 210000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Pyrene | 18000 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| Pyridine | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | | | | | | | |
| TICs | NLE | 322300 | 114500 | 117380 | 102670 | 59040 | | 54680 | 77950 | 8 | 80890 | 79160 | | 140980 | | | | | | | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.0139 | 0.0044 | 0.0121 | 0.0063 | 0.3981 | | 0.0096 | 0.0025 | | ND | 0.019 | | 0.0219 | 0.0014 | | 0.0421 | 0.0029 | | 0.0114 | 0.0113 |
| 4,4'-DDE | 9 | 0.2172 | 0.0827 | 0.0212 | 0.1093 | 1.5101 | | 0.2604 | 0.086 | 0. | .4756 | 0.1748 | | 0.3489 | 0.0445 | | 0.8396 | 0.0304 | | 0.2107 | 0.0458 |
| 4,4'-DDT | 8 | 0.2382 | 0.0263 | 0.0142 | 0.0289 | 1.1037 | | 0.157 | 0.0198 | 0. | .4803 | 0.0346 | | 0.389 | 0.0114 | | 0.3562 | 0.0237 | | 0.1191 | 0.04 |
| Aldrin | 0.2 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-BHC | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-Chlordane | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | 0.0017 | ND | | ND | ND | | ND | ND |
| Arochlor 1016 | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1221 | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1232 | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1242 | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1248 | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1254 | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1260 | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| beta-BHC | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| delta-BHC | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dieldrin | 0.2 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan I | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan II | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endosulfan-Sulfate | 6800 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endrin | 340 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Endrin Aldehyde | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| gamma-BHC | NLE | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| gamma-Chlordane | NLE | ND | ND | ND | ND | 0.0187 | | ND | ND | | ND | ND | | ND | ND | | 0.0019 | ND | | ND | ND |
| Heptachlor | 0.7 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Heptachlor Epoxide | 0.3 | ND | ND ND | ND | ND | ND ND | | ND | ND | | ND | ND | | 0.0017 | ND | | ND | ND ND | | 0.0013 | ND ND |
| Toxaphene | 3 | ND | ND ND | ND ND | ND ND | ND | | ND | ND ND | | ND | ND | | ND | ND | | ND | ND ND | | ND | ND ND |
| Toxupilolic | 3 | NU | שאו | ND | NU | שאו | | ND | ND | | NU | אוט | | IND | ND | | שאו | NU | | שאו | NU |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10139.14 C-19 (0-6") 4/14/2010 | 10139.15 C-19 (18-24") 4/14/2010 | 10139.17 D-20 (0-6") 4/14/2010 | 10139.18 D-20 (18-24") Duplicate 4/14/2010 | 10139.19 D-20 (18-24") 4/14/2010 | 10139.20 D-20 (60-66") 4/14/2010 | 10143.02 C-20 (0-6") 4/16/2010 | 10143.03 C-20 (18-24") 4/16/2010 | 10143.04 C-20 (66-72") 4/16/2010 | 10143.05 D-21 (0-6") 4/16/2010 | 10143.06 D-21 (18-24") 4/16/2010 | 10143.07 D-21 (48-56") 4/16/2010 | 10143.08 C-21 (0-6") 4/16/2010 | 10143.09 C-21 (18-24") 4/16/2010 | 10143.10 C-21 (66-72") 4/16/2010 | 10143.11 D-22 (0-6") 4/16/2010 | 10143.12 D-22 (18-24") 4/16/2010 | 10143.13 D-22 (48-54") 4/16/2010 | 10143.14 C-22 (0-6") 4/16/2010 | 10143.15 C-22 (18-24") 4/16/2010 |
|---|---|--------------------------------------|--|--------------------------------------|---|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 5460 | 7120 | 3140 | 6500 | 5190 | | 11600 | 14700 | | 11000 | 16800 | | 11200 | 15300 | | 13000 | 12700 | | 15500 | 14800 |
| Antimony | 450 | 1.81 | 2.5 | 1.79 | 1.1 | 2.01 | | 1.73 | 0.903 | | 1.31 | 2.01 | | 1.12 | 1.84 | | 1.64 | 2.14 | | 2.07 | 2.24 |
| Arsenic | NLE | 9.65 | 11.3 | 43 | 7.58 | 8.62 | | 11.1 | 9.21 | | 9.78 | 12.5 | | 10.7 | 14.4 | | 12.2 | 9.9 | | 15.5 | 13 |
| Barium | 59000 | 34.9 | 59.8 | 53.5 | 23.7 | 18.7 | | 39.8 | 38.3 | | 28 | 28.1 | | 38.4 | 32.4 | | 32.7 | 32.1 | | 45 | 43.1 |
| Beryllium | 140 | 0.612 | 0.666 | 0.442 | 0.836 | 0.497 | | 1.33 | 1.46 | | 1.27 | 2.05 | | 1.14 | 1.51 | | 1.36 | 1.35 | | 1.52 | 1.47 |
| Cadmium | 78 | 0.718 | 0.71 | 0.447 | 0.509 | 0.366 | | 1.33 | 1.3 | | 1.11 | 1.96 | | 1.14 | 1.48 | | 1.33 | 1.25 | | 1.46 | 1.4 |
| Calcium | NLE | 2170 | 1540 | 1080 | 626 | 544 | | 2030 | 774 | | 785 | 1060 | | 1600 | 917 | | 1290 | 1320 | | 3450 | 1460 |
| Chromium | NLE | 45.7 | 47 | 44.8 | 41 | 46.6 | | 118 | 107 | | 95.6 | 158 | | 88.2 | 126 | | 117 | 125 | | 127 | 148 |
| Cobalt | 590 | 1.14 | 1.29 | 0.641 | 0.767 | 0.596 | | 1.13 | 1.33 | | 1.57 | 2.46 | | 1.53 | 1.37 | | 1.5 | 1.44 | | 2.28 | 1.63 |
| Copper | 45000 | 16.6 | 15.7 | 4.46 | 4.14 | 9.82 | | 19.1 | 8.94 | | 23.6 | 14.1 | | 30.2 | 9.94 | | 14.6 | 16.7 | | 23.9 | 10.1 |
| Iron | NLE | 17300 | 21900 | 16100 | 18300 | 16000 | | 34600 | 40000 | | 32600 | 59900 | | 31600 | 43100 | | 35800 | 35200 | | 38700 | 42100 |
| Lead | 800 | 46 | 34 | 13.5 | 12.6 | 33.2 | | 38 | 19.4 | | 43.6 | 13.7 | | 47.5 | 16.2 | | 40.7 | 46.3 | | 48.2 | 23.1 |
| Magnesium | NLE | 1430 | 1370 | 1310 | 1180 | 1230 | | 4630 | 4860 | | 4020 | 7140 | | 3980 | 5390 | | 4850 | 4710 | | 5100 | 5070 |
| Manganese | 5900 | 65.2 | 57.9 | 10.9 | 40.2 | 16.2 | | 55.4 | 58.8 | | 61.3 | 90.9 | | 67.3 | 59 | | 72.2 | 70 | | 106 | 74.2 |
| Nickel | 23000 | 5.01 | 5.16 | 2.85 | 4.09 | 4.05 | | 6.84 | 7.34 | | 7.29 | 10.4 | | 7.05 | 7.51 | | 7.13 | 8.08 | | 9.97 | 9.59 |
| Potassium | NLE | 2880 | 2360 | 3950 | 1820 | 2430 | | 10200 | 10300 | | 8600 | 15400 | | 8210 | 12000 | | 10600 | 10200 | | 11100 | 10600 |
| Selenium | 5700 | 8.3 | 11 | 9.79 | 6.74 | 8.62 | | ND | ND |
| Silver | 5700 | 2.28 | 2.64 | 1.78 | 2.07 | 1.85 | | 4.57 | 5.07 | | 4.11 | 7.78 | | 4.18 | 5.11 | | 4.29 | 4.29 | | 4.64 | 5.18 |
| Sodium | NLE | ND | ND | ND | ND | ND | | ND | 332 | | 276 | ND | | 299 | 262 | | ND | ND | | 254 | ND |
| Thallium | 79 | ND | ND | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vanadium | 1100 | 35.1 | 34.8 | 15.7 | 28.9 | 27.8 | | 59.3 | 61.1 | | 52.2 | 77.6 | | 50.1 | 70.2 | | 62 | 60.4 | | 71.3 | 67 |
| Zinc | 110000 | 63.5 | 63.9 | 40 | 32.9 | 32.3 | | 85.2 | 62.5 | | 81.4 | 84.9 | | 75.2 | 55.3 | | 103 | 115 | | 89 | 64.3 |

| Lab Sample ID Field Sample Location | NJDEP Cleanup | 10143.16 C-22 (66-72") | 10149.02 C-23 (0-6") | 10149.03 C-23 (18-24") | 10149.04 C-23 (66-72") | 10149.05 D-24 (0-6") | 10149.06 D-24 (18-24") | 10149.07 D-24 (66-72") | 10149.08 C-24 (0-6") | 10149.09 C-24 (18-24") | 10149.10 C-24 (66-72") | 10149.11 D-25 (0-6") | 10149.12 D-25 (18-24") | 10149.13 D-25 (18-24") | 10149.14 D-25 (54-60") | 10159.02 D-26 (0-6") | 10159.03 D-26 (18-24") | 10159.04 D-26 (54-60") | 10159.05 D-27 (0-6") | 10159.06 D-27 (18-24") | 10159.07 D-27 (54- |
|--|---------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|-----------------------|
| Sample Date | Criteria (mg/kg) | 4/16/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | 4/19/2010 | Duplicate 4/19/2010 | 4/19/2010 | 4/22/2010 | 4/22/2010 | 4/22/2010 | 4/22/2010 | 4/22/2010 | 60") 4/22/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 1,1,1-Trichloroethane | 4200 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 1,1,2,2-Tetrachloroethane | 3 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 1,1,2-Trichloroethane | 6 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 1,1-Dichloroethene | 150 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 1,2-Dichloroethane | 3 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 1,2-Dichloropropane | 5 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 2-Butanone | 44000 | ND | | ND | | ND | | ND | ND | | ND | ND |
| 2-Chloroethyl vinyl ether | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| 2-Hexanone | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| 4-Methyl-2-pentanone | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Acetone | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Acrolein | 1 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Acrylonitrile | 3 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Benzene | 5 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Bromodichloromethane | 3 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Bromoform | 280 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Bromomethane | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Carbon disulfide | 110000 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Carbon Tetrachloride | 2 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Chlorobenzene | 7400 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Chloroethane | 1100 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Chloroform | 2 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Chloromethane | 12 | ND | | ND | | ND | | ND | ND | | ND | ND |
| cis-1,2-Dichloroethene | 560 | ND | | ND | | ND | | ND | ND | | ND | ND |
| cis-1,3-Dichloropropene | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Dibromochloromethane | 8 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Dichlorodifluoromethane | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Diisopropyl ether | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Ethylbenzene | 110000 | ND | | ND | | ND | | ND | ND | | ND | ND |
| m+p-Xylenes | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Methyl tert-butyl ether | 320 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Methylene chloride | 97 | ND | | ND | | ND | | ND | ND | | ND | ND |
| o-Xylene | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Styrene | 260 | ND | | ND | | ND | | ND | ND | | ND | ND |
| tert-Butyl alcohol | 11000 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Tetrachloroethene | 5 | ND | | ND | | ND | | ND | ND | | ND | ND |
| TICs | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Toluene | 91000 | ND | | ND | | ND | | ND | ND | | ND | ND |
| trans-1,2-Dichloroethene | 720 | ND | | ND | | ND | | ND | ND | | ND | ND |
| trans-1,3-Dichloropropene | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Trichloroethene | 20 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Trichlorofluoromethane | 340000 | ND | | ND | | ND | | ND | ND | | ND | ND |
| Vinyl Acetate | NLE | ND | | ND | | ND | | ND | ND | | ND | ND |
| Vinyl chloride | 2 | ND | | ND | | ND | | ND | ND | | ND | ND |
| vinyi ciiloride | | ND | | ND | | ND | | ND | ND | | ND | N |

Notes

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10143.16 C-22 (66-72") 4/16/2010 | 10149.02 C-23 (0-6") 4/19/2010 | 10149.03 C-23 (18-24") 4/19/2010 | 10149.04 C-23 (66-72") 4/19/2010 | 10149.05 D-24 (0-6") 4/19/2010 | 10149.06 D-24 (18-24") 4/19/2010 | 10149.07 D-24 (66-72") 4/19/2010 | 10149.08 C-24 (0-6") 4/19/2010 | 10149.09 C-24 (18-24") 4/19/2010 | 10149.10 C-24 (66-72") 4/19/2010 | 10149.11 D-25 (0-6") 4/19/2010 | 10149.12 D-25 (18-24") 4/19/2010 | 10149.13 D-25 (18-24") Duplicate 4/19/2010 | 10149.14 D-25 (54-60") 4/19/2010 | 10159.02 D-26 (0-6") 4/22/2010 | 10159.03 D-26 (18-24") 4/22/2010 | 10159.04 D-26 (54-60") 4/22/2010 | 10159.05 D-27 (0-6") 4/22/2010 | 10159.06 D-27 (18-24") 4/22/2010 | 10159.07 D-27 (54- 60") 4/22/2010 |
|---|---|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|---|--|--------------------------------------|--|--|--------------------------------------|--|--|
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 1,2-Dichlorobenzene | 59000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 1,3-Dichlorobenzene | 59000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 1,4-Dichlorobenzene | 13 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2,4,5-Trichlorophenol | 68000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2,4,6-Trichlorophenol | 74 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dichlorophenol | 2100 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dimethylphenol | 14000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dinitrophenol | 1400 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dinitrotoluene | 3 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2,6-Dinitrotoluene | 3 | | ND | ND | | ND | ND | | ND | ND | ĺ | ND | ND | ND | | ND | ND | | ND | ND | |
| 2-Chloronaphthalene | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2-Chlorophenol | 2200 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2-Methylnaphthalene | 2400 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2-Methylphenol | 3400 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2-Nitroaniline | 23000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 2-Nitrophenol | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 3,3'-Dichlorobenzidine | 4 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 3-Nitroaniline | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4-Bromophenyl Phenyl ether | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4-Chloro-3-methylphenol | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4-Chloroaniline | 66 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4-Chlorophenyl phenyl ether | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4-Methylphenol | 340 | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4-Nitroaniline | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| 4-Nitrophenol | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Acenaphthene | 37000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Acenaphthylene | 300000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Aniline | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Anthracene | 30000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Azobenzene | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Benzidine | 0.7 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Benzo(a)anthracene | 2 | | ND | ND | ND | | ND | ND | | ND | ND | |
| benzo(a)pyrene | 0.2 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Benzo(b)fluoranthene | 2 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Benzo(g,h,i)perylene | 30000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Benzo(k)fluoranthene | 23 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Benzoic Acid | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Benzyl alcohol | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| bis(2-Chloroethoxy)methane | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| bis(2-Chloroethyl)ether | 2 | | ND | ND | ND | | ND | ND | | ND | ND | |
| bis(2-chloroisopropyl)ether | 67 | | ND | ND | ND | | ND | ND | | ND | ND | |
| bis(2-ethylhexyl) phthalate | 140 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Butyl benzyl phthalate | 14000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Chrysene | 230 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Dibenz(a,h)anthracene | 0.2 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Dibenzofuran | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Diethyl phthalate | 550000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Dimethyl phthalate | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |

| Lab Camala VD | NJDEP | 10143.16 | 10149.02 | 10149.03 | 10149.04 | 10149.05 | 10149.06 | 10149.07 | 10149.08 | 10149.09 | 10149.10 | 10149.11 | 10149.12 | 10149.13 | 10149.14 | 10159.02 | 10159.03 | 10159.04 | 10159.05 | 10159.06 | 10159.07 |
|---|--------------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|---|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|--------------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | C-22 (66-72") 4/16/2010 | C-23 (0-6") 4/19/2010 | C-23 (18-24") 4/19/2010 | C-23 (66-72") 4/19/2010 | D-24 (0-6") 4/19/2010 | D-24 (18-24") 4/19/2010 | D-24 (66-72") 4/19/2010 | C-24 (0-6") 4/19/2010 | C-24 (18-24") 4/19/2010 | C-24 (66-72") 4/19/2010 | D-25 (0-6") 4/19/2010 | D-25 (18-24") 4/19/2010 | D-25 (18-24") Duplicate 4/19/2010 | D-25 (54-60") 4/19/2010 | D-26 (0-6") 4/22/2010 | D-26 (18-24") 4/22/2010 | D-26 (54-60") 4/22/2010 | D-27 (0-6") 4/22/2010 | D-27 (18-24") 4/22/2010 | D-27 (54- 60") 4/22/2010 |
| Di-n-butylphthalate | 68000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Di-n-octyl phthalate | 27000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Fluoranthene | 24000 | | ND | ND | ND | | ND | ND | | ND | ND | 1 |
| Fluorene | 24000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorobenzene | 1 | | ND | ND | ND | | ND | ND | | ND | ND | 1 |
| Hexachlorobutadiene | 25 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorocyclopentadiene | 110 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Hexachloroethane | 140 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Isophorone | 2000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Naphthalene | 17 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Nitrobenzene | 340 | | ND | ND | ND | | ND | ND | | ND | ND | |
| N-nitrosodimethylamine | 0.7 | | ND | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodi-n-propylamine | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodiphenylamine | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Pentachlorophenol | 10 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Phenanthrene | 300000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Phenol | 210000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Pyrene | 18000 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Pyridine | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| TICs | NLE | | 88240 | 59430 | | 60100 | 74480 | | 48490 | 45850 | | 48300 | 46470 | 46300 | | 126750 | 104620 | | 100600 | 99850 | 1 |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | | 0.0153 | ND | | 0.0095 | ND | | ND | ND | | 0.0067 | ND | 0.0022 | | 0.0055 | ND | | 0.0052 | ND | |
| 4,4'-DDE | 9 | | 0.8622 | 0.0116 | | 0.8735 | 0.0428 | | 0.3742 | 0.0027 | | 0.8689 | 0.0135 | 0.1078 | | 0.8842 | 0.0416 | | 0.6928 | 0.0026 | |
| 4,4'-DDT | 8 | | 0.5468 | 0.0044 | | 0.4498 | 0.0295 | | 0.2114 | ND | | 0.444 | 0.0098 | 0.0998 | | 0.5936 | 0.0145 | | 0.2629 | 0.0058 | |
| Aldrin | 0.2 | | ND | ND | ND | | ND | ND | | ND | ND | |
| alpha-BHC | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| alpha-Chlordane | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1016 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1221 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1232 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | 1 |
| Arochlor 1242 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Arochior 1248 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1254 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1260 | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| beta-BHC | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| delta-BHC | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Dieldrin | 0.2 | | ND | ND | | ND | ND | | 0.0037 | ND | | ND | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan I | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan II | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan-Sulfate | 6800 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Endrin | 340 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Endrin Aldehyde | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| gamma-BHC | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| gamma-Chlordane | NLE | | ND | ND | ND | | ND | ND | | ND | ND | |
| Heptachlor | 0.7 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Heptachlor Epoxide | 0.3 | | ND | ND | | 0.0015 | ND | | ND | ND | | ND | ND | ND | | 0.0029 | ND | | ND | ND | |
| Toxaphene | 3 | | ND | ND | ND | | ND | ND | | ND | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10143.16 C-22 (66-72") 4/16/2010 | 10149.02 C-23 (0-6") 4/19/2010 | 10149.03 C-23 (18-24") 4/19/2010 | 10149.04 C-23 (66-72") 4/19/2010 | 10149.05 D-24 (0-6") 4/19/2010 | 10149.06 D-24 (18-24") 4/19/2010 | 10149.07 D-24 (66-72") 4/19/2010 | 10149.08 C-24 (0-6") 4/19/2010 | 10149.09 C-24 (18-24") 4/19/2010 | 10149.10 C-24 (66-72") 4/19/2010 | 10149.11 D-25 (0-6") 4/19/2010 | 10149.12 D-25 (18-24") 4/19/2010 | 10149.13 D-25 (18-24") Duplicate 4/19/2010 | 10149.14 D-25 (54-60") 4/19/2010 | 10159.02 D-26 (0-6") 4/22/2010 | 10159.03 D-26 (18-24") 4/22/2010 | 10159.04 D-26 (54-60") 4/22/2010 | 10159.05 D-27 (0-6") 4/22/2010 | 10159.06 D-27 (18-24") 4/22/2010 | 10159.07 D-27 (54- 60") 4/22/2010 |
|---|---|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|---|--|--------------------------------------|--|--|--------------------------------------|--|--|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | | 11400 | 16000 | | 10100 | 10100 | | 12900 | 12700 | | 13700 | 19400 | 16600 | | 12200 | 9500 | | 16300 | 18500 | |
| Antimony | 450 | | 2.63 | 3.02 | | 2.07 | 1.55 | | 1.37 | 2.95 | | 2.43 | 3.86 | 2.81 | | 2.61 | 1.71 | | 2.53 | 2.09 | |
| Arsenic | NLE | | 10.5 | 14.7 | | 7.6 | 5.15 | | 12.7 | 5.65 | | 19.6 | 15.4 | 10.6 | | 18.9 | 5.42 | | 16.5 | 27.3 | |
| Barium | 59000 | | 39.3 | 45.5 | | 29.8 | 18.3 | | 52.1 | 32.4 | | 36.6 | 90.7 | 81 | | 22.1 | 17.7 | | 39.8 | 33.7 | |
| Beryllium | 140 | | 1.12 | 1.95 | | 1.02 | 1.26 | | 1.58 | 1.4 | | 1.44 | 2.02 | 1.76 | | 1.36 | 1.05 | | 1.67 | 2.02 | |
| Cadmium | 78 | | 1.28 | 2 | | 1.07 | 1.07 | | 1.31 | 1.16 | | 1.38 | 1.95 | 1.54 | | 1.23 | 0.889 | | 1.5 | 1.86 | |
| Calcium | NLE | | 1910 | 1330 | | 895 | 442 | | 1240 | 1380 | | 600 | 513 | 491 | | 777 | 311 | | 1000 | 464 | |
| Chromium | NLE | | 97 | 193 | | 96.5 | 128 | | 96.9 | 92 | | 147 | 229 | 196 | | 128 | 82.3 | | 141 | 186 | |
| Cobalt | 590 | | 1.7 | 1.11 | | 1.17 | 0.282 | | 3.51 | 1.29 | | 0.597 | 0.281 | 0.349 | | 0.841 | 0.712 | | 1.25 | 1.17 | |
| Copper | 45000 | | 28.3 | 7.69 | | 43.7 | 6.54 | | 29.2 | 4.18 | | 17.7 | 8.78 | 10.7 | | 10.9 | ND | | 11.8 | 5.29 | |
| Iron | NLE | | 30500 | 54600 | | 27600 | 31000 | | 32200 | 34400 | | 39400 | 55200 | 46300 | | 35100 | 28800 | | 42100 | 62000 | |
| Lead | 800 | | 98.9 | 18.7 | | 52.2 | 8.34 | | 76.2 | 81.8 | | 39.5 | 10.9 | 13.7 | | 26.8 | 7.74 | | 32 | 10.7 | |
| Magnesium | NLE | | 3870 | 7130 | | 3610 | 4630 | | 3820 | 4540 | | 5370 | 7810 | 6790 | | 4940 | 3820 | | 5780 | 7400 | |
| Manganese | 5900 | | 87.2 | 51.4 | | 55.9 | 25.9 | | 95.4 | 72.1 | | 37.7 | 31.2 | 30.3 | | 29.5 | 32.4 | | 73.6 | 30.2 | |
| Nickel | 23000 | | 7.9 | 7.79 | | 6.14 | 5.35 | | 12.6 | 6.72 | | 6 | 6.31 | 5.56 | | 6.02 | 4.77 | | 7.94 | 7.8 | |
| Potassium | NLE | | 7670 | 15200 | | 7360 | 10100 | | 7940 | 8670 | | 11400 | 16500 | 13900 | | 10400 | 8100 | | 12700 | 16800 | |
| Selenium | 5700 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Silver | 5700 | | 4.37 | 7.77 | | 3.97 | 4.56 | | 4.64 | 4.98 | | 5.59 | 7.73 | 6.34 | | 4.82 | 4.06 | | 5.79 | 9.62 | |
| Sodium | NLE | | ND | 246 | | ND | 429 | | ND | 578 | | ND | ND | 299 | | ND | ND | | ND | ND | |
| Thallium | 79 | | ND | ND | ND | | ND | ND | | ND | ND | |
| Vanadium | 1100 | | 51.3 | 77.1 | | 50.6 | 54.7 | | 57.9 | 49.7 | | 81.2 | 111 | 95.5 | | 64.3 | 43 | | 75.2 | 103 | |
| Zinc | 110000 | | 88.6 | 75.6 | | 64.6 | 42.2 | | 99 | 51.2 | | 49.8 | 55.2 | 49.4 | | 50.8 | 33.9 | | 61.6 | 58.6 | |

| Lab Sample ID | NJDEP | 10159.08 | 10159.09 | 10159.10 | 10159.11 | 10159.12 | 10159.13 | 10159.14 | 10159.15 | 10159.16 | 10159.17 | 10161.02 | 10161.03 | 10161.04 | 10161.05 | 10161.06 | 10161.07 | 10161.08 | 10161.09 | 10161.10 | 10161.11 |
|---|--------------------------------|--------------------------|---|----------------------------|----------------------------|--------------------------|----------------------------|--------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | D-28 (0-6") 4/22/2010 | D-28 (18-24") Duplicate 4/22/2010 | D-28 (18-24") 4/22/2010 | D-28 (54-60") 4/22/2010 | C-28 (0-6") 4/22/2010 | C-28 (18-24") 4/22/2010 | C-28 (0-6") 4/22/2010 | D-29 (0-6") 4/22/2010 | D-29 (18-24") 4/22/2010 | D-29 (54-60") 4/22/2010 | C-29 (0-6") 4/23/2010 | C-29 (18-24") 4/23/2010 | C-29 (66-72") 4/23/2010 | D-30 (0-6") 4/23/2010 | D-30 (18-24") 4/23/2010 | D-30 (66-72") 4/23/2010 | C-30 (0-6") 4/23/2010 | C-30 (18-24") 4/23/2010 | C-30 (66-72") 4/23/2010 | D-31 (0-6") 4/23/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,1,1-Trichloroethane | 4200 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,1,2,2-Tetrachloroethane | 3 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,1,2-Trichloroethane | 6 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,1-Dichloroethene | 150 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,2-Dichloroethane | 3 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,2-Dichloropropane | 5 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Butanone | 44000 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Chloroethyl vinyl ether | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Hexanone | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Methyl-2-pentanone | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Acetone | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Acrolein | 1 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Acrylonitrile | 3 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Benzene | 5 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Bromodichloromethane | 3 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Bromoform | 280 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Bromomethane | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Carbon disulfide | 110000 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Carbon Tetrachloride | 2 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Chlorobenzene | 7400 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Chloroethane | 1100 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Chloroform | 2 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Chloromethane | 12 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| cis-1,2-Dichloroethene | 560 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| cis-1,3-Dichloropropene | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dibromochloromethane | 8 | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dichlorodifluoromethane | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Diisopropyl ether | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Ethylbenzene | 110000 | | | ND | ND | | ND ND | ND | | ND ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| m+p-Xylenes | NLE | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Methyl tert-butyl ether Methylene chloride | 320 | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND | ND | | ND ND | ND ND | | ND | ND | |
| o-Xylene | 97 NLE | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND | | ND | ND | | ND | ND ND | | ND | ND | |
| Styrene | 260 | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| tert-Butyl alcohol | 11000 | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Tetrachloroethene | 5 | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | |
| TICs | NLE | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Toluene | 91000 | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND | ND ND | |
| trans-1,2-Dichloroethene | 720 | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| trans-1,3-Dichloropropene | NLE | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND | ND ND | |
| Trichloroethene | 20 | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Trichlorofluoromethane | 340000 | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND | |
| Vinyl Acetate | NLE | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Vinyl chloride | NLE 2 | | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | |
| y. c.aonue | | | | שוו | טוו | | ND | ND | | ND | ND | | NU | טוו | | NU | IND | | ND | IND | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 10159.08 D-28 (0-6") 4/22/2010 | 10159.09 D-28 (18-24") Duplicate | 10159.10 D-28 (18-24") 4/22/2010 | 10159.11 D-28 (54-60") 4/22/2010 | 10159.12 C-28 (0-6") 4/22/2010 | 10159.13 C-28 (18-24") 4/22/2010 | 10159.14 C-28 (0-6") 4/22/2010 | 10159.15 D-29 (0-6") 4/22/2010 | 10159.16 D-29 (18-24") 4/22/2010 | 10159.17 D-29 (54-60") 4/22/2010 | 10161.02 C-29 (0-6") 4/23/2010 | 10161.03 C-29 (18-24") 4/23/2010 | 10161.04 C-29 (66-72") 4/23/2010 | 10161.05 D-30 (0-6") 4/23/2010 | 10161.06 D-30 (18-24") 4/23/2010 | 10161.07 D-30 (66-72") 4/23/2010 | 10161.08 C-30 (0-6") 4/23/2010 | 10161.09 C-30 (18-24") 4/23/2010 | 10161.10 C-30 (66-72") 4/23/2010 | 10161.11 D-31 (0-6") 4/23/2010 |
|---|------------------------------|--------------------------------------|--|--|--|--------------------------------------|--|--------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|
| | (mg/kg) | 1,22,2010 | Duplicate 4/22/2010 | 4,22,2020 | 1, 22, 2010 | 1, 22, 2020 | 1,722,2010 | 1,22,2010 | 1,22,2020 | 1,22,2010 | 1, 22, 2020 | 4,25,2010 | 1,25,2010 | 1,725,2020 | 1,25,2020 | 1,25,2020 | 1,25,2010 | 1,25,2010 | 1/25/2010 | 1,25,2010 | 1,25,2020 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,2-Dichlorobenzene | 59000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,3-Dichlorobenzene | 59000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 1,4-Dichlorobenzene | 13 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4,5-Trichlorophenol | 68000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4,6-Trichlorophenol | 74 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4-Dichlorophenol | 2100 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4-Dimethylphenol | 14000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| -,· | 1400 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2,4-Dinitrotoluene 2,6-Dinitrotoluene | 3 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Chloronaphthalene | 3 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Chlorophenol | NLE 2200 | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| 2-Methylnaphthalene | 2400 | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| 2-Methylphenol | 3400 | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| 2-Nitroaniline | 23000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 2-Nitrophenol | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 3,3'-Dichlorobenzidine | 4 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 3-Nitroaniline | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4,6-Dinitro-2-methylphenol | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Bromophenyl Phenyl ether | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Chloro-3-methylphenol | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Chloroaniline | 66 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Chlorophenyl phenyl ether | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Methylphenol | 340 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Nitroaniline | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| 4-Nitrophenol | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acenaphthene | 37000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Acenaphthylene | 300000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Aniline | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Anthracene | 30000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Azobenzene Benzidine | NLE | ND | ND | ND | | ND ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzo(a)anthracene | 0.7 | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND 0.74 J | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND |
| benzo(a)pyrene | 0.2 | ND ND | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | 0.74 J ND | ND | | ND ND | ND ND | | ND | ND ND | | ND ND |
| Benzo(b)fluoranthene | 2 | ND | ND | ND ND | | ND | ND ND | | ND ND | ND | | 0.92 J | ND | | ND | ND | | 2.41 J | ND ND | | ND ND |
| Benzo(g,h,i)perylene | 30000 | ND | ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND | ND ND | | ND ND |
| Benzo(k)fluoranthene | 23 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzoic Acid | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Benzyl alcohol | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-Chloroethoxy)methane | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-Chloroethyl)ether | 2 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-chloroisopropyl)ether | 67 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| bis(2-ethylhexyl) phthalate | 140 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Butyl benzyl phthalate | 14000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Chrysene | 230 | ND | ND | ND | | ND | ND | | ND | ND | | 0.84 J | ND | | ND | ND | | 2.01 J | ND | | ND |
| Dibenz(a,h)anthracene | 0.2 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Dibenzofuran | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Diethyl phthalate | 550000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Dimethyl phthalate | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10159.08 D-28 (0-6") 4/22/2010 | 10159.09 D-28 (18-24") Duplicate 4/22/2010 | 10159.10 D-28 (18-24") 4/22/2010 | D-28 (54-60") C-28 | 0159.12 28 (0-6") 22/2010 | 10159.13 C-28 (18-24") 4/22/2010 | 10159.14 C-28 (0-6") 4/22/2010 | 10159.15 D-29 (0-6") 4/22/2010 | 10159.16 D-29 (18-24") 4/22/2010 | 10159.17 D-29 (54-60") 4/22/2010 | 10161.02 C-29 (0-6") 4/23/2010 | 10161.03 C-29 (18-24") 4/23/2010 | 10161.04 C-29 (66-72") 4/23/2010 | 10161.05 D-30 (0-6") 4/23/2010 | 10161.06 D-30 (18-24") 4/23/2010 | 10161.07 D-30 (66-72") 4/23/2010 | 10161.08 C-30 (0-6") 4/23/2010 | 10161.09 C-30 (18-24") 4/23/2010 | 10161.10 C-30 (66-72") 4/23/2010 | 10161.11 D-31 (0-6") 4/23/2010 |
|---|---|--------------------------------------|---|--|--------------------|---------------------------------|--|--------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|
| Di-n-butylphthalate | 68000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Di-n-octyl phthalate | 27000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Fluoranthene | 24000 | ND | ND | ND | | ND | ND | | ND | ND | | 1.19 | ND | | ND | ND | | 2.82 J | ND | | ND |
| Fluorene | 24000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachlorobenzene | 1 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachlorobutadiene | 25 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachlorocyclopentadiene | 110 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Hexachloroethane | 140 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Indeno(1,2,3-cd)pyrene | 2 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Isophorone | 2000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Naphthalene | 17 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Nitrobenzene | 340 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| N-nitrosodimethylamine | 0.7 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| n-Nitrosodi-n-propylamine | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| n-Nitrosodiphenylamine | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Pentachlorophenol | 10 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Phenanthrene | 300000 | ND | ND | ND | | ND | ND | | ND | ND | | 1.26 | ND | | ND | ND | | 2.37 J | ND | | ND |
| Phenol | 210000 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Pyrene | 18000 | ND | ND | ND | | ND | ND | | ND | ND | | 1.55 | ND | | ND | ND | | 3.07 | ND | | ND |
| Pyridine | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| TICs | NLE | 88240 | 81000 | 100620 | 44 | 149000 | 77600 | | 102200 | 74690 | | 228900 | 67350 | | 63820 | 99830 | | 563000 | 127030 | | 103660 |
| Pesticides/PCBs | | | | | l | | | | | | | | | | | 1 | | | | ı | |
| 4,4'-DDD | 13 | 0.0061 | ND | ND | 0 | 0.0039 | ND | | 0.2516 | ND | | 0.0082 | ND | | ND | ND | | ND | 0.0033 | | 0.0104 |
| 4,4'-DDE | 9 | 0.4711 | ND | 0.0021 | | 0.0445 | 0.7164 | | 1.9476 | ND | | 0.7342 | 0.0066 | | 0.0175 | ND | | 0.9524 | 0.3384 | | 0.4684 |
| 4,4'-DDT | 8 | 0.3579 | ND | 0.0024 | | 0.0744 | 0.928 | | 4.7811 | 0.0026 | | 0.5693 | 0.0032 | | 0.0107 | 0.0016 | | 0.8264 | 0.2711 | | 0.5292 |
| Aldrin | 0.2 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| alpha-BHC | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| alpha-Chlordane | NLE | ND | ND | ND | | 0.0125 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | 0.0036 |
| Arochlor 1016 | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1221 | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1232 | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1242 | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1248 | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1254 | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Arochlor 1260 | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| beta-BHC | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| delta-BHC | NLE | ND ND | ND | ND ND | | ND | ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND |
| Dieldrin | 0.2 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Endosulfan I | NLE | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Endosulfan II | NLE | ND ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Endosulfan-Sulfate | 6800 | ND | ND | ND ND | | ND | ND | | ND | ND | | ND ND | ND ND | | ND | ND | | ND | ND ND | | ND. |
| Endrin | 340 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Endrin Aldehyde | NLE | ND | ND | ND. | | ND | ND | | ND ND | ND | | ND. | ND | | ND | ND | | ND | ND | | ND ND |
| gamma-BHC | NLE | ND ND | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND |
| gamma-Chlordane | NLE | ND ND | ND | ND ND | | 0.0091 | ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND | ND ND | | 0.0032 |
| Heptachlor | 0.7 | ND ND | ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | 0.0032 ND |
| Heptachlor Epoxide | 0.3 | ND ND | ND | ND ND | | ND | ND ND | | ND ND | ND ND | | 0.0029 | ND ND | | ND ND | ND ND | | ND | ND ND | | 0.0022 |
| | 3 | ND ND | ND | ND ND | | ND | ND ND | | ND ND | ND | | 0.0029 ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | 0.0022 ND |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10159.08 D-28 (0-6") 4/22/2010 | 10159.09 D-28 (18-24") Duplicate 4/22/2010 | 10159.10 D-28 (18-24") 4/22/2010 | 10159.11 D-28 (54-60") 4/22/2010 | 10159.12 C-28 (0-6") 4/22/2010 | 10159.13 C-28 (18-24") 4/22/2010 | 10159.14 C-28 (0-6") 4/22/2010 | 10159.15 D-29 (0-6") 4/22/2010 | 10159.16 D-29 (18-24") 4/22/2010 | 10159.17 D-29 (54-60") 4/22/2010 | 10161.02 C-29 (0-6") 4/23/2010 | 10161.03 C-29 (18-24") 4/23/2010 | 10161.04 C-29 (66-72") 4/23/2010 | 10161.05 D-30 (0-6") 4/23/2010 | 10161.06 D-30 (18-24") 4/23/2010 | 10161.07 D-30 (66-72") 4/23/2010 | 10161.08 C-30 (0-6") 4/23/2010 | 10161.09 C-30 (18-24") 4/23/2010 | 10161.10 C-30 (66-72") 4/23/2010 | 10161.11 D-31 (0-6") 4/23/2010 |
|---|---|--------------------------------------|---|--|--|--------------------------------------|--|--------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 15100 | 19200 | 19700 | | 10900 | 9870 | | 17200 | 15700 | | 15500 | 13900 | | 18300 | 19200 | | 12700 | 21300 | | 17700 |
| Antimony | 450 | 3.55 | 2.93 | 3.37 | | 2.39 | 1.34 | | 4.28 | 3.38 | | 1.9 | 1.22 | | 4.15 | 3.74 | | 1.88 | 2.81 | | 5.01 |
| Arsenic | NLE | 15.3 | 16.7 | 25.9 | | 10.6 | 8.98 | | 19.6 | 25.5 | | 12.5 | 8.99 | | 17.2 | 17.8 | | 14.9 | 18.3 | | 20.4 |
| Barium | 59000 | 30.9 | 32.8 | 28 | | 33 | 25 | | 37.5 | 22.1 | | 41.5 | 25.3 | | 22.8 | 29.1 | | 40.6 | 50.8 | | 37.9 |
| Beryllium | 140 | 1.69 | 2.54 | 2.56 | | 0.764 | 1.02 | | 2.03 | 2.28 | | 1.66 | 1.26 | | 2.15 | 2.7 | | 1.17 | 1.73 | | 2.16 |
| Cadmium | 78 | 1.56 | 2.35 | 2.24 | | 0.972 | 0.999 | | 2.13 | 2.23 | | 1.92 | 1.34 | | 2.27 | 2.77 | | 1.35 | 1.87 | | 2.4 |
| Calcium | NLE | 1070 | 158 | 154 | | 3210 | 516 | | 576 | 62.6 | | 802 | 402 | | 136 | 77.1 | | 216 | 248 | | 315 |
| Chromium | NLE | 155 | 194 | 208 | | 54.5 | 77.1 | | 165 | 178 | | 125 | 98 | | 194 | 217 | | 102 | 140 | | 183 |
| Cobalt | 590 | 1.23 | 1.68 | 1.67 | | 1.82 | 1.58 | | 1.73 | 1.72 | | 2.01 | 1.2 | | 1.43 | 1.76 | | 1.48 | 2.16 | | 1.58 |
| Copper | 45000 | 14.9 | 3.57 | 3.07 | | 19.2 | 31.6 | | 19.5 | 3.69 | | 11.1 | 3.37 | | 6.44 | ND | | 21.7 | 18.9 | | 22.8 |
| Iron | NLE | 43100 | 73500 | 72200 | | 23700 | 29200 | | 59100 | 68300 | | 47700 | 37200 | | 66400 | 78300 | | 34600 | 51800 | | 68600 |
| Lead | 800 | 31.8 | 9.51 | 10.4 | | 54.7 | 42 | | 83.6 | 9.68 | | 43.4 | 26.6 | | 14.6 | 9.91 | | 121 | 62.6 | | 63.1 |
| Magnesium | NLE | 6150 | 8900 | 8580 | | 2460 | 3210 | | 7130 | 7080 | | 5330 | 4250 | | 8080 | 9240 | | 3900 | 6040 | | 7530 |
| Manganese | 5900 | 55.5 | 27.3 | 24.4 | | 104 | 69 | | 42.7 | 32.4 | | 86.5 | 70.7 | | 31.7 | 29 | | 48.7 | 101 | | 47.7 |
| Nickel | 23000 | 7.57 | 8.88 | 9.44 | | 7.73 | 7.09 | | 11.4 | 8.05 | | 9.75 | 6.69 | | 11.7 | 9.39 | | 7.59 | 10.3 | | 9.74 |
| Potassium | NLE | 13000 | 21900 | 21200 | | 4270 | 6660 | | 16200 | 17300 | | 11700 | 9000 | | 18900 | 22500 | | 8140 | 11400 | | 17500 |
| Selenium | 5700 | ND | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Silver | 5700 | 6.33 | 11.5 | 11 | | 3.26 | 4.15 | | 8.53 | 10.4 | | 6.8 | 5.27 | | 10.1 | 11.8 | | 4.89 | 7.44 | | 10.7 |
| Sodium | NLE | 224 | ND | 1380 | | 333 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Thallium | 79 | ND | 1.31 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND |
| Vanadium | 1100 | 79.8 | 96.3 | 100 | | 46.3 | 50.3 | | 93.4 | 76.8 | | 75.9 | 59 | | 92 | 102 | | 57.6 | 83.8 | | 89.8 |
| Zinc | 110000 | 72.7 | 64.5 | 67 | | 69.6 | 55.8 | | 111 | 68.8 | | 98.4 | 52.1 | | 67.8 | 69 | | 66 | 78.5 | | 134 |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup | 10161.12 D-31 (18-24") | 10161.13 D-31 (18-24") | 10161.14 D-31 (66-72") | 10173.02 C-25 (0-6") | 10173.03 C-25 (18-24") | 10173.04 C-25 (60-66") | 10173.05 C-26 (0-6") | 10173.06 C-26 (18-24") | 10173.07 C-26 (60-66") | 10173.08 C-27 (0-6") | 10173.09 C-27 (18-24") | 10173.10 C-27 (60-66") | 10173.11 C-31 (0-6") | 10173.12 C-31 (18-24") | 10173.13 C-31 (60-66") | 10173.14 D-32 (0-6") | 10173.15 D-32 (18-24") | 10173.16 D-32 (60-66") | 10173.17 D-32 (60-66") | 10173.18 D-33 (0-6") |
|---|---------------------|---------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|---------------------------|-------------------------|
| Sample Date | Criteria (mg/kg) | 4/23/2010 | Duplicate 4/23/2010 | 4/23/2010 | 5/4/2010 | 5/4/2010 | C-25 (60-66") 5/4/2010 | C-26 (0-6") 5/4/2010 | 5/4/2010 | C-26 (60-66") 5/4/2010 | 5/4/2010 | 5/4/2010 | C-27 (60-66") 5/4/2010 | C-31 (0-6") 5/4/2010 | 5/4/2010 | 5/4/2010 | D-32 (0-6") 5/4/2010 | 5/4/2010 | D-32 (60-66") 5/4/2010 | Duplicate 5/4/2010 | 5/4/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | ND | | ND | | ND | ND | | |
| 1,1,1-Trichloroethane | 4200 | ND | | ND | | ND | ND | | |
| 1,1,2,2-Tetrachloroethane | 3 | ND | | ND | | ND | ND | | |
| 1,1,2-Trichloroethane | 6 | ND | | ND | | ND | ND | | |
| 1,1-Dichloroethene | 150 | ND | | ND | | ND | ND | | |
| 1,2-Dichloroethane | 3 | ND | | ND | | ND | ND | | |
| 1,2-Dichloropropane | 5 | ND | | ND | | ND | ND | | |
| 2-Butanone | 44000 | ND | | ND | | ND | ND | | |
| 2-Chloroethyl vinyl ether | NLE | ND | | ND | | ND | ND | | |
| 2-Hexanone | NLE | ND | | ND | | ND | ND | | |
| 4-Methyl-2-pentanone | NLE | ND | | ND | | ND | ND | | |
| Acetone | NLE | ND | | ND | | ND | ND | | |
| Acrolein | 1 | ND | | ND | | ND | ND | | |
| Acrylonitrile | 3 | ND | | ND | | ND | ND | | |
| Benzene | 5 | ND | | ND | | ND | ND | | |
| Bromodichloromethane | 3 | ND | | ND | | ND | ND | | |
| Bromoform | 280 | ND | | ND | | ND | ND | | |
| Bromomethane | NLE | ND | | ND | | ND | ND | | |
| Carbon disulfide | 110000 | ND | | ND | | ND | ND | | |
| Carbon Tetrachloride | 2 | ND | | ND | | ND | ND | | |
| Chlorobenzene | 7400 | ND | | ND | | ND | ND | | |
| Chloroethane | 1100 | ND | | ND ND | | ND | ND ND | | ND | ND ND | | ND | ND | | ND | ND | | ND | ND | | |
| Chloromethane | 12 | ND ND | | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | |
| cis-1,2-Dichloroethene | 560 | ND ND | | ND ND | | ND ND | | | ND ND | ND ND | | ND ND | ND | | | | | ND ND | ND ND | | |
| cis-1,3-Dichloropropene | NLE | ND ND | | ND ND | | ND ND | ND ND | | |
| Dibromochloromethane | NLE 8 | ND ND | | ND ND | | ND ND | ND ND | | |
| Dichlorodifluoromethane | NLE | ND ND | | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | |
| Diisopropyl ether | NLE | ND ND | | ND ND | | ND | ND ND | | ND | ND | | ND ND | ND | | ND ND | ND | | ND ND | ND | | |
| Ethylbenzene | 110000 | ND | | ND | | ND | ND ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | |
| m+p-Xylenes | NLE | ND | | ND | | ND | ND | | |
| Methyl tert-butyl ether | 320 | ND | | ND | | ND | ND | | |
| Methylene chloride | 97 | ND | | ND | | ND | ND | | |
| o-Xylene | NLE | ND | | ND | | ND | ND | | |
| Styrene | 260 | ND | | ND | | ND | ND | | |
| tert-Butyl alcohol | 11000 | ND | | ND | | ND | ND | | |
| Tetrachloroethene | 5 | ND | | ND | | ND | ND | | |
| TICs | NLE | ND | | ND | | ND | ND | | ND | ND | | 2100 | ND | | ND | ND | | ND | ND | | |
| Toluene | 91000 | ND | | ND | | ND | ND | | |
| trans-1,2-Dichloroethene | 720 | ND | | ND | | ND | ND | | |
| trans-1,3-Dichloropropene | NLE | ND | | ND | | ND | ND | | |
| Trichloroethene | 20 | ND | | ND | | ND | ND | | |
| Trichlorofluoromethane | 340000 | ND | | ND | | ND | ND | | |
| Vinyl Acetate | NLE | ND | | ND | | ND | ND | | |
| Vinyl chloride | 2 | ND | | ND | | ND | ND | | |

| Lah Sample ID | NJDEP | 10161.12 | 10161.13 | 10161.14 | 10173.02 | 10173.03 | 10173.04 | 10173.05 | 10173.06 | 10173.07 | 10173.08 | 10173.09 | 10173.10 | 10173.11 | 10173.12 | 10173.13 | 10173.14 | 10173.15 | 10173.16 | 10173.17 | 10173.18 |
|---|---------------------|----------------------------|---|----------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|-------------------------|---------------------------|---------------------------|--|-------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria | D-31 (18-24") 4/23/2010 | D-31 (18-24") Duplicate 4/23/2010 | D-31 (66-72") 4/23/2010 | C-25 (0-6") 5/4/2010 | C-25 (18-24") 5/4/2010 | C-25 (60-66") 5/4/2010 | C-26 (0-6") 5/4/2010 | C-26 (18-24") 5/4/2010 | C-26 (60-66") 5/4/2010 | C-27 (0-6") 5/4/2010 | C-27 (18-24") 5/4/2010 | C-27 (60-66") 5/4/2010 | C-31 (0-6") 5/4/2010 | C-31 (18-24") 5/4/2010 | C-31 (60-66") 5/4/2010 | D-32 (0-6") 5/4/2010 | D-32 (18-24") 5/4/2010 | D-32 (60-66") 5/4/2010 | D-32 (60-66") Duplicate 5/4/2010 | D-33 (0-6") 5/4/2010 |
| | (mg/kg) | ,,,, | 4/23/2010 | ,,==,=== | -, ., | 5, 1, 2020 | 5, 1, 2020 | -, ., | 5, 1, 2323 | 5, 1, 2020 | 0, 1,2020 | 5, 1, 2020 | 0, 1, 2020 | 0, 1, 2020 | 5, 1, 2323 | 5, 1, 2225 | 5, 1, 2020 | 5, 1, 2323 | 5, 1, 2020 | 5/4/2010 | 5,1,233 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | ND | | | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | 59000 | ND | ND | | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | 59000 | ND | ND | | | | | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | 13 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | 68000 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | 74 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 2100 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | 14000 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | 1400 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | 3 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | 3 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | 2200 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | 2400 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2-Methylphenol | 3400 | ND | ND | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline 2-Nitrophenol | 23000 | ND | ND | | | | | | | | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | NLE | ND ND | ND | | | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | 4 NLE | ND ND | ND ND | | | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | NLE | ND ND | ND ND | | | | | | | | | | | | | | | | | | |
| 4-Bromophenyl Phenyl ether | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | NLE | ND ND | ND ND | | | | | | | | | | | | | | | | | | |
| 4-Chloroaniline | 66 | ND | ND | | | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| 4-Methylphenol | 340 | ND | ND | | | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Acenaphthylene | 300000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Aniline | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| Anthracene | 30000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Azobenzene | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| Benzidine | 0.7 | ND | ND | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | ND | | | | | | | | | | | | | | | | | | |
| benzo(a)pyrene | 0.2 | ND | ND | | | | | | | | | | | | | | | | | | |
| Benzo(b)fluoranthene | 2 | ND | ND | | | | | | | | | | | | | | | | | | |
| Benzo(g,h,i)perylene | 30000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Benzo(k)fluoranthene | 23 | ND | ND | | | | | | | | | | | | | | | | | | |
| Benzoic Acid Benzyl alcohol | NLE NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| bis(2-Chloroethoxy)methane | NLE | ND ND | ND ND | | | | | | | | | | | | | | | | | | |
| bis(2-Chloroethyl)ether | NLE 2 | ND ND | ND ND | | | | | | | | | | | | | | | | | | |
| bis(2-chloroisopropyl)ether | 67 | ND | ND | | | | | | | | | | | | | | | | | | |
| bis(2-ethylhexyl) phthalate | 140 | ND | ND | | | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate | 14000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Chrysene | 230 | ND | ND | | | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | 0.2 | ND | ND | | | | | | | | | | | | | | | | | | |
| Dibenzofuran | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | 550000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

| | NJDEP Cleanup Criteria | 10161.12 D-31 (18-24") 4/23/2010 | 10161.13 D-31 (18-24") Duplicate | 10161.14 D-31 (66-72") 4/23/2010 | 10173.02 C-25 (0-6") 5/4/2010 | 10173.03 C-25 (18-24") 5/4/2010 | 10173.04 C-25 (60-66") 5/4/2010 | 10173.05 C-26 (0-6") 5/4/2010 | 10173.06 C-26 (18-24") 5/4/2010 | 10173.07 C-26 (60-66") 5/4/2010 | 10173.08 C-27 (0-6") 5/4/2010 | 10173.09 C-27 (18-24") 5/4/2010 | 10173.10 C-27 (60-66") 5/4/2010 | 10173.11 C-31 (0-6") 5/4/2010 | 10173.12 C-31 (18-24") 5/4/2010 | 10173.13 C-31 (60-66") 5/4/2010 | 10173.14 D-32 (0-6") 5/4/2010 | 10173.15 D-32 (18-24") 5/4/2010 | 10173.16 D-32 (60-66") 5/4/2010 | 10173.17 D-32 (60-66") Duplicate 5/4/2010 | 10173.18 D-33 (0-6") 5/4/2010 |
|---------------------------|------------------------------|--|--|--|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--|-------------------------------------|
| | (mg/kg) | , , , | Duplicate 4/23/2010 | , ., | ., , | .,, | ., , | .,, | | .,, | | .,,,,, | .,, | .,, | .,, | | .,, | .,,,,, | ., , | 5/4/2010 | |
| Di-n-butylphthalate | 68000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | 27000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Fluoranthene | 24000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Fluorene | 24000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 1 | ND | ND | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | ND | | | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | 110 | ND | ND | | | | | | | | | | | | | | | | | | |
| Hexachloroethane | 140 | ND | ND | | | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | ND | | | | | | | | | | | | | | | | | | |
| | 2000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Naphthalene | 17 | ND | ND | | | | | | | | | | | | | | | | | | |
| Nitrobenzene | 340 | ND | ND | | | | | | | | | | | | | | | | | | |
| N-nitrosodimethylamine | 0.7 | ND | ND | | | | | | | | | | | | | | | | | | |
| n-Nitrosodi-n-propylamine | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| n-Nitrosodiphenylamine | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | 10 | ND | ND | | | | | | | | | | | | | | | | | | |
| | 300000 | ND | ND | | | | | | | | | | | | | | | | | | |
| | 210000 | ND | ND | | | | | | | | | | | | | | | | | | |
| | 18000 | ND | ND | | | | | | | | | | | | | | | | | | |
| Pyridine | NLE | ND | ND | | | | | | | | | | | | | | | | | | |
| TICs | NLE | 93800 | 105290 | | | | | | | | | | | | | | | | | | <u> </u> |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | ND | ND | | 0.0018 | ND | | 0.0046 | 0.0103 | | 0.0099 | 0.044 | | 0.0139 | ND | | 0.0801 | ND | | ND | 0.0994 |
| 4,4'-DDE | 9 | ND | ND | | 0.1172 | 0.0089 | | 0.0267 | 0.2808 | | 0.0364 | 0.2592 | | 0.169 | ND | | 1.4679 | ND | | ND | 0.6707 |
| 4,4'-DDT | 8 | ND | ND | | 0.0574 | 0.0048 | | 0.0203 | 0.1507 | | 0.0692 | 0.243 | | 0.0478 | ND | | 1.7838 | ND | | ND | 0.536 |
| Aldrin | 0.2 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-BHC | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| alpha-Chlordane | NLE | ND | ND | | ND | ND | | 0.0055 | ND | | 0.0157 | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1016 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1221 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1232 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1242 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1248 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1254 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | ND 0.070 | | ND | ND | | ND | ND | | ND | ND |
| Arochlor 1260 | NLE | ND | ND | | ND | ND | | ND | ND | | ND | 0.079 | | ND | ND | | ND | ND | | ND | ND |
| beta-BHC delta-BHC | NLE | ND | ND | | ND | ND | | ND | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND ND | ND ND |
| Dieldrin | NLE | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND 0.0024 | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Endosulfan I | 0.2 NLE | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | 0.0024 ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| Endosulfan II | NLE | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND |
| | 6800 | ND | ND ND | | ND | ND ND | | 0.0026 | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND |
| Endrin | 340 | ND ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND ND |
| Endrin Aldehyde | NLE | ND | ND | | ND | ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND | ND ND |
| gamma-BHC | NLE | ND ND | ND ND | | ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND | ND ND |
| gamma-Chlordane | NLE | ND ND | ND ND | | ND | ND | | 0.005 | ND ND | | 0.0127 | ND ND | | ND ND | ND | | 0.0024 | ND ND | | ND ND | ND ND |
| Heptachlor | 0.7 | ND ND | ND ND | | ND | ND ND | | ND | ND ND | | ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND | ND ND |
| Heptachlor Epoxide | 0.3 | ND | ND ND | | ND | ND | | ND | 0.001 | | ND | ND ND | | ND ND | ND | | ND | ND ND | | ND ND | 0.0044 |
| Toxaphene | 3 | ND ND | ND ND | | ND | ND ND | | ND | ND | | ND | ND ND | | ND ND | ND | | ND ND | ND ND | | ND ND | ND |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10161.12 D-31 (18-24") 4/23/2010 | 10161.13 D-31 (18-24") Duplicate 4/23/2010 | 10161.14 D-31 (66-72") 4/23/2010 | 10173.02 C-25 (0-6") 5/4/2010 | 10173.03 C-25 (18-24") 5/4/2010 | 10173.04 C-25 (60-66") 5/4/2010 | 10173.05 C-26 (0-6") 5/4/2010 | 10173.06 C-26 (18-24") 5/4/2010 | 10173.07 C-26 (60-66") 5/4/2010 | 10173.08 C-27 (0-6") 5/4/2010 | 10173.09 C-27 (18-24") 5/4/2010 | 10173.10 C-27 (60-66") 5/4/2010 | 10173.11 C-31 (0-6") 5/4/2010 | 10173.12 C-31 (18-24") 5/4/2010 | 10173.13 C-31 (60-66") 5/4/2010 | 10173.14 D-32 (0-6") 5/4/2010 | 10173.15 D-32 (18-24") 5/4/2010 | 10173.16 D-32 (60-66") 5/4/2010 | 10173.17 D-32 (60-66") Duplicate 5/4/2010 | 10173.18 D-33 (0-6") 5/4/2010 |
|---|---|--|---|--|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--|-------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 20600 | 20600 | | 12600 | 1220 | | 7770 | 11300 | | 9400 | 10400 | | 14600 | 16100 | | 13000 | 19200 | | 12400 | 12500 |
| Antimony | 450 | 3.86 | 4.13 | | 1.81 | 0.792 | | 2.29 | 2.34 | | 2.7 | 2.09 | | 1.38 | 2.49 | | 2.75 | 1.92 | | 2.25 | 2.52 |
| Arsenic | NLE | 21.3 | 21.9 | | 10.8 | 9.85 | | 7.99 | 11.3 | | 11.4 | 12.2 | | 19.8 | 25.1 | | 11.7 | 10.5 | | 6.22 | 15.8 |
| Barium | 59000 | 41.1 | 42.1 | | 31.1 | 25 | | 25.7 | 135 | | 43.7 | 33.3 | | 25.3 | 27.2 | | 20.8 | 16 | | 11.4 | 25 |
| Beryllium | 140 | 2.6 | 2.56 | | 1.17 | 1.14 | | 0.446 | 1.09 | | 0.591 | 1.07 | | 1.65 | 2.22 | | 1.53 | 2.22 | | 1.64 | 1.45 |
| Cadmium | 78 | 2.75 | 2.74 | | 1.17 | 1.12 | | 0.617 | 1.19 | | 0.641 | 1 | | 1.81 | 2.33 | | 1.48 | 2.04 | | 1.53 | 1.53 |
| Calcium | NLE | 118 | 124 | | 1470 | 913 | | 2470 | 1050 | | 9740 | 1890 | | 151 | 58.3 | | 177 | 79.9 | | 58.8 | 891 |
| Chromium | NLE | 214 | 218 | | 92 | 91.7 | | 37.2 | 86.1 | | 41.9 | 75.2 | | 135 | 171 | | 130 | 207 | | 150 | 159 |
| Cobalt | 590 | 1.47 | 1.46 | | 1.46 | 1.31 | | 1.08 | 1.61 | | 1.46 | 1.47 | | 1.43 | 1.79 | | 1.28 | 1.63 | | 1.02 | 0.858 |
| Copper | 45000 | 3.52 | 3.98 | | 18.2 | 6.39 | | 14.7 | 41.7 | | 18.3 | 30.6 | | 9.9 | 3.88 | | 93.8 | 6.02 | | ND | 36.1 |
| Iron | NLE | 81800 | 83200 | | 34800 | 33900 | | 15500 | 32900 | | 17200 | 25700 | | 50500 | 70900 | | 43800 | 64400 | | 44800 | 38900 |
| Lead | 800 | 10.3 | 11 | | 33.6 | 10.6 | | 40.6 | 74.1 | | 44.5 | 80.7 | | 32.4 | 10.4 | | 103 | 10.6 | | 5.26 | 68.7 |
| Magnesium | NLE | 8960 | 9190 | | 4090 | 4010 | | 1370 | 3650 | | 2450 | 3000 | | 5970 | 7310 | | 5630 | 8420 | | 6000 | 5780 |
| Manganese | 5900 | 33.3 | 29.1 | | 69 | 59.1 | | 94.4 | 74.9 | | 93.9 | 69.5 | | 32.5 | 29.6 | | 20.8 | 15.6 | | 11.4 | 49.9 |
| Nickel | 23000 | 9.11 | 9.49 | | 7.41 | 6.47 | | 5.01 | 7.06 | | 6.68 | 7.72 | | 7.61 | 8.04 | | 8.35 | 8.64 | | 5.79 | 6.68 |
| Potassium | NLE | 21600 | 21700 | | 8380 | 8180 | | 2440 | 7280 | | 3070 | 5910 | | 13300 | 18200 | | 13000 | 20800 | | 14900 | 11900 |
| Selenium | 5700 | ND | ND | | ND | ND | | ND | ND | | 5.3 | ND | | ND | ND | | ND | ND | | ND | ND |
| Silver | 5700 | 13 | 13.4 | | 5.15 | 4.6 | | 2.1 | 4.49 | | 2.17 | 3.61 | | 7.02 | 10.8 | | 6.17 | 9.46 | | 6.13 | 5.39 |
| Sodium | NLE | ND | 274 | | ND | ND | | ND | ND | | 251 | ND | | ND | ND | | ND | ND | | 435 | ND |
| Thallium | 79 | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vanadium | 1100 | 103 | 106 | | 57 | 52.9 | | 33 | 54 | | 35.6 | 48.2 | | 69.9 | 78.7 | | 65.5 | 101 | | 69.4 | 68.6 |
| Zinc | 110000 | 66.6 | 67.9 | | 54.2 | 42.6 | | 44.5 | 95.7 | | 53.2 | 54.7 | | 66.9 | 73.1 | | 70.3 | 72 | | 45.8 | 97.2 |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 10173.19 D-33 (18-24") 5/4/2010 | 10173.20 D-33 (54-60") 5/4/2010 | 10173.21 D-34 (0-6") 5/4/2010 | 10173.22 D-34 (18-24") 5/4/2010 | 10173.23 D-34 (54-60") 5/4/2010 | 10173.24 D-35 (0-6") 5/4/2010 | 10173.25 D-35 (18-24") 5/4/2010 | 10173.26 D-35 (54-60") 5/4/2010 | 10190.02 D-36 (0-6") 5/13/2010 | 10190.03 D-36 (18-24") 5/13/2010 | 10190.04 D-36 (78-84") 5/13/2010 | 10190.05 D-37 (0-6") 5/13/2010 | 10190.06 D-37 (18-24") 5/13/2010 | 10190.07 D-37 (78-84") 5/13/2010 | 10190.08 D-38 (0-6") 5/13/2010 | 10190.09 D-38 (18-24") 5/13/2010 | 10190.10 D-38 (78-84") 5/13/2010 | 10190.11 D-39 (0-6") 5/13/2010 | 10190.12 D-39 (18-24") 5/13/2010 | 10190.13 D-39 (78- 84") |
|---|------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|-------------------------------|
| Sample Date | (mg/kg) | 3/4/2010 | 3/4/2010 | 3/4/2010 | 3/4/2010 | 3/4/2010 | 3/4/2010 | 3/4/2010 | 3/4/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 3/13/2010 | 5/13/2010 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,1-Trichloroethane | 4200 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,2,2-Tetrachloroethane | 3 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1,2-Trichloroethane | 6 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,1-Dichloroethene | 150 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichloroethane | 3 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 1,2-Dichloropropane | 5 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Butanone | 44000 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Chloroethyl vinyl ether | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 2-Hexanone | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| 4-Methyl-2-pentanone | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acetone | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acrolein | 1 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Acrylonitrile | 3 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Benzene | 5 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromodichloromethane | 3 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromoform | 280 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Bromomethane | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Carbon disulfide | 110000 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Carbon Tetrachloride | 2 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chlorobenzene | 7400 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloroethane | 1100 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloroform | 2 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Chloromethane | 12 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| cis-1,2-Dichloroethene | 560 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| cis-1,3-Dichloropropene | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dibromochloromethane | 8 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Dichlorodifluoromethane | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Diisopropyl ether | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Ethylbenzene | 110000 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| m+p-Xylenes | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Methyl tert-butyl ether | 320 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Methylene chloride | 97 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| o-Xylene | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Styrene | 260 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| tert-Butyl alcohol | 11000 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Tetrachloroethene | 5 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| TICs | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Toluene | 91000 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| trans-1,2-Dichloroethene | 720 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| trans-1,3-Dichloropropene | NLE | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Trichloroethene Trichlorofluoromethane | 20 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| | 340000 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vinyl Acetate | NLE | ND | ND | | ND | | | | | | ND ND | ND | | ND | ND | | ND | ND | | ND | ND |
| Vinyl chloride | 2 | ND | ND | | ND | | | | | | ND | ND | | ND | ND | 1 | ND | ND | | ND | ND |

Notes

| Lah Sample ID | NJDEP | 10173.19 | 10173.20 | 10173.21 | 10173.22 | 10173.23 | 10173.24 | 10173.25 | 10173.26 | 10190.02 | 10190.03 | 10190.04 | 10190.05 | 10190.06 | 10190.07 | 10190.08 | 10190.09 | 10190.10 | 10190.11 | 10190.12 | 10190.13 |
|---|---------------------|---------------------------|---------------------------|-------------------------|----------|---------------------------|-------------------------|---------------------------|---------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|----------------------------|--------------------------|----------------------------|-------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria | D-33 (18-24") 5/4/2010 | D-33 (54-60") 5/4/2010 | D-34 (0-6") 5/4/2010 | | D-34 (54-60") 5/4/2010 | D-35 (0-6") 5/4/2010 | D-35 (18-24") 5/4/2010 | D-35 (54-60") 5/4/2010 | D-36 (0-6") 5/13/2010 | D-36 (18-24") 5/13/2010 | D-36 (78-84") 5/13/2010 | D-37 (0-6") 5/13/2010 | D-37 (18-24") 5/13/2010 | D-37 (78-84") 5/13/2010 | D-38 (0-6") 5/13/2010 | D-38 (18-24") 5/13/2010 | D-38 (78-84") 5/13/2010 | D-39 (0-6") 5/13/2010 | D-39 (18-24") 5/13/2010 | D-39 (78- 84") |
| | (mg/kg) | .,, | .,, | .,, | .,, | .,, | .,, | .,,,,, | .,, | ., ., | , , , | ., ., | ., ., | ., ., | , , , | ., ., | ., ., | , , | ., ., | ., ., | 5/13/2010 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,2-Dichlorobenzene | 59000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 1,3-Dichlorobenzene | 59000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | l l |
| 1,4-Dichlorobenzene | 13 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4,5-Trichlorophenol | 68000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4,6-Trichlorophenol | 74 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dichlorophenol | 2100 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dimethylphenol | 14000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dinitrophenol | 1400 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,4-Dinitrotoluene | 3 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Chloronaphthalene | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Chlorophenol | 2200 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Methylnaphthalene | 2400 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Methylphenol | 3400 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Nitroaniline | 23000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 2-Nitrophenol | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 3,3'-Dichlorobenzidine | 4 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 3-Nitroaniline | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Bromophenyl Phenyl ether | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Chloro-3-methylphenol | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Chloroaniline | 66 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Chlorophenyl phenyl ether | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Methylphenol | 340 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Nitroaniline | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Acenaphthene | 37000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Acenaphthylene | 300000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Aniline | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Anthracene | 30000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Azobenzene Benzidine | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| | 0.7 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Benzo(a)anthracene | 0.2 | | | | | | | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| benzo(a)pyrene Benzo(b)fluoranthene | 2 | | | | | | | | | ND ND | ND ND | | 0.28 J | ND ND | | 0.60 | ND ND | | ND ND | ND ND | |
| Benzo(g,h,i)perylene | 30000 | | | | | | | | | ND ND | ND ND | | 0.28 J ND | ND ND | | ND | ND ND | | ND ND | ND ND | |
| Benzo(k)fluoranthene | 23 | | | | | | | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | |
| Benzoic Acid | NLE | | | | | | | | | ND ND | ND ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | |
| Benzyl alcohol | NLE | | | | | | | | | ND | ND | | ND ND | ND ND | | ND ND | ND ND | | ND | ND ND | |
| bis(2-Chloroethoxy)methane | NLE | | | | | | | | | ND ND | ND ND | | ND | ND | | ND | ND | | ND | ND | |
| bis(2-Chloroethyl)ether | 2 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| bis(2-chloroisopropyl)ether | 67 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| bis(2-ethylhexyl) phthalate | 140 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Butyl benzyl phthalate | 14000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Chrysene | 230 | | | | | | | | | ND | ND | | ND | ND | | 0.38 J | ND | | ND | ND | |
| Dibenz(a,h)anthracene | 0.2 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dibenzofuran | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Diethyl phthalate | 550000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dimethyl phthalate | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| | | | | | | | | | | | | | | | | | | | | | 4 |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10173.19 D-33 (18-24") 5/4/2010 | 10173.20 D-33 (54-60") 5/4/2010 | 10173.21 D-34 (0-6") 5/4/2010 | 10173.22 D-34 (18-24") 5/4/2010 | 10173.23 D-34 (54-60") 5/4/2010 | 10173.24 D-35 (0-6") 5/4/2010 | 10173.25 D-35 (18-24") 5/4/2010 | 10173.26 D-35 (54-60") 5/4/2010 | 10190.02 D-36 (0-6") 5/13/2010 | 10190.03 D-36 (18-24") 5/13/2010 | 10190.04 D-36 (78-84") 5/13/2010 | 10190.05 D-37 (0-6") 5/13/2010 | 10190.06 D-37 (18-24") 5/13/2010 | 10190.07 D-37 (78-84") 5/13/2010 | 10190.08 D-38 (0-6") 5/13/2010 | 10190.09 D-38 (18-24") 5/13/2010 | 10190.10 D-38 (78-84") 5/13/2010 | 10190.11 D-39 (0-6") 5/13/2010 | 10190.12 D-39 (18-24") 5/13/2010 | 10190.13 D-39 (78- 84") 5/13/2010 |
|---|---|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|
| Di-n-butylphthalate | 68000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Di-n-octyl phthalate | 27000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Fluoranthene | 24000 | | | | | | | | | ND | ND | | ND | ND | | 0.58 | ND | | ND | ND | |
| Fluorene | 24000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorobutadiene | 25 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachlorocyclopentadiene | 110 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Hexachloroethane | 140 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Isophorone | 2000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Naphthalene | 17 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Nitrobenzene | 340 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| N-nitrosodimethylamine | 0.7 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodi-n-propylamine | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| n-Nitrosodiphenylamine | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Pentachlorophenol | 10 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Phenanthrene | 300000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Phenol | 210000 | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Pyrene | 18000 | | | | | | | | | ND | ND | | ND | ND | | 0.54 J | ND | | ND | ND | |
| Pyridine | NLE | | | | | | | | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| TICs | NLE | | | | | | | | | 104330 | 105300 | | 132330 | 118940 | | 110750 | 107920 | | 108130 | 85440 | ı |
| Pesticides/PCBs | | | | | | | | | | | | | | · | • | | · | | | • | |
| 4,4'-DDD | 13 | ND | | 0.033 | ND | | 0.0318 | ND | | 0.019 | ND | | 0.0423 | ND | | 0.0056 | ND | | 0.0134 | ND | 1 |
| 4,4'-DDE | 9 | ND | | 0.161 | ND | | 0.1145 | 0.0028 | | 0.2624 | ND | | 0.272 | ND | | 0.208 | 0.0046 | | 0.4356 | 0.0112 | |
| 4,4'-DDT | 8 | ND | | 0.1793 | ND | | 0.1115 | ND | | 0.1031 | ND | | 0.316 | ND | | 0.1756 | 0.0037 | | 0.6857 | 0.003 | |
| Aldrin | 0.2 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| alpha-BHC | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| alpha-Chlordane | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | 0.0019 | ND | |
| Arochlor 1016 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1221 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1232 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1242 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochior 1248 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochlor 1254 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Arochior 1260 | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| beta-BHC | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | _ | ND | ND | | ND | ND | |
| delta-BHC | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Dieldrin | 0.2 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan I | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan II | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endrin | 340 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Endrin Aldehyde | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| gamma-BHC | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| gamma-Chlordane | NLE | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Heptachlor | 0.7 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Heptachlor Epoxide | 0.3 | ND | | 0.001 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Toxaphene | 3 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10173.19 D-33 (18-24") 5/4/2010 | 10173.20 D-33 (54-60") 5/4/2010 | 10173.21 D-34 (0-6") 5/4/2010 | 10173.22 D-34 (18-24") 5/4/2010 | 10173.23 D-34 (54-60") 5/4/2010 | 10173.24 D-35 (0-6") 5/4/2010 | 10173.25 D-35 (18-24") 5/4/2010 | 10173.26 D-35 (54-60") 5/4/2010 | 10190.02 D-36 (0-6") 5/13/2010 | 10190.03 D-36 (18-24") 5/13/2010 | 10190.04 D-36 (78-84") 5/13/2010 | 10190.05 D-37 (0-6") 5/13/2010 | 10190.06 D-37 (18-24") 5/13/2010 | 10190.07 D-37 (78-84") 5/13/2010 | 10190.08 D-38 (0-6") 5/13/2010 | 10190.09 D-38 (18-24") 5/13/2010 | 10190.10 D-38 (78-84") 5/13/2010 | 10190.11 D-39 (0-6") 5/13/2010 | 10190.12 D-39 (18-24") 5/13/2010 | 10190.13 D-39 (78- 84") 5/13/2010 |
|---|---|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|-------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|--------------------------------------|--|--|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 21800 | | 4980 | 9400 | | 18200 | 3130 | | 10000 | 1740 | | 12000 | 2280 | | 7550 | 2360 | | 3040 | 2010 | |
| Antimony | 450 | 1.26 | | ND | 1.02 | | 3.86 | ND | | 2.13 | ND | | 8.92 | ND | | 1.45 | ND | | ND | ND | |
| Arsenic | NLE | 22.3 | | 3.77 | 5.5 | | 18.4 | 1.55 | | 13.3 | ND | | 17.1 | ND | | 12.3 | ND | | 2.9 | ND | |
| Barium | 59000 | 24 | | 12.4 | 15.1 | | 31.3 | 10.5 | | 33.4 | 10.3 | | 164 | 16.4 | | 28.2 | 8.62 | | 12.2 | 11.3 | |
| Beryllium | 140 | 1.45 | | 0.426 | 0.667 | | 2.2 | 0.184 | | 1.43 | 0.12 | | 0.951 | 0.157 | | 0.784 | 0.222 | | 0.304 | 0.183 | |
| Cadmium | 78 | 1.4 | | 0.336 | 0.484 | | 1.93 | 0.143 | | 0.995 | ND | | 4.04 | ND | | 0.619 | ND | | ND | ND | |
| Calcium | NLE | 131 | | 401 | 86 | | 1210 | 227 | | 838 | 121 | | 1400 | 253 | | 1510 | 174 | | 368 | 193 | |
| Chromium | NLE | 180 | | 46.5 | 95.5 | | 239 | 19.6 | | 150 | 12.3 | | 111 | 15.7 | | 68.5 | 16 | | 26.9 | 15.4 | |
| Cobalt | 590 | 1.03 | | 0.264 | 0.542 | | 1.1 | 0.122 | | 0.846 | ND | | 3.85 | ND | | 1.55 | ND | | 0.129 | ND | |
| Copper | 45000 | 6.06 | | 9.83 | ND | | 70.6 | 3.78 | | 93 | ND | | 641 | 3.05 | | 17.7 | ND | | 6.04 | 2.4 | |
| Iron | NLE | 41600 | | 10800 | 16100 | | 56700 | 4140 | | 35000 | 2660 | | 68800 | 3490 | | 21100 | 5150 | | 7050 | 3860 | |
| Lead | 800 | 11.6 | | 19.6 | 5.86 | | 133 | 2.88 | | 162 | 1.21 | | 946 | 1.18 | | 34.6 | 2.17 | | 12.7 | 1.76 | |
| Magnesium | NLE | 5030 | | 1590 | 1820 | | 8790 | 514 | | 5230 | 281 | | 3380 | 359 | | 2650 | 394 | | 866 | 320 | |
| Manganese | 5900 | 28.6 | | 21.1 | 13.7 | | 147 | 12.2 | | 43.1 | 10.7 | | 566 | 17.2 | | 48 | 15.1 | | 26.3 | 14.5 | |
| Nickel | 23000 | 7.27 | | 2.72 | 4 | | 8.36 | 1.76 | | 6.9 | 1.11 | | 20.9 | 1.93 | | 6.84 | 1.79 | | 2.37 | 1.37 | |
| Potassium | NLE | 10300 | | 2810 | 3250 | | 18300 | 626 | | 11100 | 292 | | 6030 | 360 | | 4800 | 404 | | 1420 | 372 | |
| Selenium | 5700 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Silver | 5700 | 5.26 | | 1.48 | 1.9 | | 8.35 | 0.623 | | 4.17 | 0.417 | | 13.1 | 0.431 | | 2.68 | 0.721 | | 0.997 | 0.548 | |
| Sodium | NLE | ND | | ND | ND | | ND | ND | | ND | 439 | | ND | ND | | ND | ND | | 257 | 396 | |
| Thallium | 79 | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | | ND | ND | |
| Vanadium | 1100 | 129 | | 26.8 | 69.7 | | 97.1 | 13.3 | | 62.9 | 6.77 | | 46 | 9.47 | | 38.6 | 12.1 | | 15.4 | 11.3 | |
| Zinc | 110000 | 50.7 | | 29.6 | 22.6 | | 141 | 13.1 | | 85.7 | 13.4 | | 1120 | 14.4 | | 63.9 | 21.5 | | 22.2 | 12.7 | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup | 10190.14 D-40 (0-6") 5/13/2010 | 10190.15 D-40 (18-24") 5/13/2010 | 10190.16 D-40 (18-24") Duplicate | 10190.17 D-40 (78-84") 5/13/2010 | 4156.02 B1 (6-12") | 4156.03 B1 (24") 12/23/1998 | 4156.04 B2 (6-12") 12/23/1998 | 4156.05 B2 (24") | 4156.06 B3 (6-12") 12/23/1998 | 4156.07 B3 (24") | 4156.08 B4 (6-12") 12/23/1998 | 4156.09 B4 (24") 12/23/1998 | 4156.10 B5 (6-12") 12/23/1998 | 4156.11 B5 (24") | 4156.12 B6 (6-12") 12/23/1998 | 4156.13 B6 (24") 12/23/1998 | 4159.02 B7 (6-12") | 4159.03 B7 (24") 12/28/1998 | 4159.04 B8 (6-12") 12/28/1998 | 4159.05 B8 (24") |
|---|---------------------|--------------------------------------|--|--|--|-----------------------|-----------------------------------|-------------------------------------|---------------------|-------------------------------------|---------------------|-------------------------------------|-----------------------------------|-------------------------------------|---------------------|-------------------------------------|-----------------------------------|-----------------------|-----------------------------------|-------------------------------------|---------------------|
| Sample Date | Criteria (mg/kg) | 5/13/2010 | 5/13/2010 | Duplicate 5/13/2010 | 5/13/2010 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/23/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Butanone | 44000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Hexanone | NLE | | ND | | ND | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acetone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrolein | 1 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrylonitrile | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Benzene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromodichloromethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromoform | 280 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromomethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon disulfide | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chlorobenzene | 7400 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroethane | 1100 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroform | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloromethane | 12 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Dibromochloromethane | 8 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Dichlorodifluoromethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Diisopropyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Ethylbenzene | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| m+p-Xylenes | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Methyl tert-butyl ether Methylene chloride | 320 | | ND ND | | ND ND | | ND 0.73 | | ND | | ND 0.60 | | ND | | ND 0.43.1 | | ND 0.60 | | ND 0.76 | | ND ND |
| o-Xylene | 97 NJ E | | ND | | ND | | 0.72 | | ND | | 0.69 | | ND | | 0.42 J | | 0.69 | | 0.76 | | ND ND |
| Styrene | NLE 260 | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| tert-Butyl alcohol | 11000 | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Tetrachloroethene | 5 | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| TICs | NLE | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Toluene | 91000 | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| trans-1,2-Dichloroethene | 720 | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| trans-1,3-Dichloropropene | NLE | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Trichloroethene | 20 | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Trichlorofluoromethane | 340000 | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Vinyl Acetate | NLE | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Vinyl chloride | 2 | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| , | 1 - | L | ND | | ND | | ND | | ND | | ND | | ND | | ND | | IND | | ND | 1 | ND |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10190.14 D-40 (0-6") 5/13/2010 | 10190.15 D-40 (18-24") 5/13/2010 | 10190.16 D-40 (18-24") Duplicate 5/13/2010 | 10190.17 D-40 (78-84") 5/13/2010 | 4156.02 B1 (6-12") 12/23/1998 | 4156.03 B1 (24") 12/23/1998 | 4156.04 B2 (6-12") 12/23/1998 | 4156.05 B2 (24") 12/23/1998 | 4156.06 B3 (6-12") 12/23/1998 | 4156.07 B3 (24") 12/23/1998 | 4156.08 B4 (6-12") 12/23/1998 | 4156.09 B4 (24") 12/23/1998 | 4156.10 B5 (6-12") 12/23/1998 | 4156.11 B5 (24") 12/23/1998 | 4156.12 B6 (6-12") 12/23/1998 | 4156.13 B6 (24") 12/23/1998 | 4159.02 B7 (6-12") 12/28/1998 | 4159.03 B7 (24") 12/28/1998 | 4159.04 B8 (6-12") 12/28/1998 | 4159.05 B8 (24") 12/28/1998 |
|---|---|--------------------------------------|--|---|--|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | ND | ND | ND | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | ND | ND | | ND | | 0.11 J | | 0.12 J | | ND | | ND | | ND | | ND | | 1.1 | |
| 2-Methylphenol | 3400 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | ND | ND | ND | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND . | | ND | | 0.24 J | |
| Acenaphthylene Aniline | 300000 | ND | ND | ND | | ND | | 0.38 J | | 0.89 J | | ND | | ND | | 0.12 J | | ND | | 1.1 | |
| Anthracene | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Azohenzene | 30000 NLE | ND ND | ND ND | ND ND | | ND ND | | 0.3 J ND | | 0.29 J ND | | ND ND | | ND ND | | ND ND | | ND ND | | 1 J ND | |
| Benzidine | 0.7 | ND ND | ND ND | ND ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(a)anthracene | 2 | ND ND | ND ND | ND ND | | ND | | 0.88 J | | 0.66 J | | ND | | ND | | 0.17 J | | ND | | 2.4 | |
| benzo(a)pyrene | 0.2 | ND | ND ND | ND | | ND | | 0.83 J | | 1 J | | ND | | ND ND | | 0.17 J | | ND | | 2.4 | |
| Benzo(b)fluoranthene | 2 | ND | ND ND | ND | | ND ND | | 0.72 J | | 0.62 J | | ND ND | | ND ND | | 0.18 J | | ND | | 1.2 | |
| Benzo(g,h,i)perylene | 30000 | ND | ND | ND | | ND | | 0.34 J | | 0.66 J | | ND | | ND | | 0.21 J | | ND | | 0.99 J | |
| Benzo(k)fluoranthene | 23 | ND | ND | ND | | ND | | 0.61 J | | 0.73 J | | ND | | ND | | 0.2 J | | ND | | 1.6 | |
| Benzoic Acid | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND | |
| Benzyl alcohol | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethyl)ether | 2 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-chloroisopropyl)ether | 67 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-ethylhexyl) phthalate | 140 | ND | ND | ND | | 0.23 JB | | 0.11 JB | | 0.16 JB | | 0.13 JB | | ND | | 0.17 JB | | 0.11 JB | | 0.13 JB | |
| Butyl benzyl phthalate | 14000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Chrysene | 230 | ND | ND | ND | | ND | | 1.2 | | 0.99 J | | ND | | ND | | 0.24 J | | 0.13 J | | 3.6 | |
| Dibenz(a,h)anthracene | 0.2 | ND | ND | ND | | ND | | 0.11 J | | 0.14 J | | ND | | ND | | ND | | ND | | 0.63 J | |
| Dibenzofuran | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | 0.11 J | |
| Diethyl phthalate | 550000 | ND | ND | ND | | ND | | ND | | ND | | 0.11 J | | ND | | ND | | ND | | ND | |
| Dimethyl phthalate | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10190.14 D-40 (0-6") 5/13/2010 | 10190.15 D-40 (18-24") 5/13/2010 | 10190.16 D-40 (18-24") Duplicate 5/13/2010 | 10190.17 D-40 (78-84") 5/13/2010 | 4156.02 B1 (6-12") 12/23/1998 | 4156.03 B1 (24") 12/23/1998 | 4156.04 B2 (6-12") 12/23/1998 | 4156.05 B2 (24") 12/23/1998 | 4156.06 B3 (6-12") 12/23/1998 | 4156.07 B3 (24") 12/23/1998 | 4156.08 B4 (6-12") 12/23/1998 | 4156.09 B4 (24") 12/23/1998 | 4156.10 B5 (6-12") 12/23/1998 | 4156.11 B5 (24") 12/23/1998 | 4156.12 B6 (6-12") 12/23/1998 | 4156.13 B6 (24") 12/23/1998 | 4159.02 B7 (6-12") 12/28/1998 | 4159.03 B7 (24") 12/28/1998 | 4159.04 B8 (6-12") 12/28/1998 | 4159.05 B8 (24") 12/28/1998 |
|---|---|--------------------------------------|--|---|--|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| Di-n-butylphthalate | 68000 | ND | ND | ND | | 0.66 JB | | 0.37 JB | | 0.83 JB | | 1.4 B | | 0.4 JB | | 1.6 B | | 2.7 B | | 1.7 B | |
| Di-n-octyl phthalate | 27000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Fluoranthene | 24000 | ND | ND | ND | | ND | | 1.6 | | 0.79 J | | 0.15 J | | 0.13 J | | 0.22 J | | 0.12 J | | 4.3 | |
| Fluorene | 24000 | ND | ND | ND | | ND | | 0.27 J | | ND | | ND | | ND | | 0.14 J | | ND | | 1 J | |
| Hexachlorobenzene | 1 | ND | ND | ND | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachloroethane | 140 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | ND | ND | | ND | | 0.27 J | | 0.38 J | | ND | | ND | | 0.13 J | | ND | | 0.63 J | |
| Isophorone | 2000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Naphthalene | 17 | ND | ND | ND | | ND | | ND | | 0.13 J | | ND | | ND | | ND | | ND | | 1.1 | |
| Nitrobenzene | 340 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pentachlorophenol | 10 | ND | ND | ND | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | ND | ND | | ND | | 1.9 | | 0.68 J | | ND | | ND | | ND | | ND | | 8.4 | |
| Phenol | 210000 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pyrene | 18000 | ND | ND | ND | | ND | | 2.2 | | 1.3 | | 0.15 J | | 0.13 J | | 0.3 J | | 0.15 J | | 6.6 | |
| Pyridine | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| TICs | NLE | 105050 | 114260 | 120720 | | 6.9 | | 12.39 | | 4.93 | | 6.7 | | 5.7 | | 7.9 | | 8.3 | | 25.6 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.0335 | ND | ND | | 0.017 | | 0.054 | | 0.022 | | 0.031 | | 0.051 | | 0.013 | | 0.028 | | 0.048 | |
| 4,4'-DDE | 9 | 0.7385 | 0.002 | ND | | 0.237 | | 0.054 | | 0.027 | | 0.253 | | 0.031 | | 0.010 | | 0.021 | | 0.026 | |
| 4,4'-DDT | 8 | 1.2647 | 0.0019 | 0.0011 | | 0.113 | | 0.106 | | 0.109 | | 0.273 | | 0.028 | | 0.017 | | 0.069 | | 0.046 | |
| Aldrin | 0.2 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-BHC | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-Chlordane | NLE | 0.0082 | ND | ND | | ND | | 0.001 | | 0.001 | | ND | |
| Arochlor 1016 | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1221 | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1232 | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1242 | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1248 | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1254 | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1260 | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| beta-BHC | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| delta-BHC | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dieldrin | 0.2 | ND | ND | ND | | ND | | 0.001 | | ND | |
| Endosulfan I | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan II | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin | 340 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin Aldehyde | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-BHC | NLE | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-Chlordane | NLE | 0.0077 | ND | ND | | ND | | 0.002 | | 0.003 | | 0.002 | | ND | | ND | | ND | | ND | |
| Heptachlor | 0.7 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Heptachlor Epoxide | 0.3 | 0.0066 | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Toxaphene | 3 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 10190.14 D-40 (0-6") 5/13/2010 | 10190.15 D-40 (18-24") 5/13/2010 | 10190.16 D-40 (18-24") Duplicate 5/13/2010 | 10190.17 D-40 (78-84") 5/13/2010 | 4156.02 B1 (6-12") 12/23/1998 | 4156.03 B1 (24") 12/23/1998 | 4156.04 B2 (6-12") 12/23/1998 | 4156.05 B2 (24") 12/23/1998 | 4156.06 B3 (6-12") 12/23/1998 | 4156.07 B3 (24") 12/23/1998 | 4156.08 B4 (6-12") 12/23/1998 | 4156.09 B4 (24") 12/23/1998 | 4156.10 B5 (6-12") 12/23/1998 | 4156.11 B5 (24") 12/23/1998 | 4156.12 B6 (6-12") 12/23/1998 | 4156.13 B6 (24") 12/23/1998 | 4159.02 B7 (6-12") 12/28/1998 | 4159.03 B7 (24") 12/28/1998 | 4159.04 B8 (6-12") 12/28/1998 | 4159.05 B8 (24") 12/28/1998 |
|---|---|--------------------------------------|--|---|--|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 4090 | 1820 | 1980 | | 10200 | | 10600 | | 7420 | | 11500 | | 11700 | | 11900 | | 11700 | | 10800 | |
| Antimony | 450 | 0.711 | ND | ND | | 1.03 | | 1.17 | | 0.633 | | 0.395 | | 0.798 | | 0.569 | | 0.570 | | 0.482 | |
| Arsenic | NLE | 9.94 | ND | ND | | 9.97 | | 9.39 | | 6.70 | | 18.2 | | 14.5 | | 13.7 | | 12.5 | | 9.96 | |
| Barium | 59000 | 15.5 | 7.66 | 9.39 | | 34.9 | | 52.3 | | 30.1 | | 30.5 | | 71.9 | | 87.6 | | 83.3 | | 65.4 | |
| Beryllium | 140 | 0.385 | 0.144 | 0.158 | | 1.07 | | 1.37 | | 1.11 | | 1.04 | | 1.65 | | 1.89 | | 1.90 | | 1.36 | |
| Cadmium | 78 | 0.233 | ND | ND | | 0.632 | | 1.22 | | 0.470 | | 0.625 | | 0.711 | | 0.873 | | 0.778 | | 0.740 | |
| Calcium | NLE | 460 | 187 | 197 | | 518 | | 1640 | | 1590 | | 697 | | 1320 | | 8190 | | 5240 | | 3890 | |
| Chromium | NLE | 33.7 | 16 | 15.4 | | 94.2 | | 95.0 | | 99.2 | | 89.3 | | 169 | | 179 | | 211 | | 140 | |
| Cobalt | 590 | 1.83 | ND | ND | | 4.74 | | 3.25 | | 2.62 | | 1.99 | | 1.98 | | 2.58 | | 1.59 | | 1.94 | |
| Copper | 45000 | 10.9 | ND | ND | | 3.53 | | 15.5 | | 14.2 | | 5.58 | | 7.72 | | 7.43 | | 6.79 | | 14.0 | |
| Iron | NLE | 10600 | 3910 | 4080 | | 48200 | | 30900 | | 24100 | | 30900 | | 39800 | | 38400 | | 45100 | | 31500 | |
| Lead | 800 | 24 | 1.15 | 1.87 | | 11.0 | | 45.8 | | 39.3 | | 16.9 | | 21.1 | | 11.7 | | 10.0 | | 40.3 | |
| Magnesium | NLE | 1200 | 306 | 318 | | 1200 | | 3190 | | 3150 | | 3160 | | 4950 | | 5370 | | 6280 | | 3940 | |
| Manganese | 5900 | 25.7 | 10.8 | 12.3 | | 150 | | 61.0 | | 48.7 | | 51.8 | | 27.8 | | 54.5 | | 28.9 | | 29.5 | |
| Nickel | 23000 | 8.05 | 1.25 | 1.35 | | 15.8 | | 11.3 | | 6.74 | | 6.91 | | 8.58 | | 13.2 | | 7.55 | | 8.55 | |
| Potassium | NLE | 2030 | 381 | 364 | | 2180 | | 6600 | | 6620 | | 6610 | | 11100 | | 16400 | | 14700 | | 8470 | |
| Selenium | 5700 | ND | ND | ND | | ND | | 0.762 | | 1.28 | | ND | | 2.19 | | 2.18 | | 1.39 | | 1.49 | |
| Silver | 5700 | 1.47 | 0.526 | 0.547 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Sodium | NLE | ND | ND | ND | | 310 | | 155 | | 228 | | 96.7 | | 157 | | 360 | | 167 | | 229 | |
| Thallium | 79 | ND | ND | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Vanadium | 1100 | 23.6 | 10.8 | 10.6 | | 138 | | 56.0 | | 47.3 | | 58.9 | | 82.1 | | 77.1 | | 82.8 | | 66.3 | |
| Zinc | 110000 | 26.4 | 11.1 | 12.3 | | 84.2 | | 103 | | 58.0 | | 71.9 | | 68.9 | | 78.5 | | 75.9 | | 60.1 | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4159.06 B9 (6-12") 12/28/1998 | 4159.07 B9 (24") 12/28/1998 | 4159.08 B10 (6-12") 12/28/1998 | 4159.09 B10 (24") 12/28/1998 | 4159.10 B11 (6-12") 12/28/1998 | 4159.11 B11 (24") 12/28/1998 | 4159.12 B12 (6-12") 12/28/1998 | 4159.13 B12 (24") 12/28/1998 | 4159.14 B13 (6-12") 12/28/1998 | 4159.15 B13 (24") 12/28/1998 | 4159.16 B14 (6-12") 12/28/1998 | 4159.17 B14 (24") 12/28/1998 | 4159.18 B15 (6-12") 12/28/1998 | 4159.19 B15 (24") 12/28/1998 | 4159.20 B16 (6-12") 12/28/1998 | 4159.21 B16 (24") 12/28/1998 | 4159.22 B17 (6-12") 12/28/1998 | 4159.23 B17 (24") 12/28/1998 | 4159.24 B18 (6-12") 12/28/1998 | 4159.25 B18 (24") 12/28/1998 |
|---|---|-------------------------------------|-----------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Volatiles | | | | | | | | | | | | | | | | • | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Butanone | 44000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acetone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrolein | 1 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrylonitrile | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Benzene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromodichloromethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromoform | 280 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromomethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon disulfide | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chlorobenzene | 7400 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroethane | 1100 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroform | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloromethane | 12 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Dibromochloromethane | 8 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Dichlorodifluoromethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Diisopropyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Ethylbenzene | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| m+p-Xylenes | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Methyl tert-butyl ether | 320 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Methylene chloride | 97 | | ND | | ND | | 0.51 J | | ND | | 0.72 | | ND |
| o-Xylene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Styrene | 260 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| tert-Butyl alcohol | 11000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Tetrachloroethene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| TICs | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Toluene | 91000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,2-Dichloroethene | 720 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichloroethene | 20 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichlorofluoromethane | 340000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl Acetate | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl chloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |

Notes

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4159.06 B9 (6-12") | 4159.07 B9 (24") 12/28/1998 | 4159.08 B10 (6-12") 12/28/1998 | 4159.09 B10 (24") 12/28/1998 | 4159.10 B11 (6-12") 12/28/1998 | 4159.11 B11 (24") 12/28/1998 | 4159.12 B12 (6-12") 12/28/1998 | 4159.13 B12 (24") | 4159.14 B13 (6-12") 12/28/1998 | 4159.15 B13 (24") | 4159.16 B14 (6-12") 12/28/1998 | 4159.17 B14 (24") | 4159.18 B15 (6-12") 12/28/1998 | 4159.19 B15 (24") 12/28/1998 | 4159.20 B16 (6-12") | 4159.21 B16 (24") 12/28/1998 | 4159.22 B17 (6-12") 12/28/1998 | 4159.23 B17 (24") 12/28/1998 | 4159.24 B18 (6-12") 12/28/1998 | 4159.25 B18 (24") 12/28/1998 |
|--|------------------------------|-----------------------|-----------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|------------------------------------|------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Sample Date | Criteria (mg/kg) | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 | 12/28/1998 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Aniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | 0.13 J | |
| Azobenzene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | | 0.13 J | | ND | | 0.15 J | | ND | | ND | | ND | | 0.17 J | | ND | | ND | |
| benzo(a)pyrene | 0.2 | ND | | 0.11 J | | 0.24 J | | 0.14 J | | ND | | ND | | ND | | 0.15 J | | ND | | ND | |
| Benzo(b)fluoranthene | 2 | ND | | 0.12 J | | ND | | ND | | ND | | ND | | ND | | 0.15 J | | ND | | ND | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(k)fluoranthene | 23 | ND | | 0.18 J | | ND | | 0.17 J | | ND | | ND | | ND | | 0.17 J | | ND | | 0.11 J | |
| Benzoic Acid | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzyl alcohol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethyl)ether | 2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-chloroisopropyl)ether | 67 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-ethylhexyl) phthalate | 140 | 0.12 JB | | 0.13 JB | | 0.15 JB | | 0.14 JB | | ND | | 0.12 JB | | ND | | ND | | 0.15 JB | | 0.14 JB | |
| Butyl benzyl phthalate | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Chrysene | 230 | ND | | 0.16 J | | ND | | 0.24 J | | ND | | ND | | ND | | 0.26 J | | ND | | 0.13 J | |
| Dibenz(a,h)anthracene | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dibenzofuran | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Diethyl phthalate | 550000 | 0.12 J | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dimethyl phthalate | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

| Lah Sample ID | NJDEP | 4159.06 | 4159.07 | 4159.08 | 4159.09 | 4159.10 | 4159.11 | 4159.12 | 4159.13 | 4159.14 | 4159.15 | 4159.16 | 4159.17 | 4159.18 | 4159.19 | 4159.20 | 4159.21 | 4159.22 | 4159.23 | 4159.24 | 4159.25 |
|---|--------------------------------|--------------------------|------------------------|---------------------------|-----------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B9 (6-12") 12/28/1998 | B9 (24") 12/28/1998 | B10 (6-12") 12/28/1998 | B10 (24") | B11 (6-12") 12/28/1998 | B11 (24") 12/28/1998 | B12 (6-12") 12/28/1998 | B12 (24") 12/28/1998 | B13 (6-12") 12/28/1998 | B13 (24") 12/28/1998 | B14 (6-12") 12/28/1998 | B14 (24") 12/28/1998 | B15 (6-12") 12/28/1998 | B15 (24") 12/28/1998 | B16 (6-12") 12/28/1998 | B16 (24") 12/28/1998 | B17 (6-12") 12/28/1998 | B17 (24") 12/28/1998 | B18 (6-12") 12/28/1998 | B18 (24") 12/28/1998 |
| Di-n-butylphthalate | 68000 | 31 BD | | 3.7 B | | 1.4 B | | 0.38 JB | | 0.47 JB | | 1.4 B | | 1 JB | | 2.3 B | | 0.89 JB | | 0.48 JB | |
| Di-n-octyl phthalate | 27000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Fluoranthene | 24000 | ND | | 0.29 J | | ND | | 0.25 J | | 0.13 J | | ND | | 0.17 J | | 0.29 J | | ND | | 0.16 J | 1 |
| Fluorene | 24000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachloroethane | 140 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Isophorone | 2000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Naphthalene | 17 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Nitrobenzene | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | 0.22 J | | ND | | 0.3 J | | 0.3 J | | ND | | ND | | 0.43 J | | ND | | 0.13 J | |
| Phenol | 210000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pyrene | 18000 | ND | | 0.25 J | | ND | | 0.36 J | | 0.22 J | | ND | | 0.18 J | | 0.44 J | | ND | | 0.18 J | |
| Pyridine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| TICs | NLE | 8.4 | | 10 | | ND | | 5 | | 5.9 | | 7.1 | | 4.96 | | 3.2 | | 3 | | 2.6 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.014 | | 0.027 | | 0.014 | | 0.169 | | 0.011 | | 0.011 | | 0.066 | | 0.047 | | 0.018 | | 0.119 | |
| 4,4'-DDE | 9 | 0.012 | | 0.024 | | 0.013 | | 0.060 | | 0.009 | | 0.008 | | 0.025 | | 0.039 | | 0.014 | | 0.067 | |
| 4,4'-DDT | 8 | 0.014 | | 0.055 | | 0.008 | | 0.173 | | 0.015 | | 0.012 | | 0.108 | | 0.088 | | 0.026 | | 0.097 | |
| Aldrin | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-Chlordane | NLE | ND | | ND | | ND | | 0.001 | | ND | |
| Arochlor 1016 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1221 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1232 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1242 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochior 1248 | NLE | ND | | ND | | ND | , | ND | |
| Arochlor 1254 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1260 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| beta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| delta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dieldrin | 0.2 | ND | | 0.001 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan I | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan II | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin Aldehyde | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND | | ND | | 0.003 | | ND | |
| Heptachlor | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Toxaphene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4159.06 B9 (6-12") 12/28/1998 | 4159.07 B9 (24") 12/28/1998 | 4159.08 B10 (6-12") 12/28/1998 | 4159.09 B10 (24") 12/28/1998 | 4159.10 B11 (6-12") 12/28/1998 | 4159.11 B11 (24") 12/28/1998 | 4159.12 B12 (6-12") 12/28/1998 | 4159.13 B12 (24") 12/28/1998 | 4159.14 B13 (6-12") 12/28/1998 | 4159.15 B13 (24") 12/28/1998 | 4159.16 B14 (6-12") 12/28/1998 | 4159.17 B14 (24") 12/28/1998 | 4159.18 B15 (6-12") 12/28/1998 | 4159.19 B15 (24") 12/28/1998 | 4159.20 B16 (6-12") 12/28/1998 | 4159.21 B16 (24") 12/28/1998 | 4159.22 B17 (6-12") 12/28/1998 | 4159.23 B17 (24") 12/28/1998 | 4159.24 B18 (6-12") 12/28/1998 | 4159.25 B18 (24") 12/28/1998 |
|---|---|-------------------------------------|-----------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 10200 | | 10000 | | 6820 | | 8430 | | 5870 | | 9250 | | 4610 | | 5610 | | 6090 | | 11100 | |
| Antimony | 450 | 0.623 | | 0.661 | | 0.675 | | 0.863 | | ND | | 0.619 | | 0.612 | | 0.643 | | 0.604 | | 1.01 | |
| Arsenic | NLE | 12.3 | | 11.2 | | 10.3 | | 12.0 | | 10.8 | | 12.2 | | 7.57 | | 9.56 | | 6.30 | | 8.28 | |
| Barium | 59000 | 85.1 | | 78.3 | | 58.4 | | 77.3 | | 66.3 | | 68.6 | | 48.9 | | 64.1 | | 49.9 | | 60.8 | |
| Beryllium | 140 | 1.76 | | 1.50 | | 1.36 | | 1.17 | | 0.952 | | 1.24 | | 0.825 | | 1.02 | | 1.02 | | 1.32 | |
| Cadmium | 78 | 0.983 | | 0.534 | | 0.809 | | 0.394 | | 0.381 | | 0.519 | | 0.332 | | 0.548 | | 0.486 | | 6.29 | |
| Calcium | NLE | 4520 | | 5320 | | 3420 | | 5300 | | 4910 | | 1070 | | 3020 | | 4580 | | 2840 | | 2170 | |
| Chromium | NLE | 190 | | 165 | | 107 | | 129 | | 99.6 | | 142 | | 63.2 | | 95.5 | | 100 | | 87.9 | |
| Cobalt | 590 | 1.45 | | 1.80 | | 1.91 | | 1.30 | | 0.826 | | 1.49 | | 1.35 | | 1.46 | | 1.34 | | 7.31 | |
| Copper | 45000 | 8.04 | | 6.37 | | 6.89 | | 6.83 | | 6.28 | | 8.62 | | 10.9 | | 6.87 | | 4.88 | | 78.0 | |
| Iron | NLE | 40500 | | 36600 | | 24600 | | 29300 | | 23800 | | 35700 | | 16800 | | 25100 | | 22900 | | 29600 | |
| Lead | 800 | 7.23 | | 12.1 | | 17.5 | | 23.6 | | 10.7 | | 20.1 | | 25.6 | | 17.1 | | 8.62 | | 30.2 | |
| Magnesium | NLE | 5670 | | 4810 | | 2930 | | 3420 | | 2800 | | 3890 | | 1450 | | 2670 | | 2620 | | 3000 | |
| Manganese | 5900 | 33.6 | | 27.6 | | 21.5 | | 26.9 | | 17.1 | | 27.2 | | 13.8 | | 19.5 | | 21.2 | | 296 | |
| Nickel | 23000 | 8.06 | | 6.58 | | 9.54 | | 5.47 | | 4.88 | | 6.63 | | 5.00 | | 6.78 | | 5.90 | | 23.3 | |
| Potassium | NLE | 13300 | | 11400 | | 6680 | | 7820 | | 6240 | | 9260 | | 2920 | | 7030 | | 6140 | | 5890 | |
| Selenium | 5700 | 1.88 | | 1.71 | | 1.83 | | 1.72 | | 2.08 | | 2.31 | | 1.42 | | 2.08 | | 1.11 | | 1.25 | |
| Silver | 5700 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Sodium | NLE | 496 | | 257 | | 556 | | 132 | | 451 | | 359 | | 447 | | 225 | | 89.3 | | 211 | |
| Thallium | 79 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Vanadium | 1100 | 76.4 | | 71.2 | | 44.7 | | 58.7 | | 38.1 | | 66.2 | | 28.8 | | 30.7 | | 43.0 | | 68.8 | |
| Zinc | 110000 | 61.2 | | 60.3 | | 53.1 | | 42.7 | | 41.1 | | 56.8 | | 39.4 | | 63.1 | | 43.9 | | 113 | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 4159.26 B19 (6-12") 12/28/1998 | 4159.27 B19 (24") 12/28/1998 | 4160.02 B20 (6-12") 12/29/1998 | 4160.03 B20 (24") 12/29/1998 | 4160.04 B21 (6-12") 12/29/1998 | 4160.05 B21 (24") 12/29/1998 | 4160.06 B22 (6-12") 12/29/1998 | 4160.07 B22 (24") 12/29/1998 | 4160.08 B23 (6-12") 12/29/1998 | 4160.09 B23 (24") 12/29/1998 | 4160.10 B24 (6-12") 12/29/1998 | 4160.11 B24 (24") 12/29/1998 | 4160.12 B25 (6-12") 12/29/1998 | 4160.13 B25 (24") 12/29/1998 | 4160.14 B26 (6-12") 12/29/1998 | 4160.15 B26 (24") 12/29/1998 | 4160.16 B27 (6-12") 12/29/1998 | 4160.17 B27 (24") 12/29/1998 | 4160.18 B28 (6-12") 12/29/1998 | 4160.19 B28 (24") 12/29/1998 |
|---|------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| | (mg/kg) | | | | | | | | | | | | | | | | | | | | |
| Volatiles | | T | r | r | 1 | T | 1 | | 1 | 1 | | r | 1 | 1 | r | | r | 1 | , | 1 | |
| 1, 1-Dichloroethane | 24 | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND |
| 1,1,2-Trichloroethane | 6 | | ND |
| 1,1-Dichloroethene | 150 | | ND |
| 1,2-Dichloroethane | 3 | | ND |
| 1,2-Dichloropropane | 5 | | ND |
| 2-Butanone | 44000 | | ND | | ND | | ND | | ND | | ND ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND |
| 2-Hexanone | NLE | | ND |
| 4-Methyl-2-pentanone Acetone | NLE | | ND |
| Acrolein | NLE | | ND |
| Acrylonitrile | 1 | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND | | ND |
| Benzene | 5 | | ND ND |
| Bromodichloromethane | 3 | | ND ND |
| Bromoform | 280 | | ND ND |
| Bromomethane | NLE | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND |
| Carbon disulfide | 110000 | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Carbon Tetrachloride | 2 | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND ND |
| Chlorobenzene | 7400 | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Chloroethane | 1100 | | ND ND | | ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND |
| Chloroform | 2 | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Chloromethane | 12 | | ND | | ND ND | | ND ND | | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND | | ND. | | ND ND | | ND ND |
| cis-1,3-Dichloropropene | NLE | | ND ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND ND | | ND | | ND |
| Dibromochloromethane | 8 | | ND | | ND ND |
| Dichlorodifluoromethane | NLE | | ND |
| Diisopropyl ether | NLE | | ND |
| Ethylbenzene | 110000 | | ND |
| m+p-Xylenes | NLE | | ND |
| Methyl tert-butyl ether | 320 | | ND |
| Methylene chloride | 97 | | ND | | 0.36 J | | ND | | 0.62 | | 0.37 J | | 0.66 |
| o-Xylene | NLE | | ND |
| Styrene | 260 | | ND |
| tert-Butyl alcohol | 11000 | | ND |
| Tetrachloroethene | 5 | | ND |
| TICs | NLE | | ND |
| Toluene | 91000 | | ND |
| trans-1,2-Dichloroethene | 720 | | ND |
| trans-1,3-Dichloropropene | NLE | | ND |
| Trichloroethene | 20 | | ND |
| Trichlorofluoromethane | 340000 | | ND |
| Vinyl Acetate | NLE | | ND |
| Vinyl chloride | 2 | | ND |

Notes

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4159.26 B19 (6-12") 12/28/1998 | 4159.27 B19 (24") 12/28/1998 | 4160.02 B20 (6-12") 12/29/1998 | 4160.03 B20 (24") 12/29/1998 | 4160.04 B21 (6-12") | 4160.05 B21 (24") 12/29/1998 | 4160.06 B22 (6-12") 12/29/1998 | 4160.07 B22 (24") | 4160.08 B23 (6-12") 12/29/1998 | 4160.09 B23 (24") | 4160.10 B24 (6-12") 12/29/1998 | 4160.11 B24 (24") | 4160.12 B25 (6-12") 12/29/1998 | 4160.13 B25 (24") 12/29/1998 | 4160.14 B26 (6-12") | 4160.15 B26 (24") 12/29/1998 | 4160.16 B27 (6-12") 12/29/1998 | 4160.17 B27 (24") 12/29/1998 | 4160.18 B28 (6-12") 12/29/1998 | 4160.19 B28 (24") 12/29/1998 |
|--|------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------|------------------------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|------------------------------------|------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Sample Date | Criteria (mg/kg) | 12/28/1998 | 12/28/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | 0.23 J | | ND | | ND | | ND | | 0.12 J | | ND | | ND | | ND | |
| Aniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | 0.23 J | | ND | | ND | | ND | |
| Azobenzene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | 0.14 J | | ND | | 0.44 J | | ND | | ND | | ND | | 1 J | | ND | | 0.14 J | | ND | |
| benzo(a)pyrene | 0.2 | 0.12 J | | ND | | 0.56 J | | ND | | 0.11 J | | ND | | 0.91 J | | ND | | 0.14 J | | ND | |
| Benzo(b)fluoranthene | 2 | ND | | ND | | 0.38 J | | ND | | ND | | ND | | 1.2 | | ND | | 0.12 J | | ND | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | 0.33 J | | ND | | ND | | ND | | 0.48 J | | ND | | ND 0.16.7 | | ND | |
| Benzo(k)fluoranthene | 23 | 0.14 J | | ND | | 0.51 J | | ND | | 0.11 J | | ND | | 1.3 | | ND | | 0.16 J | | ND | |
| Benzoic Acid Benzyl alcohol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND | |
| bis(2-Chloroethyl)ether bis(2-chloroisopropyl)ether | 2 | ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | |
| bis(2-ethylhexyl) phthalate | 67 | ND | | ND ND | | ND | | ND ND | | ND | | ND | | ND 0.11 J | | ND | | ND | | ND ND | |
| Butyl benzyl phthalate | 140 | ND ND | | | | ND ND | | | | 0.11 J | | ND | | | | ND ND | | ND ND | | | |
| | 14000 | ND 0.31.1 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND 0.26.1 | | ND | |
| Chrysene Dibenz(a,h)anthracene | 0.2 | 0.21 J ND | | ND ND | | 0.92 J | | ND ND | | 0.2 J ND | | ND ND | | 1.8 0.21 J | | ND ND | | 0.26 J ND | | ND ND | |
| Dibenz(a,n)anthracene Dibenzofuran | - | | | | | 0.15 J | | | | | | | | | | | | | | | |
| | NLE | ND ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND | | ND | |
| Diethyl phthalate Dimethyl phthalate | 550000 | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dimetriyi pritrialate | NLE | ND | | ND | | ND | | ND | | ND | | ND | | שא | | ND | | שוו | | ND | |

| Lab Sample ID Field Sample Location | NJDEP | 4159.26 | 4159.27 | 4160.02 | 4160.03 | 4160.04 | 4160.05 | 4160.06 | 4160.07 | 4160.08 | 4160.09 | 4160.10 | 4160.11 | 4160.12 | 4160.13 | 4160.14 | 4160.15 | 4160.16 | 4160.17 | 4160.18 | 4160.19 |
|--|--------------------------------|---------------------------|-------------------------|---------------------------|-----------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B19 (6-12") 12/28/1998 | B19 (24") 12/28/1998 | B20 (6-12") 12/29/1998 | B20 (24") B 12/29/1998 1 | 321 (6-12") 12/29/1998 | B21 (24") 12/29/1998 | B22 (6-12") 12/29/1998 | B22 (24") 12/29/1998 | B23 (6-12") 12/29/1998 | B23 (24") 12/29/1998 | B24 (6-12") 12/29/1998 | B24 (24") 12/29/1998 | B25 (6-12") 12/29/1998 | B25 (24") 12/29/1998 | B26 (6-12") 12/29/1998 | B26 (24") 12/29/1998 | B27 (6-12") 12/29/1998 | B27 (24") 12/29/1998 | B28 (6-12") 12/29/1998 | B28 (24") 12/29/1998 |
| Di-n-butylphthalate | 68000 | 0.25 JB | | 0.3 JB | | 0.37 JB | | 0.92 JB | | 1.2 B | | 0.98 JB | | 1.1 B | | 1.5 B | | 0.89 JB | | 0.32 JB | |
| Di-n-octyl phthalate | 27000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Fluoranthene | 24000 | 0.26 J | | ND | | 0.43 J | | ND | | 0.18 J | | ND | | 0.63 J | | ND | | 0.27 J | | ND | |
| Fluorene | 24000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachloroethane | 140 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | 0.28 J | | ND | | ND | | ND | | 0.55 J | | ND | | ND | | ND | |
| Isophorone | 2000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Naphthalene | 17 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Nitrobenzene | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | 0.37 J | | ND | | 0.3 J | | ND | | 0.14 J | | ND | | 0.21 J | | ND | | 0.21 J | | 0.13 J | |
| Phenol | 210000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pyrene | 18000 | 0.37 J | | ND | | 0.63 J | | ND | | 0.23 J | | ND | | 0.84 J | | ND | | 0.32 J | | 0.13 J | |
| Pyridine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| TICs | NLE | ND | | 16.86 | | 37.12 | | 53.2 | | 32.9 | | 27.37 | | 60.27 | | 27.67 | | 21 | | 16.53 | |
| Pesticides/PCBs | | | | | ' | | 1 | 1 | | | J | | | | ı | ı | ı | | | | |
| 4,4'-DDD | 13 | 0.088 | | 0.031 | | 0.070 | | 0.030 | | 0.041 | | 0.016 | | 0.012 | | 0.044 | | 0.055 | | 0.024 | |
| 4,4'-DDE | 9 | 0.061 | | 0.023 | | 0.065 | | 0.021 | | 0.023 | | 0.012 | | 0.013 | | 0.020 | | 0.029 | | 0.015 | |
| 4,4'-DDT | 8 | 0.065 | | 0.072 | | 0.157 | | 0.030 | | 0.026 | | 0.025 | | 0.034 | | 0.079 | | 0.033 | | 0.026 | |
| Aldrin | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-Chlordane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1016 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1221 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1232 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1242 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1248 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1254 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1260 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| beta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| delta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dieldrin | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan I | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan II | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin Aldehyde | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Heptachlor | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Toxaphene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4159.26 B19 (6-12") 12/28/1998 | 4159.27 B19 (24") 12/28/1998 | 4160.02 B20 (6-12") 12/29/1998 | 4160.03 B20 (24") 12/29/1998 | 4160.04 B21 (6-12") 12/29/1998 | 4160.05 B21 (24") 12/29/1998 | 4160.06 B22 (6-12") 12/29/1998 | 4160.07 B22 (24") 12/29/1998 | 4160.08 B23 (6-12") 12/29/1998 | 4160.09 B23 (24") 12/29/1998 | 4160.10 B24 (6-12") 12/29/1998 | 4160.11 B24 (24") 12/29/1998 | 4160.12 B25 (6-12") 12/29/1998 | 4160.13 B25 (24") 12/29/1998 | 4160.14 B26 (6-12") 12/29/1998 | 4160.15 B26 (24") 12/29/1998 | 4160.16 B27 (6-12") 12/29/1998 | 4160.17 B27 (24") 12/29/1998 | 4160.18 B28 (6-12") 12/29/1998 | 4160.19 B28 (24") 12/29/1998 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 7600 | | 10000 | | 7330 | | 7110 | | 9400 | | 10000 | | 6970 | | 7970 | | 5250 | | 7640 | |
| Antimony | 450 | 1.67 | | 0.755 | | 0.895 | | 0.728 | | 0.929 | | 0.801 | | 1.24 | | 0.854 | | 0.763 | | 0.827 | |
| Arsenic | NLE | 5.82 | | 12.9 | | 8.97 | | 11.8 | | 13.4 | | 9.39 | | 6.02 | | 11.2 | | 7.21 | | 168 | |
| Barium | 59000 | 43.3 | | 65.5 | | 54.5 | | 69.4 | | 84.2 | | 70.4 | | 42.1 | | 77.4 | | 65.4 | | 73.2 | |
| Beryllium | 140 | 1.10 | | 2.040 | | 1.15 | | 1.20 | | 1.50 | | 1.43 | | 0.908 | | 1.30 | | 1.07 | | 1.23 | |
| Cadmium | 78 | 0.453 | | 0.799 | | 0.448 | | 0.672 | | 0.782 | | 1.11 | | 0.474 | | 0.518 | | 0.739 | | 0.742 | |
| Calcium | NLE | 1600 | | 8010 | | 999 | | 5680 | | 4670 | | 3400 | | 507 | | 3660 | | 5300 | | 6360 | |
| Chromium | NLE | 100 | | 215 | | 110 | | 123 | | 152 | | 135 | | 96.8 | | 159 | | 85.2 | | 143 | |
| Cobalt | 590 | 1.29 | | 1.68 | | 1.47 | | 1.58 | | 1.78 | | 2.44 | | 1.51 | | 1.08 | | 3.05 | | 1.47 | |
| Copper | 45000 | 6.07 | | 4.00 | | 9.58 | | 5.49 | | 6.31 | | 8.92 | | 12.0 | | 5.78 | | 3.93 | | 5.70 | |
| Iron | NLE | 20500 | | 45100 | | 28400 | | 27900 | | 34500 | | 30900 | | 23100 | | 35100 | | 19000 | | 37900 | |
| Lead | 800 | 17.9 | | 4.90 | | 19.3 | | 12.6 | | 22.8 | | 16.4 | | 17.6 | | 7.76 | | 6.11 | | 11.4 | |
| Magnesium | NLE | 2310 | | 5960 | | 2660 | | 3080 | | 3950 | | 3350 | | 2110 | | 3990 | | 2160 | | 3620 | |
| Manganese | 5900 | 18.6 | | 23.9 | | 18.4 | | 20 | | 31.2 | | 33.0 | | 19.6 | | 18.5 | | 40.9 | | 24.6 | |
| Nickel | 23000 | 6.13 | | 7.25 | | 5.97 | | 7.53 | | 9.38 | | 9.89 | | 5.36 | | 4.58 | | 10.2 | | 6.76 | |
| Potassium | NLE | 5250 | | 15400 | | 6430 | | 7560 | | 9830 | | 8140 | | 5000 | | 10600 | | 5200 | | 10200 | |
| Selenium | 5700 | 1.06 | | 2.19 | | 1.55 | | 2.05 | | 1.88 | | 1.49 | | 1.35 | | 2.14 | | 1.13 | | 2.18 | |
| Silver | 5700 | ND | |
| Sodium | NLE | 105 | | 99.8 | | 159 | | 165 | | 336 | | 373 | | 121 | | 138 | | 135 | | 304 | |
| Thallium | 79 | ND | |
| Vanadium | 1100 | 49.4 | | 65.4 | | 48.4 | | 50.8 | | 66.3 | | 63.4 | | 45.5 | | 63.6 | | 38.4 | | 61.9 | |
| Zinc | 110000 | 42.5 | | 94.1 | | 66.8 | | 60.4 | | 59.7 | | 68.2 | | 46.3 | | 55.2 | | 56.5 | | 46.0 | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4160.20 B29 (6-12") 12/29/1998 | 4160.21 B29 (24") 12/29/1998 | 4160.22 B22 (6-12") 12/29/1998 | 4160.23 B22 (24") 12/29/1998 | 4162.02 B30 (6-12") 12/30/1998 | 4162.03 B30 (24") 12/30/1998 | 4162.04 B31 (6-12") 12/30/1998 | 4162.05 B31 (24") 12/30/1998 | 4162.06 B32 (6-12") 12/30/1998 | 4162.07 B32 (24") 12/30/1998 | 4162.08 B33 (6-12") 12/30/1998 | 4162.09 B33 (24") 12/30/1998 | 4162.10 B34 (6-12") 12/30/1998 | 4162.11 B34 (24") 12/30/1998 | 4162.12 B35 (6-12") 12/30/1998 | 4162.13 B35 (24") 12/30/1998 | 4162.14 B36 (6-12") 12/30/1998 | 4162.15 B36 (24") 12/30/1998 | 4162.16 B37 (6-12") 12/30/1998 | 4162.17 B37 (24") 12/30/1998 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND |
| 1,1,2-Trichloroethane | 6 | | ND |
| 1,1-Dichloroethene | 150 | | ND |
| 1,2-Dichloroethane | 3 | | ND |
| 1,2-Dichloropropane | 5 | | ND |
| 2-Butanone | 44000 | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND |
| Acetone | NLE | | ND |
| Acrolein | 1 | | ND |
| Acrylonitrile | 3 | | ND |
| Benzene | 5 | | ND |
| Bromodichloromethane | 3 | | ND |
| Bromoform | 280 | | ND |
| Bromomethane | NLE | | ND |
| Carbon disulfide | 110000 | | ND |
| Carbon Tetrachloride | 2 | | ND |
| Chlorobenzene | 7400 | | ND |
| Chloroethane | 1100 | | ND |
| Chloroform | 2 | | ND |
| Chloromethane | 12 | | ND |
| cis-1,2-Dichloroethene | 560 | | ND |
| cis-1,3-Dichloropropene | NLE | | ND |
| Dibromochloromethane | 8 | | ND |
| Dichlorodifluoromethane | NLE | | ND |
| Diisopropyl ether | NLE | | ND |
| Ethylbenzene | 110000 | | ND |
| m+p-Xylenes | NLE | | ND |
| Methyl tert-butyl ether | 320 | | ND |
| Methylene chloride | 97 | | ND | | 0.36 J | | ND | | ND | | ND | | ND | | 17 | | ND | | ND | | ND |
| o-Xylene | NLE | | ND |
| Styrene | 260 | | ND |
| tert-Butyl alcohol | 11000 | | ND |
| Tetrachloroethene | 5 | | ND |
| TICs | NLE | | ND |
| Toluene | 91000 | | ND |
| trans-1,2-Dichloroethene | 720 | | ND |
| trans-1,3-Dichloropropene | NLE | | ND |
| Trichloroethene | 20 | | ND |
| Trichlorofluoromethane | 340000 | | ND |
| Vinyl Acetate | NLE | | ND |
| Vinyl chloride | 2 | | ND |

Notes:

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4160.20 B29 (6-12") 12/29/1998 | 4160.21 B29 (24") 12/29/1998 | 4160.22 B22 (6-12") | 4160.23 B22 (24") 12/29/1998 | 4162.02 B30 (6-12") 12/30/1998 | 4162.03 B30 (24") 12/30/1998 | 4162.04 B31 (6-12") 12/30/1998 | 4162.05 B31 (24") | 4162.06 B32 (6-12") 12/30/1998 | 4162.07 B32 (24") | 4162.08 B33 (6-12") 12/30/1998 | 4162.09 B33 (24") | 4162.10 B34 (6-12") 12/30/1998 | 4162.11 B34 (24") 12/30/1998 | 4162.12 B35 (6-12") | 4162.13 B35 (24") 12/30/1998 | 4162.14 B36 (6-12") 12/30/1998 | 4162.15 B36 (24") 12/30/1998 | 4162.16 B37 (6-12") 12/30/1998 | 4162.17 B37 (24") 12/30/1998 |
|---|------------------------------|--------------------------------------|------------------------------------|------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|------------------------------------|------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Sample Date | Criteria (mg/kg) | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/29/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Aniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Azobenzene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| benzo(a)pyrene | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(b)fluoranthene | 2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(k)fluoranthene | 23 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzoic Acid | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzyl alcohol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethyl)ether | 2 | ND | | ND | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND | | ND | |
| bis(2-chloroisopropyl)ether | 67 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-ethylhexyl) phthalate Butyl benzyl phthalate | 140 | 0.11 J | | 0.12 J | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | |
| | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Chrysene Dibenz(a h)anthracene | 230 | ND ND | | 0.12 J | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND | |
| Dibenz(a,h)anthracene Dibenzofuran | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| | NLE | ND ND | | ND | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND | | ND | |
| Diethyl phthalate Dimethyl phthalate | 550000 | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dimetnyi pritrialate | NLE | ND | | ND | | טא | | ND | | ND | | ND | | ND | | טא | | ND | | ND | |

| Lab Sample ID | NJDEP | 4160.20 | 4160.21 | 4160.22 | 4160.23 | 4162.02 | 4162.03 | 4162.04 | 4162.05 | 4162.06 | 4162.07 | 4162.08 | 4162.09 | 4162.10 | 4162.11 | 4162.12 | 4162.13 | 4162.14 | 4162.15 | 4162.16 | 4162.17 |
|---|--------------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B29 (6-12") 12/29/1998 | B29 (24") 12/29/1998 | B22 (6-12") 12/29/1998 | B22 (24") 12/29/1998 | B30 (6-12") 12/30/1998 | B30 (24") 12/30/1998 | B31 (6-12") 12/30/1998 | B31 (24") 12/30/1998 | B32 (6-12") 12/30/1998 | B32 (24") 12/30/1998 | B33 (6-12") 12/30/1998 | B33 (24") 12/30/1998 | B34 (6-12") 12/30/1998 | B34 (24") 12/30/1998 | B35 (6-12") 12/30/1998 | B35 (24") 12/30/1998 | B36 (6-12") 12/30/1998 | B36 (24") 12/30/1998 | B37 (6-12") 12/30/1998 | B37 (24") 12/30/1998 |
| Di-n-butylphthalate | 68000 | 0.76 JB | | 1.3 B | | 0.75 JB | | 0.24 JB | | 0.31 JB | | 1.5 B | | 0.8 JB | | 0.3 JB | | 0.33 JB | | 0.85 JB | |
| Di-n-octyl phthalate | 27000 | ND | |
| Fluoranthene | 24000 | ND | | ND | 1 |
| Fluorene | 24000 | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | |
| Hexachlorocyclopentadiene | 110 | ND | |
| Hexachloroethane | 140 | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | , | ND | |
| Isophorone | 2000 | ND | |
| Naphthalene | 17 | ND | |
| Nitrobenzene | 340 | ND | |
| N-nitrosodimethylamine | 0.7 | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | |
| n-Nitrosodiphenylamine | NLE | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | |
| Phenol | 210000 | ND | |
| Pyrene | 18000 | ND | | ND | ŀ |
| Pyridine | NLE | ND | |
| TICs | NLE | 18.9 | | 64.92 | | 3.13 | | 1.9 | | 2.3 | | 3.4 | | 2.17 | | 2.5 | | 2.3 | | 3.7 | ŀ |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.007 | | 0.018 | | 0.084 | | 0.099 | | 0.117 | | 0.354 | | 0.049 | | 0.033 | | 0.081 | | 0.061 | |
| 4,4'-DDE | 9 | 0.006 | | 0.013 | | 0.045 | | 0.053 | | 0.062 | | 0.068 | | 0.044 | | 0.025 | | 0.054 | | 0.038 | |
| 4,4'-DDT | 8 | 0.027 | | 0.022 | | 0.053 | | 0.117 | | 0.171 | | 4.095 | | 0.098 | | 0.057 | | 0.108 | | 0.063 | |
| Aldrin | 0.2 | ND | |
| alpha-BHC | NLE | ND | |
| alpha-Chlordane | NLE | ND | |
| Arochlor 1016 | NLE | ND | |
| Arochior 1221 | NLE | ND | |
| Arochlor 1232 | NLE | ND | | ND | ŀ |
| Arochlor 1242 | NLE | ND | |
| Arochlor 1248 | NLE | ND | |
| Arochlor 1254 | NLE | ND | | ND | _ | ND | | ND | | ND | _ | ND | |
| Arochlor 1260 | NLE | ND | |
| beta-BHC | NLE | ND | |
| delta-BHC | NLE | ND | |
| Dieldrin | 0.2 | ND | |
| Endosulfan I | NLE | ND | |
| Endosulfan II | NLE | ND | |
| Endosulfan-Sulfate | 6800 | ND | |
| Endrin | 340 | ND | |
| Endrin Aldehyde | NLE | ND | |
| gamma-BHC | NLE | ND | |
| gamma-Chlordane | NLE | ND | |
| Heptachlor | 0.7 | ND | |
| Heptachlor Epoxide | 0.3 | ND | |
| Toxaphene | 3 | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4160.20 B29 (6-12") 12/29/1998 | 4160.21 B29 (24") 12/29/1998 | 4160.22 B22 (6-12") 12/29/1998 | 4160.23 B22 (24") 12/29/1998 | 4162.02 B30 (6-12") 12/30/1998 | 4162.03 B30 (24") 12/30/1998 | 4162.04 B31 (6-12") 12/30/1998 | 4162.05 B31 (24") 12/30/1998 | 4162.06 B32 (6-12") 12/30/1998 | 4162.07 B32 (24") 12/30/1998 | 4162.08 B33 (6-12") 12/30/1998 | 4162.09 B33 (24") 12/30/1998 | 4162.10 B34 (6-12") 12/30/1998 | 4162.11 B34 (24") 12/30/1998 | 4162.12 B35 (6-12") 12/30/1998 | 4162.13 B35 (24") 12/30/1998 | 4162.14 B36 (6-12") 12/30/1998 | 4162.15 B36 (24") 12/30/1998 | 4162.16 B37 (6-12") 12/30/1998 | 4162.17 B37 (24") 12/30/1998 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 7360 | | 9740 | | 10400 | | 9010 | | 8600 | | 9570 | | 6450 | | 9220 | | 4630 | | 8380 | |
| Antimony | 450 | 0.984 | | 0.832 | | 1.27 | | 1.03 | | 1.14 | | 0.882 | | 1.07 | | 0.898 | | 1.97 | | 1.31 | |
| Arsenic | NLE | 9.69 | | 13.4 | | 19.9 | | 11.8 | | 9.51 | | 15.5 | | 10.0 | | 12.4 | | 8.87 | | 14.5 | P |
| Barium | 59000 | 55.0 | | 89.5 | | 70.7 | | 82.8 | | 58.1 | | 68.1 | | 44.7 | | 86.4 | | 64.5 | | 90.4 | |
| Beryllium | 140 | 1.32 | | 1.55 | | 1.43 | | 1.59 | | 1.31 | | 1.51 | | 1.25 | | 1.51 | | 1.28 | | 1.56 | 1 |
| Cadmium | 78 | 0.461 | | 0.850 | | 0.789 | | 0.761 | | 0.528 | | 0.698 | | 0.750 | | 0.625 | | 1.33 | | 0.706 | |
| Calcium | NLE | 1050 | | 7500 | | 6460 | | 5550 | | 2300 | | 943 | | 983 | | 4120 | | 1910 | | 3490 | P |
| Chromium | NLE | 149 | | 166 | | 184 | | 177 | | 144 | | 172 | | 103 | | 176 | | 67.9 | | 166 | |
| Cobalt | 590 | 1.33 | | 1.95 | | 1.36 | | 1.23 | | 1.50 | | 1.52 | | 1.52 | | 1.62 | | 15.0 | | 1.36 | P |
| Copper | 45000 | 5.47 | | 7.08 | | 5.60 | | 5.22 | | 4.90 | | 6.69 | | 9.31 | | 7.07 | | 15.4 | | 5.86 | |
| Iron | NLE | 31600 | | 35000 | | 42100 | | 38600 | | 32700 | | 38300 | | 25600 | | 38000 | | 17900 | | 37800 | į l |
| Lead | 800 | 7.14 | | 15.0 | | 13.2 | | 11.7 | | 10.9 | | 12.4 | | 28.4 | | 11.4 | | 24.9 | | 13.3 | |
| Magnesium | NLE | 3480 | | 3850 | | 4280 | | 4580 | | 3480 | | 4170 | | 2130 | | 4170 | | 1360 | | 3870 | 1 |
| Manganese | 5900 | 19.0 | | 28.5 | | 26.1 | | 23.8 | | 22.3 | | 26.7 | | 26.5 | | 23.9 | | 171 | | 21.9 | |
| Nickel | 23000 | 5.94 | | 9.39 | | 6.20 | | 7.44 | | 5.95 | | 6.88 | | 8.18 | | 6.05 | | 10.9 | | 5.21 | 1 |
| Potassium | NLE | 8740 | | 9660 | | 11200 | | 11800 | | 9250 | | 10900 | | 5520 | | 11300 | | 3430 | | 10800 | |
| Selenium | 5700 | 2.31 | | 1.97 | | 2.39 | | 2.24 | | 1.45 | | 2.16 | | 1.52 | | 2.21 | | 1.75 | | 2.40 | P |
| Silver | 5700 | ND | |
| Sodium | NLE | 112 | | 213 | | 93.2 | | 146 | | 118 | | 71.0 | | 35.2 | | 53.0 | | 65.9 | | 67.7 | |
| Thallium | 79 | ND | |
| Vanadium | 1100 | 59.3 | | 70.5 | | 74.6 | | 72.1 | | 59.7 | | 71.5 | | 47.3 | | 70.7 | | 30.2 | | 54.7 | |
| Zinc | 110000 | 49.2 | | 73.7 | | 59.2 | | 52.9 | | 49.7 | | 63.5 | | 78.8 | | 60.6 | | 92.5 | | 64.7 | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4162.18 B38 (6-12") 12/30/1998 | 4162.19 B38 (24") 12/30/1998 | 4162.20 B39 (6-12") 12/30/1998 | 4162.21 B39 (24") 12/30/1998 | 4162.22 B40 (6-12") 12/30/1998 | 4162.23 B40 (24") 12/30/1998 | 4162.24 B41 (6-12") 12/30/1998 | 4162.25 B41 (24") 12/30/1998 | 4162.26 B42 (6-12") 12/30/1998 | 4162.27 B42 (24") 12/30/1998 | 4162.28 B43 (6-12") 12/30/1998 | 4162.29 B43 (24") 12/30/1998 | 4162.30 B44 (6-12") 12/30/1998 | 4162.31 B44 (24") 12/30/1998 | 4164.02 B45 (6-12") 12/31/1998 | 4164.03 B45 (24") 12/31/1998 | 4164.04 B46 (6-12") 12/31/1998 | 4164.05 B46 (24") 12/31/1998 | 4164.06 B47 (6-12") 12/31/1998 | 4164.07 B47 (24") 12/31/1998 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND |
| 1,1,2-Trichloroethane | 6 | | ND |
| 1,1-Dichloroethene | 150 | | ND |
| 1,2-Dichloroethane | 3 | | ND |
| 1,2-Dichloropropane | 5 | | ND |
| 2-Butanone | 44000 | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND |
| Acetone | NLE | | ND |
| Acrolein | 1 | | ND |
| Acrylonitrile | 3 | | ND |
| Benzene | 5 | | ND |
| Bromodichloromethane | 3 | | ND |
| Bromoform | 280 | | ND |
| Bromomethane | NLE | | ND |
| Carbon disulfide | 110000 | | ND |
| Carbon Tetrachloride | 2 | | ND |
| Chlorobenzene | 7400 | | ND |
| Chloroethane | 1100 | | ND |
| Chloroform | 2 | | ND |
| Chloromethane | 12 | | ND |
| cis-1,2-Dichloroethene | 560 | | ND |
| cis-1,3-Dichloropropene | NLE | | ND |
| Dibromochloromethane | 8 | | ND |
| Dichlorodifluoromethane | NLE | | ND |
| Diisopropyl ether | NLE | | ND |
| Ethylbenzene | 110000 | | ND |
| m+p-Xylenes | NLE | | ND |
| Methyl tert-butyl ether | 320 | | ND |
| Methylene chloride | 97 | | ND |
| o-Xylene | NLE | | ND |
| Styrene | 260 | | ND |
| tert-Butyl alcohol | 11000 | | ND |
| Tetrachloroethene | 5 | | ND |
| TICs | NLE | | ND | | 1.9 | | ND |
| Toluene | 91000 | | ND |
| trans-1,2-Dichloroethene | 720 | | ND |
| trans-1,3-Dichloropropene | NLE | | ND |
| Trichloroethene | 20 | | ND |
| Trichlorofluoromethane | 340000 | | ND |
| Vinyl Acetate | NLE | | ND |
| Vinyl chloride | 2 | | ND |

Notes

| Control Process Control Pr | Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4162.18 B38 (6-12") | 4162.19 B38 (24") 12/30/1998 | 4162.20 B39 (6-12") 12/30/1998 | 4162.21 B39 (24") 12/30/1998 | 4162.22 B40 (6-12") 12/30/1998 | 4162.23 B40 (24") 12/30/1998 | 4162.24 B41 (6-12") 12/30/1998 | 4162.25 B41 (24") | 4162.26 B42 (6-12") 12/30/1998 | 4162.27 B42 (24") | 4162.28 B43 (6-12") 12/30/1998 | 4162.29 B43 (24") | 4162.30 B44 (6-12") 12/30/1998 | 4162.31 B44 (24") 12/30/1998 | 4164.02 B45 (6-12") | 4164.03 B45 (24") 12/31/1998 | 4164.04 B46 (6-12") | 4164.05 B46 (24") 12/31/1998 | 4164.06 B47 (6-12") 12/31/1998 | 4164.07 B47 (24") 12/31/1998 |
|--|--|------------------------------|------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|----------------------|--------------------------------------|------------------------------------|------------------------|------------------------------------|------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Marie Company | Sample Date | Criteria (mg/kg) | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/30/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 |
| Section | Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| Marchanness 1900 | 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Manipulation Mail | 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Mathematical Math | 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Marchenoper | 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Marchander 1909 | 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Secontamination 1400 140 | 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| . Association of the control of the | 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | | | ND | | ND | | ND | | ND | | ND | |
| Continuation Cont | 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Association | 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Contention Mat Ma | | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Contemphore 2-00 10 10 10 10 10 10 10 | 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| Section Sect | | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Part | | | | | | | | | | | | | | | | | | | | | | |
| Secondation 1900 No No No No No No No | | | | | | | | | | | | | | | | | _ | | | | | |
| Secondary Mart Ma | 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Section Contention March Mode | | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
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| Application M.E. NO NO NO NO NO NO NO N | | | | | | | | | | | | | | | | | | | | | | |
| Assembly Provide filter NLE ND ND ND ND ND ND ND N | | | | | | | | | | | | | | | | | | | | | | |
| Action March Mar | | | | | | | | | | | | | | | | | | | | | | |
| - Conformation | | | | | | | | | | | | | | | | | | | | | | |
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| - Antiforphone of ME ND | | | | | | | | | | | | | | | | | | | | | | |
| #Hitroselfine | | | | | | | | | | | | | | | | | | | | | | |
| Afterophend NLE | | | | | | | | | | | | | | | | | | | | | | |
| Accessphishere 37000 ND ND ND ND ND ND ND | | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
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| Archivecene 3000 ND | | | | | | | | | | | | | | | | | | | | | | |
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| Part | | | | | | | | | | | | | | | | | | | | | | |
| Sembol S | | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| No. | | | ND | | ND | | ND | | ND | | ND | | 0.26.1 | | ND | | 011 | | 0.15.1 | | ND | |
| Semilar Semi | | | | | | | | | | | | | | | | | | | | | | |
| Semicolar Semi | | | | | | | | | | | | | | | | | | | | | | |
| Benzo(k)fluoranthene 23 ND ND ND ND ND ND ND N | | | | | | | | | | | | | | | | | | | | | | |
| Benzola Acid NLE ND ND ND ND ND ND ND N | | | | | | | | | | | | | | | | | | | | | | |
| Benzyl alcohol NLE ND ND ND ND ND ND ND N | , , | | | | | | | | | | | | | | | | | | | | | |
| NLE ND ND ND ND ND ND ND N | | | | | | | | | | | | | | | | | | | | | | |
| ND ND ND ND ND ND ND ND | | | | | | | | | | | | | | | | | _ | | | | | |
| Signature Sign | | | | | | | | | | | | | | | | | | | | | | |
| 140 ND ND ND ND ND ND ND N | bis(2-chloroisopropyl)ether | | | | | | ND | | | | | | ND | | | | ND | | | | ND | |
| Butyl benzyl phthalate 14000 ND | bis(2-ethylhexyl) phthalate | | | | | | | | | | | | | | | | | | | | | |
| Chrysene 230 ND 0.17 J ND 0.13 J ND 0.35 J ND 0.14 J 0.21 J ND Dibenz(a,b)anthracene 0.2 ND < | | | | | | | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene 0.2 ND ND< | Chrysene | | | | | | | | | | | | | | | | | | | | | |
| | Dibenz(a,h)anthracene | | | | | | | | | | | | | | | | _ | | | | | |
| | Dibenzofuran | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| י און עואון איי איי איי איי איי איי איי איי א | Diethyl phthalate | 550000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dimethyl phthalate NLE ND | | | | | ND | | | | | | | | | | | | | | | | | |

| Lab Sample ID Field Sample Location | NJDEP | 4162.18 | 4162.19 | 4162.20 | 4162.21 | 4162.22 | 4162.23 | 4162.24 | 4162.25 | 4162.26 | 4162.27 | 4162.28 | 4162.29 | 4162.30 | 4162.31 | 4164.02 | 4164.03 | 4164.04 | 4164.05 | 4164.06 | 4164.07 |
|--|--------------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B38 (6-12") 12/30/1998 | B38 (24") 12/30/1998 | B39 (6-12") 12/30/1998 | B39 (24") 12/30/1998 | B40 (6-12") 12/30/1998 | B40 (24") 12/30/1998 | B41 (6-12") 12/30/1998 | B41 (24") 12/30/1998 | B42 (6-12") 12/30/1998 | B42 (24") 12/30/1998 | B43 (6-12") 12/30/1998 | B43 (24") 12/30/1998 | B44 (6-12") 12/30/1998 | B44 (24") 12/30/1998 | B45 (6-12") 12/31/1998 | B45 (24") 12/31/1998 | B46 (6-12") 12/31/1998 | B46 (24") 12/31/1998 | B47 (6-12") 12/31/1998 | B47 (24") 12/31/1998 |
| Di-n-butylphthalate | 68000 | 0.9 JB | | 0.35 JB | | 0.82 JB | | 0.38 JB | | 0.44 JB | | 1.1 JB | | 1.6 B | | 1 JB | | 0.45 JB | | 0.39 JB | |
| Di-n-octyl phthalate | 27000 | ND | |
| Fluoranthene | 24000 | 0.12 J | | 0.22 J | | ND | | 0.14 J | | ND | | 0.42 J | | ND | | 0.19 J | | 0.28 J | | 0.12 J | |
| Fluorene | 24000 | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | |
| Hexachlorocyclopentadiene | 110 | ND | |
| Hexachloroethane | 140 | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | 1 |
| Isophorone | 2000 | ND | |
| Naphthalene | 17 | ND | | 0.16 J | | ND | | ND | | ND | | ND | |
| Nitrobenzene | 340 | ND | |
| N-nitrosodimethylamine | 0.7 | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | |
| n-Nitrosodiphenylamine | NLE | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | 0.15 J | | ND | | 0.14 J | | ND | | 0.64 J | | ND | | 0.14 J | | 0.21 J | | ND | 1 |
| Phenol | 210000 | ND | |
| Pyrene | 18000 | 0.13 J | | 0.22 J | | ND | | 0.19 J | | ND | | 0.52 J | | ND | | 0.22 J | | 0.31 J | | 0.15 J | |
| Pyridine | NLE | ND | |
| TICs | NLE | 4.1 | | 2.8 | | 4.8 | | 3.9 | | 3.8 | | 7.1 | | 11.5 | | 5.7 | | 3.5 | | 3.8 | |
| Pesticides/PCBs | | | | • | • | | | | | | | | | | • | • | • | | | | |
| 4,4'-DDD | 13 | 0.043 | | 0.042 | | 0.077 | | 0.043 | | ND | | 0.040 | | 0.068 | | 0.038 | | 0.056 | | 0.039 | |
| 4,4'-DDE | 9 | 0.032 | | 0.030 | | 0.052 | | 0.032 | | ND | | 0.028 | | 0.055 | | 0.037 | | 0.030 | | 0.036 | |
| 4,4'-DDT | 8 | 0.067 | | 0.138 | | 0.293 | | 0.114 | | 0.039 | | 0.100 | | 0.123 | | 0.134 | | 0.175 | | 0.077 | |
| Aldrin | 0.2 | ND | |
| alpha-BHC | NLE | ND | | ND | ĺ |
| alpha-Chlordane | NLE | ND | |
| Arochlor 1016 | NLE | ND | |
| Arochlor 1221 | NLE | ND | |
| Arochlor 1232 | NLE | ND | |
| Arochlor 1242 | NLE | ND | |
| Arochlor 1248 | NLE | ND | |
| Arochlor 1254 | NLE | ND | |
| Arochlor 1260 | NLE | ND | |
| beta-BHC | NLE | ND | |
| delta-BHC | NLE | ND | |
| Dieldrin | 0.2 | ND | |
| Endosulfan I | NLE | ND | |
| Endosulfan II | NLE | ND | |
| Endosulfan-Sulfate | 6800 | ND | |
| Endrin | 340 | ND | |
| Endrin Aldehyde | NLE | ND | |
| gamma-BHC | NLE | ND | |
| gamma-Chlordane | NLE | ND | |
| Heptachlor | 0.7 | ND | |
| Heptachlor Epoxide | 0.3 | ND | |
| Toxaphene | 3 | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4162.18 B38 (6-12") 12/30/1998 | 4162.19 B38 (24") 12/30/1998 | 4162.20 B39 (6-12") 12/30/1998 | 4162.21 B39 (24") 12/30/1998 | 4162.22 B40 (6-12") 12/30/1998 | 4162.23 B40 (24") 12/30/1998 | 4162.24 B41 (6-12") 12/30/1998 | 4162.25 B41 (24") 12/30/1998 | 4162.26 B42 (6-12") 12/30/1998 | 4162.27 B42 (24") 12/30/1998 | 4162.28 B43 (6-12") 12/30/1998 | 4162.29 B43 (24") 12/30/1998 | 4162.30 B44 (6-12") 12/30/1998 | 4162.31 B44 (24") 12/30/1998 | 4164.02 B45 (6-12") 12/31/1998 | 4164.03 B45 (24") 12/31/1998 | 4164.04 B46 (6-12") 12/31/1998 | 4164.05 B46 (24") 12/31/1998 | 4164.06 B47 (6-12") 12/31/1998 | 4164.07 B47 (24") 12/31/1998 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 4550 | | 4090 | | 8650 | | 7360 | | 9370 | | 11000 | | 9190 | | 7900 | | 10300 | | 9520 | |
| Antimony | 450 | 0.990 | | 0.783 | | 1.18 | | 0.722 | | 0.954 | | 0.760 | | 1.23 | | 1.40 | | 1.19 | | 0.932 | |
| Arsenic | NLE | 11.6 | | 9.61 | | 12.6 | | 11.7 | | 9.31 | | 11.9 | | 11.1 | | 12.7 | | 12.7 | | 14.2 | |
| Barium | 59000 | 60.9 | | 72.5 | | 70.3 | | 70.2 | | 56.8 | | 120 | | 77.4 | | 57.3 | | 77.4 | | 83.1 | |
| Beryllium | 140 | 0.872 | | 0.831 | | 1.33 | - | 1.17 | | 1.41 | | 1.89 | | 1.39 | | 1.26 | | 1.91 | | 1.61 | |
| Cadmium | 78 | 0.351 | | 0.428 | | 0.704 | | 0.551 | | 0.632 | | 0.953 | | 0.704 | | 0.747 | | 1.47 | | 0.701 | |
| Calcium | NLE | 914 | | 4090 | | 997 | | 1010 | | 3680 | | 7320 | | 1370 | | 1350 | | 3880 | | 7000 | |
| Chromium | NLE | 84.9 | | 68.8 | | 153 | | 133 | | 179 | | 235 | | 145 | | 140 | | 198 | | 197 | |
| Cobalt | 590 | 1.29 | | 1.46 | | 1.37 | | 1.41 | | 0.892 | | 2.03 | | 1.61 | | 1.80 | | 3.23 | | 1.55 | |
| Copper | 45000 | 6.86 | | 6.04 | | 8.34 | | 6.08 | | 5.34 | | 6.75 | | 5.48 | | 7.01 | | 6.50 | | 4.95 | |
| Iron | NLE | 23000 | | 18800 | | 34300 | | 27800 | | 38000 | | 42400 | | 32900 | | 32100 | | 40900 | | 40400 | |
| Lead | 800 | 16.2 | | 13.9 | | 18.6 | | 20.1 | | 7.66 | | 8.59 | | 22.8 | | 16.0 | | 19.6 | | 7.92 | |
| Magnesium | NLE | 1800 | | 1470 | | 3380 | | 2680 | | 4080 | | 5070 | | 3090 | | 2980 | | 4200 | | 4210 | |
| Manganese | 5900 | 15.2 | | 17.9 | | 23.8 | | 19.3 | | 23.3 | | 42.6 | | 28.2 | | 44.3 | | 43.2 | | 25.4 | |
| Nickel | 23000 | 4.80 | | 4.99 | | 6.05 | | 5.61 | | 5.07 | | 8.93 | | 6.82 | | 8.41 | | 27.7 | | 6.53 | |
| Potassium | NLE | 4960 | | 4090 | | 9200 | | 7500 | | 11700 | | 14300 | | 8680 | | 8220 | | 11900 | | 12400 | |
| Selenium | 5700 | 1.98 | | 1.86 | | 2.19 | | 1.81 | | 1.83 | | 2.59 | | 1.82 | | 1.72 | | 1.91 | | 2.24 | |
| Silver | 5700 | ND | |
| Sodium | NLE | 66.4 | | 86.7 | | 100 | | 55.3 | | 138 | | 224 | | 90.2 | | 53.0 | | 107 | | 112 | |
| Thallium | 79 | ND | |
| Vanadium | 1100 | 29.6 | | 25.5 | | 62.3 | | 46.2 | | 64.0 | | 81.3 | | 61.9 | | 57.8 | | 67.0 | | 61.2 | |
| Zinc | 110000 | 38.0 | | 45.0 | | 59.6 | | 54.7 | | 92.8 | | 77.7 | | 55.3 | | 82.3 | | 79.0 | | 76.2 | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4164.08 B48 (6-12") 12/31/1998 | 4164.09 B48 (24") 12/31/1998 | 4164.10 B49 (6-12") 12/31/1998 | 4164.11 B49 (24") 12/31/1998 | 4164.12 B50 (6-12") 12/31/1998 | 4164.13 B50 (24") 12/31/1998 | 4164.14 B51 (6-12") 12/31/1998 | 4164.15 B51 (24") 12/31/1998 | 4164.16 B52 (6-12") 12/31/1998 | 4164.17 B52 (24") 12/31/1998 | 4164.18 B53 (6-12") 12/31/1998 | 4164.19 B53 (24") 12/31/1998 | 4164.20 B51 (6-12") 12/31/1998 | 4164.21 B51 (24") 12/31/1998 | 4169.02 B54 (6-12") 1/5/1999 | 4169.03 B54 (24") 1/5/1999 | 4169.04 B55 (6-12") 1/5/1999 | 4169.05 B55 (24") 1/5/1999 | 4169.06 B56 (6-12") 1/5/1999 | 4169.07 B56 (24") 1/5/1999 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | ND | | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | ND | | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | ND | | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | ND | | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | ND | | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | ND | | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | ND | | ND | | ND |
| 2-Butanone | 44000 | | ND | | ND | | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | ND | | ND | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | ND | | ND | | ND |
| Acetone | NLE | | ND | | ND | | ND | | ND |
| Acrolein | 1 | | ND | | ND | | ND | | ND |
| Acrylonitrile | 3 | | ND | | ND | | ND | | ND |
| Benzene | 5 | | ND | | ND | | ND | | ND | | 0.3 | | ND | | ND | | ND | | ND | | ND |
| Bromodichloromethane | 3 | | ND | | ND | | ND | | ND |
| Bromoform | 280 | | ND | | ND | | ND | | ND |
| Bromomethane | NLE | | ND | | ND | | ND | | ND |
| Carbon disulfide | 110000 | | ND | | ND | | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | ND | | ND | | ND |
| Chlorobenzene | 7400 | | ND | | ND | | ND | | ND |
| Chloroethane | 1100 | | ND | | ND | | ND | | ND |
| Chloroform | 2 | | ND | | ND | | ND | | ND |
| Chloromethane | 12 | | ND | | ND | | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND | | ND | | ND | | ND |
| cis-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND |
| Dibromochloromethane | 8 | | ND | | ND | | ND | | ND |
| Dichlorodifluoromethane | NLE | | ND | | ND | | ND | | ND |
| Diisopropyl ether | NLE | | ND | | ND | | ND | | ND |
| Ethylbenzene | 110000 | | ND | | ND | | ND | | ND |
| m+p-Xylenes | NLE | | ND | | ND | | ND | | ND |
| Methyl tert-butyl ether | 320 | | ND | | ND | | ND | | ND |
| Methylene chloride | 97 | | ND | | ND | | ND | | ND |
| o-Xylene | NLE | | ND | | ND | | ND | | ND |
| Styrene | 260 | | ND | | ND | | ND | | ND |
| tert-Butyl alcohol | 11000 | | ND | | ND | | ND | | ND |
| Tetrachloroethene | 5 | | ND | | ND | | ND | | ND |
| TICs | NLE | | ND | | ND | | ND | | ND |
| Toluene | 91000 | | ND | | 0.56 | | ND | | ND | | ND | | 0.75 |
| trans-1,2-Dichloroethene | 720 | | ND | | ND | | ND | | ND |
| trans-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND |
| Trichloroethene | 20 | | ND | | ND | | ND | | ND |
| Trichlorofluoromethane | 340000 | | ND | | ND | | ND | | ND |
| Vinyl Acetate | NLE | | ND | | ND | | ND | | ND |
| Vinyl chloride | 2 | | ND | | ND | | ND | | ND |

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4164.08 B48 (6-12") | 4164.09 B48 (24") 12/31/1998 | 4164.10 B49 (6-12") 12/31/1998 | 4164.11 B49 (24") 12/31/1998 | 4164.12 B50 (6-12") 12/31/1998 | 4164.13 B50 (24") 12/31/1998 | 4164.14 B51 (6-12") 12/31/1998 | 4164.15 B51 (24") 12/31/1998 | 4164.16 B52 (6-12") 12/31/1998 | 4164.17 B52 (24") | 4164.18 B53 (6-12") 12/31/1998 | 4164.19 B53 (24") 12/31/1998 | 4164.20 B51 (6-12") 12/31/1998 | 4164.21 B51 (24") 12/31/1998 | 4169.02 B54 (6-12") 1/5/1999 | 4169.03 B54 (24") 1/5/1999 | 4169.04 B55 (6-12") | 4169.05 B55 (24") 1/5/1999 | 4169.06 B56 (6-12") 1/5/1999 | 4169.07 B56 (24") 1/5/1999 |
|--|------------------------------|------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|----------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|----------------------------------|------------------------|----------------------------------|------------------------------------|----------------------------------|
| Sample Date | Criteria (mg/kg) | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 12/31/1998 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Aniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Azobenzene Benzidine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(a)anthracene benzo(a)pyrene | 2 | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND 0.13 J | | ND ND | | ND ND | |
| Benzo(b)fluoranthene | 0.2 | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Benzo(g,h,i)perylene | 30000 | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | | | ND ND | | ND ND | | ND ND | |
| Benzo(k)fluoranthene | 23 | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Benzoic Acid | NLE | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Benzyl alcohol | NLE | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| bis(2-Chloroethoxy)methane | NLE | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| bis(2-Chloroethyl)ether | 2 | ND ND | | ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| bis(2-chloroisopropyl)ether | 67 | ND | | ND | | ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND | |
| bis(2-ethylhexyl) phthalate | 140 | ND ND | | ND | | ND ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | 0.14 JB | | ND | |
| Butyl benzyl phthalate | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND | |
| Chrysene | 230 | ND ND | | ND | | ND ND | | ND ND | | ND | | ND | | ND | | 0.12 J | | ND | | ND | |
| Dibenz(a,h)anthracene | 0.2 | ND ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dibenzofuran | NLE | ND | | ND | | ND ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND ND | | ND | |
| Diethyl phthalate | 550000 | ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND | |
| Dimethyl phthalate | NLE | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND | |
| caryr priciolote | IATE | שאו | | שאו | | שאו | | שאו | | שאו | | IND | | IND | | שאו | | IND | | IND | |

| Lab Sample ID | NJDEP | 4164.08 | 4164.09 | 4164.10 | 4164.11 | 4164.12 | 4164.13 | 4164.14 | 4164.15 | 4164.16 | 4164.17 | 4164.18 | 4164.19 | 4164.20 | 4164.21 | 4169.02 | 4169.03 | 4169.04 | 4169.05 | 4169.06 | 4169.07 |
|---|--------------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B48 (6-12") 12/31/1998 | B48 (24") 12/31/1998 | B49 (6-12") 12/31/1998 | B49 (24") 12/31/1998 | B50 (6-12") 12/31/1998 | B50 (24") 12/31/1998 | B51 (6-12") 12/31/1998 | B51 (24") 12/31/1998 | B52 (6-12") 12/31/1998 | B52 (24") 12/31/1998 | B53 (6-12") 12/31/1998 | B53 (24") 12/31/1998 | B51 (6-12") 12/31/1998 | B51 (24") 12/31/1998 | B54 (6-12") 1/5/1999 | B54 (24") 1/5/1999 | B55 (6-12") 1/5/1999 | B55 (24") 1/5/1999 | B56 (6-12") 1/5/1999 | B56 (24") 1/5/1999 |
| Di-n-butylphthalate | 68000 | 1.1 JB | | 1.2 B | | 2.2 B | | 1 JB | | 1 JB | | 0.72 JB | | 0.33 JB | | 0.33 JB | | 1.9 B | | 1.1 JB | |
| Di-n-octyl phthalate | 27000 | ND | | ND | | ND | | ND | |
| Fluoranthene | 24000 | ND | | 0.13 J | | ND | | 0.22 J | | ND | | ND | |
| Fluorene | 24000 | ND | | ND | | ND | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | ND | | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | | ND | | ND | |
| Hexachloroethane | 140 | ND | | ND | | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | ND | | ND | |
| Isophorone | 2000 | ND | | ND | | ND | | ND | |
| Naphthalene | 17 | ND | | ND | | ND | | ND | |
| Nitrobenzene | 340 | ND | | ND | | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | | ND | | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | 0.12 J | | ND | | 0.13 J | | ND | | ND | |
| Phenol | 210000 | ND | | ND | | ND | | ND | |
| Pyrene | 18000 | 0.13 J | | ND | | 0.24 J | | ND | | ND | |
| Pyridine | NLE | ND | | ND | | ND | | ND | |
| TICs | NLE | 3.9 | | 4.7 | | 8 | | 3.3 | | 3.7 | | 6.7 | | 5.1 | | 4.5 | | 3.4 | | 2 | |
| Pesticides/PCBs | • | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.165 | | ND | | 0.034 | | ND | | ND | | ND | | ND | | 0.020 | | ND | | ND | |
| 4,4'-DDE | 9 | 0.034 | | 0.010 | | 0.028 | | ND | | ND | | 0.038 | | 0.010 | | 0.023 | | ND | | ND | |
| 4,4'-DDT | 8 | 0.044 | | 0.031 | | 0.042 | | ND | | ND | | 0.046 | | ND | | ND | | ND | | ND | |
| Aldrin | 0.2 | ND | | ND | | ND | | ND | |
| alpha-BHC | NLE | ND | | ND | | ND | | ND | |
| alpha-Chlordane | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1016 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1221 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1232 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1242 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1248 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1254 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1260 | NLE | ND | | ND | | ND | | ND | |
| beta-BHC | NLE | ND | _ | ND | _ | ND | | ND | | ND | | ND | _ | ND | | ND | _ | ND | | ND | |
| delta-BHC | NLE | ND | | ND | | ND | | ND | |
| Dieldrin | 0.2 | ND | | ND | | ND | | ND | |
| Endosulfan I | NLE | ND | | ND | | ND | | ND | |
| Endosulfan II | NLE | ND | _ | ND | _ | ND | | ND | | ND | | ND | _ | ND | | ND | _ | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | | ND | | ND | |
| Endrin | 340 | ND | | ND | | ND | | ND | |
| Endrin Aldehyde | NLE | ND | | ND | | ND | | ND | |
| gamma-BHC | NLE | ND | | ND | | ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND | | ND | | ND | |
| Heptachlor | 0.7 | ND | | ND | | ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | | ND | | ND | |
| Toxaphene | 3 | ND | | ND | | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4164.08 B48 (6-12") 12/31/1998 | 4164.09 B48 (24") 12/31/1998 | 4164.10 B49 (6-12") 12/31/1998 | 4164.11 B49 (24") 12/31/1998 | 4164.12 B50 (6-12") 12/31/1998 | 4164.13 B50 (24") 12/31/1998 | 4164.14 B51 (6-12") 12/31/1998 | 4164.15 B51 (24") 12/31/1998 | 4164.16 B52 (6-12") 12/31/1998 | 4164.17 B52 (24") 12/31/1998 | 4164.18 B53 (6-12") 12/31/1998 | 4164.19 B53 (24") 12/31/1998 | 4164.20 B51 (6-12") 12/31/1998 | 4164.21 B51 (24") 12/31/1998 | 4169.02 B54 (6-12") 1/5/1999 | 4169.03 B54 (24") 1/5/1999 | 4169.04 B55 (6-12") 1/5/1999 | 4169.05 B55 (24") 1/5/1999 | 4169.06 B56 (6-12") 1/5/1999 | 4169.07 B56 (24") 1/5/1999 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 5870 | | 12000 | | 8490 | | 10300 | | 11300 | | 10400 | | 101000 | | 13200 | | 14700 | | 22300 | |
| Antimony | 450 | 1.86 | | 1.07 | | 0.961 | | 0.977 | | 0.953 | | 1.31 | | 1.13 | | ND | | 0.733 | | ND | |
| Arsenic | NLE | 8.06 | | 16.8 | | 18.4 | | 14.3 | | 26.1 | | 18.2 | | 13.0 | | 25.2 | | 12.9 | | 52.4 | |
| Barium | 59000 | 71.4 | | 57.7 | | 69.4 | | 36.1 | | 15.9 | | 106 | | 36.3 | | 70.5 | | 9.40 | | 42.4 | |
| Beryllium | 140 | 0.808 | | 0.910 | | 1.41 | | 1.05 | | 0.808 | | 0.935 | | 1.03 | | 2.12 | | 1.28 | | 0.993 | |
| Cadmium | 78 | 0.587 | | 0.804 | | 0.735 | | 0.918 | | 0.558 | | 1.65 | | 0.739 | | 1.98 | | 0.595 | | 0.609 | |
| Calcium | NLE | 1210 | | 950 | | 7200 | | 887 | | 600 | | 865 | | 830 | | 5110 | | 1330 | | 463 | |
| Chromium | NLE | 20.3 | | 110 | | 173 | | 102 | | 86.4 | | 138 | | 99.5 | | 215 | | 172 | | 135 | |
| Cobalt | 590 | 7.19 | | 1.81 | | 1.21 | | 2.66 | | 1.21 | | 2.31 | | 2.17 | | 3.04 | | 1.04 | | 2.17 | |
| Copper | 45000 | 44.1 | | 27.0 | | 6.42 | | 16.4 | | 7.28 | | 141 | | 14.5 | | 11.3 | | 10.2 | | 8.67 | |
| Iron | NLE | 12700 | | 27500 | | 38900 | | 26400 | | 28600 | | 50100 | | 26000 | | 48900 | | 28600 | | 33200 | |
| Lead | 800 | 19.4 | | 32.1 | | 10.6 | | 39.0 | | 6.43 | | 263 | | 20.8 | | 19.3 | | 7.49 | | 6.08 | |
| Magnesium | NLE | 263 | | 2460 | | 3580 | | 2300 | | 2060 | | 2540 | | 2210 | | 7020 | | 4840 | | 3870 | |
| Manganese | 5900 | 69.7 | | 77.3 | | 20.1 | | 28.4 | | 24.7 | | 125 | | 23.9 | | 54.1 | | 35.4 | | 60.0 | |
| Nickel | 23000 | 22.8 | | 5.80 | | 5.18 | | 9.22 | | 4.87 | | 10.7 | | 8.27 | | 17.3 | | 4.83 | | 6.50 | |
| Potassium | NLE | 677 | | 5390 | | 11000 | | 5580 | | 3980 | | 6200 | | 5310 | | 16000 | | 9210 | | 6320 | |
| Selenium | 5700 | 1.75 | | 1.04 | | 1.74 | | 1.13 | | 0.99 | | 0.661 | | 1.25 | | 2.21 | | ND | | 1.04 | |
| Silver | 5700 | ND | | ND | | ND | | ND | |
| Sodium | NLE | 198 | | 100 | | 52.4 | | 51.0 | | 59.7 | | 83.0 | | 46.5 | | 188 | | 211 | | 165 | |
| Thallium | 79 | ND | | ND | | ND | | ND | |
| Vanadium | 1100 | 27.1 | | 57.9 | | 52.0 | | 53.3 | | 50.3 | | 58.6 | | 49.3 | | 86.2 | | 81.0 | | 74.5 | |
| Zinc | 110000 | 44.1 | | 102 | | 75.9 | | 56.2 | | 34.3 | | 337 | | 62.8 | | 93.8 | | 97.9 | | 41.2 | |

| Lab Cample ID | NJDEP | 4169.08 | 4169.09 | 4169.10 | 4169.11 | 4169.12 | 4169.13 | 4169.14 | 4169.15 | 4169.16 | 4169.17 | 4169.18 | 4169.19 | 4169.20 | 4169.21 | 4169.22 | 4169.23 | 4169.24 | 4169.25 | 4169.26 | 4169.27 |
|---|--------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|--------------------------|------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B57 (6-12") 1/5/1999 | B57 (24") 1/5/1999 | B58 (6-12") 1/5/1999 | B58 (24") 1/5/1999 | B59 (6-12") 1/5/1999 | B59 (24") 1/5/1999 | B60 (6-12") 1/5/1999 | B60 (24") 1/5/1999 | B61 (6-12") 1/5/1999 | B61 (24") 1/5/1999 | B62 (6-12") 1/5/1999 | B62 (24") 1/5/1999 | B63 (6-12") 1/5/1999 | B63 (24") 1/5/1999 | B64 (6-12") 1/5/1999 | B64 (24") 1/5/1999 | B65 (6-12") 1/5/1999 | B65 (24") 1/5/1999 | B64A (6-12") 1/5/1999 | B64A (24") 1/5/1999 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | ND |
| 2-Butanone | 44000 | | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | ND |
| Acetone | NLE | | ND | | ND |
| Acrolein | 1 | | ND | | ND |
| Acrylonitrile | 3 | | ND | | ND |
| Benzene | 5 | | ND | | ND |
| Bromodichloromethane | 3 | | ND | | ND |
| Bromoform | 280 | | ND | | ND |
| Bromomethane | NLE | | ND | | ND |
| Carbon disulfide | 110000 | | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | ND |
| Chlorobenzene | 7400 | | ND | | ND |
| Chloroethane | 1100 | | ND | | ND |
| Chloroform | 2 | | ND | | ND |
| Chloromethane | 12 | | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND | | ND |
| cis-1,3-Dichloropropene | NLE | | ND | | ND |
| Dibromochloromethane | 8 | | ND | | ND |
| Dichlorodifluoromethane | NLE | | ND | | ND |
| Diisopropyl ether | NLE | | ND | | ND |
| Ethylbenzene m+p-Xylenes | 110000 NLE | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND |
| Methyl tert-butyl ether | | | ND ND | | ND ND |
| Methylene chloride | 320 97 | | ND ND | | ND ND |
| o-Xylene | NLE | | ND ND | | ND ND | | ND | | ND ND | | ND ND |
| Styrene | 260 | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| tert-Butyl alcohol | 11000 | | ND ND | | ND ND |
| Tetrachloroethene | 5 | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| TICs | NLE | | ND | | ND |
| Toluene | 91000 | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND ND | | ND. | | ND ND | | ND ND |
| trans-1,2-Dichloroethene | 720 | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| trans-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Trichloroethene | 20 | | ND ND | | ND | | ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Trichlorofluoromethane | 340000 | | ND | | ND ND | | ND | | ND | | ND |
| Vinyl Acetate | NLE | | ND | | ND ND | | ND | | ND | | ND |
| Vinyl chloride | 2 | | ND | | ND ND | | ND | | ND |
| | | | | | | | | | | | | | | | | | | | | 1 | |

Notes

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4169.08 B57 (6-12") | 4169.09 B57 (24") 1/5/1999 | 4169.10 B58 (6-12") 1/5/1999 | 4169.11 B58 (24") 1/5/1999 | 4169.12 B59 (6-12") 1/5/1999 | 4169.13 B59 (24") 1/5/1999 | 4169.14 B60 (6-12") 1/5/1999 | 4169.15 B60 (24") 1/5/1999 | 4169.16 B61 (6-12") 1/5/1999 | 4169.17 B61 (24") 1/5/1999 | 4169.18 B62 (6-12") 1/5/1999 | 4169.19 B62 (24") 1/5/1999 | 4169.20 B63 (6-12") 1/5/1999 | 4169.21 B63 (24") 1/5/1999 | 4169.22 B64 (6-12") 1/5/1999 | 4169.23 B64 (24") 1/5/1999 | 4169.24 B65 (6-12") | 4169.25 B65 (24") 1/5/1999 | 4169.26 B64A (6-12") 1/5/1999 | 4169.27 B64A (24") 1/5/1999 |
|--|------------------------------|------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|----------------------------------|-------------------------------------|-----------------------------------|
| Sample Date | Criteria (mg/kg) | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | | 0.48 J | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether 4-Methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline 4-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Acenaphthene | NLE 37000 | ND | | ND | | ND | | 7.3 | | ND | | ND | | ND | | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND ND | | ND ND | | ND ND | | 7.3 ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Aniline | NLE | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Anthracene | 30000 | ND ND | | ND ND | | ND ND | | 17 JD | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Azobenzene | NLE | ND ND | | ND | | ND ND | | ND ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND | |
| Benzidine | 0.7 | ND | | NO | | ND | | ND | | 140 | | IND | | IIID | | IND . | | IND | | NO | |
| Benzo(a)anthracene | 2 | ND | | ND | | ND | | 27 D | | ND | | ND | | ND | | ND | | ND | | ND | |
| benzo(a)pyrene | 0.2 | ND | | ND | | ND | | 26 D | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(b)fluoranthene | 2 | ND | | ND | | ND | | 23 D | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | ND | | 18 JD | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzo(k)fluoranthene | 23 | ND | | ND | | ND | | 25 D | | ND | | ND | | ND | | ND | | ND | | 0.12 J | |
| Benzoic Acid | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzyl alcohol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethyl)ether | 2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-chloroisopropyl)ether | 67 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-ethylhexyl) phthalate | 140 | ND | | 0.13 JB | | ND | | ND | | ND | | ND | | 0.13 JB | | ND | | 0.14 JB | | 0.12 JB | |
| Butyl benzyl phthalate | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Chrysene | 230 | ND | | ND | | ND | | 29 D | | ND | | ND | | ND | | ND | | ND | | 0.15 J | |
| Dibenz(a,h)anthracene | 0.2 | ND | | ND | | ND | | 1.1 J | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dibenzofuran | NLE | ND | | ND | | ND | | 4.2 | | ND | | ND | | ND | | ND | | ND | | ND | |
| Diethyl phthalate | 550000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dimethyl phthalate | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

| Lab Samula ID | NJDEP | 4169.08 | 4169.09 | 4169.10 | 4169.11 | 4169.12 | 4169.13 | 4169.14 | 4169.15 | 4169.16 | 4169.17 | 4169.18 | 4169.19 | 4169.20 | 4169.21 | 4169.22 | 4169.23 | 4169.24 | 4169.25 | 4169.26 | 4169.27 |
|---|--------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|--------------------------|------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B57 (6-12") 1/5/1999 | B57 (24") 1/5/1999 | B58 (6-12") 1/5/1999 | B58 (24") 1/5/1999 | B59 (6-12") 1/5/1999 | B59 (24") 1/5/1999 | B60 (6-12") 1/5/1999 | B60 (24") 1/5/1999 | B61 (6-12") 1/5/1999 | B61 (24") 1/5/1999 | B62 (6-12") 1/5/1999 | B62 (24") 1/5/1999 | B63 (6-12") 1/5/1999 | B63 (24") 1/5/1999 | B64 (6-12") 1/5/1999 | B64 (24") 1/5/1999 | B65 (6-12") 1/5/1999 | B65 (24") 1/5/1999 | B64A (6-12") 1/5/1999 | B64A (24") 1/5/1999 |
| Di-n-butylphthalate | 68000 | 22 BD | | 2 B | | 0.9 JB | | 0.23 JB | | 0.33 JB | | 0.34 JB | | 1.8 B | | 0.49 JB | | 1.2 B | | ND | |
| Di-n-octyl phthalate | 27000 | ND | | ND | |
| Fluoranthene | 24000 | ND | | 0.18 J | | ND | | 89 D | | ND | | ND | | 0.13 J | | ND | | ND | | 0.21 J | 1 |
| Fluorene | 24000 | ND | | ND | | ND | | 8.1 | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | |
| Hexachloroethane | 140 | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | ND | | 13 | | ND | |
| Isophorone | 2000 | ND | | ND | |
| Naphthalene | 17 | ND | | ND | | ND | | 3.6 | | ND | |
| Nitrobenzene | 340 | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | ND | | ND | | 76 D | | ND | | 0.19 J | |
| Phenol | 210000 | ND | | ND | |
| Pyrene | 18000 | ND | | 0.19 J | | ND | | 60 D | | ND | | ND | | 0.12 J | | ND | | ND | | 0.23 J | |
| Pyridine | NLE | ND | | ND | |
| TICs | NLE | 2.7 | | 3.7 | | 1.7 | | 61.06 | | 2.7 | | 2.4 | | 5.2 | | 1.8 | | 2.02 | | 3.7 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.030 | | 0.025 | | ND | | ND | | ND | | 0.018 | | ND | | ND | | ND | | 0.282 | |
| 4,4'-DDE | 9 | 0.075 | | 0.017 | | ND | | ND | | 0.015 | | 0.013 | | ND | | ND | | ND | | 0.693 | |
| 4,4'-DDT | 8 | 0.155 | | ND | | ND | | ND | | 0.040 | | ND | | ND | | ND | | ND | | 2.590 | |
| Aldrin | 0.2 | ND | | ND | |
| alpha-BHC | NLE | ND | | ND | |
| alpha-Chlordane | NLE | ND | | ND | |
| Arochlor 1016 | NLE | ND | | ND | |
| Arochior 1221 | NLE | ND | | ND | |
| Arochlor 1232 | NLE | ND | | ND | |
| Arochlor 1242 | NLE | ND | | ND | |
| Arochlor 1248 | NLE | ND | | ND | |
| Arochlor 1254 | NLE | ND | | ND | _ | ND | _ | ND | | ND | | ND | | ND | | ND | _ | ND | | ND | |
| Arochlor 1260 | NLE | ND | | ND | |
| beta-BHC | NLE | ND | | ND | |
| delta-BHC | NLE | ND | | ND | |
| Dieldrin | 0.2 | ND | | ND | |
| Endosulfan I | NLE | ND | | ND | 1 |
| Endosulfan II | NLE | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | |
| Endrin | 340 | ND | | ND | |
| Endrin Aldehyde | NLE | ND | | ND | |
| gamma-BHC | NLE | ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND | |
| Heptachlor | 0.7 | ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | |
| Toxaphene | 3 | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4169.08 B57 (6-12") 1/5/1999 | 4169.09 B57 (24") 1/5/1999 | 4169.10 B58 (6-12") 1/5/1999 | 4169.11 B58 (24") 1/5/1999 | 4169.12 B59 (6-12") 1/5/1999 | 4169.13 B59 (24") 1/5/1999 | 4169.14 B60 (6-12") 1/5/1999 | 4169.15 B60 (24") 1/5/1999 | 4169.16 B61 (6-12") 1/5/1999 | 4169.17 B61 (24") 1/5/1999 | 4169.18 B62 (6-12") 1/5/1999 | 4169.19 B62 (24") 1/5/1999 | 4169.20 B63 (6-12") 1/5/1999 | 4169.21 B63 (24") 1/5/1999 | 4169.22 B64 (6-12") 1/5/1999 | 4169.23 B64 (24") 1/5/1999 | 4169.24 B65 (6-12") 1/5/1999 | 4169.25 B65 (24") 1/5/1999 | 4169.26 B64A (6-12") 1/5/1999 | 4169.27 B64A (24") 1/5/1999 |
|---|---|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|-------------------------------------|-----------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 13700 | | 13500 | | 16800 | | 15300 | | 18100 | | 14200 | | 18900 | | 20800 | | 17300 | | 17100 | |
| Antimony | 450 | 1.34 | | ND | | 0.608 | | ND | | ND | | 0.726 | | ND | | ND | | ND | | ND | |
| Arsenic | NLE | 19.8 | | 14.1 | | 18.7 | | 25.7 | | 27.4 | | 16.9 | | 19.3 | | 32.6 | | 18.2 | | 28.1 | |
| Barium | 59000 | 42.1 | | 73.6 | | 42.1 | | 25.0 | | 25.1 | | 18.7 | | 16.6 | | 18.7 | | 53.6 | | 10.3 | |
| Beryllium | 140 | 1.32 | | 2.37 | | 1.03 | | 1.81 | | 2.37 | | 0.910 | | 2.92 | | 3.24 | | 1.40 | | 2.84 | |
| Cadmium | 78 | 1.28 | | 2.51 | | 0.623 | | 0.763 | | 0.977 | | 0.708 | | 1.11 | | 1.13 | | 0.556 | | 0.949 | |
| Calcium | NLE | 1330 | | 4410 | | 1020 | | 1070 | | 1080 | | 2160 | | 1030 | | 529 | | 581 | | 453 | |
| Chromium | NLE | 172 | | 198 | | 114 | | 211 | | 277 | | 98.7 | | 325 | | 367 | | 149 | | 323 | |
| Cobalt | 590 | 1.78 | | 4.58 | | 2.00 | | 1.24 | | 0.914 | | 1.49 | | 0.937 | | 1.36 | | 1.87 | | 0.482 | |
| Copper | 45000 | 45.5 | | 11.6 | | 17.0 | | 13.8 | | 21.0 | | 10.2 | | 9.68 | | 14.2 | | 21.7 | | 11.1 | |
| Iron | NLE | 35100 | | 43500 | | 29300 | | 50800 | | 55600 | | 32600 | | 63400 | | 75300 | | 38500 | | 62000 | |
| Lead | 800 | 58.7 | | 26.2 | | 30.6 | | 8.44 | | 32.4 | | 6.73 | | 9.96 | | 48.0 | | 12.5 | | 7.33 | |
| Magnesium | NLE | 4980 | | 6270 | | 3790 | | 6710 | | 9020 | | 3470 | | 10700 | | 12500 | | 4760 | | 10300 | |
| Manganese | 5900 | 177 | | 52.3 | | 50.2 | | 56.6 | | 28.8 | | 66.5 | | 35.2 | | 23.6 | | 67.0 | | 19.3 | |
| Nickel | 23000 | 7.80 | | 35.3 | | 7.99 | | 7.75 | | 6.94 | | 6.34 | | 8.88 | | 8.23 | | 6.32 | | 6.38 | |
| Potassium | NLE | 9370 | | 14200 | | 6650 | | 13900 | | 19500 | | 5070 | | 24700 | | 28900 | | 10100 | | 24100 | |
| Selenium | 5700 | 0.736 | | 1.64 | | 1.01 | | 1.13 | | ND | | ND | | 0.989 | | 0.771 | | 0.99 | | ND | |
| Silver | 5700 | ND | | ND | |
| Sodium | NLE | 109 | | 161 | | 213 | | 154 | | 183 | | 168 | | 155 | | 159 | | 211 | | 115 | |
| Thallium | 79 | ND | | ND | |
| Vanadium | 1100 | 80.6 | | 83.0 | | 63.7 | | 91.2 | | 119 | | 57.1 | | 141 | | 144 | | 77.7 | | 127 | |
| Zinc | 110000 | 207 | | 110 | | 53.7 | | 71.2 | | 70.7 | | 39.8 | | 71.7 | | 72.0 | | 48.2 | | 65.2 | |

| l ah Sample ID | NJDEP | 4169.28 | 4169.29 | 4169.30 | 4169.31 | 4169.32 | 4169.33 | 4169.34 | 4169.35 | 4169.36 | 4169.37 | 4169.38 | 4169.39 | 4173.02 | 4173.03 | 4173.04 | 4173.05 | 4173.06 | 4173.07 | 4173.08 | 4173.09 |
|---|--------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B66 (6-12") 1/5/1999 | B66 (24") 1/5/1999 | B67 (6-12") 1/5/1999 | B67 (24") 1/5/1999 | B68 (6-12") 1/5/1999 | B68 (24") 1/5/1999 | B69 (6-12") 1/5/1999 | B69 (24") 1/5/1999 | B71 (6-12") 1/5/1999 | B71 (24") 1/5/1999 | B71 (6-12") 1/5/1999 | B71 (24") 1/5/1999 | B72 (6-12") 1/6/1999 | B72 (24") 1/6/1999 | B73 (6-12") 1/6/1999 | B73 (24") 1/6/1999 | B74 (6-12") 1/6/1999 | B74 (24") 1/6/1999 | B75 (6-12") 1/6/1999 | B75 (24") 1/6/1999 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND |
| 1,1,2-Trichloroethane | 6 | | ND |
| 1,1-Dichloroethene | 150 | | ND |
| 1,2-Dichloroethane | 3 | | ND |
| 1,2-Dichloropropane | 5 | | ND |
| 2-Butanone | 44000 | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND |
| Acetone | NLE | | ND |
| Acrolein | 1 | | ND |
| Acrylonitrile | 3 | | ND |
| Benzene | 5 | | ND |
| Bromodichloromethane | 3 | | ND |
| Bromoform | 280 | | ND |
| Bromomethane | NLE | | ND |
| Carbon disulfide | 110000 | | ND |
| Carbon Tetrachloride | 2 | | ND |
| Chlorobenzene | 7400 | | ND |
| Chloroethane | 1100 | | ND |
| Chloroform | 2 | | ND |
| Chloromethane cis-1,2-Dichloroethene | 12 | | ND |
| | 560 | | ND |
| cis-1,3-Dichloropropene Dibromochloromethane | NLE | | ND | | ND ND |
| Dichlorodifluoromethane | 8 NLE | | ND ND | | ND ND | | ND | | ND | | ND ND |
| Diisopropyl ether | NLE | | ND ND |
| Ethylbenzene | 110000 | | ND ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND |
| m+p-Xylenes | NLE | | ND ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND |
| Methyl tert-butyl ether | 320 | | ND ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND | | ND ND |
| Methylene chloride | 97 | | 0.94 | | 0.91 | | 1 | | 0.44 J | | 0.96 | | 0.39 J | | 0.95 | | 0.4 3 | | 0.55 J | | 0.42 J |
| o-Xylene | NLE | | ND | | ND ND | | ND ND |
| Styrene | 260 | | ND |
| tert-Butyl alcohol | 11000 | | ND |
| Tetrachloroethene | 5 | | ND |
| TICs | NLE | | ND |
| Toluene | 91000 | | ND |
| trans-1,2-Dichloroethene | 720 | | ND |
| trans-1,3-Dichloropropene | NLE | | ND |
| Trichloroethene | 20 | | ND |
| Trichlorofluoromethane | 340000 | | ND |
| Vinyl Acetate | NLE | | ND |
| Vinyl chloride | 2 | | ND |
| | | | | 1 | - | 1 | | 1 | _ | 1 | | l . | | 1 | | 1 | | 1 | | 1 | |

Notes

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4169.28 B66 (6-12") 1/5/1999 | 4169.29 B66 (24") 1/5/1999 | 4169.30 B67 (6-12") 1/5/1999 | 4169.31 B67 (24") 1/5/1999 | 4169.32 B68 (6-12") 1/5/1999 | 4169.33 B68 (24") 1/5/1999 | 4169.34 B69 (6-12") 1/5/1999 | 4169.35 B69 (24") 1/5/1999 | 4169.36 B71 (6-12") 1/5/1999 | 4169.37 B71 (24") 1/5/1999 | 4169.38 B71 (6-12") 1/5/1999 | 4169.39 B71 (24") 1/5/1999 | 4173.02 B72 (6-12") 1/6/1999 | 4173.03 B72 (24") 1/6/1999 | 4173.04 B73 (6-12") 1/6/1999 | 4173.05 B73 (24") 1/6/1999 | 4173.06 B74 (6-12") | 4173.07 B74 (24") 1/6/1999 | 4173.08 B75 (6-12") 1/6/1999 | 4173.09 B75 (24") 1/6/1999 |
|--|------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|----------------------------------|------------------------------------|----------------------------------|
| Sample Date | Criteria (mg/kg) | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/5/1999 | 1/6/1999 | 1/6/1999 | 1/6/1999 | 1/6/1999 | 1/6/1999 | 1/6/1999 | 1/6/1999 | 1/6/1999 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | ND | |
| Aniline | NLE | ND | | ND | | ND J | | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | ND | | ND | |
| Azobenzene | NLE | ND | | ND | | ND | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | | ND | | ND | |
| benzo(a)pyrene | 0.2 | ND | | ND | | ND | |
| Benzo(b)fluoranthene | 2 | ND | | ND | | ND | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | ND | |
| Benzo(k)fluoranthene | 23 | ND | | ND | | ND | |
| Benzoic Acid Benzyl alcohol | NLE | ND | | ND ND | | ND | | ND | |
| | NLE | ND | | ND | | ND ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND | |
| bis(2-Chloroethyl)ether | 2 | ND ND | | ND ND | | ND ND | |
| bis(2-chloroisopropyl)ether bis(2-ethylhexyl) phthalate | 67 | ND | | ND ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND 0.13 J | | ND ND | |
| Butyl benzyl phthalate | 140 | ND ND | | ND ND | | ND ND | | | | ND ND | | ND ND | | ND ND | | ND ND | | 0.13 J ND | | ND ND | |
| Chrysene | 14000 | ND | | | | | | ND | | | | ND | | ND | | | | | | | |
| Dibenz(a,h)anthracene | 230 0.2 | ND ND | | ND ND | | ND ND | |
| Dibenz(a,n)anthracene Dibenzofuran | | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | NLE 550000 | ND ND | | ND ND | | ND 0.21 J | |
| Dimethyl phthalate | NLE | ND ND | | ND ND | | ND | |
| Dimetriyi pirtifalate | NLE | שא | | ND | | שא | | ND | | ND | | IND | | MD | | שוו | | ND | | ND | |

| Leb Comple ID | NJDEP | 4169.28 | 4169.29 | 4169.30 | 4169.31 | 4169.32 | 4169.33 | 4169.34 | 4169.35 | 4169.36 | 4169.37 | 4169.38 | 4169.39 | 4173.02 | 4173.03 | 4173.04 | 4173.05 | 4173.06 | 4173.07 | 4173.08 | 4173.09 |
|---|--------------------------------|------------------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | H169.28 B66 (6-12") 1/5/1999 | B66 (24") 1/5/1999 | 867 (6-12") 1/5/1999 | B67 (24") 1/5/1999 | B68 (6-12") 1/5/1999 | B68 (24") 1/5/1999 | B69 (6-12") 1/5/1999 | 869 (24") 1/5/1999 | 871 (6-12") 1/5/1999 | B71 (24") 1/5/1999 | 871 (6-12") 1/5/1999 | B71 (24") 1/5/1999 | B72 (6-12") 1/6/1999 | B72 (24") 1/6/1999 | 873 (6-12") 1/6/1999 | B73 (24") 1/6/1999 | B74 (6-12") 1/6/1999 | 874 (24") 1/6/1999 | 875 (6-12") 1/6/1999 | B75 (24") 1/6/1999 |
| Di-n-butylphthalate | 68000 | 1.1 JB | | 1.7 B | | 1 JB | | 2.7 B | | 0.25 JB | | 0.36 JB | | 0.66 JB | | 0.28 JB | | 1.3 B | | 1.2 JB | |
| Di-n-octyl phthalate | 27000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Fluoranthene | 24000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | 0.18 J | |
| Fluorene | 24000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachloroethane | 140 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Isophorone | 2000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Naphthalene | 17 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Nitrobenzene | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Phenol | 210000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pyrene | 18000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | 0.14 J | |
| Pyridine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| TICs | NLE | 2.5 | | 3.3 | | 2.96 | | 3.5 | | 3.5 | | ND | | 5.8 | | 3.8 | | 14.9 | | 8.3 | |
| Pesticides/PCBs | | | | • | • | | | | | | | · | | | • | | • | · | | · | |
| 4,4'-DDD | 13 | 0.033 | | ND | | 0.028 | | ND | | 0.101 | | 0.128 | | 0.017 | | 0.001 | | 0.017 | | ND | |
| 4,4'-DDE | 9 | 0.015 | | ND | | 0.019 | | ND | | 0.131 | | 0.117 | | 0.018 | | 0.002 | | ND | | 0.001 | |
| 4,4'-DDT | 8 | ND | | ND | | ND | | ND | | 0.095 | | 0.117 | | 0.025 | | ND | | ND | | 0.002 | |
| Aldrin | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-Chlordane | NLE | ND | | ND | | ND | | ND | | 0.040 | | 0.057 | | ND | | ND | | ND | | ND | |
| Arochlor 1016 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1221 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochior 1232 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochior 1242 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1248 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochior 1254 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1260 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| beta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| delta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dieldrin | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan I | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan II | NLE | ND | | ND | _ | ND | | ND | _ | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin Aldehyde | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND | | ND | | ND | | 0.057 | | 0.080 | | ND | | ND | | ND | | ND | |
| Heptachlor | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Toxaphene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4169.28 B66 (6-12") 1/5/1999 | 4169.29 B66 (24") 1/5/1999 | 4169.30 B67 (6-12") 1/5/1999 | 4169.31 B67 (24") 1/5/1999 | 4169.32 B68 (6-12") 1/5/1999 | 4169.33 B68 (24") 1/5/1999 | 4169.34 B69 (6-12") 1/5/1999 | 4169.35 B69 (24") 1/5/1999 | 4169.36 B71 (6-12") 1/5/1999 | 4169.37 B71 (24") 1/5/1999 | 4169.38 B71 (6-12") 1/5/1999 | 4169.39 B71 (24") 1/5/1999 | 4173.02 B72 (6-12") 1/6/1999 | 4173.03 B72 (24") 1/6/1999 | 4173.04 B73 (6-12") 1/6/1999 | 4173.05 B73 (24") 1/6/1999 | 4173.06 B74 (6-12") 1/6/1999 | 4173.07 B74 (24") 1/6/1999 | 4173.08 B75 (6-12") 1/6/1999 | 4173.09 B75 (24") 1/6/1999 |
|---|---|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 17900 | | 20000 | | 7700 | | 14200 | | 13500 | | 16900 | | 13500 | | 15100 | | 12800 | | 17900 | |
| Antimony | 450 | ND | | 1.47 | | 1.04 | | 0.494 | | 2.09 | | 1.97 | | ND | | 0.568 | | ND | | ND | |
| Arsenic | NLE | 30.2 | | 23.0 | | 17.4 | | 14.3 | | 15.5 | | 20.8 | | 29.7 | | 18.4 | | 12.7 | | 29.5 | 1 |
| Barium | 59000 | 13.0 | | 51.2 | | 44.8 | | 22.6 | | 63.2 | | 90.5 | | 19.8 | | 22.7 | | 41.0 | | 37.6 | |
| Beryllium | 140 | 2.49 | | 2.52 | | 1.03 | | 0.795 | | 1.33 | | 1.72 | | 1.98 | | 1.52 | | 1.04 | | 2.47 | |
| Cadmium | 78 | 0.814 | | 1.09 | | 0.495 | | 0.433 | | 1.91 | | 2.10 | | 0.823 | | 0.572 | | 0.478 | | 1.20 | |
| Calcium | NLE | 1200 | | 919 | | 848 | | 519 | | 796 | | 987 | | 2030 | | 546 | | 636 | | 965 | 1 |
| Chromium | NLE | 302 | | 227 | | 66.0 | | 101 | | 165 | | 199 | | 237 | | 182 | | 89.4 | | 301 | |
| Cobalt | 590 | 1.13 | | 4.37 | | 10.5 | | 1.36 | | 1.40 | | 1.51 | | 1.43 | | 1.14 | | 3.78 | | 1.11 | 1 |
| Copper | 45000 | 7.46 | | 39.1 | | 283 | | 19.1 | | 41.8 | | 55.3 | | 9.26 | | 9.69 | | 5.03 | | 45.0 | |
| Iron | NLE | 60300 | | 44300 | | 19800 | | 25900 | | 35500 | | 43900 | | 53700 | | 38300 | | 30400 | | 63700 | į l |
| Lead | 800 | 4.28 | | 54.5 | | 39.8 | | 12.3 | | 93.7 | | 75.8 | | 8.01 | | 9.17 | | 6.67 | | 35.3 | |
| Magnesium | NLE | 9660 | | 6630 | | 1850 | | 3250 | | 4670 | | 6020 | | 7460 | | 5090 | | 3070 | | 8980 | 1 |
| Manganese | 5900 | 24.3 | | 37.1 | | 91.4 | | 49.4 | | 32.5 | | 41.8 | | 16.2 | | 21.9 | | 62.7 | | 37.0 | |
| Nickel | 23000 | 7.42 | | 16.8 | | 88.0 | | 4.87 | | 6.93 | | 7.13 | | 8.87 | | 6.70 | | 6.71 | | 7.77 | 1 |
| Potassium | NLE | 22000 | | 15200 | | 4270 | | 5040 | | 9960 | | 13500 | | 18100 | | 11600 | | 7100 | | 21100 | |
| Selenium | 5700 | ND | | 2.76 | | 0.942 | | ND | | 0.716 | | 1.11 | | 0.927 | | 1.17 | | 0.832 | | 1.30 | |
| Silver | 5700 | ND | | ND | | ND | | ND | | 2.90 | | 5.00 | | ND | | ND | | ND | | ND | |
| Sodium | NLE | 475 | | 212 | | 216 | | 92.8 | | 164 | | 151 | | 291 | | 123 | | 164 | | 188 | |
| Thallium | 79 | ND | |
| Vanadium | 1100 | 121 | | 108 | | 40.1 | | 54.1 | | 68.7 | | 84.7 | | 87.3 | | 79.1 | | 56.0 | | 123 | |
| Zinc | 110000 | 59.1 | | 65.6 | | 93.6 | | 48.1 | | 106 | | 113 | | 62.0 | | 49.9 | | 61.6 | | 141 | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup | 4173.10 B76 (6-12") | 4173.11 B76 (24") | 4173.12 B77 (6-12") | 4173.13 B77 (24") | 4173.14 B78 (6-12") | 4173.15 B78 (24") | 4173.16 B79 (6-12") | 4173.17 B79 (24") | 4173.18 B80 (6-12") | 4173.19 B80 (24") | 4173.20 B81 (6-12") | 4173.21 B81 (24") | 4173.22 B82 (6-12") | 4173.23 B82 (24") | 4173.24 B83 (6-12") | 4173.25 B83 (24") | 4173.26 B84 (6-12") | 4173.27 B84 (24") | 4173.28 B85 (6-12") | 4173.29 B85 (24") |
|---|---------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|------------------------|-----------------------|-------------------------|-----------------------|------------------------|----------------------|-------------------------|----------------------|-------------------------|----------------------|------------------------|-----------------------|------------------------|----------------------|
| Sample Date | Criteria (mg/kg) | 1/6/1999 | B76 (24") 1/6/1999 | 1/6/1999 | B77 (24") 1/6/1999 | 1/6/1999 | B78 (24") 1/6/1999 | 1/6/1999 | B79 (24") 1/6/1999 | B80 (6-12") 1/6/1999 | B80 (24") 1/6/1999 | 1/6/1999 | 1/6/1999 | B82 (6-12") 1/6/1999 | 1/6/1999 | B83 (6-12") 1/6/1999 | 1/6/1999 | 1/6/1999 | B84 (24") 1/6/1999 | 1/6/1999 | 1/6/1999 |
| /olatiles | | | | | | | | | | | | | | | | | | | | | |
| I, 1-Dichloroethane | 24 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Butanone | 44000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acetone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrolein | 1 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrylonitrile | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Benzene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromodichloromethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromoform | 280 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromomethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon disulfide | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chlorobenzene | 7400 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroethane | 1100 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroform | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloromethane | 12 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,2-Dichloroethene | 560 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Dibromochloromethane | 8 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Dichlorodifluoromethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Diisopropyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Ethylbenzene | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| m+p-Xylenes | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Methyl tert-butyl ether | 320 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Methylene chloride | 97 | | 0.42 J | | 1.1 | | 2 | | 1.9 | | 1.1 | | 1.7 | | 1.8 | | 1.1 | | 1.8 | | 2 |
| o-Xylene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Styrene | 260 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| tert-Butyl alcohol | 11000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Tetrachloroethene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| TICs | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Toluene | 91000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,2-Dichloroethene | 720 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichloroethene | 20 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichlorofluoromethane | 340000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl Acetate | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl chloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4173.10 B76 (6-12") 1/6/1999 | 4173.11 B76 (24") 1/6/1999 | 4173.12 B77 (6-12") 1/6/1999 | 4173.13 B77 (24") 1/6/1999 | 4173.14 B78 (6-12") 1/6/1999 | 4173.15 B78 (24") 1/6/1999 | 4173.16 B79 (6-12") 1/6/1999 | 4173.17 B79 (24") 1/6/1999 | 4173.18 B80 (6-12") 1/6/1999 | 4173.19 B80 (24") 1/6/1999 | 4173.20 B81 (6-12") 1/6/1999 | 4173.21 B81 (24") 1/6/1999 | 4173.22 B82 (6-12") 1/6/1999 | 4173.23 B82 (24") 1/6/1999 | 4173.24 B83 (6-12") 1/6/1999 | 4173.25 B83 (24") 1/6/1999 | 4173.26 B84 (6-12") 1/6/1999 | 4173.27 B84 (24") 1/6/1999 | 4173.28 B85 (6-12") 1/6/1999 | 4173.29 B85 (24") 1/6/1999 |
|---|---|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | |
| 1,4-Dichlorobenzene | 13 | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | |
| 2,4-Dichlorophenol | 2100 | ND | |
| 2,4-Dimethylphenol | 14000 | ND | |
| 2,4-Dinitrophenol | 1400 | ND | |
| 2,4-Dinitrotoluene | 3 | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | |
| 2-Chlorophenol | 2200 | ND | |
| 2-Methylnaphthalene | 2400 | 0.13 J | | ND | |
| 2-Methylphenol | 3400 | ND | |
| 2-Nitroaniline | 23000 | ND | |
| 2-Nitrophenol | NLE | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | |
| 3-Nitroaniline | NLE | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | |
| 4-Chloroaniline | 66 | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | |
| 4-Methylphenol | 340 | ND | |
| 4-Nitroaniline | NLE | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | 1.4 | | ND | |
| Acenaphthylene | 300000 | ND | |
| Aniline | NLE | ND | |
| Anthracene | 30000 | 6.4 | | ND | |
| Azobenzene Benzidine | NLE | ND | |
| Benzo(a)anthracene | 0.7 | 4.4 | | ND | | 0.2.1 | | ND | | ND | | 0.10.7 | | ND | | ND | | ND | | ND | |
| | 2 | 11 | | ND | | 0.2 J | | ND | | ND | | 0.19 J | | ND | | ND | | ND | | ND | |
| benzo(a)pyrene Benzo(b)fluoranthene | 0.2 | 10 11 | | ND ND | | 0.15 J ND | | ND ND | | ND ND | | 0.19 J 0.14 J | | ND ND | | ND | | ND ND | | ND ND | |
| Benzo(g,h,i)perylene | 20000 | | | | | | | | | | | | | | | ND ND | | | | | |
| Benzo(g,n,i)perylene Benzo(k)fluoranthene | 30000 23 | 4.6 | | ND ND | | ND ND | | ND ND | | ND ND | | 0.14 J 0.2 J | | ND ND | | ND ND | | ND ND | | ND ND | |
| Benzoic Acid | NLE | 6.6 ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Benzyl alcohol | NLE | ND ND | | ND ND | | ND ND | | ND ND | |
| bis(2-Chloroethoxy)methane | NLE | ND ND | | ND ND | | ND ND | | ND ND | |
| bis(2-Chloroethyl)ether | NLE 2 | ND ND | | ND ND | | ND ND | | ND ND | |
| bis(2-chloroisopropyl)ether | 67 | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | |
| bis(2-ethylhexyl) phthalate | 140 | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND | |
| Butyl benzyl phthalate | 14000 | ND | | ND | | ND ND | | ND | | ND ND | | ND | |
| Chrysene | 230 | 11 | | ND ND | | 0.26 J | | ND ND | | ND ND | | 0.22 J | | ND | | ND | | ND | | ND | |
| Dibenz(a,h)anthracene | 0.2 | 1.2 | | ND | | ND | | ND | | ND ND | | ND | | ND | | ND ND | | ND | | ND | |
| Dibenzofuran | NLE | 0.72 J | | ND | | ND ND | | ND | | ND ND | | ND | | ND | | ND | | ND | | ND | |
| Diethyl phthalate | 550000 | ND | | ND | | ND | | ND | | ND ND | | ND ND | | 0.13 J | | ND | | ND ND | | ND | |
| Dimethyl phthalate | NLE | ND | | ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND | | ND | | ND | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4173.10 B76 (6-12") 1/6/1999 | 4173.11 B76 (24") 1/6/1999 | 4173.12 B77 (6-12") 1/6/1999 | 4173.13 B77 (24") 1/6/1999 | 4173.14 B78 (6-12") 1/6/1999 | 4173.15 B78 (24") 1/6/1999 | 4173.16 B79 (6-12") 1/6/1999 | 4173.17 B79 (24") 1/6/1999 | 4173.18 B80 (6-12") 1/6/1999 | 4173.19 B80 (24") 1/6/1999 | 4173.20 B81 (6-12") 1/6/1999 | 4173.21 B81 (24") 1/6/1999 | 4173.22 B82 (6-12") 1/6/1999 | 4173.23 B82 (24") 1/6/1999 | 4173.24 B83 (6-12") 1/6/1999 | 4173.25 B83 (24") 1/6/1999 | 4173.26 B84 (6-12") 1/6/1999 | 4173.27 B84 (24") 1/6/1999 | 4173.28 B85 (6-12") 1/6/1999 | 4173.29 B85 (24") 1/6/1999 |
|---|---|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|
| Di-n-butylphthalate | 68000 | 0.91 JB | | 0.34 JB | | 1.4 B | | 1 JB | | 1.2 B | | 0.87 JB | | 2.2 B | | 0.3 JB | | 0.36 JB | | 1.9 B | |
| Di-n-octyl phthalate | 27000 | ND | |
| Fluoranthene | 24000 | 25 D | | ND | | 0.28 J | | ND | | ND | | 0.43 J | | ND | | ND | | ND | | 0.14 J | |
| Fluorene | 24000 | 1.5 | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | |
| Hexachlorocyclopentadiene | 110 | ND | |
| Hexachloroethane | 140 | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | 4.1 | | ND | |
| Isophorone | 2000 | ND | |
| Naphthalene | 17 | 0.16 J | | ND | |
| Nitrobenzene | 340 | ND | |
| N-nitrosodimethylamine | 0.7 | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | |
| n-Nitrosodiphenylamine | NLE | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | 16 D | | ND | | 0.25 J | | ND | | ND | | 0.17 J | | ND | | ND | | ND | | ND | |
| Phenol | 210000 | ND | |
| Pyrene | 18000 | 18 D | | ND | | 0.43 J | | ND | | ND | | 0.34 J | | ND | | ND | | ND | | ND | |
| Pyridine | NLE | ND | |
| TICs | NLE | 26.77 | | 4.9 | | 12.43 | | 7.9 | | 9.1 | | 6.6 | | 6.3 | | 4.4 | | 5.2 | | 4.7 | |
| Pesticides/PCBs | 1 | 1 | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | ND | | 0.003 | | 1.132 | | 0.007 | | ND | | 0.001 | | 0.001 | | 0.013 | | 0.050 | | 0.002 | |
| 4,4'-DDE | 9 | ND | | 0.014 | | 0.292 | | 0.022 | | ND | | 0.001 | | 0.001 | | 0.125 | | 0.046 | | 0.015 | |
| 4,4'-DDT | 8 | ND | | 0.030 | | 0.349 | | 0.062 | | ND | | 0.006 | | 0.007 | | 0.224 | | 0.047 | | 0.021 | |
| Aldrin | 0.2 | ND | | ND ND | | ND ND | | ND | |
| alpha-BHC | NLE | ND | | ND ND | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND | |
| alpha-Chlordane | NLE | ND | |
| Arochlor 1016 | NLE | ND | |
| Arochlor 1221 | NLE | ND | |
| Arochlor 1232 | NLE | ND | |
| Arochlor 1242 | NLE | ND | |
| Arochlor 1248 | NLE | ND | |
| Arochlor 1254 | NLE | ND | |
| Arochlor 1260 | NLE | ND | |
| beta-BHC | NLE | ND | |
| delta-BHC | NLE | ND | |
| Dieldrin | 0.2 | ND | |
| Endosulfan I | NLE | ND | |
| Endosulfan II | NLE | ND | |
| Endosulfan-Sulfate | 6800 | ND | |
| Endrin | 340 | ND | |
| Endrin Aldehyde | NLE | ND | |
| gamma-BHC | NLE | ND | | ND ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND ND | | ND | | ND | | ND | |
| Heptachlor | 0.7 | ND | | ND ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND ND | | ND ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Toxaphene | 3 | ND ND | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | |
| - oxapileile | 3 | IND | | IND | | IND | | IND | | ND | | ND | | ND | | ND | | שאו | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4173.10 B76 (6-12") 1/6/1999 | 4173.11 B76 (24") 1/6/1999 | 4173.12 B77 (6-12") 1/6/1999 | 4173.13 B77 (24") 1/6/1999 | 4173.14 B78 (6-12") 1/6/1999 | 4173.15 B78 (24") 1/6/1999 | 4173.16 B79 (6-12") 1/6/1999 | 4173.17 B79 (24") 1/6/1999 | 4173.18 B80 (6-12") 1/6/1999 | 4173.19 B80 (24") 1/6/1999 | 4173.20 B81 (6-12") 1/6/1999 | 4173.21 B81 (24") 1/6/1999 | 4173.22 B82 (6-12") 1/6/1999 | 4173.23 B82 (24") 1/6/1999 | 4173.24 B83 (6-12") 1/6/1999 | 4173.25 B83 (24") 1/6/1999 | 4173.26 B84 (6-12") 1/6/1999 | 4173.27 B84 (24") 1/6/1999 | 4173.28 B85 (6-12") 1/6/1999 | 4173.29 B85 (24") 1/6/1999 |
|---|---|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 16200 | | 19300 | | 16000 | | 12000 | | 12100 | | 16600 | | 15300 | | 15300 | | 8640 | | 19700 | |
| Antimony | 450 | ND | | 1.18 | | 0.822 | | 0.426 | | 0.471 | | 1.67 | | 0.635 | | 0.635 | | ND | | 0.495 | |
| Arsenic | NLE | 27.8 | | 21.7 | | 21.0 | | 22.7 | | 19.4 | | 20.7 | | 21.0 | | 21.0 | | 6.64 | | 27.5 | |
| Barium | 59000 | 27.2 | | 28.5 | | 45.4 | | 10.4 | | 10.1 | | 102 | | 27.8 | | 27.8 | | 17.0 | | 37.9 | |
| Beryllium | 140 | 1.85 | | 2.90 | | 1.76 | | 1.86 | | 0.778 | | 1.81 | | 1.60 | | 1.60 | | 0.572 | | 2.82 | |
| Cadmium | 78 | 1.00 | | 1.49 | | 1.18 | | 0.759 | | 0.444 | | 1.65 | | 1.05 | | 1.05 | | 0.719 | | 1.79 | |
| Calcium | NLE | 1020 | | 745 | | 1230 | | 1090 | | 436 | | 3110 | | 447 | | 447 | | 427 | | 1190 | |
| Chromium | NLE | 215 | | 327 | | 206 | | 210 | | 83.8 | | 214 | | 178 | | 178 | | 71.5 | | 325 | |
| Cobalt | 590 | 1.25 | | 2.26 | | 1.62 | | 0.564 | | 0.953 | | 2.23 | | 1.01 | | 1.01 | | 1.32 | | 2.09 | |
| Copper | 45000 | 106 | | 60.3 | | 44.4 | | 24.7 | | 8.25 | | 76.7 | | 38.2 | | 38.2 | | 9.02 | | 44.1 | |
| Iron | NLE | 47900 | | 69300 | | 46200 | | 39300 | | 28300 | | 44100 | | 39900 | | 39900 | | 16500 | | 76100 | |
| Lead | 800 | 96.1 | | 58.2 | | 74.8 | | 45.2 | | 5.47 | | 237 | | 53.8 | | 53.8 | | 9.32 | | 44.7 | |
| Magnesium | NLE | 6230 | | 10400 | | 6060 | | 5630 | | 2510 | | 6070 | | 5100 | | 5100 | | 1710 | | 10700 | |
| Manganese | 5900 | 99.1 | | 40.1 | | 67.1 | | 25.6 | | 35.5 | | 210 | | 33.7 | | 33.7 | | 27.2 | | 44.1 | |
| Nickel | 23000 | 6.64 | | 9.43 | | 8.03 | | 5.25 | | 3.87 | | 8.56 | | 5.48 | | 5.48 | | 6.16 | | 9.33 | |
| Potassium | NLE | 14100 | | 25600 | | 14600 | | 13300 | | 4370 | | 13900 | | 11700 | | 11700 | | 3620 | | 26700 | |
| Selenium | 5700 | 1.08 | | 1.72 | | 0.851 | | ND | | 1.97 | |
| Silver | 5700 | ND | |
| Sodium | NLE | 99.9 | | 94.8 | | 302 | | 90.6 | | 106 | | 850 | | 83.2 | | 83.2 | | 67.6 | | 159 | |
| Thallium | 79 | ND | |
| Vanadium | 1100 | 94.5 | | 121 | | 90.9 | | 83.5 | | 47.1 | | 98.0 | | 77.4 | | 77.4 | | 46.1 | | 122 | |
| Zinc | 110000 | 203 | | 168 | | 133 | | 74.6 | | 31.7 | | 362 | | 101 | | 101 | | 49.6 | | 144 | |

| Lab Carrela ID | NJDEP | 4173.30 | 4173.31 | 4177.02 | 4177.03 | 4177.04 | 4177.05 | 4177.06 | 4177.07 | 4177.08 | 4177.09 | 4177.10 | 4177.11 | 4177.12 | 4177.13 | 4177.14 | 4177.15 | 4177.16 | 4177.17 | 4177.18 | 4177.19 |
|---|--------------------------------|------------------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | 4173.30 B86 (6-12") 1/6/1999 | B86 (24") 1/6/1999 | B87 (6-12") 1/7/1999 | B87 (24") 1/7/1999 | B88 (6-12") 1/7/1999 | B88 (24") 1/7/1999 | B89 (6-12") 1/7/1999 | B89 (24") 1/7/1999 | B90 (6-12") 1/7/1999 | 890 (24") 1/7/1999 | B91 (6-12") 1/7/1999 | B91 (24") 1/7/1999 | B92 (6-12") 1/7/1999 | B92 (24") 1/7/1999 | B93 (6-12") 1/7/1999 | B93 (24") 1/7/1999 | B94 (6-12") 1/7/1999 | B94 (24") 1/7/1999 | B95 (6-12") 1/7/1999 | B95 (24") 1/7/1999 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Butanone | 44000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acetone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrolein | 1 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrylonitrile | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Benzene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromodichloromethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromoform | 280 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromomethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon disulfide | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chlorobenzene | 7400 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroethane | 1100 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroform | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloromethane cis-1,2-Dichloroethene | 12 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| | 560 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,3-Dichloropropene Dibromochloromethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Dichlorodifluoromethane | 8 NLE | | ND ND | | ND ND | | ND | | ND | | ND ND |
| Diisopropyl ether | NLE | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Ethylbenzene | 110000 | | ND ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND |
| m+p-Xylenes | NLE | | ND ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Methyl tert-butyl ether | 320 | | ND ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | ND | | ND |
| Methylene chloride | 97 | | 2.1 | | 0.72 | | 0.83 | | 0.4 J | | 0.68 | | 0.51 J | | 0.67 | | ND ND | | 0.7 | | 0.73 |
| o-Xylene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND ND | | ND |
| Styrene | 260 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| tert-Butyl alcohol | 11000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Tetrachloroethene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| TICs | NLE | | ND | | 2.6 | | ND | | ND | | ND | | 2.2 | | ND | | ND | | ND | | ND |
| Toluene | 91000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,2-Dichloroethene | 720 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichloroethene | 20 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichlorofluoromethane | 340000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl Acetate | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl chloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| | 1 | | I. | | <u> </u> | 1 | | 1 | l | L | 1 | l . | 1 | 1 | 1 | 1 | L | L | l | 1 | , |

Notes

| Lab Sample ID Field Sample Location | NJDEP Cleanup Criteria | 4173.30 B86 (6-12") 1/6/1999 | 4173.31 B86 (24") 1/6/1999 | 4177.02 B87 (6-12") 1/7/1999 | 4177.03 B87 (24") 1/7/1999 | 4177.04 B88 (6-12") 1/7/1999 | 4177.05 B88 (24") 1/7/1999 | 4177.06 B89 (6-12") 1/7/1999 | 4177.07 B89 (24") 1/7/1999 | 4177.08 B90 (6-12") 1/7/1999 | 4177.09 B90 (24") 1/7/1999 | 4177.10 B91 (6-12") 1/7/1999 | 4177.11 B91 (24") 1/7/1999 | 4177.12 B92 (6-12") 1/7/1999 | 4177.13 B92 (24") 1/7/1999 | 4177.14 B93 (6-12") 1/7/1999 | 4177.15 B93 (24") 1/7/1999 | 4177.16 B94 (6-12") | 4177.17 B94 (24") 1/7/1999 | 4177.18 B95 (6-12") 1/7/1999 | 4177.19 B95 (24") 1/7/1999 |
|---|------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------------------|----------------------------------|------------------------|----------------------------------|------------------------------------|----------------------------------|
| Sample Date | Criteria (mg/kg) | 1/6/1999 | 1/6/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 | 1/7/1999 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | 0.15 J | | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | ND | |
| Aniline | NLE | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | 0.37 J | | ND | | ND | | ND | |
| Azobenzene | NLE | ND | | ND | | ND | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | | 0.62 J | | ND | | ND | | ND | |
| benzo(a)pyrene | 0.2 | ND | | 0.54 J | | ND | | ND | | ND | | 0.12 J | | ND | | ND ND | | ND | | ND | |
| Benzo(b)fluoranthene Benzo(g,h,i)perylene | 2 20000 | ND ND | | 0.48 J | | ND | | ND ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND | |
| Benzo(g,n,i)perylene Benzo(k)fluoranthene | 30000 | ND | | 0.26 J | | ND | | ND | | ND | |
| Benzoic Acid | 23 NLE | ND ND | | 0.52 J ND | | ND ND | | ND ND | | ND ND | |
| Benzyl alcohol | NLE | ND ND | | ND ND | | ND ND | |
| bis(2-Chloroethoxy)methane | NLE | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| bis(2-Chloroethyl)ether | NLE 2 | ND ND | | ND ND | | ND ND | |
| bis(2-chloroisopropyl)ether | 67 | ND ND | | ND ND | | ND ND | |
| bis(2-ethylhexyl) phthalate | 140 | ND ND | | 0.14 J | | ND ND | | ND ND | | ND ND | | ND ND | | 0.16 J | | 0.14 J | | ND ND | | ND ND | |
| Butyl benzyl phthalate | 14000 | ND ND | | 0.14 J ND | | ND ND | | ND ND | | ND ND | | ND | | ND | | 0.14 J ND | | ND ND | | ND ND | |
| Chrysene | 230 | ND ND | | 0.88 J | | ND ND | | ND ND | | ND ND | | 0.18 J | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dibenz(a,h)anthracene | 0.2 | ND ND | | 0.86 J | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dibenzofuran | NLE | ND ND | | ND ND | | ND ND | |
| Diethyl phthalate | 550000 | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dimethyl phthalate | NLE | ND ND | | ND ND | | ND ND | |
| Zculyi pilalalate | INLE | שא | | שאו | | שאו | | IND | | ND | | IND | | שאו | | שאו | | IND | | IND | |

| Lab Samula ID | NJDEP | 4173.30 | 4173.31 | 4177.02 | 4177.03 | 4177.04 | 4177.05 | 4177.06 | 4177.07 | 4177.08 | 4177.09 | 4177.10 | 4177.11 | 4177.12 | 4177.13 | 4177.14 | 4177.15 | 4177.16 | 4177.17 | 4177.18 | 4177.19 |
|---|--------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|----------------------------------|-------------------------|-----------------------|-------------------------|----------------------------------|-------------------------|-----------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B86 (6-12") 1/6/1999 | B86 (24") 1/6/1999 | 887 (6-12") 1/7/1999 | B87 (24") 1/7/1999 | B88 (6-12") 1/7/1999 | B88 (24") 1/7/1999 | B89 (6-12") 1/7/1999 | B89 (24") 1/7/1999 | 890 (6-12") 1/7/1999 | B90 (24") 1/7/1999 | B91 (6-12") 1/7/1999 | B91 (24") 1/7/1999 | B92 (6-12") 1/7/1999 | H177.13 B92 (24") 1/7/1999 | 893 (6-12") 1/7/1999 | B93 (24") 1/7/1999 | 894 (6-12") 1/7/1999 | 41/7.17 B94 (24") 1/7/1999 | 895 (6-12") 1/7/1999 | B95 (24") 1/7/1999 |
| Di-n-butylphthalate | 68000 | 1.3 B | | 0.83 JB | | 0.23 JB | | 0.31 JB | | 0.7 JB | | 0.92 JB | | 1.5 B | | 1 JB | | 0.2 JB | | 0.27 JB | |
| Di-n-octyl phthalate | 27000 | ND | | ND | | ND | | ND | |
| Fluoranthene | 24000 | ND | | 1.7 | | ND | | ND | | ND | | 0.3 J | | ND | | ND | | ND | | ND | ' |
| Fluorene | 24000 | ND | | 0.13 J | | ND | | ND | | ND | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | ND | | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | | ND | | ND | |
| Hexachloroethane | 140 | ND | | ND | | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | 0.27 J | | ND | | ND | | ND | | ND | |
| Isophorone | 2000 | ND | | ND | | ND | | ND | |
| Naphthalene | 17 | ND | | ND | | ND | | ND | |
| Nitrobenzene | 340 | ND | | ND | | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | | ND | | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | 1.5 | | ND | | ND | | ND | | 0.21 J | | ND | | ND | | ND | | ND | |
| Phenol | 210000 | ND | | ND | | ND | | ND | |
| Pyrene | 18000 | ND | | 1.5 | | ND | | ND | | ND | | 0.26 J | | ND | | ND | | ND | | ND | |
| Pyridine | NLE | ND | | ND | | ND | | ND | |
| TICs | NLE | 7.3 | | 10.6 | | 6.6 | | 11.8 | | 14.6 | | 11.8 | | 20.2 | | 14.3 | | 13.4 | | 8.3 | |
| Pesticides/PCBs | | | | • | · | | • | | | | | · | | · | • | | • | · | | · | |
| 4,4'-DDD | 13 | 0.001 | | 0.004 | | 0.002 | | 0.027 | | 0.010 | | ND | | 0.069 | | ND | | 0.003 | | 0.049 | |
| 4,4'-DDE | 9 | 0.004 | | 0.005 | | 0.002 | | 0.234 | | 0.058 | | 0.003 | | 0.058 | | 0.001 | | 0.007 | | 0.488 | |
| 4,4'-DDT | 8 | 0.007 | | 0.009 | | ND | | 0.351 | | 0.070 | | ND | | 0.347 | | 0.002 | | 0.023 | | 0.516 | |
| Aldrin | 0.2 | ND | | ND | | ND | | ND | |
| alpha-BHC | NLE | ND | | ND | | ND | | ND | |
| alpha-Chlordane | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1016 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1221 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1232 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1242 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1248 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1254 | NLE | ND | | ND | | ND | | ND | |
| Arochlor 1260 | NLE | ND | | ND | | ND | | ND | |
| beta-BHC | NLE | ND | | ND | | ND | | ND | |
| delta-BHC | NLE | ND | | ND | | ND | | ND | |
| Dieldrin | 0.2 | ND | | ND | | ND | | ND | |
| Endosulfan I | NLE | ND | | ND | | ND | | ND | |
| Endosulfan II | NLE | ND | | ND | | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | | ND | | ND | |
| Endrin | 340 | ND | | ND | | ND | | ND | |
| Endrin Aldehyde | NLE | ND | | ND | | ND | | ND | |
| gamma-BHC | NLE | ND | | ND | | ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND | | ND | | ND | |
| Heptachlor | 0.7 | ND | | ND | | ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | | ND | | ND | |
| Toxaphene | 3 | ND | | ND | | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID | NJDEP | 4173.30 | 4173.31 | 4177.02 | 4177.03 | 4177.04 | 4177.05 | 4177.06 | 4177.07 | 4177.08 | 4177.09 | 4177.10 | 4177.11 | 4177.12 | 4177.13 | 4177.14 | 4177.15 | 4177.16 | 4177.17 | 4177.18 | 4177.19 |
|-----------------------------------|--------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|
| Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B86 (6-12") 1/6/1999 | B86 (24") 1/6/1999 | B87 (6-12") 1/7/1999 | B87 (24") 1/7/1999 | B88 (6-12") 1/7/1999 | B88 (24") 1/7/1999 | B89 (6-12") 1/7/1999 | B89 (24") 1/7/1999 | B90 (6-12") 1/7/1999 | B90 (24") 1/7/1999 | B91 (6-12") 1/7/1999 | B91 (24") 1/7/1999 | B92 (6-12") 1/7/1999 | B92 (24") 1/7/1999 | B93 (6-12") 1/7/1999 | B93 (24") 1/7/1999 | B94 (6-12") 1/7/1999 | B94 (24") 1/7/1999 | B95 (6-12") 1/7/1999 | B95 (24") 1/7/1999 |
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 16000 | | 22100 | | 17400 | | 15800 | | 5610 | | 14700 | | 14400 | | 17400 | | 12400 | | 10700 | |
| Antimony | 450 | 0.512 | | 1.55 | | 0.789 | | ND | | 0.526 | | 0.654 | | ND | | 0.434 | | ND | | ND | |
| Arsenic | NLE | 24.8 | | 32.6 | | 28.1 | | 14.1 | | 2.96 | | 18.8 | | 13.9 | | 24.7 | | 16.1 | | 18 | |
| Barium | 59000 | 38.6 | | 153 | | 54.1 | | 23.7 | | 12.4 | | 26.4 | | 81.9 | | 24.1 | | 16.4 | | 13.8 | |
| Beryllium | 140 | 2.53 | | 2.57 | | 2.26 | | 1.54 | | 0.375 | | 1.14 | | 1.83 | | 2.58 | | 1.35 | | 1.66 | |
| Cadmium | 78 | 1.15 | | 1.52 | | 2.49 | | 0.846 | | 0.541 | | 0.661 | | 1.09 | | 1.70 | | 0.892 | | 1.36 | |
| Calcium | NLE | 786 | | 1060 | | 885 | | 246 | | 221 | | 691 | | 4230 | | 513 | | 427 | | 180 | |
| Chromium | NLE | 286 | | 307 | | 268 | | 168 | | 37.1 | | 137 | | 207 | | 305 | | 150 | | 113 | |
| Cobalt | 590 | 0.935 | | 4.48 | | 2.38 | | 2.18 | | 1.14 | | 1.45 | | 1.47 | | 0.971 | | 0.930 | | 1.06 | |
| Copper | 45000 | 58.4 | | 118 | | 51.3 | | 6.72 | | 3.52 | | 34.3 | | 104 | | 20.3 | | 18.5 | | 4.68 | |
| Iron | NLE | 57700 | | 63100 | | 26000 | | 41300 | | 9870 | | 26900 | | 47800 | | 63700 | | 35400 | | 53200 | |
| Lead | 800 | 44.9 | | 111 | | 61.2 | | 6.61 | | 3.65 | | 75.9 | | 3.33 | | 11.5 | | 28.7 | | 6.11 | |
| Magnesium | NLE | 8550 | | 8610 | | 7600 | | 4830 | | 985 | | 3580 | | 5590 | | 9110 | | 4130 | | 2970 | |
| Manganese | 5900 | 41.4 | | 145 | | 107 | | 33.3 | | 24.1 | | 42.6 | | 29.0 | | 34.0 | | 22.6 | | 24.8 | |
| Nickel | 23000 | 6.01 | | 10.5 | | 7.33 | | 7.21 | | 3.93 | | 4.40 | | 6.49 | | 6.54 | | 4.57 | | 4.84 | |
| Potassium | NLE | 21300 | | 20100 | | 19300 | | 12400 | | 2090 | | 7510 | | 15200 | | 24000 | | 10500 | | 7970 | |
| Selenium | 5700 | 3.33 | | 2.13 | | 0.910 | | 0.796 | | ND | | ND | | 1.77 | | 0.666 | | ND | | 2.12 | |
| Silver | 5700 | ND | |
| Sodium | NLE | 111 | | 169 | | 242 | | 74.2 | | 82.1 | | 122 | | 118 | | 232 | | 199 | | 80.1 | |
| Thallium | 79 | ND | |
| Vanadium | 1100 | 125 | | 134 | | 113 | | 99.5 | | 22.8 | | 69.5 | | 82.9 | | 121 | | 66.8 | | 102 | |
| Zinc | 110000 | 82.4 | | 158 | | 147 | | 50.4 | | 33.6 | | 67.1 | | 92.3 | | 71.8 | | 44.2 | | 46.7 | |

| Lab Sample ID Field Sample Location | NJDEP | 4177.20 | 4177.21 | 4179.02 | 4179.03 | 4179.04 | 4179.05 | 4179.06 | 4179.07 | 4179.08 | 4179.09 | 4179.10 | 4179.11 | 4179.12 | 4179.13 | 4179.14 | 4179.15 | 4179.16 | 4179.17 | 4179.18 | 4179.19 |
|--|--------------------------------|-------------------------|-----------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B95 (6-12") 1/7/1999 | B95 (24") 1/7/1999 | B96 (6-12") 1/11/1999 | B96 (24") 1/11/1999 | B97 (6-12") 1/11/1999 | B97 (24") 1/11/1999 | B98 (6-12") 1/11/1999 | B98 (24") 1/11/1999 | B99 (6-12") 1/11/1999 | B99 (24") 1/11/1999 | B100 (6-12") 1/11/1999 | B100 (24") 1/11/1999 | B101 (6-12") 1/11/1999 | B101 (24") 1/11/1999 | B102 (6-12") 1/11/1999 | B102 (24") 1/11/1999 | B103 (6-12") 1/11/1999 | B103 (24") 1/11/1999 | B104 (6-12") 1/11/1999 | B104 (24") 1/11/1999 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1,2-Trichloroethane | 6 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,1-Dichloroethene | 150 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloroethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 1,2-Dichloropropane | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Butanone | 44000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acetone | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrolein | 1 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Acrylonitrile | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Benzene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromodichloromethane | 3 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromoform | 280 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Bromomethane | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon disulfide | 110000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Carbon Tetrachloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chlorobenzene | 7400 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroethane | 1100 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloroform | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Chloromethane cis-1,2-Dichloroethene | 12 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| | 560 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| cis-1,3-Dichloropropene Dibromochloromethane | NLE 8 | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Dichlorodifluoromethane | NLE | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Diisopropyl ether | NLE | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| Ethylbenzene | 110000 | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| m+p-Xylenes | NLE | | ND ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND. | | ND ND | | ND ND |
| Methyl tert-butyl ether | 320 | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND |
| Methylene chloride | 97 | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND |
| o-Xylene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Styrene | 260 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| tert-Butyl alcohol | 11000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Tetrachloroethene | 5 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| TICs | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Toluene | 91000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,2-Dichloroethene | 720 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| trans-1,3-Dichloropropene | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichloroethene | 20 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Trichlorofluoromethane | 340000 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl Acetate | NLE | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| Vinyl chloride | 2 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND |
| | - | | 1 | 1 | I . | 1 | 1 | | I . | 1 | 1 | l . | l . | 1 | I . | 1 | I . | 1 | l | I | , |

Notes

| Lab Sample ID Field Sample Location | NJDEP Cleanup | 4177.20 B95 (6-12") | 4177.21 B95 (24") | 4179.02 B96 (6-12") | 4179.03 B96 (24") | 4179.04 B97 (6-12") | 4179.05 B97 (24") | 4179.06 B98 (6-12") | 4179.07 B98 (24") | 4179.08 B99 (6-12") | 4179.09 B99 (24") | 4179.10 B100 (6-12") | 4179.11 B100 (24") | 4179.12 B101 (6-12") | 4179.13 B101 (24") | 4179.14 B102 (6-12") | 4179.15 B102 (24") | 4179.16 B103 (6-12") | 4179.17 B103 (24") | 4179.18 B104 (6-12") | 4179.19 B104 (24") |
|---|--------------------------------|-------------------------|-----------------------|--------------------------|------------------------|------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Sample Date | Cleanup Criteria (mg/kg) | B95 (6-12") 1/7/1999 | B95 (24") 1/7/1999 | B96 (6-12") 1/11/1999 | B96 (24") 1/11/1999 | 1/11/1999 | B97 (24") 1/11/1999 | B98 (6-12") 1/11/1999 | B98 (24") 1/11/1999 | B99 (6-12") 1/11/1999 | B99 (24") 1/11/1999 | B100 (6-12") 1/11/1999 | B100 (24") 1/11/1999 | B101 (6-12") 1/11/1999 | B101 (24") 1/11/1999 | B102 (6-12") 1/11/1999 | B102 (24") 1/11/1999 | B103 (6-12") 1/11/1999 | B103 (24") 1/11/1999 | B104 (6-12") 1/11/1999 | B104 (24") 1/11/1999 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Aniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Azobenzene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | | ND | | ND | | ND | | ND | | ND | | 0.33 J | | ND | | ND | | ND | |
| benzo(a)pyrene | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | 0.27 J | | ND | | ND | | ND | |
| Benzo(b)fluoranthene | 2 | ND | | ND | | ND | | ND | | ND | | ND | | 0.24 J | | ND | | ND | | ND | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | ND | | ND | | ND | | ND | | 0.19 J | | ND | | ND | | ND | |
| Benzo(k)fluoranthene | 23 | ND | | ND | | ND | | ND | | ND | | ND | | 0.29 J | | ND | | ND | | ND | |
| Benzoic Acid | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzyl alcohol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethyl)ether | 2 | ND | | ND | | ND ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-chloroisopropyl)ether | 67 | ND | | ND | | ND 0.12.7 | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-ethylhexyl) phthalate Butyl benzyl phthalate | 140 | ND ND | | ND | | 0.12 J | | 0.16 J | | ND ND | | 0.13 J | | ND ND | | ND | | ND ND | | 0.11 J | |
| | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND 0.663 | | ND | | ND | | ND | |
| Chrysene Dibenz(a h)anthracene | 230 | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND | | 0.66 J | | ND | | ND ND | | ND ND | |
| Dibenz(a,h)anthracene Dibenzofuran | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| | NLE | ND ND | | ND 0.10.1 | | ND ND | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND | | ND ND | |
| Diethyl phthalate | 550000 | ND | | 0.19 J | | ND | | ND | | ND | | ND | | ND ND | | ND | | ND | | ND | |
| Dimethyl phthalate | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

| Lab Sample ID | NJDEP | 4177.20 | 4177.21 | 4179.02 | 4179.03 | 4179.04 | 4179.05 | 4179.06 | 4179.07 | 4179.08 | 4179.09 | 4179.10 | 4179.11 | 4179.12 | 4179.13 | 4179.14 | 4179.15 | 4179.16 | 4179.17 | 4179.18 | 4179.19 |
|---|--------------------------------|-------------------------|-----------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|--------------------------|------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B95 (6-12") 1/7/1999 | B95 (24") 1/7/1999 | B96 (6-12") 1/11/1999 | B96 (24") 1/11/1999 | B97 (6-12") 1/11/1999 | B97 (24") 1/11/1999 | B98 (6-12") 1/11/1999 | B98 (24") 1/11/1999 | B99 (6-12") 1/11/1999 | B99 (24") 1/11/1999 | B100 (6-12") 1/11/1999 | B100 (24") 1/11/1999 | B101 (6-12") 1/11/1999 | B101 (24") 1/11/1999 | B102 (6-12") 1/11/1999 | B102 (24") 1/11/1999 | B103 (6-12") 1/11/1999 | B103 (24") 1/11/1999 | B104 (6-12") 1/11/1999 | B104 (24") 1/11/1999 |
| Di-n-butylphthalate | 68000 | 0.83 JB | | 0.54 JB | | 0.3 JB | | 1.3 B | | 0.38 JB | | 1.4 B | | 0.37 JB | | 0.38 JB | | 1.3 B | | 0.88 JB | |
| Di-n-octyl phthalate | 27000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Fluoranthene | 24000 | ND | | ND | | ND | | ND | | ND | | ND | | 0.64 J | | ND | | ND | | ND | |
| Fluorene | 24000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachlorocyclopentadiene | 110 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Hexachloroethane | 140 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | ND | | ND | | ND | | ND | | 0.18 J | | ND | | ND | | ND | |
| Isophorone | 2000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Naphthalene | 17 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Nitrobenzene | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| N-nitrosodimethylamine | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | | ND | - | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | ND | | ND | | ND | | ND | | ND | | 0.67 J | | ND | | ND | | ND | |
| Phenol | 210000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Pyrene | 18000 | ND | | ND | | ND | | ND | | ND | | ND | | 0.77 J | | ND | | ND | | ND | |
| Pyridine | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| TICs | NLE | 21.1 | | 7.5 | | 6.5 | | 20.4 | | 9 | | 11.9 | | 12.15 | | 6.1 | | 12 | | 16 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.025 | | 0.019 | | 0.017 | | 0.172 | | 0.136 | | ND | | 0.061 | | 0.003 | | 0.002 | | 0.051 | |
| 4,4'-DDE | 9 | 0.269 | | 0.206 | | 0.034 | | 0.075 | | 0.084 | | 0.002 | | 0.066 | | 0.029 | | 0.020 | | 0.024 | |
| 4,4'-DDT | 8 | 0.202 | | 0.213 | | 0.028 | | 0.309 | | 2.930 | | 0.003 | | 0.283 | | 0.029 | | 0.018 | | 0.005 | |
| Aldrin | 0.2 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| alpha-Chlordane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | 0.002 | | ND | | ND | | ND | |
| Arochlor 1016 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1221 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1232 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochlor 1242 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochior 1248 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochior 1254 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Arochior 1260 | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| beta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| delta-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Dieldrin | 0.2 | ND | | ND | | ND | | 0.001 | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan I | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan II | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endosulfan-Sulfate | 6800 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Endrin Aldehyde | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-BHC | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| gamma-Chlordane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | 0.003 | | ND | | ND | | ND | |
| Heptachlor | 0.7 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Heptachlor Epoxide | 0.3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Toxaphene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4177.20 B95 (6-12") 1/7/1999 | 4177.21 B95 (24") 1/7/1999 | 4179.02 B96 (6-12") 1/11/1999 | 4179.03 B96 (24") 1/11/1999 | 4179.04 B97 (6-12") 1/11/1999 | 4179.05 B97 (24") 1/11/1999 | 4179.06 B98 (6-12") 1/11/1999 | 4179.07 B98 (24") 1/11/1999 | 4179.08 B99 (6-12") 1/11/1999 | 4179.09 B99 (24") 1/11/1999 | 4179.10 B100 (6-12") 1/11/1999 | 4179.11 B100 (24") 1/11/1999 | 4179.12 B101 (6-12") 1/11/1999 | 4179.13 B101 (24") 1/11/1999 | 4179.14 B102 (6-12") 1/11/1999 | 4179.15 B102 (24") 1/11/1999 | 4179.16 B103 (6-12") 1/11/1999 | 4179.17 B103 (24") 1/11/1999 | 4179.18 B104 (6-12") 1/11/1999 | 4179.19 B104 (24") 1/11/1999 |
|---|---|------------------------------------|----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|-------------------------------------|-----------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 10100 | | 13600 | | 12400 | | 15100 | | 14900 | | 3190 | | 1420 | | 4570 | | 4140 | | 1600 | |
| Antimony | 450 | ND | | ND | | ND | | 0.611 | | ND | | 0.566 | | ND | | ND | | 0.461 | | ND | |
| Arsenic | NLE | 6.88 | | 8.96 | | 23.2 | | 29.9 | | 28.0 | | 24.4 | | 6.59 | | 9.69 | | 6.47 | | 1.14 | |
| Barium | 59000 | 14.9 | | 16.6 | | 17.6 | | 41.5 | | 16.9 | | 6.78 | | 16.0 | | 13.6 | | 16.8 | | 4.92 | |
| Beryllium | 140 | 1.13 | | 1.06 | | 2.03 | | 2.12 | | 2.80 | | 0.162 | | ND | | 0.257 | | 0.295 | | ND | |
| Cadmium | 78 | 0.734 | | 0.743 | | 1.26 | | 1.66 | | 1.92 | | 0.415 | | 0.504 | | 0.569 | | 0.418 | | 0.183 | |
| Calcium | NLE | 294 | | 270 | | 765 | | 1860 | | 1060 | | 432 | | 135 | | 148 | | 143 | | 73.7 | |
| Chromium | NLE | 93.1 | | 109 | | 231 | | 237 | | 317 | | 41.3 | | 18.9 | | 40.4 | | 32.4 | | 9.66 | |
| Cobalt | 590 | 1.23 | | 1.59 | | 0.771 | | 1.86 | | 0.628 | | 0.677 | | 0.437 | | 0.655 | | 0.303 | | 0.248 | |
| Copper | 45000 | 4.69 | | 7.04 | | 11.7 | | 32.9 | | 20.6 | | 10.9 | | 10.6 | | 5.24 | | 3.56 | | 2.61 | |
| Iron | NLE | 29600 | | 30400 | | 48600 | | 51300 | | 64100 | | 7170 | | 6930 | | 10500 | | 7410 | | 2320 | |
| Lead | 800 | 5.14 | | 6.11 | | 10.8 | | 47.3 | | 12.2 | | 4.86 | | 24.6 | | 4.79 | | 2.21 | | 1.21 | |
| Magnesium | NLE | 3170 | | 3160 | | 6380 | | 6730 | | 8860 | | 346 | | 163 | | 350 | | 214 | | 51.0 | |
| Manganese | 5900 | 24.8 | | 28.6 | | 20.8 | | 100 | | 21.9 | | 11.3 | | 5.13 | | 11.0 | | 5.04 | | 1.55 | |
| Nickel | 23000 | 5.04 | | 5.57 | | 5.70 | | 11.0 | | 7.42 | | 1.46 | | 1.23 | | 2.31 | | 1.54 | | 1.44 | |
| Potassium | NLE | 8490 | | 7990 | | 16400 | | 17800 | | 23800 | | 608 | | 369 | | 717 | | 231 | | 96.6 | |
| Selenium | 5700 | ND | | ND | | ND | | 1.23 | | 0.725 | | ND | | ND | | ND | | ND | | ND | |
| Silver | 5700 | ND | | ND | | ND | | ND | | ND | | ND | | 1.03 | | ND | | ND | | ND | |
| Sodium | NLE | 95.6 | | 334 | | 139 | | 178 | | 93.5 | | 63.7 | | 63.9 | | 87.5 | | 50.2 | | 66.0 | |
| Thallium | 79 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Vanadium | 1100 | 47.8 | | 63.6 | | 100.0 | | 104 | | 126 | | 14.2 | | 9.61 | | 31.3 | | 30.3 | | 9.70 | |
| Zinc | 110000 | 43.4 | | 40.4 | | 61.7 | | 95.5 | | 76.1 | | 24.9 | | 16.6 | | 27.6 | | 23.5 | | 17.0 | |

| Lab Sample ID | NJDEP | 4179.20 | 4179.21 | 4179.22 | 4179.23 | 4184.02 | 4184.03 | 4184.04 | 4184.05 | 4184.06 | 4184.07 | 4184.08 | 4184.09 | 4184.10 | 4184.11 | 4184.12 | 4184.13 | 4189.02 | 4189.03 | 4189.04 | 4189.05 |
|---|--------------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B105 (6-12") 1/11/1999 | B105 (24") 1/11/1999 | B106 (6-12") 1/11/1999 | B106 (24") 1/11/1999 | B107 (6-12") 1/12/1999 | B107 (24") 1/12/1999 | B108 (6-12") 1/12/1999 | B108 (24") 1/12/1999 | B109 (6-12") 1/12/1999 | B109 (24") 1/12/1999 | B110 (6-12") 1/12/1999 | B110 (24") 1/12/1999 | B111 (6-12") 1/12/1999 | B111 (24") 1/12/1999 | B112 (6-12") 1/12/1999 | B112 (24") 1/12/1999 | B113 (6-12") 1/13/1999 | B113 (24") 1/13/1999 | B114 (6-12") 1/13/1999 | B114 (24") 1/13/1999 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND |
| 1,1,1-Trichloroethane | 4200 | | ND |
| 1,1,2,2-Tetrachloroethane | 3 | | ND |
| 1,1,2-Trichloroethane | 6 | | ND |
| 1,1-Dichloroethene | 150 | | ND |
| 1,2-Dichloroethane | 3 | | ND |
| 1,2-Dichloropropane | 5 | | ND |
| 2-Butanone | 44000 | | ND |
| 2-Chloroethyl vinyl ether | NLE | | ND |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND |
| Acetone | NLE | | ND |
| Acrolein | 1 | | ND |
| Acrylonitrile | 3 | | ND |
| Benzene | 5 | | ND |
| Bromodichloromethane | 3 | | ND |
| Bromoform | 280 | | ND |
| Bromomethane | NLE | | ND |
| Carbon disulfide | 110000 | | ND |
| Carbon Tetrachloride | 2 | | ND |
| Chlorobenzene | 7400 | | ND |
| Chloroethane | 1100 | | ND |
| Chloroform | 2 | | ND |
| Chloromethane cis-1,2-Dichloroethene | 12 | | ND |
| | 560 | | ND |
| cis-1,3-Dichloropropene Dibromochloromethane | NLE 8 | | ND ND |
| Dichlorodifluoromethane | NLE | | ND ND |
| Diisopropyl ether | NLE | | ND ND |
| Ethylbenzene | 110000 | | ND ND | | ND ND | | ND | | ND ND | | ND | | ND ND |
| m+p-Xvlenes | NLE | | ND ND | | ND ND | | ND | | ND | | ND ND | | ND ND | | ND ND | | ND. | | ND ND | | ND ND |
| Methyl tert-butyl ether | 320 | | ND |
| Methylene chloride | 97 | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND |
| o-Xylene | NLE | | ND |
| Styrene | 260 | | ND |
| tert-Butyl alcohol | 11000 | | ND |
| Tetrachloroethene | 5 | | ND |
| TICs | NLE | | ND |
| Toluene | 91000 | | ND |
| trans-1,2-Dichloroethene | 720 | | ND |
| trans-1,3-Dichloropropene | NLE | | ND |
| Trichloroethene | 20 | | ND |
| Trichlorofluoromethane | 340000 | | ND |
| Vinyl Acetate | NLE | | ND |
| Vinyl chloride | 2 | | ND |
| | | | | 1 | | | _ | I. | _ | 1 | | l . | | 1 | | 1 | | 1 | | 1 | |

Notes

| Lab Sample ID Field Sample Location | NJDEP | 4179.20 B105 (6-12") | 4179.21 | 4179.22 | 4179.23 | 4184.02 | 4184.03 | 4184.04 | 4184.05 B108 (24") | 4184.06 | 4184.07 B109 (24") | 4184.08 | 4184.09 | 4184.10 | 4184.11 | 4184.12 | 4184.13 | 4189.02 B113 (6-12") | 4189.03 | 4189.04 | 4189.05 B114 (24") |
|--|--------------------------------|-------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-----------------------|---------------------------|-----------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|-------------------------|-------------------------|---------------------------|-----------------------|
| Sample Date | Cleanup Criteria (mg/kg) | 1/11/1999 | B105 (24") 1/11/1999 | B106 (6-12") 1/11/1999 | B106 (24") 1/11/1999 | B107 (6-12") 1/12/1999 | B107 (24") 1/12/1999 | B108 (6-12") 1/12/1999 | 1/12/1999 | B109 (6-12") 1/12/1999 | 1/12/1999 | B110 (6-12") 1/12/1999 | B110 (24") 1/12/1999 | B111 (6-12") 1/12/1999 | B111 (24") 1/12/1999 | B112 (6-12") 1/12/1999 | B112 (24") 1/12/1999 | 1/13/1999 | B113 (24") 1/13/1999 | B114 (6-12") 1/13/1999 | 1/13/1999 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,2-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,3-Dichlorobenzene | 59000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 1,4-Dichlorobenzene | 13 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,5-Trichlorophenol | 68000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4,6-Trichlorophenol | 74 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dichlorophenol | 2100 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dimethylphenol | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Chlorophenol | 2200 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylnaphthalene | 2400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Methylphenol | 3400 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitroaniline | 23000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 2-Nitrophenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 3-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloro-3-methylphenol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chloroaniline | 66 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Methylphenol | 340 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | 0.13 J | | ND | | ND | |
| Acenaphthylene | 300000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | 0.52 J | | ND | | 0.17 J | |
| Aniline | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Anthracene | 30000 | ND | | ND | | 0.3 J | | ND | | ND | | ND | | ND | | 0.86 J | | ND | | 0.27 J | |
| Azobenzene | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | | ND | | 0.64 J | | ND | | ND | | ND | | ND | | 2.8 | | ND | | 2.4 | |
| benzo(a)pyrene | 0.2 | ND | | ND | | 0.48 J | | ND | | ND | | ND | | ND | | 2.3 | | ND | | 2.5 | |
| Benzo(b)fluoranthene | 2 | ND | | ND | | 0.4 J | | ND | | ND | | ND | | ND | | 2 | | ND | | 2.2 | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | 0.26 J | | ND | | ND | | ND | | ND | | 1.1 | | ND | | 1.5 | |
| Benzo(k)fluoranthene | 23 | ND | | ND | | 0.49 J | | ND | | ND | | ND | | ND | | 2.1 | | ND | | 2.1 | |
| Benzoic Acid | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| Benzyl alcohol | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | |
| bis(2-Chloroethoxy)methane | NLE | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND ND | | ND | |
| bis(2-Chloroethyl)ether bis(2-chloroisopropyl)ether | 2 | ND | | ND | | ND ND | | ND | | ND | | ND | | ND ND | | ND | | ND ND | | ND ND | |
| bis(2-chioroisopropyi)ether bis(2-ethylhexyl) phthalate | 67 | ND 0.16.1 | | ND ND | | ND 0.15.1 | | ND 0.17 J | | ND 0.2 J | | ND 0.13 J | | ND 0.14 J | | ND 0.15.1 | | ND | | ND ND | |
| Butyl benzyl phthalate | 140 | 0.16 J | | | | 0.15 J | | | | | | | | | | 0.15 J | | ND ND | | | |
| | 14000 | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND | | ND 2.6 | |
| Chrysene Dibenz(a,h)anthracene | 230 0.2 | ND ND | | ND ND | | 0.92 J ND | | ND ND | | ND ND | | ND ND | | ND ND | | 3.9 0.31 J | | ND ND | | 2.6 0.34 J | |
| Dibenz(a,n)anthracene Dibenzofuran | - | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | NLE 550000 | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dimethyl phthalate | NLE | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | |
| Dimetriyi pirtiralate | NLE | שא | | ND | | שא | | ND | | UND | | ND | | UND | | שאו | | ND | | ND | |

| Lab Sample ID | NJDEP | 4179.20 | 4179.21 | 4179.22 | 4179.23 | 4184.02 | 4184.03 | 4184.04 | 4184.05 | 4184.06 | 4184.07 | 4184.08 | 4184.09 | 4184.10 | 4184.11 | 4184.12 | 4184.13 | 4189.02 | 4189.03 | 4189.04 | 4189.05 |
|---|--------------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B105 (6-12") 1/11/1999 | B105 (24") 1/11/1999 | B106 (6-12") 1/11/1999 | B106 (24") 1/11/1999 | B107 (6-12") 1/12/1999 | B107 (24") 1/12/1999 | B108 (6-12") 1/12/1999 | B108 (24") 1/12/1999 | B109 (6-12") 1/12/1999 | B109 (24") 1/12/1999 | B110 (6-12") 1/12/1999 | B110 (24") 1/12/1999 | B111 (6-12") 1/12/1999 | B111 (24") 1/12/1999 | B112 (6-12") 1/12/1999 | B112 (24") 1/12/1999 | B113 (6-12") 1/13/1999 | B113 (24") 1/13/1999 | B114 (6-12") 1/13/1999 | B114 (24") 1/13/1999 |
| Di-n-butylphthalate | 68000 | 1.3 B | | 0.37 JB | | 1.9 B | | 1.2 B | | 30 BD | | 2 B | | 1.1 JB | | 1.2 B | | 0.38 JB | | 0.47 JB | |
| Di-n-octyl phthalate | 27000 | ND | |
| Fluoranthene | 24000 | 0.14 J | | 0.14 J | | 1.6 | | ND | | ND | | ND | | ND | | 7.9 | | ND | | 6.4 | 1 |
| Fluorene | 24000 | ND | | 0.31 J | | ND | | ND | |
| Hexachlorobenzene | 1 | | | | | | - | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | |
| Hexachlorocyclopentadiene | 110 | ND | |
| Hexachloroethane | 140 | ND | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | 0.28 J | | ND | | ND | | ND | | ND | | 0.95 J | | ND | | 1.2 J | |
| Isophorone | 2000 | ND | |
| Naphthalene | 17 | ND | | 0.11 J | | ND | | ND | |
| Nitrobenzene | 340 | ND | |
| N-nitrosodimethylamine | 0.7 | ND | |
| n-Nitrosodi-n-propylamine | NLE | ND | |
| n-Nitrosodiphenylamine | NLE | ND | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | ND | | 1.2 | | ND | | ND | | ND | | ND | | 6.4 | | ND | | 0.86 J | |
| Phenol | 210000 | ND | |
| Pyrene | 18000 | 0.13 J | | 0.12 J | | 1.3 | | ND | | ND | | ND | | ND | | 6.4 | | ND | | 4.8 | |
| Pyridine | NLE | ND | |
| TICs | NLE | 19.7 | | 3.6 | | 11.8 | | 11.8 | | 14.7 | | 8.2 | | 39.18 | | 11.25 | | 2.3 | | 3.7 | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.006 | | 0.031 | | 0.025 | | 0.001 | | ND | | 0.002 | | ND | | 0.149 | | ND | | 0.072 | |
| 4,4'-DDE | 9 | 0.013 | | 0.109 | | 0.040 | | 0.007 | | 0.001 | | 0.024 | | 0.003 | | 0.117 | | 0.046 | | 0.387 | |
| 4,4'-DDT | 8 | 0.029 | | 0.355 | | 0.144 | | 0.006 | | ND | | 0.012 | | 0.003 | | 0.509 | | 0.036 | | 0.466 | |
| Aldrin | 0.2 | ND | |
| alpha-BHC | NLE | ND | |
| alpha-Chlordane | NLE | ND | |
| Arochlor 1016 | NLE | ND | | ND | | ND | - | ND | |
| Arochlor 1221 | NLE | ND | |
| Arochlor 1232 | NLE | ND | |
| Arochlor 1242 | NLE | ND | |
| Arochlor 1248 | NLE | ND | |
| Arochlor 1254 | NLE | ND | |
| Arochlor 1260 | NLE | ND | |
| beta-BHC | NLE | ND | |
| delta-BHC | NLE | ND | |
| Dieldrin | 0.2 | ND | |
| Endosulfan I | NLE | ND | | ND | 1 |
| Endosulfan II | NLE | ND | |
| Endosulfan-Sulfate | 6800 | ND | |
| Endrin | 340 | ND | |
| Endrin Aldehyde | NLE | ND | |
| gamma-BHC | NLE | ND | |
| gamma-Chlordane | NLE | ND | |
| Heptachlor | 0.7 | ND | |
| Heptachlor Epoxide | 0.3 | ND | |
| Toxaphene | 3 | ND | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4179.20 B105 (6-12") 1/11/1999 | 4179.21 B105 (24") 1/11/1999 | 4179.22 B106 (6-12") 1/11/1999 | 4179.23 B106 (24") 1/11/1999 | 4184.02 B107 (6-12") 1/12/1999 | 4184.03 B107 (24") 1/12/1999 | 4184.04 B108 (6-12") 1/12/1999 | 4184.05 B108 (24") 1/12/1999 | 4184.06 B109 (6-12") 1/12/1999 | 4184.07 B109 (24") 1/12/1999 | 4184.08 B110 (6-12") 1/12/1999 | 4184.09 B110 (24") 1/12/1999 | 4184.10 B111 (6-12") 1/12/1999 | 4184.11 B111 (24") 1/12/1999 | 4184.12 B112 (6-12") 1/12/1999 | 4184.13 B112 (24") 1/12/1999 | 4189.02 B113 (6-12") 1/13/1999 | 4189.03 B113 (24") 1/13/1999 | 4189.04 B114 (6-12") 1/13/1999 | 4189.05 B114 (24") 1/13/1999 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | 1500 | | 3380 | | 12800 | | 16600 | | 17100 | | 4320 | | 3040 | | 3070 | | 18000 | | 16300 | |
| Antimony | 450 | ND | | ND | | 0.663 | | ND | | 0.483 | | 0.581 | | 1.03 | | 1.16 | | ND | | ND | |
| Arsenic | NLE | 14.9 | | 17.0 | | 16.2 | | 11.8 | | 11.7 | | 1.90 | | 1.12 | | 1.92 | | 23.3 | | 25.6 | |
| Barium | 59000 | 34.0 | | 10.2 | | 26.5 | | 26.5 | | 26.9 | | 10.7 | | 10.1 | | 17.5 | | 26.2 | | 29.2 | |
| Beryllium | 140 | 0.217 | | 0.217 | | 1.38 | | 1.85 | | 1.29 | | 0.255 | | 0.197 | | 0.319 | | 2.54 | | 2.16 | |
| Cadmium | 78 | 0.952 | | 0.532 | | 0.786 | | 1.02 | | 0.714 | | 0.313 | | 0.326 | | 0.250 | | 1.21 | | 1.09 | |
| Calcium | NLE | 9270 | | 808 | | 749 | | 116 | | 134 | | 201 | | 199 | | 299 | | 634 | | 1200 | |
| Chromium | NLE | 13.8 | | 25.8 | | 161 | | 188 | | 142 | | 32.7 | | 19.3 | | 19.8 | | 308 | | 254 | |
| Cobalt | 590 | 1.02 | | 0.562 | | 0.996 | | 1.83 | | 1.89 | | 0.634 | | 0.425 | | 1.41 | | 0.573 | | 1.07 | |
| Copper | 45000 | 10.3 | | 12.5 | | 52.1 | | 36.6 | | 30.1 | | 23.6 | | 20.1 | | 21.3 | | 65.4 | | 31.9 | |
| Iron | NLE | 8270 | | 10200 | | 37900 | | 51300 | | 35400 | | 6360 | | 5400 | | 8550 | | 64400 | | 55300 | |
| Lead | 800 | 17.9 | | 7.06 | | 28.8 | | 6.91 | | 7.09 | | 2.60 | | 2.41 | | 40.7 | | 32.5 | | 36.5 | |
| Magnesium | NLE | 4600 | | 232 | | 4880 | | 6450 | | 4150 | | 728 | | 470 | | 831 | | 10100 | | 8290 | |
| Manganese | 5900 | 36.3 | | 16.7 | | 21.7 | | 23.4 | | 30.3 | | 15.9 | | 12.2 | | 20.5 | | 22.2 | | 30.4 | |
| Nickel | 23000 | 5.85 | | 1.81 | | 5.69 | | 7.82 | | 6.76 | | 2.43 | | 2.31 | | 3.81 | | 7.11 | | 7.88 | |
| Potassium | NLE | 700 | | 535 | | 10500 | | 15400 | | 8550 | | 1050 | | 566 | | 1910 | | 22800 | | 18600 | |
| Selenium | 5700 | 1.09 | | ND | | 1.14 | | 0.711 | | 1.11 | | ND | | ND | | 1.16 | | 2.48 | | 2.11 | |
| Silver | 5700 | ND | |
| Sodium | NLE | 115 | | 56.9 | | 174 | | 118 | | 194 | | 71.6 | | 69.4 | | 79.5 | | 148 | | 118 | |
| Thallium | 79 | ND | |
| Vanadium | 1100 | 8.80 | | 14.3 | | 65.7 | | 98.4 | | 84.4 | | 23.0 | | 14.0 | | 12.6 | | 120 | | 82.4 | |
| Zinc | 110000 | 59.4 | | 24.3 | | 52.7 | | 75.9 | | 43.1 | | 15.8 | | 20.1 | | 37.7 | | 84.9 | | 85.3 | |

| Lab Sample ID | NJDEP | 4189.06 | 4189.07 | 4189.08 | 4189.09 | 4189.10 | 4189.11 | 4189.12 | 4189.13 | 4189.14 | 4189.15 | 4189.16 | 4189.17 | 9021301 | 9021302 | 9021303 | 9021304 | 9021305 | 9021306 | 9021307 | 9021308 |
|---|--------------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------|-------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria (mg/kg) | B115 (6-12") 1/13/1999 | B115 (24") 1/13/1999 | B116 (6-12") 1/13/1999 | B116 (24") 1/13/1999 | B117 (6-12") 1/13/1999 | B117 (24") 1/13/1999 | B118 (6-12") 1/13/1999 | B118 (24") 1/13/1999 | B119 (6-12") 1/13/1999 | B119 (24") 1/13/1999 | B119 (6-12") 1/13/1999 | B119 (24") 1/13/1999 | Playground- 1A1 5/29/2009 | Playground- 1A2 5/29/2009 | Playground- 1A3 5/29/2009 | Playground- 2A1 5/29/2009 | Playground- 2A2 5/29/2009 | Playground- 2A3 5/29/2009 | Playground- 3A1 5/29/2009 | Playground- 3A2 5/29/2009 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | ND | | | | | | | | |
| 1,1,1-Trichloroethane | 4200 | | ND | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 3 | | ND | | | | | | | | |
| 1,1,2-Trichloroethane | 6 | | ND | | | | | | | | |
| 1,1-Dichloroethene | 150 | | ND | | | | | | | | |
| 1,2-Dichloroethane | 3 | | ND | | | | | | | | |
| 1,2-Dichloropropane | 5 | | ND | | | | | | | | |
| 2-Butanone | 44000 | | ND | | | | | | | | |
| 2-Chloroethyl vinyl ether | NLE | | ND | | | | | | | | |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | ND | | | | | | | | |
| Acetone | NLE | | ND | | | | | | | | |
| Acrolein | 1 | | ND | | | | | | | | |
| Acrylonitrile | 3 | | ND | | | | | | | | |
| Benzene | 5 | | ND | | | | | | | | |
| Bromodichloromethane | 3 | | ND | | | | | | | | |
| Bromoform | 280 | | ND | | | | | | | | |
| Bromomethane | NLE | | ND | | | | | | | | |
| Carbon disulfide | 110000 | | ND | | | | | | | | |
| Carbon Tetrachloride | 2 | | ND | | | | | | | | |
| Chlorobenzene | 7400 | | ND | | | | | | | | |
| Chloroethane | 1100 | | ND | | | | | | | | |
| Chloroform | 2 | | ND | | | | | | | | |
| Chloromethane | 12 | | ND | | | | | | | | |
| cis-1,2-Dichloroethene | 560 | | ND | | | | | | | | |
| cis-1,3-Dichloropropene | NLE | | ND | | | | | | | | |
| Dibromochloromethane | 8 | | ND | | | | | | | | |
| Dichlorodifluoromethane | NLE | | ND | | | | | | | | |
| Diisopropyl ether | NLE | | ND | | | | | | | | |
| Ethylbenzene m.t.n. Yulonos | 110000 NLE | | ND | | ND | | ND | | ND ND | | ND | | ND | | | | | | | | |
| m+p-Xylenes Methyl tert-butyl ether | | | ND ND | | | | | | | | |
| Methylene chloride | 320 97 | | ND ND | | | | | | | | |
| o-Xylene | NLE | | ND ND | | ND ND | | ND | | ND ND | | ND ND | | ND | | | | | | | | |
| Styrene | 260 | | ND | | | | | | | | |
| tert-Butyl alcohol | 11000 | | ND | | | | | | | | |
| Tetrachloroethene | 5 | | ND | | | | | | | | |
| TICs | NLE | | ND | | | | | | | | |
| Toluene | 91000 | | ND | | | | | | | | |
| trans-1,2-Dichloroethene | 720 | | ND | | | | | | | | |
| trans-1,3-Dichloropropene | NLE | | ND | | | | | | | | |
| Trichloroethene | 20 | | ND | | | | | | | | |
| Trichlorofluoromethane | 340000 | | ND | | | | | | | | |
| Vinyl Acetate | NLE | | ND | | | | | | | | |
| Vinyl chloride | 2 | | ND | | | | | | | | |
| • | | | | | | 1 | | | | | | | | 1 | 1 | 1 | 1 | | L | 1 | |

Notes

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 4189.06 B115 (6-12") | 4189.07 B115 (24") | 4189.08 B116 (6-12") | 4189.09 B116 (24") | 4189.10 B117 (6-12") | 4189.11 B117 (24") | 4189.12 B118 (6-12") | 4189.13 B118 (24") | 4189.14 B119 (6-12") | 4189.15 B119 (24") | 4189.16 B119 (6-12") | 4189.17 B119 (24") | 9021301 Playground- 1A1 | 9021302 Playground- 1A2 | 9021303 Playground- 1A3 | 9021304 Playground- | 9021305 Playground- 2A2 | 9021306 Playground- 2A3 | 9021307 Playground- 3A1 | 9021308 Playground- 3A2 |
|---|------------------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------|-----------------------|-------------------------------|-------------------------------|-------------------------------|------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Sample Date | (mg/kg) | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 1/13/1999 | 5/29/2009 | 1A2 5/29/2009 | 1A3 5/29/2009 | 2A1 5/29/2009 | 5/29/2009 | 5/29/2009 | 3A1 5/29/2009 | 3A2 5/29/2009 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | ND | | | | | | | | | |
| 1,2-Dichlorobenzene | 59000 | ND | | | | | | | | | |
| 1,3-Dichlorobenzene | 59000 | ND | | | | | | | | | |
| 1,4-Dichlorobenzene | 13 | ND | | | | | | | | | |
| 2,4,5-Trichlorophenol | 68000 | ND | | | | | | | | | |
| 2,4,6-Trichlorophenol | 74 | ND | | | | | | | | | |
| 2,4-Dichlorophenol | 2100 | ND | | | | | | | | | |
| 2,4-Dimethylphenol | 14000 | ND | | | | | | | | | |
| 2,4-Dinitrophenol | 1400 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| 2,4-Dinitrotoluene | 3 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | ND | | | | | | | | | |
| 2-Chlorophenol | 2200 | ND | | | | | | | | | |
| 2-Methylnaphthalene | 2400 | ND | | | | | | | | | |
| 2-Methylphenol | 3400 | ND | | | | | | | | | |
| 2-Nitroaniline | 23000 | ND | | | | | | | | | |
| 2-Nitrophenol | NLE | ND | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 4 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| 3-Nitroaniline | NLE | ND | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | NLE | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| 4-Bromophenyl Phenyl ether | NLE | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| 4-Chloro-3-methylphenol | NLE | ND | | | | | | | | | |
| 4-Chloroaniline | 66 | ND | | | | | | | | | |
| 4-Chlorophenyl phenyl ether | NLE | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| 4-Methylphenol | 340 | ND | | | | | | | | | |
| 4-Nitroaniline | NLE | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | ND | | ND | | ND | | ND | | N.D. | | ND | | | | | | | | | |
| Acenaphthylene Aniline | 300000 | ND | | | | | | | | | |
| Anthracene | NLE | ND | | | | | | | | | |
| Azobenzene | 30000 | ND ND | | ND ND | | ND ND | | ND ND | | | | ND ND | | | | | | | | | |
| Benzidine | 0.7 | ND | | ND | | ND | | ND | | | | NU | | | | | | | | | |
| Benzo(a)anthracene | 2 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| benzo(a)pyrene | 0.2 | ND ND | | ND ND | | ND ND | | ND ND | | | | ND ND | | | | | | | | | |
| Benzo(b)fluoranthene | 2 | ND ND | | ND ND | | ND ND | | ND ND | | | | ND | | | | | | | | | |
| Benzo(g,h,i)perylene | 30000 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Benzo(k)fluoranthene | 23 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Benzoic Acid | NLE | ND | | | | | | | | | |
| Benzyl alcohol | NLE | ND | | | | | | | | | |
| bis(2-Chloroethoxy)methane | NLE | ND | | | | | | | | | |
| bis(2-Chloroethyl)ether | 2 | ND | | | | | | | | | |
| bis(2-chloroisopropyl)ether | 67 | ND | | | | | | | | | |
| bis(2-ethylhexyl) phthalate | 140 | ND | | ND | | 0.12 J | | 0.17 J | | | | ND | | | | | | | | | |
| Butyl benzyl phthalate | 14000 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Chrysene | 230 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Dibenz(a,h)anthracene | 0.2 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Dibenzofuran | NLE | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Diethyl phthalate | 550000 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Dimethyl phthalate | NLE | ND | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4189.06 B115 (6-12") 1/13/1999 | 4189.07 B115 (24") 1/13/1999 | 4189.08 B116 (6-12") 1/13/1999 | 4189.09 B116 (24") 1/13/1999 | 4189.10 B117 (6-12") 1/13/1999 | 4189.11 B117 (24") 1/13/1999 | 4189.12 B118 (6-12") 1/13/1999 | 4189.13 B118 (24") 1/13/1999 | 4189.14 B119 (6-12") 1/13/1999 | 4189.15 B119 (24") 1/13/1999 | 4189.16 B119 (6-12") 1/13/1999 | 4189.17 B119 (24") 1/13/1999 | 9021301 Playground- 1A1 5/29/2009 | 9021302 Playground- 1A2 5/29/2009 | 9021303 Playground- 1A3 5/29/2009 | 9021304 Playground- 2A1 5/29/2009 | 9021305 Playground- 2A2 5/29/2009 | 9021306 Playground- 2A3 5/29/2009 | 9021307 Playground- 3A1 5/29/2009 | 9021308 Playground- 3A2 5/29/2009 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--|--|--|--|--|--|--|--|
| Di-n-butylphthalate | 68000 | 0.38 JB | | 1.2 JB | | 0.31 JB | | 1.4 B | | | | 1.2 B | | | | | | | | | T |
| Di-n-octyl phthalate | 27000 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Fluoranthene | 24000 | ND | | ND | | ND | | ND | | | | 0.2 J | | | | | | | | | |
| Fluorene | 24000 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | ND | | | | | | | | | |
| Hexachlorocyclopentadiene | 110 | ND | | | | | | | | | |
| Hexachloroethane | 140 | ND | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 2 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Isophorone | 2000 | ND | | | | | | | | | |
| Naphthalene | 17 | ND | | | | | | | | | |
| Nitrobenzene | 340 | ND | | | | | | | | | |
| N-nitrosodimethylamine | 0.7 | ND | | | | | | | | | |
| n-Nitrosodi-n-propylamine | NLE | ND | | | | | | | | | |
| n-Nitrosodiphenylamine | NLE | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | ND | | ND | | ND | | ND | | | | ND | | | | | | | | | |
| Phenol | 210000 | ND | | | | | | | | | |
| Pyrene | 18000 | ND | | ND | | ND | | 0.11 J | | | | 0.15 J | | | | | | | | | |
| Pyridine | NLE | ND | | | | | | | | | |
| TICs | NLE | 2.1 | | 3.69 | | 2.5 | | 5.9 | | 6.08 | | 5.55 | | | | | | | | | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.695 | | ND | | 0.015 | | ND | | 0.022 | | ND | | 0.016 | 0.004 | ND | 0.040 | 0.005 | ND | 1.133 | 0.028 |
| 4,4'-DDE | 9 | 0.743 | | 0.186 | | 0.155 | | 0.094 | | 0.136 | | 0.092 | | 0.628 | 0.041 | 0.003 | 0.934 | 0.040 | 0.007 | 3.146 | 0.448 |
| 4,4'-DDT | 8 | 4.142 | | 0.152 | | 0.165 | | 0.080 | | 0.113 | | 0.057 | | 0.496 | 0.039 | ND | 0.819 | 0.042 | 0.008 | 3.259 | 0.565 |
| Aldrin | 0.2 | ND | | 0.004 | ND |
| alpha-BHC | NLE | ND | | ND |
| alpha-Chlordane | NLE | ND | | 0.004 | ND | ND | 0.003 | ND | ND | 0.017 | 0.003 |
| Arochlor 1016 | NLE | ND | | ND |
| Arochlor 1221 | NLE | ND | | ND |
| Arochlor 1232 | NLE | ND | | ND |
| Arochlor 1242 | NLE | ND | | ND |
| Arochlor 1248 | NLE | ND | | ND |
| Arochlor 1254 | NLE | ND | | ND |
| Arochlor 1260 | NLE | ND | | 0.130 | 0.126 | ND | 0.278 | 0.0621 | ND | 0.339 | 0.0752 |
| beta-BHC | NLE | ND | | ND |
| delta-BHC | NLE | ND | | ND |
| Dieldrin Endosulfan I | 0.2 | ND | | ND | | ND | | 0.013 | | ND | | ND | | 0.004 | ND | ND | 0.006 | ND | ND | 0.012 | ND |
| Endosulfan II | NLE | ND | | ND ND | ND | ND | ND | ND | ND | 0.004 | ND |
| Endosulfan-Sulfate | NLE 6800 | ND ND | | ND ND | ND ND | ND ND | ND 0.011 | ND 0.007 | ND ND | ND 0.023 | ND 0.006 |
| Endrin | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | | ND ND | ND ND | ND ND | 0.011 | 0.007 ND | ND ND | 0.023 ND | 0.006 ND |
| Endrin Aldehyde | 340 NLE | | | ND ND | | ND ND | | | | | | | | | | | | | | | |
| gamma-BHC | NLE NLE | ND ND | | ND ND | | | | ND ND | | ND ND | | ND ND | | 0.006 ND | ND ND | ND ND | 0.034 | ND ND | ND ND | 0.030 | 0.006 |
| gamma-Chlordane | NLE | ND ND | | 0.004 | ND ND | ND ND | ND ND | ND ND | ND ND | 0.005 0.016 | ND ND |
| Heptachlor | | | | ND ND | | ND ND | | ND ND | | | | | | 0.004 ND | ND ND | | ND ND | | 0.005 | | ND ND |
| Heptachlor Epoxide | 0.7 | ND ND | | 0.003 | ND ND | ND ND | 0.004 | ND ND | 0.005 ND | 0.050 | ND ND |
| Toxaphene | | | | ND ND | | ND ND | | | | ND ND | | | | | | | | ND ND | ND ND | | |
| Toxaphene | 3 | ND | | ND | | שאו | | ND | | ND | | ND | | ND |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 4189.06 B115 (6-12") 1/13/1999 | 4189.07 B115 (24") 1/13/1999 | 4189.08 B116 (6-12") 1/13/1999 | 4189.09 B116 (24") 1/13/1999 | 4189.10 B117 (6-12") 1/13/1999 | 4189.11 B117 (24") 1/13/1999 | 4189.12 B118 (6-12") 1/13/1999 | 4189.13 B118 (24") 1/13/1999 | 4189.14 B119 (6-12") 1/13/1999 | 4189.15 B119 (24") 1/13/1999 | 4189.16 B119 (6-12") 1/13/1999 | 4189.17 B119 (24") 1/13/1999 | 9021301 Playground- 1A1 5/29/2009 | 9021302 Playground- 1A2 5/29/2009 | 9021303 Playground- 1A3 5/29/2009 | 9021304 Playground- 2A1 5/29/2009 | 9021305 Playground- 2A2 5/29/2009 | 9021306 Playground- 2A3 5/29/2009 | 9021307 Playground- 3A1 5/29/2009 | 9021308 Playground- 3A2 5/29/2009 |
|---|---|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--------------------------------------|------------------------------------|--|--|--|--|--|--|--|--|
| Metals | (3, 3) | | | | | | | | | | | | | , , , | | , , , | 7, 1, 111 | , , | ., ., | ., ., | |
| Aluminum | NLE | 17000 | | 17300 | | 2720 | | 12100 | | 5260 | | 6590 | | | | | | | | | $\overline{}$ |
| Antimony | 450 | 0.588 | | ND | | 0.792 | | 0.407 | | 0.424 | | ND | | | | | | | | | |
| Arsenic | NLE | 19.3 | | 23.4 | | 1.36 | | 11.8 | | 5.03 | | 6.05 | | | | | | | | | |
| Barium | 59000 | 17.6 | | 40.3 | | 12.9 | | 20.8 | | 19.8 | | 18.0 | | | | | | | | | |
| Beryllium | 140 | 2.30 | | 2.39 | | 0.190 | | 1.15 | | 0.470 | | 0.630 | | | | | | | | | |
| Cadmium | 78 | 1.00 | | 3.17 | | 0.268 | | 0.539 | | 0.276 | | 0.334 | | | | | | | | | |
| Calcium | NLE | 758 | | 1180 | | 162 | | 386 | | 235 | | 276 | | | | | | | | | |
| Chromium | NLE | 258 | | 280 | | 16.3 | | 135 | | 51.0 | | 71.0 | | | | | | | | | |
| Cobalt | 590 | 0.298 | | 0.959 | | 0.443 | | 0.938 | | 0.692 | | 0.84 | | | | | | | | | |
| Copper | 45000 | 25.5 | | 34.2 | | 4.80 | | 33.0 | | 7.50 | | 7.75 | | | | | | | | | |
| Iron | NLE | 55900 | | 57600 | | 4980 | | 31000 | | 13900 | | 17100 | | | | | | | | | |
| Lead | 800 | 16.1 | | 45.2 | | 8.16 | | 30.5 | | 11.9 | | 13.5 | | | | | | | | | |
| Magnesium | NLE | 8380 | | 9020 | | 474 | | 4270 | | 1520 | | 2210 | | | | | | | | | |
| Manganese | 5900 | 18.2 | | 47.0 | | 18.5 | | 29.6 | | 24.1 | | 23.8 | | | | | | | | | |
| Nickel | 23000 | 6.36 | | 8.00 | | 2.26 | | 10.9 | | 3.16 | | 3.39 | | | | | | | | | |
| Potassium | NLE | 19600 | | 20500 | | 770 | | 9350 | | 3070 | | 4560 | | | | | | | | | |
| Selenium | 5700 | 1.94 | | 1.67 | | 0.661 | | 1.08 | | 0.705 | | 0.959 | | | | | | | | | |
| Silver | 5700 | ND | | | | | | | | | |
| Sodium | NLE | 238 | | 124 | | 74.9 | | 130 | | 64.9 | | 62.2 | | | | | | | | | |
| Thallium | 79 | ND | | | | | | | | | |
| Vanadium | 1100 | 94.6 | | 118 | | 9.79 | | 57.2 | | 24.1 | | 32.1 | | | | | | | | | |
| Zinc | 110000 | 70.5 | | 256 | | 26.7 | | 49.8 | | 32.6 | | 39.3 | | | | | | | | | |

| 110 170 | NJDEP | 0074700 | 0004040 | 0004044 | 0004040 | 0004040 | 9021314 | 0004045 | 9021316 | 9021317 | 0004040 | 2024240 | 9021320 | | | 9021323 | 0004004 | 0004000 | 0004004 | 9021327 | 9021328 |
|---|---------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria | 9021309 Playground- 3A3 | 9021310 Playground- 4A1 | 9021311 Playground- 4A2 | 9021312 Playground- 4A3 | 9021313 Playground- 5A1 | 9021314 Playground- 5A2 | 9021315 Playground- 5A3 | 9021316 Playground- 6A1 | 9021317 Playground- 6A2 | 9021318 Playground- 6A3 | 9021319 Duplicate 5/29/2009 | 9021320 Playground- 7A1 | 9021321 Playground- 7A2 | 9021322 Playground- 7A3 | 9021323 Playground- 8A1 | 9021324 Playground- 8A2 | 9021325 Playground- 8A3 | 9021326 Playground- 9A1 | 9021327 Playground- 9A2 | 9021328 Playground- 9A3 |
| Sample Date | (mg/kg) | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 |
| Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | I 1 | | | | | | | | | 1 | | | | | T | | | | | |
| 1,1,1-Trichloroethane | 4200 | | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 3 | | | | | | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | 6 | | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | 150 | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | 3 | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | 5 | | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | 44000 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloroethyl vinyl ether | NLE | | | | | | | | | | | | | | | | | | | | |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | | | | | | | | | | | | | | | | | | | |
| Acetone | NLE | | | | | | | | | | | | | | | | | | | | |
| Acrolein | 1 | | | | | | | | | | | | | | | | | | | | |
| Acrylonitrile | 3 | | | | | | | | | | | | | | | | | | | | |
| Benzene | 5 | | | | | | | | | | | | | | | | | | | | |
| Bromodichloromethane | 3 | | | | | | | | | | | | | | | | | | | | |
| Bromoform | 280 | | | | | | | | | | | | | | | | | | | | |
| Bromomethane | NLE | | | | | | | | | | | | | | | | | | | | |
| Carbon disulfide | 110000 | | | | | | | | | | | | | | | | | | | | |
| Carbon Tetrachloride | 2 | | | | | | | | | | | | | | | | | | | | |
| Chlorobenzene | 7400 | | | | | | | | | | | | | | | | | | | | |
| Chloroethane | 1100 | | | | | | | | | | | | | | | | | | | | |
| Chloroform | 2 | | | | | | | | | | | | | | | | | | | | |
| Chloromethane | 12 | | | | | | | | | | | | | | | | | | | | |
| cis-1,2-Dichloroethene | 560 | | | | | | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropene | NLE | | | | | | | | | | | | | | | | | | | | |
| Dibromochloromethane Dichlorodifluoromethane | 8 | | | | | | | | | | | | | | | | | | | | |
| Diisopropyl ether | NLE NLE | | | | | | | | | | | | | | | | | | | | |
| Ethylbenzene | 110000 | | | | | | | | | | | | | | | | | | | | |
| m+p-Xylenes | NLE | | | | | | | | | | | | | | | | | | | | |
| Methyl tert-butyl ether | 320 | | | | | | | | | | | | | | | | | | | | |
| Methylene chloride | 97 | | | | | | | | | | | | | | | | | | | | |
| o-Xylene | NLE | | | | | | | | | | | | | | | | | | | | |
| Styrene | 260 | | | | | | | | | | | | | | | | | | | | |
| tert-Butyl alcohol | 11000 | | | | | | | | | | | | | | | | | | | | |
| Tetrachloroethene | 5 | | | | | | | | | | | | | | | | | | | | |
| TICs | NLE | | | | | | | | | | | | | | | | | | | | |
| Toluene | 91000 | | | | | | | | | | | | | | | | | | | | |
| trans-1,2-Dichloroethene | 720 | | | | | | | | | | | | | | | | | | | | |
| trans-1,3-Dichloropropene | NLE | | | | | | | | | | | | | | | | | | | | |
| Trichloroethene | 20 | | | | | | | | | | | | | | | | | | | | |
| Trichlorofluoromethane | 340000 | | | | | | | | | | | | | | | | | | | | |
| Vinyl Acetate | NLE | | | | | | | | | | | | | | | | | | | | |
| Vinyl chloride | 2 | | | | | | | | | | | | | | | | | | | | |

Notes

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP | 9021309 Playground | 9021310 Playgrounds | 9021311 Playgrounds | 9021312 | 9021313 Playgrounds | 9021314 | 9021315 | 9021316 | 9021317 | 9021318 | 9021319 Dunlicate | 9021320 | 9021321 | 9021322 Playground | 9021323 | 9021324 | 9021325 | 9021326 | 9021327 | 9021328 Playgrounds |
|---|--------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Sample Date | Cleanup Criteria (mg/kg) | Playground- 3A3 5/29/2009 | Playground- 4A1 5/29/2009 | Playground- 4A2 5/29/2009 | Playground- 4A3 5/29/2009 | Playground- 5A1 5/29/2009 | Playground- 5A2 5/29/2009 | Playground- 5A3 5/29/2009 | Playground- 6A1 5/29/2009 | Playground- 6A2 5/29/2009 | Playground- 6A3 5/29/2009 | Duplicate 5/29/2009 | Playground- 7A1 5/29/2009 | Playground- 7A2 5/29/2009 | Playground- 7A3 5/29/2009 | Playground- 8A1 5/29/2009 | Playground- 8A2 5/29/2009 | Playground- 8A3 5/29/2009 | Playground- 9A1 5/29/2009 | Playground- 9A2 5/29/2009 | Playground- 9A3 5/29/2009 |
| Semi-Volatiles | | | | | | | | | | | | | | | | | | | | | |
| 1,2,4-Trichlorobenzene | 820 | | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichlorobenzene | 59000 | | | | | | | | | | | | | | | | | | | | |
| 1,3-Dichlorobenzene | 59000 | | | | | | , | | | | | | | | | | | | | | |
| 1,4-Dichlorobenzene | 13 | | | | | | | | | | | | | | | | | | | | |
| 2,4,5-Trichlorophenol | 68000 | | | | | | | | | | | | | | | | | | | | |
| 2,4,6-Trichlorophenol | 74 | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dichlorophenol | 2100 | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dimethylphenol | 14000 | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrophenol | 1400 | | | | | | | | | | | | | | | | | | | | |
| 2,4-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| 2-Chloronaphthalene | NLE | | | | | | | | | | | | | | | | | | | | |
| 2-Chlorophenol | 2200 | | | | | | | | | | | | | | | | | | | | |
| 2-Methylnaphthalene | 2400 | | | | | | | | | | | | | | | | | | | | |
| 2-Methylphenol | 3400 | | | | | | | | | | | | | | | | | | | | |
| 2-Nitroaniline | 23000 | | | | | | | | | | | | | | | | | | | | |
| 2-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| 3,3'-Dichlorobenzidine | 4 | | | | | | | | | | | | | | | | | | | | |
| 3-Nitroaniline | NLE | | | | | | | | | | | | | | | | | | | | |
| 4,6-Dinitro-2-methylphenol | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Bromophenyl Phenyl ether | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Chloro-3-methylphenol | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Chloroaniline 4-Chlorophenyl phenyl ether | 66 | | | | | | | | | | | | | | | | | | | | |
| 4-Chlorophenyl phenyl ether 4-Methylphenol | NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Nitroaniline | 340 NLE | | | | | | | | | | | | | | | | | | | | |
| 4-Nitrophenol | NLE | | | | | | | | | | | | | | | | | | | | |
| Acenaphthene | 37000 | | | | | | | | | | | | | | | | | | | | |
| Acenaphthylene | 300000 | | | | | | | | | | | | | | | | | | | | |
| Aniline | NLE | | | | | | | | | | | | | | | | | | | | |
| Anthracene | 30000 | | | | | | | | | | | | | | | | | | | | |
| Azobenzene | NLE | | | | | | | | | | | | | | | | | | | | |
| Benzidine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)anthracene | 2 | | | | | | | | | | | | | | | | | | | | |
| benzo(a)pyrene | 0.2 | | | | | | | | | | | | | | | | | | | | |
| Benzo(b)fluoranthene | 2 | | | | | | | | | | | | | | | | | | | | |
| Benzo(g,h,i)perylene | 30000 | | | | | | | | | | | | | | | | | | | | |
| Benzo(k)fluoranthene | 23 | | | | | | | | | | | | | | | | | | | | |
| Benzoic Acid | NLE | | | | | | | | | | | | | | | | | | | | |
| Benzyl alcohol | NLE | | | | | | | | | | | | | | | | | | | | |
| bis(2-Chloroethoxy)methane | NLE | | | | | | | | | | | | | | | | | | | | |
| bis(2-Chloroethyl)ether | 2 | | | | | | | | | | | | | | | | | | | | |
| bis(2-chloroisopropyl)ether | 67 | | | | | | | | | | | | | | | | | | | | |
| bis(2-ethylhexyl) phthalate | 140 | _ | | _ | _ | | | _ | _ | | _ | | | | _ | | | | | | |
| Butyl benzyl phthalate | 14000 | | | | | | | | | | | | | | | | | | | | |
| Chrysene | 230 | | | | | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene | 0.2 | | | | | | | | | | | | | | | | | | | | |
| Dibenzofuran | NLE | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate | 550000 | | | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate | NLE | | | | | | | | | | | | | | | | | | | | |

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 9021309 Playground- 3A3 5/29/2009 | 9021310 Playground- 4A1 5/29/2009 | 9021311 Playground- 4A2 5/29/2009 | 9021312 Playground- 4A3 5/29/2009 | 9021313 Playground- 5A1 5/29/2009 | 9021314 Playground- 5A2 5/29/2009 | 9021315 Playground- 5A3 5/29/2009 | 9021316 Playground- 6A1 5/29/2009 | 9021317 Playground- 6A2 5/29/2009 | 9021318 Playground- 6A3 5/29/2009 | 9021319 Duplicate 5/29/2009 | 9021320 Playground- 7A1 5/29/2009 | 9021321 Playground- 7A2 5/29/2009 | 9021322 Playground- 7A3 5/29/2009 | 9021323 Playground- 8A1 5/29/2009 | 9021324 Playground- 8A2 5/29/2009 | 9021325 Playground- 8A3 5/29/2009 | 9021326 Playground- 9A1 5/29/2009 | 9021327 Playground- 9A2 5/29/2009 | 9021328 Playground- 9A3 5/29/2009 |
|---|---|--|--|--|--|--|--|--|--|--|--|-----------------------------------|--|--|--|--|--|--|--|--|--|
| Di-n-butylphthalate | 68000 | | | | | | | | | | | | | | | | | | | | |
| Di-n-octyl phthalate | 27000 | | | | | | | | | | | | | | | | | | | | |
| Fluoranthene | 24000 | | | | | | | | | | | | | | | | | | | | |
| Fluorene | 24000 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobenzene | 1 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorobutadiene | 25 | | | | | | | | | | | | | | | | | | | | |
| Hexachlorocyclopentadiene | 110 | | | | | | | | | | | | | | | | | | | | |
| Hexachloroethane | 140 | | | | | | | | | | | | | | | | | | | | |
| Indeno(1,2,3-cd)pyrene | 2 | | | | | | | | | | | | | | | | | | | | |
| Isophorone | 2000 | | | | | | | | | | | | | | | | | | | | |
| Naphthalene | 17 | | | | | | | | | | | | | | | | | | | | |
| Nitrobenzene | 340 | | | | | | | | | | | | | | | | | | | | |
| N-nitrosodimethylamine | 0.7 | | | | | | | | | | | | | | | | | | | | |
| n-Nitrosodi-n-propylamine | NLE | | | | | | | | | | | | | | | | | | | | |
| n-Nitrosodiphenylamine | NLE | | | | | | | | | | | | | | | | | | | | |
| Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | | |
| Phenanthrene | 300000 | | | | | | | | | | | | | | | | | | | | |
| Phenol | 210000 | | | | | | | | | | | | | | | | | | | | |
| Pyrene | 18000 | | | | | | | | | | | | | | | | | | | | |
| Pyridine | NLE | | | | | | | | | | | | | | | | | | | | |
| TICs | NLE | | | | | | | | | | | | | | | | | | | | |
| Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | | |
| 4,4'-DDD | 13 | 0.006 | 0.040 | 0.055 | 0.019 | 0.050 | 0.048 | 0.010 | 0.507 | 1.292 | 0.013 | 0.527 | 0.102 | 0.011 | 0.004 | 0.146 | 0.008 | 0.003 | 0.211 | 0.044 | 0.025 |
| 4,4'-DDE | 9 | 0.040 | 0.863 | 0.672 | 0.161 | 0.826 | 0.849 | 0.109 | 1.384 | 1.692 | 0.057 | 1.520 | 0.167 | 0.041 | 0.013 | 0.827 | 0.034 | 0.021 | 0.818 | 0.179 | 0.083 |
| 4,4'-DDT | 8 | 0.048 | 0.815 | 0.583 | 0.087 | 0.607 | 0.509 | 0.036 | 1.347 | 3.393 | 0.040 | 1.440 | 0.467 | 0.018 | 0.005 | 0.619 | 0.014 | 0.004 | 1.014 | 0.003 | 0.025 |
| Aldrin | 0.2 | ND | ND | ND | ND | 0.003 | ND | ND | 0.003 | ND | ND | 0.003 | ND |
| alpha-BHC | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| alpha-Chlordane | NLE | ND | ND | ND | ND | 0.005 | ND | ND | 0.015 | ND | ND | 0.006 | 0.007 | ND |
| Arochlor 1016 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arochlor 1221 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arochlor 1232 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arochlor 1242 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arochlor 1248 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arochlor 1254 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Arochlor 1260 | NLE | ND | 0.201 | 0.143 | 0.0747 | 0.0725 | 0.0445 | ND | 0.131 | 0.143 | ND | 0.0804 | 0.0782 | ND | ND | 0.139 | 0.0747 | ND | 0.147 | ND | ND |
| beta-BHC | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| delta-BHC | NLE | ND | 0.003 | 0.003 | 0.003 | 0.003 | 0.002 | 0.002 | 0.003 | ND | ND | 0.003 | 0.003 | ND | 0.002 | 0.003 | 0.003 | ND | ND | ND | 0.003 |
| Dieldrin | 0.2 | ND | 0.005 | 0.004 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Endosulfan I | NLE | ND | 0.003 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Endosulfan II | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Endosulfan-Sulfate | 6800 | ND | 0.006 | 0.005 | 0.003 | 0.006 | 0.003 | ND | 0.049 | ND | ND | 0.010 | ND |
| Endrin | 340 | ND | ND | 0.004 | ND |
| Endrin Aldehyde | NLE | ND | 0.013 | 0.009 | ND | 0.009 | ND | ND | ND | ND | ND | 0.006 | 0.006 | ND | ND | 0.007 | ND | ND | ND | ND | ND |
| gamma-BHC | NLE | ND | ND | ND | ND | 0.003 | ND | 0.003 | ND | ND | ND | ND | ND | ND | 0.002 | 0.004 | 0.003 | 0.003 | 0.005 | 0.003 | 0.003 |
| gamma-Chlordane | NLE | ND | 0.008 | ND | ND | 0.006 | 0.004 | ND |
| Heptachlor | 0.7 | 0.004 | 0.003 | ND | 0.005 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| Heptachlor Epoxide | 0.3 | ND | 0.005 | ND | ND | ND | ND | ND | 0.005 | ND | ND | 0.013 | 0.003 | ND | ND | 0.005 | ND | ND | ND | ND | ND |
| Toxaphene | 3 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria | 9021309 Playground- 3A3 | 9021310 Playground- 4A1 | 9021311 Playground- 4A2 | 9021312 Playground- 4A3 | 9021313 Playground- 5A1 | 9021314 Playground- 5A2 | 9021315 Playground- 5A3 | 9021316 Playground- 6A1 | 9021317 Playground- 6A2 | 9021318 Playground- 6A3 | 9021319 Duplicate 5/29/2009 | 9021320 Playground- 7A1 | 9021321 Playground- 7A2 | 9021322 Playground- 7A3 | 9021323 Playground- 8A1 | 9021324 Playground- 8A2 | 9021325 Playground- 8A3 | 9021326 Playground- 9A1 | 9021327 Playground- 9A2 | 9021328 Playground- 9A3 |
|---|------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| | (mg/kg) | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | -,, | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 |
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | | | | | | | | | | | | | | | | | | | | |
| Antimony | 450 | | | | | | | | | | | | | | | | | | | | |
| Arsenic | NLE | | | | | | | | | | | | | | | | | | | | l l |
| Barium | 59000 | | | | | | | | | | | | | | | | | | | | |
| Beryllium | 140 | | | | | | | | | | | | | | | | | | | | 1 |
| Cadmium | 78 | | | | | | | | | | | | | | | | | | | | |
| Calcium | NLE | | | | | | | | | | | | | | | | | | | | 1 |
| Chromium | NLE | | | | | | | | | | | | | | | | | | | | |
| Cobalt | 590 | | | | | | | | | | | | | | | | | | | | l l |
| Copper | 45000 | | | | | | | | | | | | | | | | | | | | |
| Iron | NLE | | | | | | | | | | | | | | | | | | | | |
| Lead | 800 | | | | | | | | | | | | | | | | | | | | |
| Magnesium | NLE | | | | | | | | | | | | | | | | | | | | l l |
| Manganese | 5900 | | | | | | | | | | | | | | | | | | | | |
| Nickel | 23000 | | | | | | | | | | | | | | | | | | | | ŀ |
| Potassium | NLE | | | | | | | | | | | | | | | | | | | | |
| Selenium | 5700 | | | | | | | | | | | | | | | | | | | | 1 |
| Silver | 5700 | | | | | | | | | | | | | | | | | | | | |
| Sodium | NLE | | | | | | | | | | | | | | | | | | | | |
| Thallium | 79 | | | | | | | | | | | | | | | | | | | | |
| Vanadium | 1100 | | | | | | | | | | | | | | | | | | | | |
| Zinc | 110000 | | | | | | | | | | | | | | | | | | | | |

| Lab Camulo ID | NJDEP | 9021329 | 9021330 | 0021221 | 9021332 | 9021401 | 9021402 | 9021403 | 9021404 | 9021405 | 9021406 | 9021407 | 9021408 | 9021409 | 9021410 | 0021411 | 9021412 | 0021412 | 0021414 | |
|---|---------------------|----------------------|----------------------|---------------------------------|----------------------|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|------------------------|--------------------|--------------------|--------------------|---------------------------------------|----------------------------|---------------------------------------|---------------------------------------|-------------------|
| Lab Sample ID Field Sample Location Sample Date | Cleanup Criteria | Mulch-1 5/29/2009 | Mulch-2 5/29/2009 | 9021331 Mulch-3 5/29/2009 | Mulch-4 5/29/2009 | Playground- 1A1 | Playground- 2A1 | Playground- 3A1 | Playground- 4A1 | Playground- 5A1 | Playground- 6A1 | Duplicate 5/29/2009 | Playground- 7A1 | Playground- 8A1 | Playground- 9A1 | 9021411 Mulch -1 0-6" 5/29/2009 | Mulch -2 0-6" 5/29/2009 | 9021413 Mulch -3 0-6" 5/29/2009 | 9021414 Mulch -4 0-6" 5/29/2009 | |
| Sample Date | (mg/kg) | 3/29/2009 | 3/29/2009 | 3/29/2009 | 3/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 3/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 3/29/2009 | 3/29/2009 | 3/29/2009 | 3/29/2009 | |
| Volatiles | | | | | | | | | | | | | | | | | | | | |
| 1, 1-Dichloroethane | 24 | | | | | | | | | | | | | | | | | | | $\overline{}$ |
| 1,1,1-Trichloroethane | 4200 | | | | | | | | | | | | | | | | | | | |
| 1,1,2,2-Tetrachloroethane | 3 | | | | | | | | | | | | | | | | | | | |
| 1,1,2-Trichloroethane | 6 | | | | | | | | | | | | | | | | | | | |
| 1,1-Dichloroethene | 150 | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloroethane | 3 | | | | | | | | | | | | | | | | | | | |
| 1,2-Dichloropropane | 5 | | | | | | | | | | | | | | | | | | | |
| 2-Butanone | 44000 | | | | | | | | | | | | | | | | | | | |
| 2-Chloroethyl vinyl ether | NLE | | | | | | | | | | | | | | | | | | | |
| 2-Hexanone | NLE | | | | | | | | | | | | | | | | | | | |
| 4-Methyl-2-pentanone | NLE | | | | | | - | | | | | | | | | | | | | |
| Acetone | NLE | | | | | | | | | | | | | | | | | | | |
| Acrolein | 1 | | | | | | | | | | | | | | | | | | | |
| Acrylonitrile | 3 | | | | | | | | | | | | | | | | | | | |
| Benzene | 5 | | | | | | | | | | | | | | | | | | | |
| Bromodichloromethane | 3 | | | | | | | | | | | | | | | | | | | |
| Bromoform | 280 | | | | | | | | | | | | | | | | | | | |
| Bromomethane | NLE | | | | | | | | | | | | | | | | | | | |
| Carbon disulfide | 110000 | | | | | | - | | | | | | | | | | | | | |
| Carbon Tetrachloride | 2 | | | | | | | | | | | | | | | | | | | |
| Chlorobenzene | 7400 | | | | | | - | | | | | | | | | | | | | |
| Chloroethane | 1100 | | | | | | | | | | | | | | | | | | | |
| Chloroform | 2 | | | | | | | | | | | | | | | | | | | |
| Chloromethane | 12 | | | | | | | | | | | | | | | | | | | |
| cis-1,2-Dichloroethene | 560 | | | | | | | | | | | | | | | | | | | |
| cis-1,3-Dichloropropene | NLE | | | | | | | | | | | | | | | | | | | |
| Dibromochloromethane | 8 | | | | | | | | | | | | | | | | | | | |
| Dichlorodifluoromethane | NLE | | | | | | | | | | | | | | | | | | | |
| Diisopropyl ether | NLE | | | | | | | | | | | | | | | | | | | |
| Ethylbenzene | 110000 | | | | | | | | | | | | | | | | | | | |
| m+p-Xylenes | NLE | | | | | | | | | | | | | | | | | | | |
| Methyl tert-butyl ether | 320 | | | | | | | | | | | | | | | | | | | |
| Methylene chloride | 97 | | | | | | | | | | | | | | | | | | | |
| o-Xylene Styrene | NLE | | | | | | | | | | | | | | | | | | | |
| tert-Butyl alcohol | 260 | | | | | | | | | | | | | | | | | | | |
| Tetrachloroethene | 11000 5 | | | | | | | | | | | | | | | | | | | |
| TICs | NLE | | | | | | | | | | | | | | | | | | | |
| Toluene | 91000 | | | | | | | | | | | | | | | | | | | |
| trans-1,2-Dichloroethene | 720 | | | | | | | | | | | | | | | | | | | |
| trans-1,3-Dichloropropene | NLE | | | | | | | | | | | | | | | | | | | |
| Trichloroethene | 20 | | | | | | | | | | | | | | | | | | | |
| Trichlorofluoromethane | 340000 | | | | | | | | | | | | | | | | | | | |
| Vinyl Acetate | NLE | | | | | | | | | | | | | | | | | | | |
| Vinyl chloride | 2 | | | | | | | | | | | | | | | | | | | |
| , | | | | | | | | | | | 1 | | | 1 | | 1 | | | | |

Notes

| Marche M | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---------------------|--------------------|--------------------|--------------------|--------------------|------------------------|------------------------|------------------------|------------------------|------------------------|------------------------|----------------------|------------------------|------------------------|------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|--|
| Section Part Section | Lab Sample ID Field Sample Location | NJDEP Cleanup | 9021329 Mulch-1 | 9021330 Mulch-2 | 9021331 Mulch-3 | 9021332 Mulch-4 | 9021401 Playground- | 9021402 Playground- | 9021403 Playground- | 9021404 Playground- | 9021405 Playground- | 9021406 Playground- | 9021407 Duplicate | 9021408 Playground- | 9021409 Playground- | 9021410 Playground- | 9021411 Mulch -1 0-6" | 9021412 Mulch -2 0-6" | 9021413 Mulch -3 0-6" | 9021414 Mulch -4 0-6" | | |
| 2.50 | Sample Date | Criteria (mg/kg) | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 1A1 5/29/2009 | 2A1 5/29/2009 | 3A1 5/29/2009 | 4A1 5/29/2009 | 5A1 5/29/2009 | 6A1 5/29/2009 | 5/29/2009 | 7A1 5/29/2009 | 8A1 5/29/2009 | 9A1 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | | |
| 2.50 | Comi Volatilos | | | | | | | | | | | | | | | | | | | | | |
| Section Sect | | 820 | | | | | 1 | 1 | | | | | I | 1 | 1 | | I | | | | I | |
| Description Company | | | | | | | | | | | | | | | | | | | | | | |
| Accompanion 13 | • | - | | | | | | | | | | | | | | | | | | | | |
| Act - Contemporal Contempo | | | | | | | | | | | | | | | | | | | | | | |
| Mathematical Mat | | _ | | | | | | | | | | | | | | | | | | | | |
| Accompanion 1,900 | | | | | | | | | | | | | | | | | | | | | | |
| A-Company A-Co | 2,4-Dichlorophenol | _ | | | | | | | | | | | | | | | | | | | | |
| Schimination Same | 2,4-Dimethylphenol | 14000 | | | | | | | | | | | | | | | | | | | | |
| Mathematical Mat | 2,4-Dinitrophenol | 1400 | | | | | | | | | | | | | | | | | | | | |
| Coloraphatheniane | 2,4-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| Composition 2009 10 10 10 10 10 10 10 | 2,6-Dinitrotoluene | 3 | | | | | | | | | | | | | | | | | | | | |
| Substitution Subs | 2-Chloronaphthalene | NLE | | | | | | | | | | | | | | | | | | | | |
| Settlement 1906 1 | 2-Chlorophenol | 2200 | | | | | | | | | | | | | | | | | | | | |
| Streethoule 19.00 | 2-Methylnaphthalene | 2400 | | | | | | | | | | | | | | | | | | | | |
| 2-morphoridation | | 3400 | | | | | | | | | | | | | | | | | | | | |
| Streamformer | 2-Nitroaniline | 23000 | | | | | | | | | | | | | | | | | | | | |
| -Monthing MLE 1 1 1 1 1 1 1 1 1 | | NLE | | | | | | | | | | | | | | | | | | | | |
| A-Distribution NLE | | 4 | | | | | | | | | | | | | | | | | | | | |
| Astronophysical files of the Section of Male | | NLE | | | | | | | | | | | | | | | | | | | | |
| Content | | _ | | | | | | | | | | | | | | | | | | | | |
| -Chicagolling of Berling 1949 1949 1949 1949 1949 1949 1949 194 | | | | | | | | | | | | | | | | | | | | | | |
| | | - | | | | | | | | | | | | | | | | | | | | |
| ### Afterplaned NLE | | | | | | | | | | | | | | | | | | | | | | |
| Actividation of NLE 10 10 10 10 10 10 10 1 | | - | | | | | | | | | | | | | | | | | | | | |
| -Microphand NLE S S S S S S S S S | | | | | | | | | | | | | | | | | | | | | | |
| Acmaphthene 37000 | | _ | | | | | | | | | | | | | | | | | | | | |
| Acamphitylene Analine NLE NLE NLO Anthrocome 30000 NLE Marchiacome NLE Mar | | | | | | | | | | | | | | | | | | | | | | |
| Anthracene 3000 | | _ | | | | | | | | | | | | | | | | | | | | |
| Arbitracene 3000 | | | | | | | | | | | | | | | | | | | | | | |
| Azobenzene NLE Benzidine 0.7 0.8 0.9 0.9 0.9 0.0 Benzio(a)pryrene 0.2 Benzio(a,h)perylene 30000 Benzio(a,h)perylene 40000 Benzio(a,h)perylene 400000 Benzio(a,h)perylene 40000 Benzio(a,h)perylene 40000 Benz | | - | | | | | | | | | | | | | | | | | | | | |
| Benzidine 0.7 0.7 0.8 0. | | | | | | | | | | | | | | | | | | | | | | |
| Benzo(a)nthracene 2 | | | | | | | | | | | | | | | | | | | | | | |
| Denzo(a) pyrene 0.2 0.2 0.3 0.4 0.5 | | | | | | | | | | | | | | | | | | | | | | |
| Benzo(g,h,i)perylene 30000 Benzo(g,h,i)perylene 23 Benzo(g,h,i)perylene 24 Benzo(g,h,i)perylene 25 Benzo(g,h,i)perylene 25 Benzo(g,h,i)perylene 26 Benzo(g,h,i)perylene 27 Bis(2-chlorosthy)ethane NLE 15 Bis(2-chlorosthy)ethane 15 Bis(2- | | | | | | | | | | | | | | | | | | | | | | |
| Benzo(g,h,i)perylene 30000 | | | | | | | | | | | | | | | | | | | | | | |
| Benzo(k)fluoranthene 23 | | _ | | | | | | | | | | | | | | | | | | | | |
| Benzoic Acid NLE | | | | | | | | | | | | | | | | | | | | | | |
| Benzyl alcohol NLE | | | | | | | | | | | | | | | | | | | | | | |
| bis(2-Chlorethyl)ether 2 | Benzyl alcohol | NLE | | | | | | | | | | | | | | | | | | | | |
| bis(2-chloroisopropyl)ether 67 | bis(2-Chloroethoxy)methane | NLE | | | | | | | | | | | | | | | | | | | | |
| bis(2-ethylhexyl) phthalate | bis(2-Chloroethyl)ether | 2 | | | | | | | | | | | | | | | | | | | | |
| Butyl benzyl phthalate 14000 Identify benzyl phthalate | bis(2-chloroisopropyl)ether | 67 | | | | | | | | | | | | | | | | | | | | |
| Chrysene 230 Dibenz(a,h)anthracene 0.2 | bis(2-ethylhexyl) phthalate | 140 | | | | | | | | | | | | | | | | | | | | |
| Dibenz(a,h)anthracene 0.2 | Butyl benzyl phthalate | 14000 | | | | | | | | | | | | | | | | | | | | |
| | | 230 | | | | | | | | | | | | | | | | | | | | |
| Dibenzofuran NLE | | | | | | | | | | | | | | | | | | | | | | |
| | | _ | | | | | | | | | | | | | | | | | | | | |
| Diethyl phthalate 550000 Storm | | | | | | | | | | | | | | | | | | | | | | |
| Dimethyl phthalate NLE | Dimethyl phthalate | NLE | | | | | | | | | | | | | | | | | | | | |

| Part | | | | | | | | | | | | | | | | | | | | | |
|---|---|----------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|-----------|-----------|-------------------------------|-------------------------------|-------------------------------|-----------|-----------------------------------|-----------|-----------|-------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|-------|
| Part | Lab Sample ID Field Sample Location Sample Date | Criteria | 9021329 Mulch-1 5/29/2009 | 9021330 Mulch-2 5/29/2009 | 9021331 Mulch-3 5/29/2009 | 9021332 Mulch-4 5/29/2009 | 1A1 | 2A1 | 9021403 Playground- 3A1 | 9021404 Playground- 4A1 | 9021405 Playground- 5A1 | 6A1 | 9021407 Duplicate 5/29/2009 | 7A1 | 8A1 | 9021410 Playground- 9A1 | 9021411 Mulch -1 0-6" 5/29/2009 | 9021412 Mulch -2 0-6" 5/29/2009 | 9021413 Mulch -3 0-6" 5/29/2009 | 9021414 Mulch -4 0-6" 5/29/2009 | |
| Maritaniane 1909 1 | | | | | | | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | 5/29/2009 | | 5/29/2009 | 5/29/2009 | 5/29/2009 | | | | | |
| Part | * * | | | | | | | | | | | | | | | | | | | | |
| Marie Continue | | | | | | | | | | | | | | | | | | | | | |
| Mathematical Math | | | | | | | | | | | | | | | | | | | | | |
| Content | | | | | | | | | | | | | | | | | | | | | |
| Marie Continue | | | | | | | | | | | | | | | | | | | | | |
| Marie Mari | | | | | | | | | | | | | | | | | | | | | |
| Marchander 1 | | | | | | | | | | | | | | | | | | | | | |
| Mathematic 17 18 18 18 18 18 18 18 | | 140 | | | | | | | | | | | | | | | | | | | |
| Marie Mari | | | | | | | | | | | | | | | | | | | | | |
| Marie Content | | 2000 | | | | | | | | | | | | | | | | | | | |
| Processes of the pro | Naphthalene | | | | | | | | | | | | | | | | | | | | |
| Second personal per | Nitrobenzene | 340 | | | | | | | | | | | | | | | | | | | |
| Particulariciparity Particular Particu | | | | | | | | | | | | | | | | | | | | | |
| Particular Marie | | NLE | | | | | | | | | | | | | | | | | | | |
| Second S | n-Nitrosodiphenylamine | NLE | | | | | | | | | | | | | | | | | | | |
| Name 1900 | Pentachlorophenol | 10 | | | | | | | | | | | | | | | | | | | |
| Personal Dissolution 1800 | Phenanthrene | 300000 | | | | | | | | | | | | | | | | | | | |
| Pyridine NLE N | Phenol | 210000 | | | | | | | | | | | | | | | | | | | |
| Postsicides/PCBS ***T-000 | | 18000 | | | | | | | | | | | | | | | | | | | |
| Pesticides / PCBs 4.4-DDD 33 0.048 0.014 0.025 0.005 11.71 39.1 187 23.7 21.8 77.2 114 18.7 30.4 27.4 ND ND ND ND ND ND ND N | Pyridine | NLE | | | | | | | | | | | | | | | | | | | |
| ## POPO 13 0.048 0.014 0.025 0.005 11.7 39.1 187 23.7 21.8 77.2 114 18.7 30.4 27.4 ND ND ND ND ND ND ND N | TICs | NLE | | | | | | | | | | | | | | | | | | | |
| ## POPO 13 0.048 0.014 0.025 0.005 11.7 39.1 187 23.7 21.8 77.2 114 18.7 30.4 27.4 ND ND ND ND ND ND ND N | Pesticides/PCBs | | | | | | | | | | | | | | | | | | | | |
| 4-PDT 8 0.070 0.016 0.067 0.048 278 801 3290 454 402 1670 1830 221 327 815 ND | | 13 | 0.048 | 0.014 | 0.025 | 0.005 | 11.7 J | 39.1 | 187 | 23.7 | 21.8 | 77.2 | 114 | 18.7 | 30.4 | 27.4 | ND | ND | ND | ND | T |
| Audrin | 4,4'-DDE | 9 | 0.039 | 0.017 | 0.043 | 0.021 | 544 | 1140 | 2650 | 842 | 795 | 1710 | 1740 | 130 | 563 | 869 | ND | ND | ND | 9.76 J | |
| Applie-BHC NLE 0.036 0.013 0.077 ND ND ND ND ND ND ND | 4,4'-DDT | 8 | 0.070 | 0.016 | 0.067 | 0.048 | 278 | 801 | 3290 | 454 | 402 | 1670 | 1830 | 221 | 327 | 815 | ND | ND | 21.3 | ND | |
| September Nice 0.017 0.006 0.026 0.015 | Aldrin | 0.2 | 0.036 | 0.010 | 0.024 | 0.008 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Arochior 10.16 | alpha-BHC | NLE | 0.036 | 0.013 | 0.077 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Arechlor 1221 NLE ND | alpha-Chlordane | NLE | 0.017 | 0.006 | 0.026 | 0.015 | | | | | | | | | | | | | | | |
| Arochior 1232 NLE ND | Arochlor 1016 | NLE | ND | 0.281 | 0.432 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Arochlor 1242 NLE ND | Arochlor 1221 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Arochlor 1248 NLE ND | Arochlor 1232 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Arochlor 1254 NLE ND | Arochlor 1242 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Arochior 1254 NLE ND | Arochlor 1248 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Deta-BHC NLE ND 0.023 0.043 0.015 ND ND ND ND ND ND ND N | Arochlor 1254 | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | | |
| NLE ND 0.023 0.043 0.015 ND ND ND ND ND ND ND N | Arochlor 1260 | NLE | 0.831 | 0.533 | ND | 0.102 | 69.4 | 346 | 240 | 241 | 13.7 J | 41.3 J | 48.5 | 40.7 | 27.2 | 31.1 | ND | 32.2 J | 35.3 J | 29.7 J | |
| Dieldrin O.2 0.024 ND ND ND 0.014 ND ND ND ND ND ND ND N | beta-BHC | NLE | ND | | 0.043 | 0.015 | ND | ND | ND | ND | ND | | ND | ND | ND | ND | ND | ND | ND | ND | |
| Endosulfan I NLE ND 0.007 ND ND ND ND ND ND ND N | delta-BHC | | | | | | | | | | | | | | | ND | | | | | |
| Endosulfan II NLE 0.045 ND 0.022 ND ND <th>Dieldrin</th> <th>0.2</th> <th>0.024</th> <th>ND</th> <th>ND</th> <th>0.014</th> <th>ND</th> <th></th> | Dieldrin | 0.2 | 0.024 | ND | ND | 0.014 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Endosulfan II NLE 0.045 ND 0.022 ND ND <th>Endosulfan I</th> <th></th> <th>ND</th> <th></th> <th></th> <th></th> <th></th> | Endosulfan I | | | | | | | | | | | | | | | | ND | | | | |
| Endrin 340 ND | Endosulfan II | NLE | 0.045 | ND | 0.022 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Endrin Aldehyde NLE ND | Endosulfan-Sulfate | 6800 | 0.044 | 0.034 | 0.110 | 0.017 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| gamma-BHC NLE 0.024 ND 0.017 ND | Endrin | 340 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | 10.5 J | ND | ND | |
| gamma-Chlordane | Endrin Aldehyde | NLE | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| gamma-Chlordane | gamma-BHC | | | | | | | | | | | | | | | | | | | | |
| | gamma-Chlordane | | | | | | | | | | | | | | | | | | | | |
| ו לוא לוא | Heptachlor | 0.7 | ND | ND | ND | 0.013 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | |
| Heptachlor Epoxide 0.3 ND | | | | | | | | | | | | | | | | | | | | | |
| Toxaphene 3 ND | Toxaphene | | | | | | | | | | | | | | | | | | | | |

Table 4-1 Soil Sampling Results M-14 Landfill Site 12/23/1998 - 5/13/2010 Fort Monmouth, New Jersey

| Lab Sample ID Field Sample Location Sample Date | NJDEP Cleanup Criteria (mg/kg) | 9021329 Mulch-1 5/29/2009 | 9021330 Mulch-2 5/29/2009 | 9021331 Mulch-3 5/29/2009 | 9021332 Mulch-4 5/29/2009 | 9021401 Playground- 1A1 5/29/2009 | 9021402 Playground- 2A1 5/29/2009 | 9021403 Playground- 3A1 5/29/2009 | 9021404 Playground- 4A1 5/29/2009 | 9021405 Playground- 5A1 5/29/2009 | 9021406 Playground- 6A1 5/29/2009 | 9021407 Duplicate 5/29/2009 | 9021408 Playground- 7A1 5/29/2009 | 9021409 Playground- 8A1 5/29/2009 | 9021410 Playground- 9A1 5/29/2009 | 9021411 Mulch -1 0-6" 5/29/2009 | 9021412 Mulch -2 0-6" 5/29/2009 | 9021413 Mulch -3 0-6" 5/29/2009 | 9021414 Mulch -4 0-6" 5/29/2009 | | |
|---|---|---------------------------------|---------------------------------|---------------------------------|---------------------------------|--|--|--|--|--|--|-----------------------------------|--|--|--|---------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|---|--|
| Metals | | | | | | | | | | | | | | | | | | | | | |
| Aluminum | NLE | | | | | | | | | | | | | | | | | | | | |
| Antimony | 450 | | | | | | | | | | | | | | | | | | | | |
| Arsenic | NLE | | | | | | | | | | | | | | | | | | | | |
| Barium | 59000 | | | | | | | | | | | | | | | | | | | | |
| Beryllium | 140 | | | | | | | | | | | | | | | | | | | | |
| Cadmium | 78 | | | | | | | | | | | | | | | | | | | | |
| Calcium | NLE | | | | | | | | | | | | | | | | | | | Ų | |
| Chromium | NLE | | | | | | | | | | | | | | | | | | | | |
| Cobalt | 590 | | | | | | | | | | | | | | | | | | | Ų | |
| Copper | 45000 | | | | | | | | | | | | | | | | | | | | |
| Iron | NLE | | | | | | | | | | | | | | | | | | | Ų | |
| Lead | 800 | | | | | | | | | | | | | | | | | | | | |
| Magnesium | NLE | | | | | | | | | | | | | | | | | | | | |
| Manganese | 5900 | | | | | | | | | | | | | | | | | | | | |
| Nickel | 23000 | | | | | | | | | | | | | | | | | | | | |
| Potassium | NLE | | | | | | | | | | | | | | | | | | | | |
| Selenium | 5700 | | | | | | | | | | | | | | | | | | | | |
| Silver | 5700 | | | | | | | | | | | | | | | | | | | | |
| Sodium | NLE | | | | | | | | | | | | | | | | | | | | |
| Thallium | 79 | | | | | | | | | | | | | | | | | | | | |
| Vanadium | 1100 | | | | | | | | | | | | | | | | | | | | |
| Zinc | 110000 | | | | | | | | | | | | | | | | | | | | |

Attachment C Field Notes

34 Dogwood Lane Middletown, PA 07057

CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /

| COC #: GOSS <i>-01-2020</i> 0130 | 1 |
|----------------------------------|----|
| | of |
| ALS Quote #: | 2 |

| Environmental (717) 944-5 | 5541 | | | | | SAMPL | er. Inst | TRUCTIO | NS ON T | HE BAC | Κ. | | | | | | | | |
|--|-------------------------------|--|----------------------|------------|-----------------------------|-----------|---------------|-------------|------------|-------------|------------|-----------|----------------------|--|-----------------|--|-----------|--------------|-------------------------|
| Client Name: Parsons Federal | | | Containe | эт Туре | AN. | | 10.416.000.00 | | | | | | | | Receipt I | nformation (comple | ted by | Recei | ving Lab) |
| Address: 100 High St. 4th Floor | | | Containe | er Size | 4 oz | | | | | | | | | | Cooler Te | mp: Then | m ID: | | |
| Boston, MA 02110 | | | Preserv | vative | 4c | | | | | | | | | | No. of Cool | ers: | Υ | N | Initial |
| Contact: Lorraine Weber | | | 10 m | | | | ANAI | LYSES/ME | THOD RE | QUESTE | Ď | | | |] c | ustody Seals Present | ? 🔲 | | |
| Phone#: 315-552-9745 | | | 200 | | | | | | | | | | | | (i) | present) Seals Intact | ? | | |
| Project Name/#: Gosselin Area Pesticides In | ivestigation | | | | | 0.00 | | | | | | | | | | Received on Ice | - | | |
| Bill To: Parsons Federal | | | | | | | | | | | | | | | COC/Labe | ls Complete/Accurate | - | Н | |
| TAT X Normal-Standard TAT is 10-12 | | | | | 808 | | | | | | | | | ₹ | | Cont. in Good Cond. | - | Ц | |
| Rush-Subject to ALS approva | | | | | Pesticides (full list) 8081 | | | | | | | | | AUTHORIZED TO RUN | | Correct Containers | \vdash | Н | |
| | Approved | | | | ₹ | | | | 2.5 | | | | | TED. | Cor | rect Sample Volumes | ш | Н | |
| Email? X -Y <u>lorraine.weber@pars</u> Fax? -Y No.: | SUNS.GOI | 4 | | | sepi | | | | | | | | | R | | Correct Preservation | H | Н | |
| Sample Description/Location | Sample | | ว | ΙΞ | estic | | | | | | | | | ∣ E | CassainalTaa | Headspace/Volatiles | ? | | |
| (as it will appear on the lab report) | Date | Time | *G or C | **Matrix | <u> </u> | | Enter Numb | er of Conta | iners Per | Sample or I | Field Resu | its Below | 5-25-20 | ব | Courier/Tra | Sample/COC C | ommen | ts | |
| 1 GOSS-SB-01-0:0-0.5 | of Otto Indonesia Programment | 0940 | de montanelistaviste | #1800E181 | S Bis planting | | | | | | | | | | | | | | |
| | والاتا | INSTER AVAIGNMENT SERVING SERVING | 4 54000000 | SO. | 1 | | | | 200 | | | | | X | | | | | |
| 2 GOSS-SB-02-0:0-0.5 | | 0945 | G | SO. | 1. | | | | | | | | | X | | | | | |
| 3 GOSS-SB-03-0,0-0.5 | | 0950 | G | SO | 1 | | | | | | | | | X | | | | | |
| 4 GOSS-SB-04-0.0-0.5 | | 0920 | Ö | so | 1 | | | | | | | | | X | | | | | |
| 5 GOSS-SB-05-0:0-0.5 | | 0925 | Ì G | so | 1 | | | | | | | | | Х | | | | · | |
| 6 GOSS-SB-06-0.0-0.5 | | 0930 | | SO. | 1 | | | | | | | | | X | | | | | |
| 7 GOSS-SB-07-0.0-0.5 | | 0910 | G | so | 1 | | | | | | | | | X | | | | | |
| 8 GOSS-SB-08-0.0-0.5 | | | | | | | | | | | | | | Х | + M | 5 + M | SD | | |
| 9 GOSS-SB-09-0.0-0.5 | | 0905 | | SO | 3در 1 | | | | | | | | | X | - | Field Services: _ | | | Labor |
| 10 D29-0.0-0.5 | | LOOC | or anothernment | 2000555400 | 1 | | | | | | | | | X | Com Othe | posite Sampling | Rent | al Equ | ripment |
| Project Comments: 110016.03400 | V | Contract of the Contract of th | - Company | SO. | o nemocenski zamanejon | | | H | | u 2 | g 36 | u 2710 | | | ENAUTANISMASSAS | nia:9420a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a.a. | SERENDONS | 200000000 | |
| MDL Must Meet NJDEP Soil Cleanup Criteria and/or Gro | oundwater_ | LOGGED BY | Y(signatu | ire): | 916 | tuor | li. | | | \$ 1 - X | 2-20 | = X/ C | es | 2 0.000 12 12 12 12 12 12 12 12 12 12 12 12 12 | dard | Special Process | | Art Programs | e Samples |
| Quality/Standards | | REVIEWED | BY(signa | ture): | | | | | | DATE | | TIVE | Data verabl | X CLP | | USACE | | Co | llected in |
| Relinquished By / Company Nam | ne | Date | Tir | ne | | Rece | eived By / (| Company | Name | | Date | Time | Data Deliverables | USA | CE | Nav | у 🔙 | | NY |
| FRANK ACORSI /PM | RSOW | 5 431-20 | 4 | | 2 | | | | | | | |] | | | | | Х | NJ |
| 3 | | | | | 4 | | | | | | | | Repo | rtable to I | PADEP? | Sample Dispo | sal | | PA |
| 5 | | | | | 6 | | | | | | | | Yes | | | Lal | | | NC |
| 7 | | | 1 | | 8 | | | | | | | | PWSID | # | 0.00 | Specia | i | | |
| 9 10 | | | | | | | | | | | | | EDDS | Format Ty | /pe- ERPII | AS & HAZSITE | | | |
| * G=Gra | ab; C=Com | osite ** | Matrix - | A=A | ir; DW=Drin | king Wate | er; GW=Gro | oundwater; | OI=Oil; OL | =Other Liq | uid; SL=S | ludge; SO | ≂Soil; WP | =Wipe; W | W=Wastewa | ater | | *starging. | or tracta strain strain |

| ALS | |
|-----|--|
| | |

34 Dogwood Lane Middletown, PA 07057

CHAIN OF CUSTODY/

REQUEST FOR ANALYSIS
ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT I

| COC #: GOSS-02-20200130 | 2 |
|-------------------------|----|
| | of |
| ALS Quote #: | 2 |

| Environmental (717) 944-5541 | | | | | SAMPL | er. Inst | RUCTION | IS ON T | HE BACK | ί. | | | | | | | | |
|---|------------|--------------|--------------------|-----------------------------|-----------------|--------------|-------------|------------|-----------------------------------|-----------|------------|----------------------|--|--------------------|----------------------|-------------|----------|----------|
| Client Name: Parsons Federal | | Container 1 | Туре | AN | | | | | | | | | | Receipt I | nformation (co | mpleted by | Receivi | ng Lab) |
| Address: 100 High St. 4th Floor | | Container : | Size | 4 oz | | | | | | | | | | Cooler Te | mp: | Therm ID: | | |
| Boston, MA 02110 | | Preservat | tive | 4c | | | | | | | | 18.6 | | No. of Cool | ers: | _ Y | N | Initial |
| Contact: Lorraine Weber | | | | | | ANAL | YSES/MET | THOD RE | QUESTE |) | | | | 7 c | ustody Seals Pr | esent? | | |
| Phone#: 315-552-9745 | | | | | | | | | | | | | | (if | present) Seals | ntact? | | |
| Project Name/#: Gosselin Area Pesticides Investigation | | | | | | | | | | | | | 10000 | | Received of | on Ice? | | |
| Bill To: Parsons Federal | | | | | | | | | | | | | | COC/Labe | s Complete/Acc | urate? | | |
| TAT Normal-Standard TAT is 10-12 business d | ays. | | | | | | | | | | | | RUN | | Cont. in Good | Cond.? | | |
| Rush-Subject to ALS approval and surcha | irges. | | | st) 8 | | | | | | | | | O R | | Correct Conta | iners? | | |
| Date Required: Approved? | | | | = | | | | | | | | | | Car | rect Sample Vol | umes? | | |
| Email? X -Y <u>lorraine.weber@parsons.com</u> | | | | Pesticides (full list) 8081 | | | | | | | | | AUTHORIZED TO | | Correct Presen | ration? | | |
| Fax? Y No.: | | <u>ں</u> ا | . <u>×</u> | stici | | | | | | | | | 1 E | | Headspace/Vol | atiles? | | |
| Sample Description/Location Sample | | *G or | **Matrix | <u>&</u> | | | | | | | | | ₹ | Courier/Tra | | | | |
| (as it will appear on the lab report) Date | Time | 174313470300 | 00069100 (#009402) | estera Assertina | Lucavesta Marco | Enter Numbe | r of Contai | ners Per S | Sample or F | ield Resu | Its Below. | deti senemasi en | According to the contract of t | 00 | Sample/Co | DC Comme | nts | |
| 16055-58-109-0,0-0,5 1-30-20 | 1200 | 4 | 50 | | | | | | | | | | X | | | | | - |
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| 10 | | | | | | | | | | | | | | Com Othe | oosite Samplir r: | igKen | aı Equi | oment |
| Project Comments: 110015.03400 MDL Must Meet NJDEP Soil Cleanup Criteria and/or Groundwater | LOGGED BY(| (signature |): | id | cura | li . | | | #1-30 | -20 | 1210 | S | Sta | ndard | Special Pro | cessing | State | Samples |
| Quality Standards | REVIEWED B | 3Y(signatu | ıre): | | | | | | DATE | | nve. | Data Deliverables | X CLI | ² -like | U(| SACE | 7270 034 | ected In |
| Relinquished By / Company Name | Date | Time | e | | Rece | ived By / Co | ompany N | ame | | Date | Time | ار الا | Us | ACE | | Navy | | VY Y |
| 1 TRANK ACCORSI PARSONS | 1-31-20 | | 2 | | | - | | | | | | ដំ | ٦ | | | | X | VJ |
| 3 | | | 4 | | | | | | | | | Repo | rtable to | PADEP? | Sample D | isposal | × | >A . |
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| 7 | | | 8 | | | | | | | | | PWSIE |)# | | Si | oecial | | |
| 9 | | 10 | | | | | | | EDDS: FormatType ERPIMS & HAZSITE | | | | | | | | | |
| **Matrix - Al=Air; DW=Drinking Water; GW=Groundwater; Ol=Oil; OL=Other Liquid; SL=Sludge; SO=Soil; WP=Wipe; WW=Wastewater | | | | | | | | | | | | | | | | | | |

| Project / Client FUM-69 / USACE Date 1-30-20 | Location | Date | 131 |
|---|------------------|------|-------------|
| Project / Client FTWM-68 /USACE | Project / Client | | |
| | | | |
| | | | |
| Weather-for 30's, Cloudy | | | |
| - Actions - Hand Auger, Soil Sample Dun | | | |
| Farson - UM + FA Passon | | | |
| Personal - UM + PA Parsons | | | |
| | | | |
| Activity | | | |
| 10700 - All onsite, HSE, Discuss Gripler | | | |
| Label Bottlevar a Mob to Gosse Vm | | | |
| 10940 - Collat 6055-5B-01-0,0-0,5 | | | |
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| 1130 - MIL OLDSIN | | | + |
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| | | | . 1 |

Safety Meeting Sign-In Sheet

| Safety Meeting Presenter: Kevin MMull Date: 1-30-20 |
|---|
| Current Weather Conditions: |
| Temp: 25 (Sunny Cloudy – Rain – Other Forecast: Low 30° |
| Temp: 25 Sunny Cloudy - Rain - Other Forecast: Low 30. Activities taking place today: Hand Augs - Soil Sampling - Decon |
| |
| Anticipated Hazards: Slips/Trips/Falls, Uneven Walking Surfaces, Pinch Points, Potential Biological Hazards: ticks, chiggers, mosquitoes, spiders, bees, poison ivy, Contact with Harmful Contaminants and/or Preservatives, Heavy Lifting, Back Strain, Driving to/from or on Site, Exposure to Loud/Excessive Noise, Contact with Sharp/Rough Surfaces. Other: No Rus H - Faus Back Strain |
| |
| Engineering Controls/Work Practices/PPE to Protect Against Hazards: Inspect work area and be careful when walking around the site; Wear proper PPE:High visibility clothing, hardhat, safety glasses, work gloves, nitrile gloves, ear plugs/muffs; Inspect |

| PRINTED NAME | <u>SIGNATURE</u> | COMPANY |
|---------------|------------------|----------|
| Kerin MMalk | 12m | Parson |
| TRANK Accaes, | J. Guori | GAR SONS |
| | | |
| | | |
| | | |
| | | |

frequent breaks; Review relevant AHAs and site HASP; Work smart, Work SAFE.