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Post-Soil Removal Groundwater Evaluation

for

Former Melville North Landfill

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Naval Station Newport
Newport, Rhode Island

Engineering Field Activity Northeast
Naval Facilities Engineering Command

Contract Number N62467-94-D-0888
Contract Task Order 0842

October 2004

TETRA TECH NUS, INC.

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POST-SOIL REMOVAL GROUNDWATER EVALUATION

FOR

FORMER MELVILLE NORTH LANDFILL

NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

COMPREHENSIVE LONG-TERM
ENVIRONMENTAL ACTION NAVY (CLEAN) CONTRACT

Submitted to:
Engineering Field Activity Northeast
Environmental Branch Code 18
Naval Facilities Engineering Command
10 Industrial Highway, Mail Stop #82
Lester, Pennsylvania 19113-2090

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October 2004

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1.0 INTRODUCTION

This report has been prepared under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract No. N62472-94-D-0888, Contract Task Order (CTO) 842. This report describes the field work and the analytical results from sampling of monitoring wells at the former Melville North Landfill (the Site), located in the Naval Station (NAVSTA) Newport, in Portsmouth, Rhode Island.

Figure 1-1 presents the location of the former Melville North Landfill.

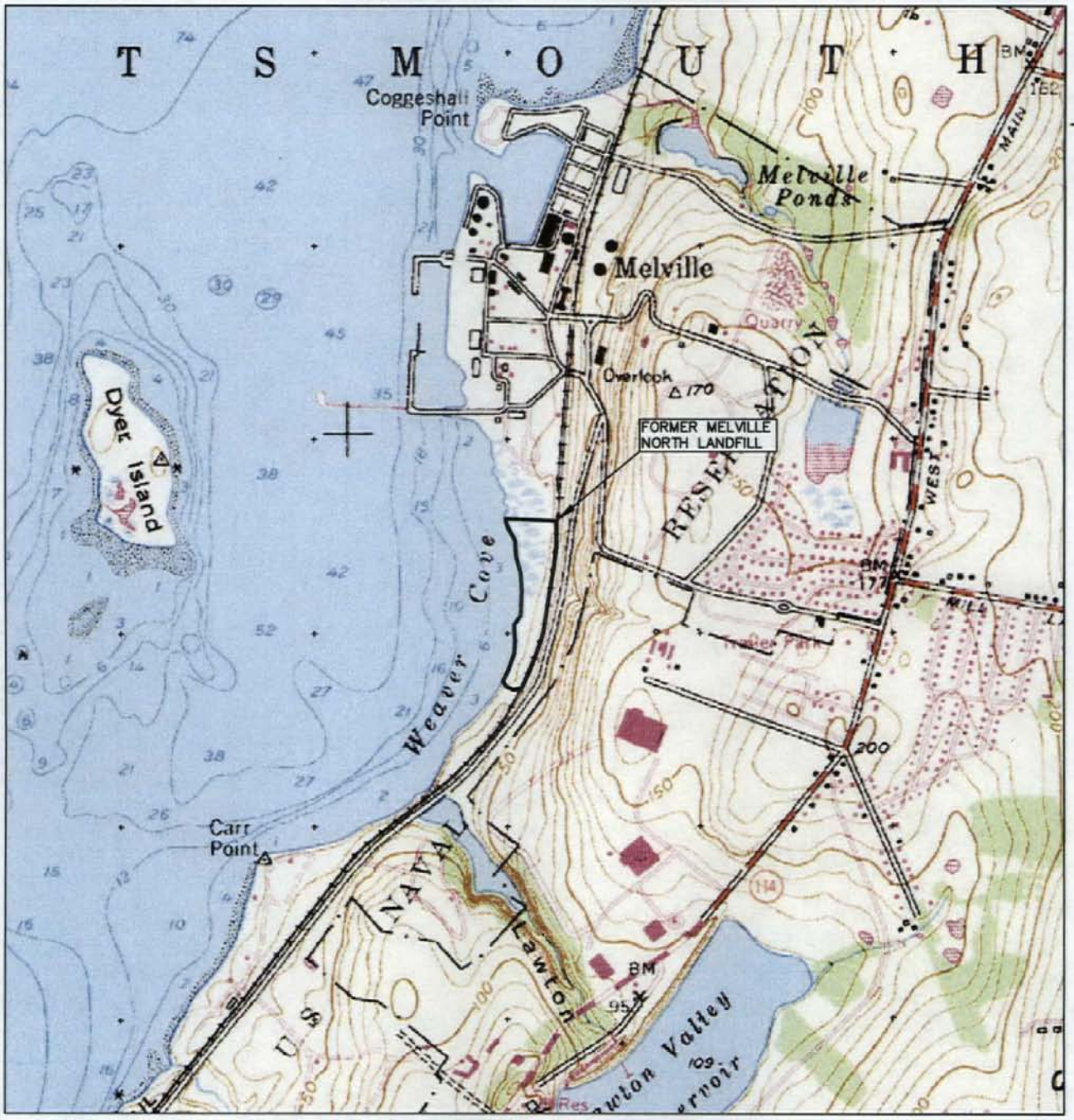
1.1 OBJECTIVE

The objective of this effort is to evaluate groundwater quality at the Site following the soil removal completed in 2000. This evaluation was requested by the Rhode Island Department of Environmental Management (RIDEM). Although soil had been addressed at the Site through a series of removal actions, RIDEM was concerned that groundwater had not been evaluated since the completion of those actions.

The field investigation and analysis work was conducted in accordance with the Work Plan for Groundwater Monitoring, Former Melville North Landfill, Naval Station Newport, Newport, Rhode Island (Work Plan) (TtNUS, 2003). Groundwater monitoring wells were installed on August 12-13, 2003, and an initial round of samples was collected August 18-19, 2003. Additional groundwater sample collection rounds were conducted on April 20, 2004 (Round 2), and August 26-27, 2004 (Round 3), to provide information for varied groundwater conditions. In this manner low (Rounds 1 and 3) and high (Round 2) groundwater conditions were evaluated at the Site.

1.2 REPORT FORMAT

Section 1 of this report describes the objectives of the study. Section 2 presents the location of the Site and site description, as well as a brief background of the site as it pertains to this study. Section 3 presents a description of the data collection activities conducted for this groundwater investigation. This includes the rationale for placement of the monitoring wells, a description of well installation efforts, and data acquisition procedures and analysis. Section 4 presents the findings of the investigation and Section 5 presents conclusions and recommendations.



BASE MAP IS A PORTION OF THE FOLLOWING 7.5 X 15 MINUTE U.S.G.S. QUADRANGLE: PRUDENCE ISLAND, RHODE ISLAND, 1955, PHOTOREVISED 1970 AND 1975

GRAPHIC SCALE
0 — 0.5 MILE — 1 MILE

QUADRANGLE LOCATION

SITE LOCUS	FIGURE 1–1
FORMER MELVILLE NORTH LANDFILL	TETRA TECH NUS, INC.
PORTSMOUTH, RHODE ISLAND	

DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	S. PARKER	DATE:	OCTOBER 14, 2004
SCALE:	AS NOTED	ACAD NAME:	DWG\5152\3503\FIG_1-1.DWG

55 Jonspin Road Wilmington, MA 01887
(978)658-7899

2.0 BACKGROUND INFORMATION

This section presents a description of the Site and background information pertinent to the monitoring work conducted. Additional information on the site is provided in the Final Site Investigation Report for Melville North Landfill, (Brown & Root Environmental, 1997).

2.1 SITE LOCATION AND DESCRIPTION

NAVSTA Newport is located in the City of Newport, and Towns of Middletown and Portsmouth, Rhode Island, on the western shore of Aquidneck Island facing the east passage of Narragansett Bay (Figure 1-1). The former Melville North Landfill is located in the northern portion of NAVSTA Newport on the shoreline of Narragansett Bay in the Town of Portsmouth. The Site is approximately 10 acres in size and was used as a landfill from World War II until 1955. The Site was excessed to the State of Rhode Island in September 1993, and was sold to Melville Marine Industries six months later.

Access to the former Melville North Landfill is gained from the east via Defense Highway. The Site is bounded to the west by Narragansett Bay, to the east by the Penn Central railroad tracks and Defense Highway (also known as Burma Road), to the north by vegetated wetlands, and to the south by a wooded upland area. The topography of the Site is relatively flat with a decrease in elevation between 5 and 10 feet along the shoreline and an increase in elevation between 5 and 10 feet along Defense Highway.

2.2 SITE HISTORY

The approximate 10-acre site was used as a landfill for at least the period following World War II until 1955. The date landfill operations began at the site is unclear, but indications are that use began after the war. Following its closure in 1954, wastes generated at the Naval complex were disposed of at the McAllister Point Landfill.

The landfill reportedly received a variety of waste materials from World War II until 1955. These wastes included spent acids, various waste oils, solvents, waste paints, and possibly polychlorinated biphenyls (PCBs). Initial inspections of the Site also revealed mounds of oil-soaked soil and surface areas that were covered with oil and oil sludge. It was reported that the mounds of oil-soaked soil came from disposal of the oil sludge material generated while cleaning fuel supply tanks at the nearby tank farms, or from cleanup operations of various oil spills. The quantity of waste disposed of in the landfill is unknown.

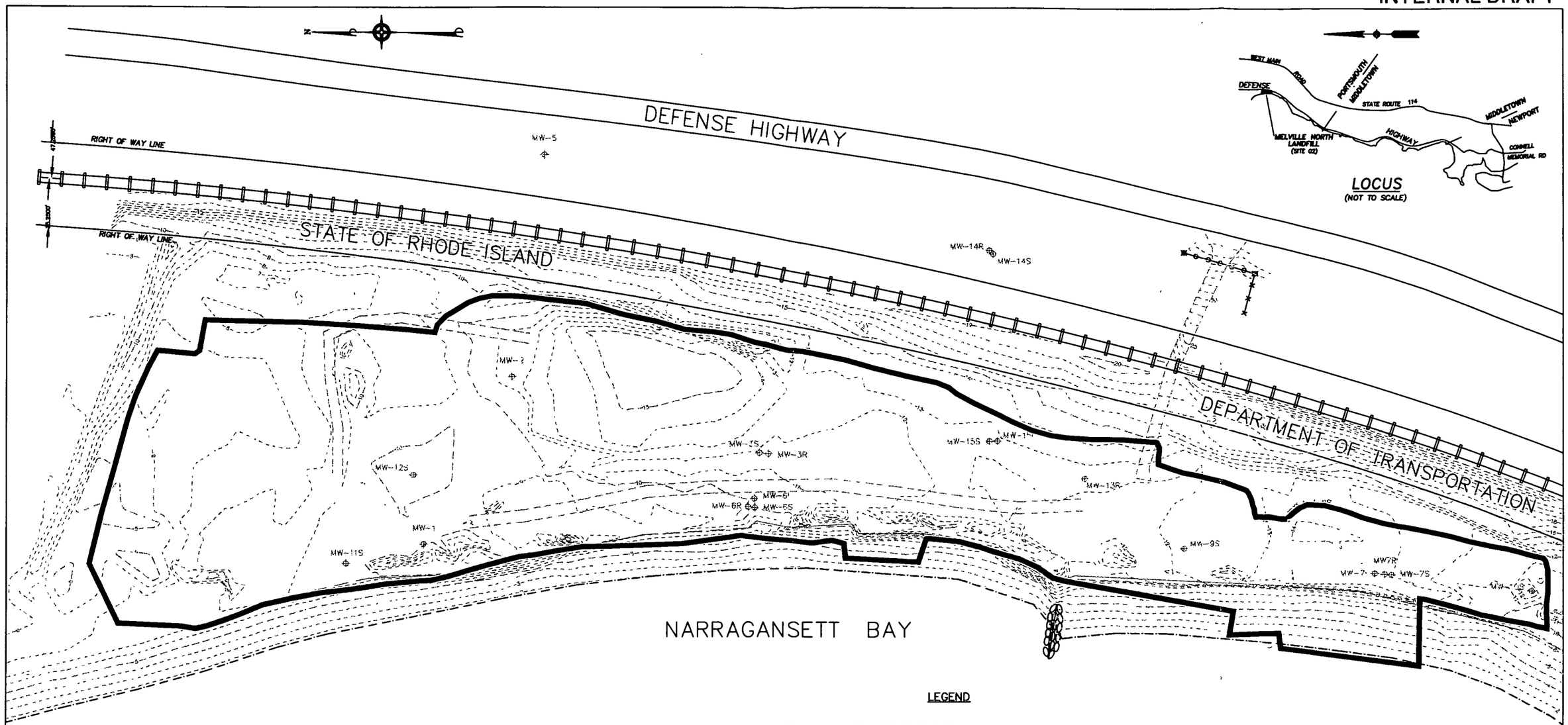
The geologic and hydrogeologic conditions of the Site were evaluated in the Site Investigation (SI) Report (B&R Environmental, 1997). Geologic materials at the Site include fill, stratified drift, and till,

underlain by bedrock. Depth to bedrock ranges from 20 – 50 feet below ground surface in the former landfill area. Depth to groundwater ranges between 2 – 10 feet below ground surface. Groundwater classifications at the site include GB (northern portion of the site) and GA (southern portion of the site). The GA designation at the southern portion of the Site was believed to be in error, since groundwater beneath inactive landfills is classified as GB according to Rhode Island Groundwater Quality Regulations (RIDEM, 1995). Therefore, for the purposes of the SI, groundwater at the Site was assumed to be GB (B&R Environmental, 1997). Applicable soil criteria are uncertain, as future land use is, as yet, not determined.

A series of removal actions were conducted at the Site. The first removal action was performed in 1993 to remove soil piles found to contain oil. These soils were removed from the Site and disposed of at a licensed off-site facility. The second removal action was conducted in 1996 to address additional soils with oil contamination and elevated concentrations of metals. Following the second removal action, a Site Investigation was conducted under RIDEM Remediation Regulations to, in part, determine a final remedy for the Site.

A third removal action was carried out as a final remedy for the Site by Foster Wheeler Environmental Corporation (FWENC) from April 15, 1999 to May 3, 2000. Soil excavation was conducted within the excavation area identified on Figure 2-1. The limit of the excavation area was initially mapped out by FWENC based on sample locations that exceeded the RIDEM Residential Direct Exposure Criteria and the RIDEM GB Leachability Criteria as determined by the Site Investigation (B&R Environmental, 1997). Field screening, laboratory confirmation sampling, visual inspection, and the presence of large quantities of debris were used during the soil excavation activities to delineate the vertical and horizontal limits of the excavation area. A total of 73,001 cubic yards of soil and debris was removed by the beginning of 2000. An additional 4000 tons of material was excavated from the southern part of the landfill during April 2000. Following the completion of each removal action, the soils were replaced with clean fill to the approximate original grade. The ground surface was then raked and seeded (FWENC 2001).

The Site was transferred by the Navy to Melville Marine Enterprises in 2001. However, the Navy retained responsibility for environmental concerns from previous use of the Site as a landfill.



LEGEND

- ACTUAL LIMIT OF EXCAVATION
- APPROXIMATE LOW WATER
- STONE JETTY
- CHAIN LINK FENCE
- POST & WIRE FENCE
- PRE-CONSTRUCTION CONTOUR
- PRE-CONSTRUCTION ACCESS ROAD
- PRE-CONSTRUCTION APPROXIMATE TOP OF BERM
- MW-3R MONITORING WELL

GRAPHIC SCALE

0' 100' 200'

1 INCH = 100 FEET

REFERENCE PLANS:

1. NAVAL COMPLEX, NEWPORT, R.I., MELVILLE (NORTH), EXISTING CONDITIONS MAP, BY NAVAL FACILITIES ENGINEERING COMMAND, DWG. NO. 994, 207.
2. PLAT SHOWING LAND IN CITY OF NEWPORT & TOWNS OF MIDDLETOWN & PORTSMOUTH, ACQUIRED FOR RAILROAD PURPOSES ON BEHALF OF THE STATE OF RHODE ISLAND & PROVIDENCE PLANTATIONS, BY THE DIRECTOR OF TRANSPORTATION, RAILROAD PLAT NO. 1.
3. BASE PLAN ENTITLED "SITE 02, MELVILLE NORTH LANDFILL, SITE MAP" PREPARED FOR NAVAL EDUCATION TRAINING CENTER, NEWPORT, RHODE ISLAND, SCALE: 1"=60', DWG.NO. 2, PROJ.NO. 6760-N81, DATED: 5/29/91, PREPARED BY: SAI SURVEYING, CO.

NOTES:

1. ALL COORDINATES SHOWN HEREON ARE RHODE ISLAND GRID COORDINATES, NORTH AMERICAN DATUM OF 1927, PER REFERENCE PLAN.
2. ELEVATION DATUM: MEAN LOW WATER, U.S. NAVY.
3. THE CONTOUR INTERVAL IS ONE (1) FEET.
4. CONTROL POINTS 1 & 2 ARE LOCATED ALONG RAILROAD BASELINE, EACH FOUND APPROXIMATELY 1 FOOT BELOW SURFACE.

EXCAVATION AREA			FIGURE 2-1
FORMER MELVILLE NORTH LANDFILL			TETRA TECH NUS, INC.
PORTSMOUTH, RHODE ISLAND			55 Jonspin Road Wilmington, MA 01887 (978)658-7899
DRAWN BY:	D.W. MACDOUGALL	REV.:	0
CHECKED BY:	S. PARKER	DATE:	OCTOBER 14, 2004
SCALE:	AS NOTED	FILE NO.:	DWG\5152\3501\FIG_2-1.DWG

3.0 SAMPLING AND ANALYSIS

This section presents a description of the field work conducted as a part of the monitoring effort at the Former Melville North Landfill. Work conducted includes soil boring and soil sampling activities, overburden well installation, and groundwater sampling activities. All work was conducted in accordance with the Work Plan for Groundwater Monitoring, Former Melville North Landfill, prepared by TtNUS, May 2003.

During the field work and sample collection, investigation derived waste (IDW) (soil, groundwater, sheeting, etc.) was contained on site in 55-gallon steel drums. Equipment including field screening instruments, water quality meters, sampling equipment, and the drilling apparatus used was decontaminated in accordance with the requirements stated in the Work Plan. IDW was containerized in 55-gallon drums and disposed of off site after characterization.

3.1 SOIL BORINGS AND SAMPLING

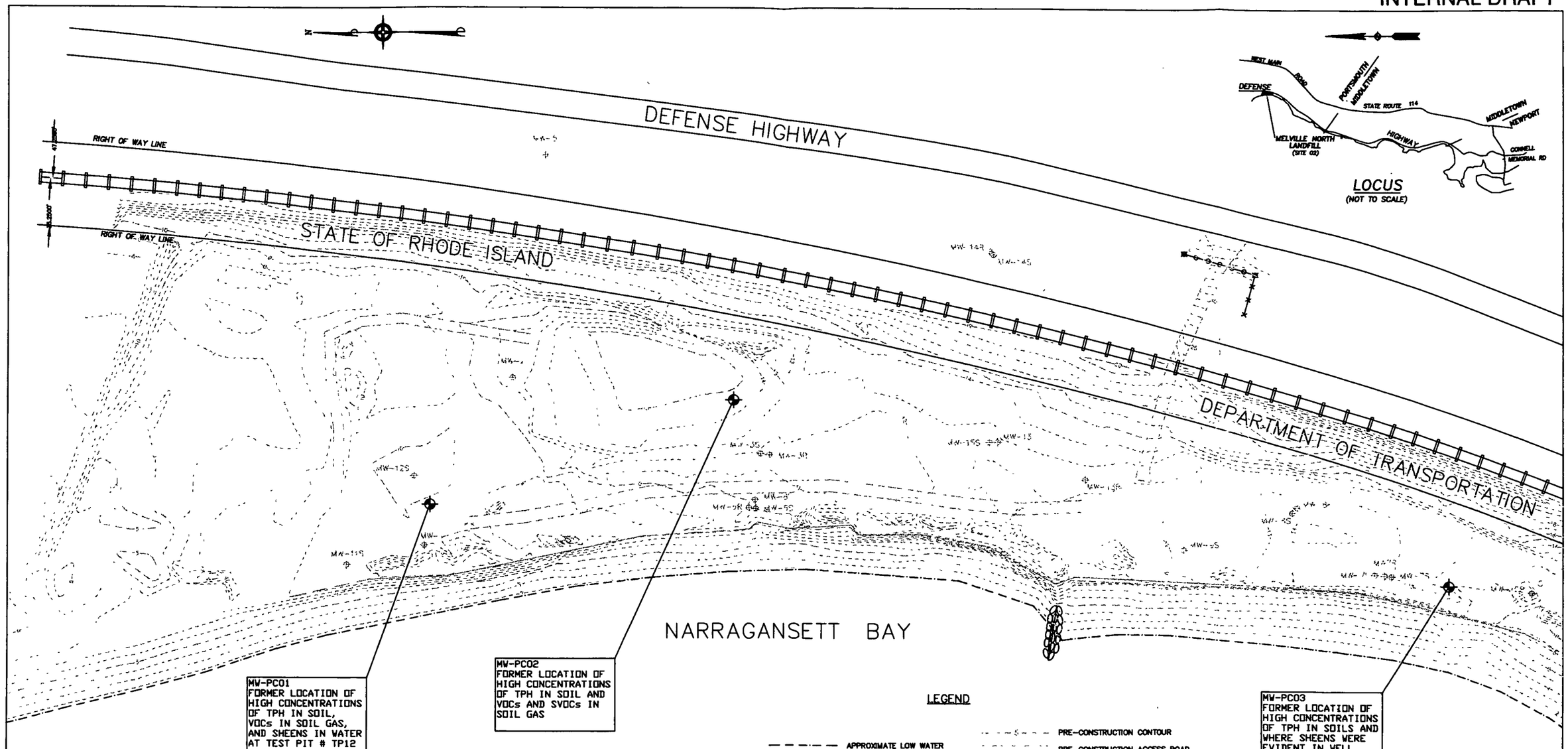
Three soil borings were advanced by a drilling subcontractor using standard drive and wash drilling methods for collection of soil samples and installation of groundwater monitoring wells. Soil boring and monitoring well locations are presented in Figure 3-1. The rationale for the selection of monitoring well locations is presented in Table 3-1.

Soil borings were advanced using 4.0-inch inside diameter (ID) temporary flush-joint steel casing. Continuous soil samples were collected using a 2-inch split-barrel sampler driven ahead of the casing with a 140-pound hammer. In accordance with a request from RIDEM, soil sampling was conducted during boring advancement.

Aliquots of each soil sample were containerized and screened on site with a Photovac MicroFID flame ionization detector (FID) using the jar headspace screening technique described in the Work Plan. A second aliquot of each soil sample was set aside and placed on ice until the boring was completed. Once the boring was completed, one soil sample was selected from the stored aliquots from each boring based on visual, olfactory, and headspace information for laboratory analysis for volatile organic compounds (VOCs) (Method 8260), and Total Petroleum Hydrocarbons (TPH) (Method 8015, modified for extractable TPH, C-9 through C-36 hydrocarbons by Gas Chromatograph/Flame Ionization Detector (GC/FID)). The C-9 through C-36 range of hydrocarbons is inclusive of petroleum products from a light-phase, such as kerosene, to a heavier phase, such as No. 6 fuel oil.

TABLE 3-1
MONITORING WELL LOCATION RATIONALE
DRAFT POST-SOIL REMOVAL GROUNDWATER EVALUATION
FORMER MELVILLE NORTH LANDFILL
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

MONITORING WELL No.	LOCATION/DEPTH RATIONALE
MW-PC01	Located on the north side of the former Melville North Landfill between former monitoring wells MW-12S, MW-11S and MW-1. This monitoring well was placed at the former location of high concentrations of TPH in soil, VOCs in soil gas, and sheens in water found at former test pit TP12 during the SI, prior to removal actions completed in 2000. Boring installed to a depth of 13.5 feet, fill was present to 8 feet, underlain by natural soils.
MW-PC02	Located in the central area of the former Melville North Landfill near former monitoring wells MW-3S and MW-3R. This monitoring well was placed at the location of high concentrations of TPH in soil and VOCs and SVOCs in soil gas found during the SI, prior to removal actions completed in 2000. Boring installed to a depth of 16 feet, fill was present to a depth of 8 feet, underlain by natural soils.
MW-PC03	Located on the south side of the former Melville North Landfill near the former MW-7 monitoring well cluster. This monitoring well was placed at the location of high concentrations of TPH in soils and where sheens were evident in well purge water during the SI, prior to removal actions completed in 2000. Boring installed to a depth of 16 feet, fill was present to a depth of 12 feet, underlain by natural soils.



REFERENCE PLANS:

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3. BASE PLAN ENTITLED "SITE 02, MELVILLE NORTH LANDFILL, SITE MAP" PREPARED FOR NAVAL EDUCATION TRAINING CENTER, NEWPORT, RHODE ISLAND, SCALE: 1"=60', DWG.NO. 2, PROJ.NO. 6760-N81, DATED: 5/29/91, PREPARED BY: SAI SURVEYING, CO.

NOTES:

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2. ELEVATION DATUM: MEAN LOW WATER, U.S. NAVY.
3. THE CONTOUR INTERVAL IS ONE (1) FEET.
4. CONTROL POINTS 1 & 2 ARE LOCATED ALONG RAILROAD BASELINE, EACH FOUND APPROXIMATELY 1 FOOT BELOW SURFACE.

POST-CLOSURE MONITORING WELL LOCATIONS			FIGURE 3-1
FORMER MELVILLE NORTH LANDFILL			TETRA TECH NUS, INC.
PORTSMOUTH, RHODE ISLAND			55 Jonspin Road Wilmington, MA 01887 (978)658-7899
DRAWN BY: D.W. MACDOUGALL	REV.: 0		
CHECKED BY: S. PARKER	DATE: OCTOBER 14, 2004		
SCALE: AS NOTED	FILE NO.: DWG\5152\3503\FIG_3-1.DWG		

Borings were advanced for installation of water table monitoring wells. All soil borings were continued through fill until the boring penetrated natural soils.

Headspace screening results and the field geologist's observations were recorded on boring logs provided in Appendix A-1. This information is summarized in Table 3-2.

TABLE 3-2
DRILLING AND SAMPLING OBSERVATIONS
DRAFT POST-SOIL REMOVAL GROUNDWATER EVALUATION
FORMER MELVILLE NORTH LANDFILL
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

BORING ID/ LOCATION	SAMPLE DEPTH (FEET BGS)	VISUAL/OLFACTORY	HEADSPACE RESULTS BY FID (ppm)	SELECTED FOR LAB ANALYSIS?
MW-PC01	0-2	None/H_2S	3	
	2-4	H_2S, light petroleum odor	120	Yes
	4-6	None/ H_2S	170*	
	6-8	None/ H_2S	560*	
	8-10	None/ H_2S	1980*	
	10-12	None/ H_2S	410*	
MW-PC02	0-2	None/None	0	
	2-4	None/None	0	
	4-6	None/None	0	
	6-8	None/None	55	Yes
	8-10	None/None	0	
	10-12	None/None	0	
	12-14	None/None	0	
	14-16	None/None	0	
MW-PC03	0-2	None/None	0	
	2-4	None/None	0	
	4-6	None/None	380	Yes
	6-8	No Recovery	NA	
	8-10	No Recovery	NA	
	10-12	Staining/Petroleum odor	400	Yes
	12-14	None/None	2	
	14-16	None/None	1	

* - Presence of H_2S odors indicates that FID is likely reading methane.
bgs - feet below ground surface
ppm - parts per million by volume

3.2 GROUNDWATER WELL CONSTRUCTION

Each soil boring was completed as an overburden monitoring well. Each monitoring well was constructed with a 2-inch ID screen (10 slot). The screen was installed to intersect the water table with the top of the screen placed 2 to 3 feet above the saturated zone measured by the field geologist. Table 3-3 presents a summary of well construction details. Well construction logs are provided in Appendix A-1 of this report.

At monitoring wells MW-PC01 and MW-PC02, 10-foot screens were utilized. At MW-PC03, an 8-foot screen was utilized to assure that the well screen would intersect the interval where elevated headspace VOC readings were found, and also to avoid bridging a layer of dense natural sand and gravel below that interval.

The size of the materials used for filter pack were selected as appropriate for the soil conditions encountered at each well location.

3.3 GROUNDWATER WELL DEVELOPMENT AND SAMPLING

The wells were developed through pumping and surging, until the formation water was relatively free of fines. Readings of turbidity, pH, temperature, and specific conductance were monitored during the development process. Wells were developed until these parameters stabilized. Approximately 70 gallons of water were removed during development of each well. Field notes for well development are provided in Appendix A-1 of this report.

Following well development, two methods of sample collection were employed as described in the Work Plan. Low flow (low stress) sample collection was conducted in order to acquire samples in accordance with EPA and Navy policy for collection of groundwater samples. In addition, samples were also collected using bailers in accordance with a request from RIDEM.

For Round 1, replicate samples from each well were collected using both low-flow techniques (EPA SOP No. GW 001) and by standard bailing techniques, at the request of RIDEM. At each well, the low-flow purging technique was conducted first, then the sample was collected after parameters stabilized as required by the SOP and the Work Plan. After collection of the low-flow sample, a bailer was used to purge three well volumes, and a groundwater sample was subsequently collected with the bailer. For Round 2, low-flow purging techniques alone were used to sample each well. This approach was deemed adequate for the second round, as compliance with RIDEM's request for use of bailers was met during

TABLE 3-3
WELL CONSTRUCTION SUMMARY AND DEPTH TO WATER
DRAFT POST-SOIL REMOVAL GROUNDWATER EVALUATION
FORMER MELVILLE NORTH LANDFILL
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Well No.	Type of Protective Casing	Protective Casing Dia. (inches)	Protective Casing Stick-up	Well Dia. (inches)	Well Screen Length (feet)	Well Screen Interval (ft bgs)	PVC Stick-Up (ft)	Water Depth (ft bpvc) 8/18/03	Water Depth (ft bgs) 8/18/03	Water Depth (ft bpvc) 4/20/04	Water Depth (ft bgs) 4/20/04	Water Depth (ft bpvc) 8/25/04	Water Depth (ft bgs) 8/25/04
MW-PC01	Steel	6.0	2 0	2	10 0	3 5/13 5	1 44	6.05	4 61	6 70	5.26	6.55	5.11
MW-PC02	Steel	6.0	4.0	2	10 0	5 6/15 6	3 37	6.32	2 95	3 66	0.29	6 90	3 53
MW-PC03	Steel	6 0	1 47	2	8.0	4.1/12.1	1.30	9.00	7 70	6 91	5.61	9.15	7 85

Notes
ft bgs feet below ground surface
ft bpvc feet below PVC riser
MP measuring point (top of PVC riser)
Dia diameter
* PVC stick-up in feet above ground surface

INTERNAL DRAFT

Round 1. For Round 3, low-flow techniques were used to collect the metals samples and a bailer was used to collect the samples for the other analyses, in accordance with a RIDEM request. Equipment and materials used for samples collected are described in the Work Plan (TtNUS, 2003).

Groundwater samples from all three rounds were analyzed for volatile organic compounds (VOCs) (EPA Method 8260B), gasoline range organics (GRO) and diesel range organics (DRO) (Method 8015B, modified for C-9 through C-36 hydrocarbons by GC), semivolatile organic compounds (SVOCs) (Method 8270), pesticides and PCBs (Method 8080), and total target analyte list (TAL) metals (Method 6010).

Field notes for all three sampling rounds are provided in Appendices A-1, A-2, and A-3 of this report. Documentation of low flow sample collection is described on the "Sample Log Sheets – Low Flow Groundwater," and samples collected in this manner were identified as GW-PC##-LF-01, GW-PC##-LF-02, or GW-PC##-LF-03. Documentation of bailer sample collection is described on "Sample Log Sheets – Liquid Phase," and samples collected in this manner were identified as GW-PC##-B-01 or GW-PC##-B-03. Table 3-4 presents a summary of stabilized water quality parameters after low-flow purging.

All three wells were checked with an oil-water interface probe prior to each groundwater sampling round for the presence of Light Non-Aqueous Phase Liquid (LNAPL) and Dense Non-Aqueous Phase Liquid (DNAPL). In Round 1, no LNAPL was detected with the oil-water interface probe at MW-PC01; the purge water was free of petroleum odors or a sheen. The water at MW-PC02 set off the oil-water interface probe tone, but no odor or sheen was noted either when checked with a bailer or on the purge water. At MW-PC03, the oil-water interface probe had a steady LNAPL signal 0.01 foot thick, but when checked with a bailer, no sheen or other visual sign of oil was detected. The purge water and initial bailer check from MW-PC03 both had a noticeable petroleum odor during Round 1.

During Round 2, all three wells were checked again for the presence of both LNAPL and DNAPL with the oil-water interface probe; no evidence of NAPL was detected. No sheen, odor, or other indications of petroleum was observed in the purge water of the three wells.

During Round 3, all three wells were checked for the presence of LNAPL and DNAPL with the oil-water interface probe; no evidence of NAPL was detected with the probe. At MW-PC01, a slight sheen was noted on the purge water, and at MW-PC03, a slight petroleum odor was noted when the well was initially opened; however, no odor was detected from the purge water. No other indications of petroleum were detected.

All three wells were tidally influenced and water levels in the wells dropped or increased while sampling regardless of pumping rates. In all three water level rounds, the water levels in wells MW-PC01 and

MW-PC03 were within the screened interval of the well; however, due to tide changes, the water level in MW-PC02 was above the screened interval during Round 2.

TABLE 3-4
STABILIZED GROUNDWATER FIELD PARAMETERS
DRAFT POST-SOIL REMOVAL GROUNDWATER EVALUATION
FORMER MELVILLE NORTH LANDFILL
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Well No.	Sample Date	Well Screen Interval (ft bgs)	Purge Method	ORP (mV)	Temp. (°Celsius)	Turbidity (NTU)	pH (Std. Units)	Specific Cond. (µS/cm)	Dissolved Oxygen (mg/L)	Salinity (ppt)
MW-PC01	8/18/03	3.5/13.5	pp	-291.1	17.23	4.1	6.85	4873	0.01	NR
	8/18/03	3.5/13.5	bailer	NR	16.44	NR	6.91	4965	5.70	NR
	4/20/04	3.5/13.5	pp	-89.7	10.40	2.20	6.57	1622	0.62	0.82
	8/27/04	3.5/13.5	pp	-12.8	17.82	3.01	6.44	367	0.62	0.18
	8/27/04	3.5/13.5	bailer	69.3	17.83	6.12	6.76	363	3.93	0.17
MW-PC02	8/19/03	5.6/15.6	pp	315.7	18.53	3.5	5.80	254	0.64	NR
	8/19/03	5.6/15.6	bailer	NR	18.07	Off Scale	5.89	255	5.41	NR
	4/20/04	5.6/15.6	pp	139.1	12.33	5.9	6.00	249	7.50	0.12
	8/27/04	5.6/15.6	pp	287.8	17.60	1.69	5.75	164	0.93	0.08
	8/27/04	5.6/15.6	bailer	303.7	17.44	269	6.03	160	3.34	NR
MW-PC03	8/19/03	4.1/12.1	pp	353.1	17.14	3.6	5.23	286	3.31	NR
	8/19/03	4.1/12.1	bailer	173.3	15.32	Off Scale	5.61	291	6.01	NR
	4/20/04	4.1/12.1	pp	314.2	9.47	1.19	5.30	308	1.66	0.15
	8/26/04	4.1/12.1	pp	312.3	16.10	1.95	5.18	234	4.20	0.11
	8/26/04	4.1/12.1	bailer	363.3	18.40	90	5.61	232	6.59	0.11

Notes:

ft bgs	feet below ground surface
mV	millivolts
NTU	Nephelometric turbidity unit
µS/cm	micro siemens per centimeter
mg/L	milligrams per liter
pp	peristaltic pump
NR	not recorded
ppt	parts per thousand

Table 3-5 presents a summary of tide stages relative to sampling period.

TABLE 3-5
TIDE STAGES RELATIVE TO SAMPLING PERIODS
DRAFT POST-SOIL REMOVAL GROUNDWATER EVALUATION
FORMER MELVILLE NORTH LANDFILL
NAVAL STATION NEWPORT
NEWPORT, RHODE ISLAND

Well No.	Date	Purge Time[1]	Tides[2] (ft-MLLW)	Groundwater Level Response[3]
MW-PC01	8/18/03	1500-1612	1212 = 3.67 High 1724= 1.17 Low	decreasing
	4/20/04	1055-1150	0812 = 2.61 High 1318 = -0.82 Low	decreasing
	8/27/04	0830-0910	0448 = 3.38 High 1030 = -0.14 Low	decreasing
MW-PC02	8/19/03	1010-1129	0524 = 0.71 Low 1306 = 3.31 High	increasing
	4/20/04	1130-1244	0812 = 2.61 High 1318 = -0.82 Low	decreasing
	8/27/04	0810-0945	0448 = 3.38 High 1030 = -0.14 Low	decreasing
MW-PC03	8/19/03	1512-1630	1306 = 3.31 High 1818 = 1.00 Low	decreasing
	4/20/04	1330-1430	1318 = -0.82 Low 2024 = 3.39 High	decreasing
	8/26/04	1605-1705	1636 = 4.11 High	increasing

Notes.
1 Purge time = initial purge time to time of sample collection Drawdown not recorded for bailer samples, bailer sample purge time not included on table.
2. Verified High Tide for Newport according to NOAA National Ocean Service Center for Operational Oceanographic Products and Services
3. Groundwater level response according to recorded water levels during purging and sampling.

ft MLLW = feet above mean lower low water

During Round 1, the intake for the pump during low-flow sampling was set at the midpoint of each screen in MW-PC01 and MW-PC02, 3 to 6 feet below the water table. Signs of petroleum contamination were found at 10 to 12 feet bgs when drilling MW-PC03, so the intake for the pump was set at 11.5 feet bgs for this well. Bailer samples were not specific to any portion of the water column. During Round 2, the pump intake was set as close to the water table as possible for MW-PC01 and MW-PC02, while the intake was set at 10.5 feet bgs for MW-PC03, again to sample the interval with suspected contamination. For Round 3, RIDEM requested that low-flow pump intakes be placed at the zones with the highest PID reading from purge water. As no PID readings above background were detected, the pump was set at the midpoint of the saturated screen length. Bailer samples, collected for all analyses in Round 1 and for all analyses except metals in Round 3, were not specific to any portion of the water column.

Field quality control samples were collected in accordance with the Work Plan, and included trip blanks, duplicate samples, matrix spike/matrix spike duplicate (MS/MSD) samples, and equipment blank samples, both for the low flow equipment, and for the bailers.

All groundwater samples were placed on ice immediately after collection and hand-delivered with a chain-of-custody to the analytical laboratory (Mitkem Corporation for Rounds 1 and 2; Katahdin Analytical Services for Round 3).

4.0 FINDINGS OF THE INVESTIGATION

This section presents the data from the monitoring efforts described in Section 3. Analytical database summary tables for soil and groundwater are provided in Appendix B and C, respectively. The soil and groundwater analytical results are summarized below.

4.1 SOIL

TPH results for soil are summarized on Figure 4-1. TPH was detected at low concentrations (below 200 mg/kg) in all samples collected, with the exception of one sample (MW-PC02, from 6-8 feet below ground surface) where none was detected (11U mg/kg). The highest concentration of TPH was detected in the sample collected at MW-PC03, at a depth of 10-12 feet (190 mg/kg).

Because future site use is uncertain, soil data were compared with residential soil criteria published by RIDEM. All TPH results are below the residential TPH direct exposure criteria of 500 ppm and the TPH leachability criteria of 500 ppm (RIDEM, 2000).

The analytical results indicate no VOCs detected with the exception of acetone and methylene chloride, which were also found in the laboratory blank samples. Acetone and methylene chloride are both common laboratory contaminants and are not indicative of site contamination.

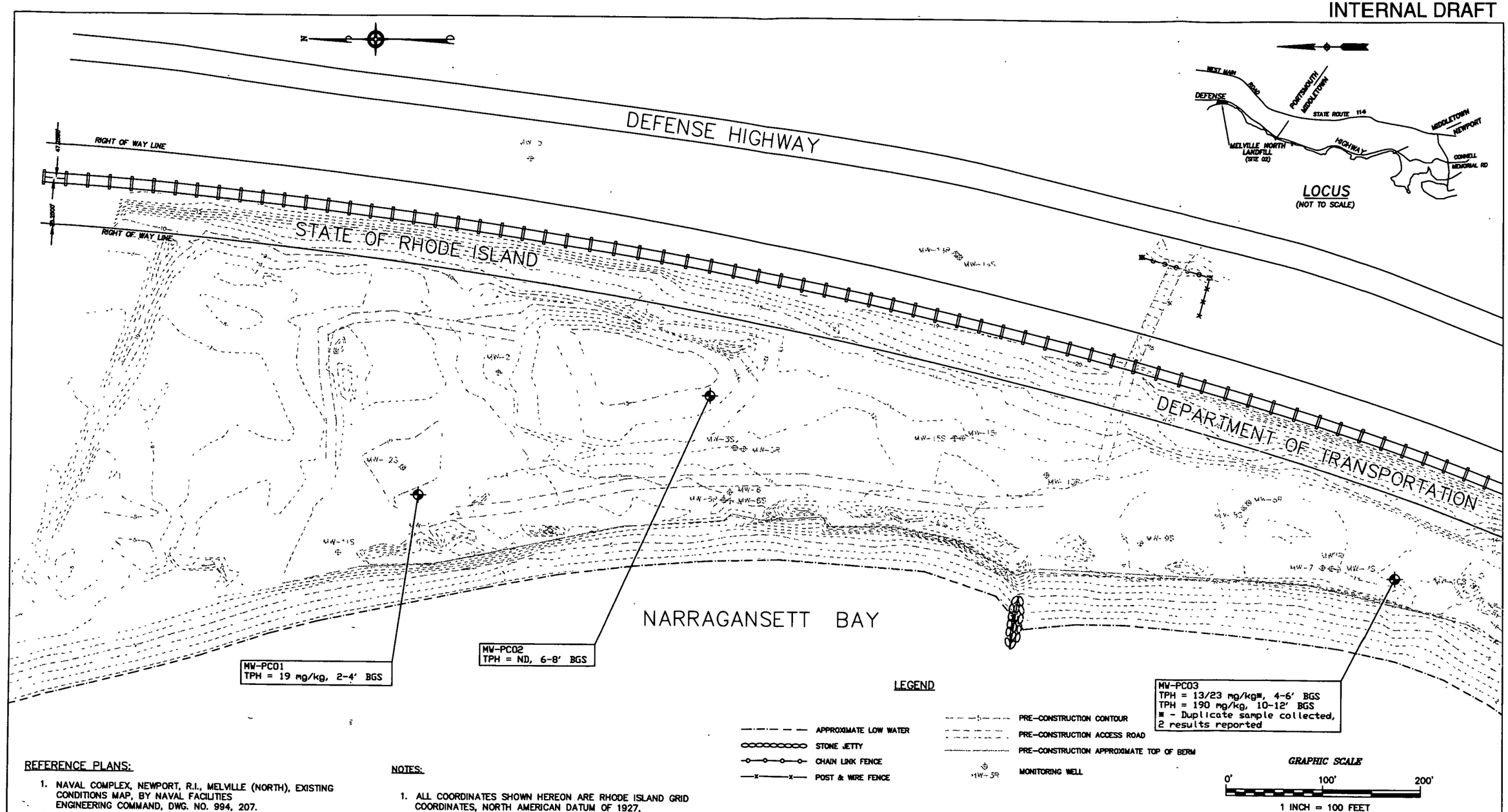
4.2 GROUNDWATER

Groundwater samples were analyzed using the analytical methods described in Section 3 and in the Work Plan. The complete data set for both sample rounds is provided in Appendix C (C1 – Round 1, C2 – Round 2, and C3 – Round 3). Detected compounds and metals in the groundwater samples are depicted on Figure 4-2.

VOC results from Round 1 indicate the presence of acetone and methylene chloride, both of which are found in either a rinsate or trip blank. These compounds are not indicative of site contamination. VOC results from Round 2 indicate the presence of 2-butanone and acetone in one rinsate blank only, as well as bromoform, detected at trace concentrations. These compounds are all common laboratory contaminants. VOC results from Round 3 indicate presence of a trace of tetrachloroethene (PCE) in PC03, at 1 J ug/l, well below the MCL for this compound.

Other organic analyses indicate no pesticides or PCBs detected, and only dimethylphthalate (Round 1) and bis(2-ethylhexyl)phthalate (Round 1 and Round 2) detected at trace concentrations. Phthalates are

INTERNAL DRAFT



REFERENCE PLANS:

1. NAVAL COMPLEX, NEWPORT, R.I., MELVILLE (NORTH), EXISTING CONDITIONS MAP, BY NAVAL FACILITIES ENGINEERING COMMAND, DWG. NO. 994, 207.
2. PLAT SHOWING LAND IN CITY OF NEWPORT & TOWNS OF MIDDLETOWN & PORTSMOUTH, ACQUIRED FOR RAILROAD PURPOSES ON BEHALF OF THE STATE OF RHODE ISLAND & PROVIDENCE PLANTATIONS, BY THE DIRECTOR OF TRANSPORTATION, RAILROAD PLAT NO. 1.
3. BASE PLAN ENTITLED "SITE 02, MELVILLE NORTH LANDFILL, SITE MAP" PREPARED FOR NAVAL EDUCATION TRAINING CENTER, NEWPORT, RHODE ISLAND, SCALE: 1"=60', DWG.NO. 2, PROJ.NO. 6760-N81, DATED: 5/29/91, PREPARED BY: SAI SURVEYING, CO.

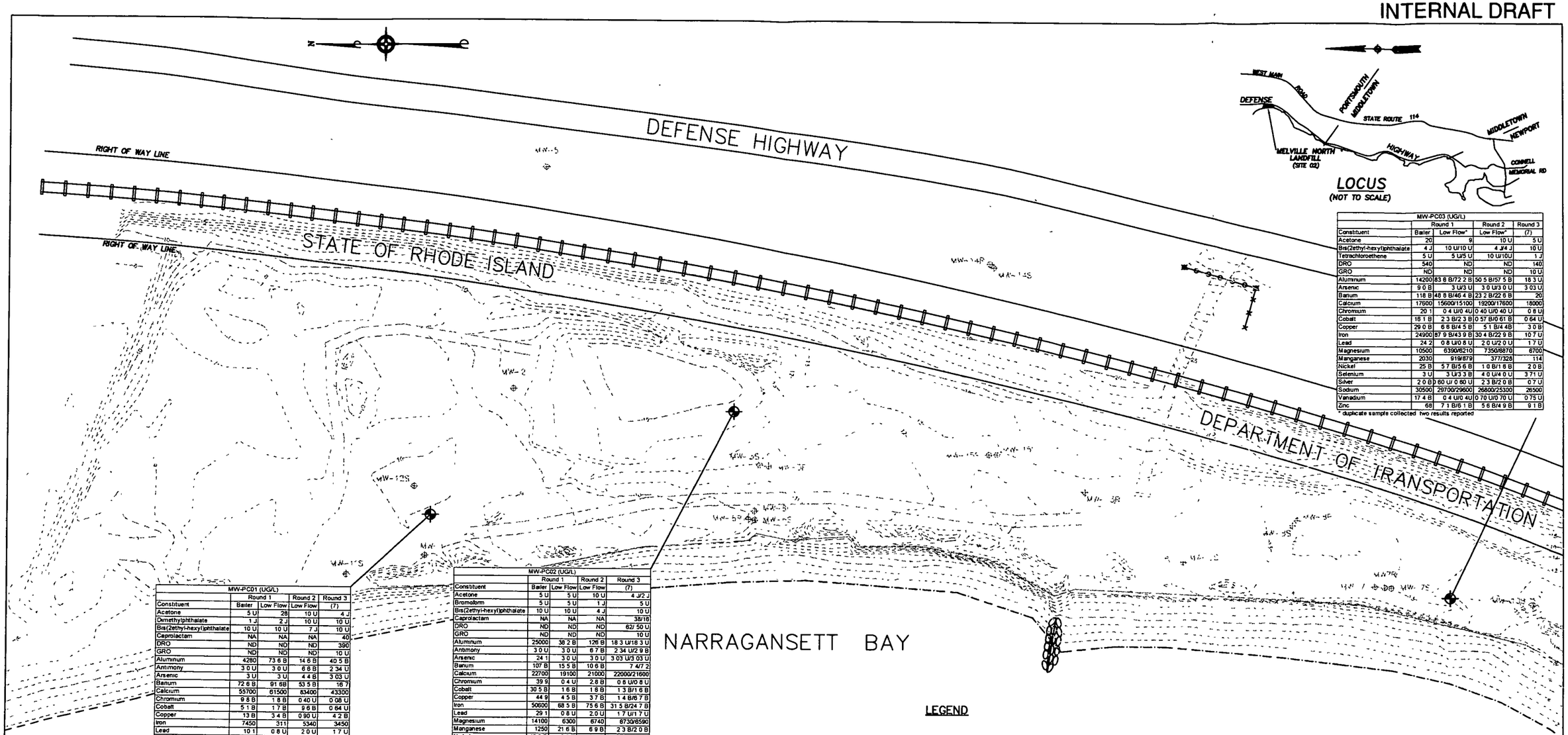
NOTES:

1. ALL COORDINATES SHOWN HEREON ARE RHODE ISLAND GRID COORDINATES, NORTH AMERICAN DATUM OF 1927, PER REFERENCE PLAN.
2. ELEVATION DATUM: MEAN LOW WATER, U.S. NAVY.
3. THE CONTOUR INTERVAL IS ONE (1) FEET.
4. CONTROL POINTS 1 & 2 ARE LOCATED ALONG RAILROAD BASELINE, EACH FOUND APPROXIMATELY 1 FOOT BELOW SURFACE.

SOIL SAMPLE RESULTS – AUGUST 2003			FIGURE 4-1
FORMER MELVILLE NORTH LANDFILL			TETRA TECH NUS, INC.
PORTSMOUTH, RHODE ISLAND			55 Jonspin Road Wilmington, MA 01887 (978)658-7899
DRAWN BY: D.W. MACDOUGALL	REV.: 0		
CHECKED BY: S. PARKER	DATE: OCTOBER 14, 2004		
SCALE: AS NOTED	FILE NO.: DWG\5152\3503\FIG_4-1.DWG		

W5203294D

CTO 842



MW-PC03 (UG/L)				
	Round 1		Round 2	Round 3
Constituent	Bailer	Low Flow*	Low Flow*	(7)
Acetone	20	9	10 U	5 U
Bis(2ethyl-hexyl)phthalate	4 J	10 U/10 U	4 J/4 J	10 U
Tetrachloroethene	5 U	5 U/5 U	10 U/10U	1 J
DRO	540	ND	ND	140
GRO	ND	ND	ND	10 U
Aluminum	14200	83 8 B/72 2 B	50 5 B/57 5 B	18 3 U
Arsenic	9 0 B	3 U/3 U	3 0 U/3 0 U	3 03 U
Barium	118 B	48 8 B/46 4 B	23 2 B/22 6 B	26
Calcium	17600	15600/15100	19200/17600	18000
Chromium	20 1	0 4 U/0 4U	0 40 U/0 40 U	0 8 U
Cobalt	16 1 B	2 3 B/2 3 B	0 57 B/0 61 B	0 64 U
Copper	29 0 B	6 8 B/4 5 B	5 1 B/4 4B	3 0 B
Iron	24900	87 9 B/43 9 B	30 4 B/22 9 B	10 7 U
Lead	24 2	0 8 U/0 8 U	2 0 U/2 0 U	1 7 U
Magnesium	10500	6390/6210	7350/6870	6700
Manganese	2030	919/879	377/328	114
Nickel	25 B	5 7 B/5 6 B	1 0 B/1 8 B	2 0 B
Selenium	3 U	3 U/3 3 B	4 0 U/4 0 U	3 71 U
Silver	2 0 B	0 60 U/ 0 60 U	2 3 B/2 0 B	0 7 U
Sodium	30500	29700/29600	26800/25300	26500
Vanadium	17 4 B	0 4 U/0 4U	0 70 U/0 70 U	0 75 U
Zinc	68	7 1 B/6 1 B	5 6 B/4 9 B	9 1 B

* duplicate sample collected two results reported

MW-PC01 (UG/L)				
	Round 1		Round 2	Round 3
Constituent	Bailer	Low Flow	Low Flow	(7)
Acetone	5 U	28	10 U	4 J
Dimethylphthalate	1 J	2 J	10 U	10 U
Bis(2ethyl-hexyl)phthalate	10 U	10 U	7 J	10 U
Caprolactam	NA	NA	NA	40
DRO	ND	ND	ND	390
GRO	ND	ND	ND	10 U
Aluminum	4280	73 6 B	14 6 B	40 5 B
Antimony	3 0 U	3 0 U	6 6 B	2 34 U
Arsenic	3 U	3 U	4 4 B	3 03 U
Barium	72 6 B	91 6B	53 5 B	16 7
Calcium	55700	61500	83400	43300
Chromium	9 8 B	1 8 B	0 40 U	0 08 U
Cobalt	5 1 B	1 7 B	9 6 B	0 64 U
Copper	13 B	3 4 B	0 90 U	4 2 B
Iron	7450	311	5340	3450
Lead	10 1	0 8 U	2 0 U	1 7 U
Magnesium	87800	84700	30000	8370
Manganese	2180	4040	13300	1250
Nickel	7 7 B	1 7 B	0 50 U	1 2 B
Selenium	4 3 B	5 6 B	4 0 U	3 71 U
Sodium	1330000	1260000	162000	64400
Vanadium	11 2 B	3 7 B	0 70 U	2 7 B
Zinc	22 9 B	3 0 U	3 1 B	2 8 B

MW-PC02 (UG/L)				
	Round 1		Round 2	Round 3
Constituent	Bailer	Low Flow	Low Flow	(7)
Acetone	5 U	5 U	10 U	4 J/2 J
Bromoform	5 U	5 U	1 J	5 U
Bis(2ethyl-hexyl)phthalate	10 U	10 U	4 J	10 U
Caprolactam	NA	NA	NA	38/16
DRO	ND	ND	ND	62/ 50 U
GRO	ND	ND	ND	10 U
Aluminum	25000	38 2 B	126 B	18 3 U/18 3 U
Antimony	3 0 U	3 0 U	6 7 B	2 34 U/2 9 B
Arsenic	24 1	3 0 U	3 0 U	3 03 U/3 03 U
Barium	107 B	15 5 B	10 6 B	7 4/7 2
Calcium	22700	19100	21000	22000/21600
Chromium	39 9	0 4 U	2 8 B	0 8 U/0 8 U
Cobalt	30 5 B	1 6 B	1 6 B	1 3 B/1 6 B
Copper	44 9	4 5 B	3 7 B	1 4 B/6 7 B
Iron	50600	68 5 B	75 6 B	31 5 B/24 7 B
Lead	29 1	0 8 U	2.0 U	1 7 U/1 7 U
Magnesium	14100	6300	6740	8730/6590
Manganese	1250	21 6 B	6 9 B	2 3 B/2 0 B
Nickel	43 3 B	2 0 B	2 8 B	1 6 B/1 7 B
Silver	3 7 B	0 60 U	2 3 B	0 7 U/0 7 U
Sodium	16900	16800	16600	18900/18500
Vanadium	33 7 B	0 4 U	0 7 U	0 75 U/0 75 U
Zinc	101	5 6 B	6 0 B	1 8 B/4 7 B

REFERENCE PLANS:

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2. PLAT SHOWING LAND IN CITY OF NEWPORT & TOWNS OF MIDDLETOWN & PORTSMOUTH, ACQUIRED FOR RAILROAD PURPOSES ON BEHALF OF THE STATE OF RHODE ISLAND & PROVIDENCE PLANTATIONS, BY THE DIRECTOR OF TRANSPORTATION, RAILROAD PLAT NO. 1.
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NOTES:

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2. ELEVATION DATUM: MEAN LOW WATER, U.S. NAVY.
3. THE CONTOUR INTERVAL IS ONE (1) FEET.
4. CONTROL POINTS 1 & 2 ARE LOCATED ALONG RAILROAD BASELINE, EACH FOUND APPROXIMATELY 1 FOOT BELOW SURFACE.
5. ALL GROUNDWATER RESULTS ARE REPORTED IN $\mu g/L$.
6. GROUNDWATER SAMPLING ROUND 1 CONDUCTED IN AUGUST 2003. GROUNDWATER SAMPLING ROUND 2 CONDUCTED IN APRIL 2004.
7. GROUNDWATER COLLECTED VIA BAILER (ORGANICS) AND LOW-FLOW (METALS) AUGUST 2004.

GROUNDWATER SAMPLING RESULTS – ROUNDS 1 – 3

FORMER MELVILLE NORTH LANDFILL

PORTSMOUTH, RHODE ISLAND

DRAWN BY:	D.W. MACDOUGALL	REV.:	2
CHECKED BY:	S. PARKER	DATE:	OCTOBER 14, 2004
SCALE:	AS NOTED	FILE NO.:	DWG\5152\3503\FIG_4-2.DWG

FIGURE 4-2

TETRA TECH NUS, INC.
55 Jonspin Road Wilmington, MA 01887
(978)658-7899

common field and laboratory contaminants. GRO was not detected in groundwater. DRO was detected at a trace concentration (0.54 mg/L) in MW-PC03 in Round 1 and was not detected at all in Round 2. DRO was detected in wells sampled during Round 3, again trace concentrations in MW-PC01 (0.39 mg/L) and MW-PC03 (0.14 mg/L). In MW-PC02, duplicate samples were collected, and DRO was detected in one of these duplicate samples near the detection limit (0.062 mg/L).

Metals analysis indicated the presence of naturally occuring metals in groundwater collected from all wells. The analyses indicated the presence of higher concentrations of metals in the samples collected using bailers, likely due to the turbidity of the samples. In particular, in Round 1 lead was detected at 10.1 µg/L, 29.1 µg/L, and 24.2 µg/L at MW-PC01, -PC02, and -PC03, respectively, in bailer samples. However, corresponding low flow samples in all rounds showed no lead detected at all of these locations.

As demonstrated during the SI, the results of this groundwater evaluation appear to confirm that groundwater at the site is tidally influenced (B&R Environmental, 1997). The groundwater levels observed during development and sampling responded to tidal fluctuations at each of the monitoring wells. However, all of the sampling events took place over several hours (two days in the case of Rounds 1 and 3), so not all of the samples were not collected at the same tide stage. Regardless, samples collected during Rounds 1 and 3 (summer – low water table period) and Round 2 (spring – high water table period) are considered representative of the groundwater conditions at the Site.

5.0 CONCLUSIONS AND RECOMMENDATIONS

This groundwater evaluation was conducted to determine if any residual contamination was present at the Former Melville North Landfill following contaminated soil removal actions conducted between 1993 and 2000. Per RIDEM's request, soils were also evaluated and sampled for residual contaminants. This section presents a summary of findings, conclusions regarding the contaminants present, and recommendations based on these results.

5.1 FINDINGS SUMMARY

Soils collected from the 10 to 12 foot interval of MW-PC03 showed oil staining. Laboratory analysis of these soils showed a concentration of 190 mg/kg of TPH in soil by GC/FID, well below the TPH criterion of 500 mg/kg. Although the field geologist noted the presence of oil in this sample, the sample is below the water table and samples taken above and below this interval do not exhibit the presence of oil. The physical location indicates that this is an isolated remnant of the fill, in place well below the water table. The analytical result below the residential direct exposure criteria shows that it is not actionable. Observations and analysis of soil samples from other borings do not indicate the presence of oil, or oil impacted soil.

Groundwater was found to contain trace concentrations of phthalates. Trace petroleum (e.g DRO) (0.54 mg/L) was detected in one groundwater sample from Round 1 (MW-PC03) collected with a bailer, and again in Round 3 (maximum detected 0.39 mg/L, MW-PC01). No petroleum was detected in groundwater from any well using the low flow sample collection procedure. The trace concentrations of the diesel range organic compounds in groundwater collected during Rounds 1 and 3 do not exceed any RIDEM contaminant criteria.

Metals were detected in groundwater samples collected using both low flow and bailer samples. Bailer samples showed higher concentrations of some metals; however, the low flow samples are more representative of the analytes dissolved in groundwater because bailer sampling increases turbidity in the groundwater samples through agitation and introduction of soil particles from the soil formation.

Groundwater quality underlying the Site is classified GA at the southern portion of the Site and GB at the northern portion of the Site. As both criteria are associated with the Site, RIDEM criteria GA, the stricter standard, were compared with the groundwater results. GA groundwater criteria were not exceeded for any analytes detected in groundwater, with one exception: the RIDEM GA groundwater objective for lead (0.015 mg/l) is exceeded in groundwater samples collected with bailers at MW-PC02 and MW-PC03 during Round 1. However, corresponding samples collected using low flow techniques at these wells

during all three rounds showed no lead detections in these low-flow samples, indicating that the lead is associated with the suspended silt particles present in those bailed samples. No analytical result exceeds RIDEM GB groundwater objectives.

5.2 CONCLUSIONS

Based on the groundwater data collected, no contaminants appear to be present in the groundwater at the Former Melville North Landfill at concentrations that would be considered actionable. Based on the soil data collected, some remnant oil is present, though it is bound within the soil well below the water table, at elevations below the limits of the removal actions conducted between 1993 and 2000. Additionally, this material is not present at levels exceeding RIDEM residential criteria for soil.

5.3 RECOMMENDATIONS

Based on the data collected as described in this report, no further action is recommended at this site.

6.0 REFERENCES

Brown & Root Environmental (B&R Environmental) 1997. Final Site Investigation Report for Melville North Landfill. August.

Foster Wheeler Environmental Corporation 2001. Closeout Report and Drawings, Actual Excavation Limits. Foster wheeler Environmental Corporation, Livingston, N. J. January 20.

Rhode Island Department of Environmental Management (RIDEM) 1995. Rules and Regulations for Groundwater Quality (Regulation 12-100-006). Division of Groundwater and Individual Sewage Disposal Systems. May.

Rhode Island Department of Environmental Management (RIDEM) 1997. Water Quality Regulations Appendix A: Water Quality Classification Descriptions (Regulation EVM 112-88.97-1). Water Resources. August.

Rhode Island Department of Environmental Management (RIDEM) 2000. Rhode Island Standards for Hydrocarbon Contaminated Soil, Direct Exposure Criteria (Residential and Industrial/Commercial). Waste Management.

TtNUS (Tetra Tech NUS) 2003. Work Plan, Groundwater Monitoring for Former Melville North Landfill, Naval Station Newport, Newport, RI. March.

APPENDIX A

FIELD RECORDS

APPENDIX A-1

GEOLOGIC BORING LOGS, WELL CONSTRUCTION LOGS, AND FIELD RECORDS, AUGUST 2003

BORING LOG FOR: CT0842 - Former Mobile North Landfill
PROJECT NO. 5152
LOGGED BY. T. Dorgan
DRILLED BY (Company/Driller) EDI / JOE
GRD. SURFACE ELEVATION:
TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW-PC01
START DATE: 8-12-03
COMPLETION. DATE. 8-12-03
MON. WELL NO.: MW-PC01
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC. / SAMP LENG	SAMPLING TIME & SAMPLE NO (QA/QC STATUS)	DEPTH MAT'L CHG./ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition, odors, geological classification, rock weathering, etc)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							GRASS COVERED SURFACE			
	8 23	1.5	FMNLF-S-PC01-0002		DENSE	BROWN GRAY	SAND. MOSTLY F-MED. POORLY GRADED SAND, FEW SILT TRACE	SP	DAMP. BACKFILL MATERIAL	3 PPM - (H.S) HEAD SPACE
2	17 21	2.0	S-1 1040				SUBANG.- SUBROUNDED GRAVEL. GRASS ROOTS IN UPPER 0.2'			0 PPM - OPEN AIR
	9 3	1.1	FMNLF-S-PC01-0204	FILL	LOOSE		(BACKFILL FROM REMOVAL)		MOIST. SLIGHT PETROLEUM ODOR.	120 PPM - H.S
4	5 5	2.0	S-2 1042						SATURATED @ 4' BGS	0 PPM - OPEN
	9 7	1.3	FMNLF-S-PC01-0406	BASED ON SOIL MOIST.	MED. DENSE				LIGHT SHEEN ON WASH WATER.	170 PPM - H.S
6	8 7	2.0	S-3 1105							12 PPM - OPEN
	5 3	1.0	FMNLF-S-PC01-0608		LOOSE		S-4A = 0.7' - SIMILAR TO ABOVE. S-4B = 0.3' - ORGANIC SILT & CLAY	SP	LIKELY METHANE	560 PPM H.S
8	2 2	2.0	S-4 1107				MOSTLY CLAY, SOME SILT, FEW ROOT FIBERS & PLANT FRAGMENTS	OL	OLD WETLAND DEPOSITS	
	6 4	0.8	FMNLF-S-PC01-0810	ORG. SILT & CLAY		DARK BROWN TO BLACK	S-5A = 0.1' - SIMILAR TO S-4B. S-5B = GRADES FROM ORG. SILT	SP	STRONG H_2S ODOR.	1,980 PPM - H.S.
10	5 5	2.0	S-5 1125	GRADES INTO		DARK GRAY	TO SAND. MOSTLY POORLY GRADED FINE SAND, TRACE SILT, TRACE CLAY.			15 PPM - OPEN
	5 5	0.5	FMNLF-S-PC01-1012	FINE SAND					H_2S ODOR.	410 PPM - H.S.
12	3 4	2.0	S-6 1127				- INCLUDES TRACE GRAVEL			0 PPM - OPEN
14							EOB @ 13.5' BGS.			

TYPE OF DRILLING RIG: ATV MOUNTED DETRICH D-120
METHOD OF ADVANCING BORING: 4 IN. D&IN CASING
METHOD OF SOIL SAMPLING: 2 IN SPLIT-SPOON DRIVEN W/ 140 LB HAMMER
METHOD OF ROCK CORING: NA
GROUNDWATER LEVELS: ~4' BGS
OTHER OBSERVATIONS: CHECKED JAR HEADSPACE WITH PID WATER AND ALL SAMPLES READ 0.0 PPM. HITS WITH FID = METHANE.

Tetra Tech NUS, Inc.

BORING NO

PAGE 1 OF 1

Tnus Form 0018

BORI LOG FOR: CTO-841 2
PROJECT NO.: 5157
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI / JOE
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW-PC02
START DATE: 8-12-03
COMPLETION. DATE: 8-12-03
MON. WELL NO.: MW-PC02
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC / SAMP LENG	SAMPLING TIME & SAMPLE NO (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition, odors, geological classification, rock weathering, etc.)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							GRASS SURFACE			
	8 53	1.5	FMNLF-S-PC02 -0002	BACKFILL	VERY	GRAY	SAND, MOSTLY F-MED. POORLY GRADED SAND, TRACE SILT, TRACE	SP	MOIST (PROBLP)	0 PPM
2	27 20	2.0	S-1 1324		DENSE		F-C GRAVEL. PHYLLITE COBBLE (6") @ 1.25' BGS.		FILL. (BACKFILL)	
	23 12	1.0	FMNLF-S-PC02 -0204		MED.				DAMP. UNSORTED.	0 PPM
4	12 14	2.0	S-2 1326		DENSE					
	7 11	1.2	FMNLF-S-PC02 -0406			SLIGHT MOTTLING YELLOW-ORANGE & GRAY			DAMP-MOIST	0 PPM
6	4 5	2.0	S-3 1335							
*	4 5	0.9	FMNLF-S-PC02 -0608			GRAY-			MOIST-WET. CLOSE TO SATURATED	55 PPM-HS.
8	7 7	2.0	S-4 1340			DARK GRAY				
	4 2	1.4	FMNLF-S-PC02 -0810		LOOSE	LIGHT GRAY W/ ORANGE BANDING	SAND. MOSTLY FINE POORLY GRADED SAND. TRACE SILT.	SP	FINE BEDDING NOTED	0 PPM
10	3 4	2.0	S-5 1400							
	12 14	1.6	FMNLF-S-PC02 -1012		MED.	DARK GRAY	S-6A=0.2'-SIMILAR TO ABOVE. S-6B=0.4'-COBBLES & GRAVEL.	GP		0 PPM
12	7 5	2.0	S-6 1404		DENSE		MOSTLY BROKEN PHYLLITE COBBLES, GRAVEL ANGULAR TRACE F-C SAND & SILT.		NO STRUCTURE NOTED.	
	4 18	1.1	FMNLF-S-PC02 -1214		DENSE		S-7A=0.5'-SIMILAR TO S-6B. S-7B=0.6'-SAND. MOSTLY POORLY GRADED FINE-MED. SAND TRACE ROUNDED FINE GRAVEL.	SP	NO SIGN OF CONTAMINATION NOTED.	0 PPM
14	14 11	2.0	S-7 1425							
	8 10	1.5	FMNLF-S-PC02 -1416		MED.					0 PPM
16	7 6	2.0	S-8 1426		DENSE		EOB @ 16' BGS			

MAR HEADSPACE

TYPE OF DRILLING RIG	ATV MOUNTED DIETRICH D-120
METHOD OF ADVANCING BORING	4 IN. D&W CASING
METHOD OF SOIL SAMPLING	2 IN. SPLIT-BARREL DRIVEN W/ 140 LB. HAMMER
METHOD OF ROCK CORING	NA
GROUNDWATER LEVELS	~7 FT. BGS.
OTHER OBSERVATIONS	

BORING NO

Tetra Tech NUS, Inc.

PAGE 1 OF 1

Ttnus Form 0018

BORING LOG FOR: CT0842 - FMNLF
PROJECT NO.: 5152
LOGGED BY: T. DORGAN
DRILLED BY (Company/Driller): EDI / JOE
GRD. SURFACE ELEVATION:

TRANSCRIBED BY:
ELEVATION FROM:

BORING NO.: MW-PC03
START DATE: 8-13-03
COMPLETION. DATE: 8-13-03
MON. WELL NO.: MW-PC03
CHECKED BY:

DEPTH (FEET)	BLOWS PER 6"	SAMP REC / SAMP LENG	SAMPLING TIME & SAMPLE NO (QA/QC STATUS)	DEPTH MAT'L CHG/ WELL PROF'L	SOIL DENSITY/ CONSIS. or ROCK HARD	CLR	MATERIAL CLASSIFICATION	USCS or ROCK BRKN	REMARKS (moisture condition, odors, geological classification, rock weathering, etc)	FIELD SCREENING DATA METHOD = [FID, (PPM)]
0							GRASS SURFACE			
	8 7 7 6	1.9 / 2.0	FMNLF-S-PC03 -0002 S-1 0825	FILL	MED. DENSE	TAN - LT. GRAY	SAND. MOSTLY POORLY GRADED F-MED. SAND, TRACE FINE SUBAND. GRAVEL, TRACE SILT. ROOT FIBER IN UPPER 0.4'.	SP	FILL (BACKFILL) DRY	0 PPM
2										
	15 14 17 16	1.0 / 2.0	FMNLF-S-PC03 -0204 S-2 0830		DENSE					0 PPM
4										
*	5 5 7 9	0.8 / 2.0	FMNLF-S-PC03 -0406 DUP01-0915 S-3 0910		MED. DENSE				WET, CLOSE TO SATURATED	3500 PPM
6										
	11 15 19 21	0.1 / 2.0	FMNLF-S-PC03 -0608 S-4 0912		DENSE		POOR/NO RECOVERY, 1 PIECE COARSE GRAVEL PLUGGED SAMPLER	X	NO RECOVERY C. GRAVEL BLOCKING RECOVERY	
8										
	9 5 6 7	0.0 / 2.0	NO RECOV S-5 0935		MED. DENSE		NO RECOVERY. TRACE ANGULAR PHYLLITE FRAGMENTS IN NOSE.	X	NO RECOVERY SLIGHT PET. ODOR	40 PPM
10										
*	13 25 32 27	1.5 / 2.0	FMNLF-S-PC03 -1012 S-6 0940 MS/MSD	OIL IMPACTED	DENSE	BLACK	SAND. MOSTLY F-C WELL GRADED SAND, SOME FINE GRAVEL, TRACE SILT HEAVY OIL STAINING	SW	HEAVY PET. ODOR & STAINING, TRACE FREE OIL IN SOILS OIL DROPS & SHEEN IN WASH TUB.	4000 3500 PPM
12										
	13 8 11 12	1.4 / 2.0	FMNLF-S-PC03 -1214 S-7 1012		MED. DENSE	DARK GRAY	S-7A = 0.5' - SANDY, SILT. MOSTLY SILT, SOME FINE SAND, TRACE CLAY. S-7B = 0.9' - SAND. MOSTLY F-C WELL GRADED SAND, TRACE FINE ROUNDED GRAVEL.	ML SW	NO PET. ODOR OR SHEEN NOTED	2 PPM
14										
	29 28 18 17	1.5 / 2.0	FMNLF-S-PC03 -1416 S-8 1015		DENSE		EOB @ 16' BGS			1 PPM
16										

TYPE OF DRILLING RIG: ATV MOUNTED DIETRICH D-120
METHOD OF ADVANCING BORING: 4 IN. DTW CASING
METHOD OF SOIL SAMPLING: 2 IN. SPLIT-BARREL DRIVEN W/ A 140 LB. HAMMER
METHOD OF ROCK CORING: NA
GROUNDWATER LEVELS: EST - @ ~6' BGS.
OTHER OBSERVATIONS:

BORING NO

Tetra Tech NUS, Inc.

PAGE 1 OF 1

Ttnus Form 0018

OVERBURDEN MONITORING WELL CONSTRUCTION LOG

TETRA TECH NUS, INC.

PROJECT NAME: CTO842 - FORMER MELVILLE NORTH LANDFILL

PROJECT LOCATION: MIDDLETOWN / PORTSMOUTH, RI

CLIENT: U.S. NAVY - EFANE

CONTRACTOR: GEOSEARCH - EDI

DRILLER: JOE KEENAN

LOGGED BY: T. DORGAN

DATE: 8-12-03

CHECKED BY:

DATE:

PROJECT NO: 5152-0501

WELL NO: MW-PC01

BORING NO: MW-PC01

BORING LOCATION:

PAGE: 1 OF 1

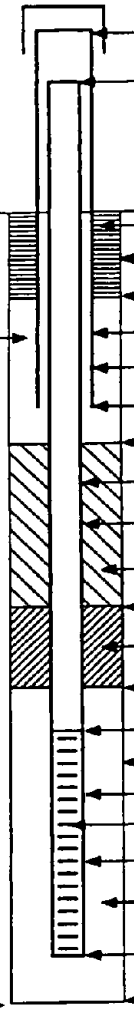
ELEVATION TOP OF PROTECTIVE CASING

ELEVATION TOP OF RISER PIPE

GROUND ELEVATION

SAND DRAIN LAYER

END OF BORING



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	2.0'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	1.44'
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	12-14"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	0.5'
I.D. OF PROTECTIVE CASING (In.)	6 IN.
TYPE OF PROTECTIVE CASING	STEEL
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	0.5'
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	1'
RISER PIPE (In.) I.D.: 2 O.D.: 2.5	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	NA
DEPTH TOP OF SEAL (Ft.)	1'
TYPE OF SEAL (HYDRATED)	BENTONITE CHIP
DEPTH BOTTOM OF SEAL (Ft.)	2'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	3.5
DIAMETER OF BOREHOLE (In.)	4 IN.
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010 IN.
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2.5	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 1 SILICA SAND
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	13.5
DEPTH BOTTOM OF FILTER PACK (Ft.)	13.5

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available.

OVERBURDEN MONITORING WELL CONSTRUCTION LOG

TETRA TECH NUS, INC.

PROJECT NAME: CTO842 - FORMER MELVILLE NORTH LANDFILL

PROJECT LOCATION: MIDDLETOWN / PORTSMOUTH, RI

CLIENT: U.S. NAVY - EFANE

CONTRACTOR: GEOSEARCH - EDI

DRILLER: JOE KEENAN

LOGGED BY: T. DURGAN

DATE: 8/12/03

CHECKED BY:

DATE:

PROJECT NO: 5152-0501

WELL NO: MW-PC02

BORING NO: MW-PC02

BORING LOCATION:

PAGE: 1 OF 1

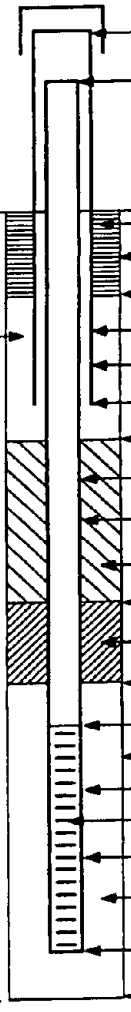
ELEVATION TOP OF PROTECTIVE CASING

ELEVATION TOP OF RISER PIPE

GROUND ELEVATION

SAND DRAIN LAYER

END OF BORING



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	4.0'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	3.37'
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	12-14"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	10"
I.D. OF PROTECTIVE CASING (In.)	6 IN.
TYPE OF PROTECTIVE CASING	STEEL
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	1'
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	3'
RISER PIPE (In.) I.D.: 2 O.D.:	2.5
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	NA
DEPTH TOP OF SEAL (Ft.)	3'
TYPE OF SEAL (HYDRATED)	BENTONITE CHIP
DEPTH BOTTOM OF SEAL (Ft.)	4'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	5.59'
DIAMETER OF BOREHOLE (In.)	4 IN.
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010 IN.
PERVIOUS SECTION (In.) I.D.: 2 O.D.:	2.5
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 1 SILICA SAND
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	15.59'
DEPTH BOTTOM OF FILTER PACK (Ft.)	16

GENERAL NOTE:

1. Entry of 0.00 for Ground Elevation, Elev. Top of Riser Pipe & Elev. Top of Protective Casing indicates that Surveyed Ground Elevation Not Available

OVERBURDEN MONITORING WELL CONSTRUCTION LOG

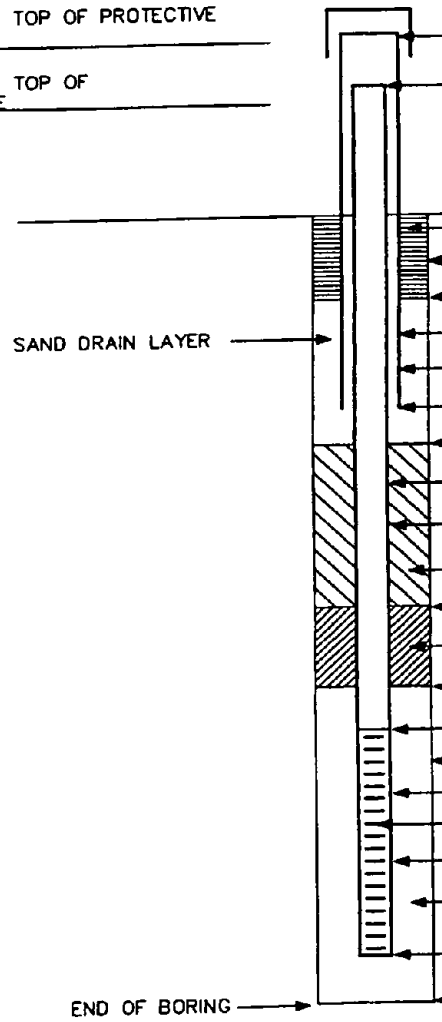
TETRA TECH NUS, INC.

PROJECT NAME: CTO842 - FORMER MELVILLE NORTH LANDFILL
PROJECT LOCATION: MIDDLETOWN / PORTSMOUTH, RI
CLIENT: U.S. NAVY - EFANE
CONTRACTOR: GEOSEARCH - EDI
DRILLER: JOE KEENAN
LOGGED BY: T. DURGAN
DATE: 8/13/03
CHECKED BY:
DATE:

PROJECT NO: 5152-0501
WELL NO: MW-PC03
BORING NO: MW-PC03
BORING LOCATION:

PAGE: 1 OF 1

ELEVATION TOP OF PROTECTIVE CASING
ELEVATION TOP OF RISER PIPE
GROUND ELEVATION



LENGTH OF PROTECTIVE CASING ABOVE GROUND SURFACE (Ft.)	1.47'
LENGTH OF RISER PIPE ABOVE GROUND SURFACE (Ft.)	1.30'
TYPE OF SURFACE SEAL	CONCRETE
DIA. SURFACE SEAL BGS (In.)	12"
DEPTH TO BOTTOM OF SURFACE SEAL (Ft.)	10"
I.D. OF PROTECTIVE CASING (In.)	6 IN.
TYPE OF PROTECTIVE CASING	STEEL
DEPTH BOTTOM OF PROTECTIVE CASING (Ft.)	1.0'
DEPTH BOTTOM OF DRAIN LAYER (Ft.)	2'
RISER PIPE (In.) I.D.: 2 O.D.: 2.5	
TYPE OF RISER PIPE	SCHEDULE 40 PVC
TYPE OF BACKFILL AROUND RISER PIPE	NA
DEPTH TOP OF SEAL (Ft.)	2'
TYPE OF SEAL (HYDRATED)	BENTONITE CHIP
DEPTH BOTTOM OF SEAL (Ft.)	3'
DEPTH TOP OF PERVIOUS SECTION (Ft.)	4.13'
DIAMETER OF BOREHOLE (In.)	4 IN.
TYPE OF PERVIOUS SECTION	SCHEDULE 40 PVC
TYPE OF OPENINGS	0.010 IN.
PERVIOUS SECTION (In.) I.D.: 2 O.D.: 2.5	
TYPE OF FILTER PACK AROUND PERVIOUS SECTION	NO. 1 SILICA SAND
DEPTH BOTTOM OF PERVIOUS SECTION (Ft.)	12.13'
DEPTH BOTTOM OF FILTER PACK (Ft.)	16

GENERAL NOTE

1. Entry of 0.00 for Ground Elevation, Elev Top of Riser Pipe & Elev. Top of Protective Casing Indicates that Surveyed Ground Elevation Not Available

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: MW-PC01

PROJECT: CTO 842
PROJECT NO.: 5152
PERSONNEL: T. DORGAN

DATE: 8/13/03
WEATHER: SUNNY, DRY, HOT

Well Screen Depth: 3.5 / 13.5 ft. bgs
H&S Monitoring Instrument Reading 0.5 @ BUCKET.

Pump Type/Material: WHALE PUMP
Pump Intake Depth: VARIED.

Total Purge Volume = 55 (gal)
Data Recorded By: T. Dorgan

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1310	6.37' BGS	START	WHALE-PUMP. DARK BROWN, OPAQUE PURGE WATER. NO SHEEN, STRONG H_2S ODOR						
1315	WELL DRY,	STOP	PUMP & LET RECOVER.						
1320	RE-START							VIS. IMPROVING.	
1328				19.2	6.94	4.88	11.34	320	ORP=-269
1335			~1 GPM	19.3	6.84	6.65	11.18	100	TDS=4.1
STOP	PUMP, ALLOW	RECOVER	& RE-SURGE FOR	~2-3 MIN. THEN			RE-PUMP.	4(D)	
1344				18.6	6.83	6.01	12.09	470	ORP=-300
1348				18.7	6.86	6.36	12.21	53	PURGE H_2O=YELLOW &
1350	STOP PUMP, LET RECOVER, RE-SURGE &			RESTART	PUMP @ 1358.				STRONG H_2S ODOR
~~1405~~ (B)	FIX PUMP	CABLE.							
1410		~35 GAL		18.8	6.83	6.38	12.38	61	PUMP CYCLING
1415				19.4	6.84	6.37	11.72	44	
1425				19.1	6.87	6.94	12.07	58	INORGANIC SHEEN
1433				18.9	6.86	7.67	11.76	200	ON PURGE WATER
1440				18.0	6.87	7.94	12.05	78	
1445				18.1	6.86	8.00	11.74	32	
STOP PUMP.		TOTAL PURGE VOL. = 55 GAL.							

SPILLED 0.3 L YELLOW BROWN

Tt NUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: MW-PC02

PROJECT: CT0842
PROJECT NO.: 5152
PERSONNEL: T. DURGAN

DATE: 8/13/03
WEATHER:

Well Screen Depth: 5.59', 15.59 ft. bgs
H&S Monitoring Instrument Reading 0.0 ppm

Pump Type/Material: WHALE PUMP
Pump Intake Depth: VARIED

Total Purge Volume = ~100 (gal)
Data Recorded By: T. Durgan

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments
1450	6.7'	INSERT	WHALE-PUMP	& START @ 1455.					
	INITIAL PURGE = BROWN OPAQUE NO ODOR NOTED.								
1505	7.0'	STILL	LT. BROWN & OPAQUE.						ONLY 0.3' DRAWDOWN
1508				18.75	7.55	0.541	11.76	830	SALIN. = 0.0%
1515	7.6'		1.5 GPM	18.20	6.52	0.320	11.72	400	TDS = 0.26
	SURGE & PUMP ~5 MIN. MOVE INTAKE THROUGHOUT SCREEN.								ORP = -115
1525				18.20	6.28	0.315	11.63	570	
				18.7	5.94		4.79	230	
1545		50 GAL	1.5 GPM	18.2	5.87	0.276	10.91	200	
1550				18.6	5.95	0.301	5.55	140	TDS = 0.20
1600		75 GAL		18.8	6.01	0.307	11.10	110	ORP = +60
1605				18.7	5.93	0.299	11.43	120	NO ODOR OR SHEEN
1618	7.6'			18.4	5.92	0.298	11.53	46	
1625				18.4	6.00	0.300	11.60	35	
	STOP DEVEL. MODAL.								

Tt NUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

WELL DEVELOPMENT DATA SHEET

Well No.: MW-PC03

PROJECT:

PROJECT NO.: 5157

PERSONNEL: T-DORGAN

DATE: 8/13/03

WEATHER:

Well Screen Depth: 12.1 / 4.1 ft. bgs

H&S Monitoring Instrument Reading 0.0

Pump Type/Material: 4" MOYNO

Pump Intake Depth: VARIED

Total Purge Volume = ~70 (gal)

Data Recorded By: T. Dorgan

Time	Water Level ft below top PVC	Volume mL	Flow Rate mL/min	Temp °C	pH	Sp Cond mS/cm	DO mg/L	Turbidity NTU	Comments	SHLIN
1120	START WELL	DEVEL.	USING	RIG 4" MOYNO	PUMP	W/ TREMIE	PIPE			
1124		INITIAL	PURGE	WATER OPAQUE,	VERY TURBID	LT. BROWN	W/ PETROLEUM	ODOR.		
1127	BOTTOM OF WELL		~1 GPM	Δ PUMP,	THIS ONE	DEWATERED	WELL TOO	QUICKLY @ LOWEST	PUMP RATE.	
	MONITOR RECOVERY		RATE = 0.1	'/22 SEC.	Δ TO	WHALE	PUMP.			
1139	RE-START W/ WHALE PUMP.			20.0	5.79	0.346	8.01	OFF SCALE	PET. SHEEN	0.0
1142	STOP PUMP, GONE DRY.		LET RECOVER ~3 MIN.	SURGE	PUMP	THEN	TURN	ON.		
1145	RE-START.		1 GPM	17.9	5.69	0.374	7.10	OFF SCALE	ORP = 117 mV	0.0
1158	12.6 VIS. IMPROVEMENT			17.8	5.66	0.377	11.86	↓		0.0
1205	~~10.4~~ 15.2		~1 GPM	17.1	5.61	0.383	12.19	310		
1209	RE-SURGE,	~25 GAL.		17.0	5.6	0.377	7.15	130	ORP = 118	
1216				16.9	5.61	0.381	6.7	310		
1220	15.4			16.5	5.60	0.383	10.12	92		
1226				16.2	5.58	0.383	6.52	42		
1230				16.4	5.61	0.394	11.88	90		
1240		50 GAL			5.60	0.394	4.76	43		
1245	15.1			16.3	5.63	0.398	11.51	88		
1250				16.3	5.67	0.396	8.6	25		
		TOTAL PURGE = ~70 GAL.								
	STOP DEVEL.									

Tt NUS Form 0013

Page ___ of ___

TETRA TECH NUS, INC.

VOC SOIL SAMPLE COLLECTION/PRESERVATION LOG SHEET

Sample Container Lot # _____ Preserved in the field Date: 8/14/03

			LOW CONCENTRATION VOC				HIGH CONCENTRATION				LAB
Sample # FMMF-S-	Bottle Letter	Vial ID Number	Sodium Bisulfate ($NAHSO_4$) (mL)	Tare Weight Vial + Pres.(g)	Final Weight Vial + Pres. + Sample (g)	Soil Sample Weight (g)	Methanol (mL)	Tare Weight Vial + Pres. (g)	Final Weight (g)	Soil Sample Weight (g)	Final Weight Vial + Pres. + Sample (g)
PC01-0204	A	01-228000 810					5	31.17	40.055		
↓	B	02-175001 760	5	35.33	44.047						
PC01-0204	C	02-175001 748	5	35.40	44.123						
PC02-0608	A	01-228000 785					5	30.81	38.451		
↓	B	02-17500 1741	5	35.27	43.383						
PC02-0608	C	02-17500 1744	5	35.17	41.468						
PC03-0406	A	01-228000 798					5	31.29	37.504		
↓	B	02-17500 1780	5	35.51	42.844						
PC03-0406	C	02-17500 1750	5	35.36	42.564						
DUP-01	A	01-228000 751					5	31.09	37.657		
↓	B	02-17500 1763	5	35.42	41.587						
DUP-01	C	02-17500 1777	5	35.42	43.844						
PC03-1012	A	01-228000 1764					5	34.85	35.869		
↓	B	01-228000 758					5	30.78	36.713		
↓	C	01-228000 759					5	31.00	39.666		
↓	D	02-17500 1761	5	35.54	43.193						
↓	E	1-1779	↓	35.58	43.434						
↓	F	↓-1758	↓	35.52	42.908						
↓ PC03-1012	G	02-17500 1769	5	35.14	42.378						

TtNUS Form 0040

J. Dyer

Note: Tare weight = vial, preservative, cap and magnetic stirrer, if applicable
Severe effervescence: Yes ☐ No ☒

Laboratory Analysts Initials: _____ Date: _____

TETRA TECH NUS, INC.

VOC SOIL SAMPLE COLLECTION/PRESERVATION LOG SHEET

Sample Container Lot # _____ Preserved in the field Date: 8/14/03

			LOW CONCENTRATION VOC				HIGH CONCENTRATION				LAB
Sample # FMNLF-S-	Bottle Letter	Vial ID Number	Sodium Bisulfate ($NAHSO_4$) (mL)	Tare Weight Vial + Pres.(g)	Final Weight Vial + Pres. + Sample (g)	Soil Sample Weight (g)	Methanol (mL)	Tare Weight Vial + Pres. (g)	Final Weight (g)	Soil Sample Weight (g)	Final Weight Vial + Pres. + Sample (g)
PC03-1012	H	02-17500 1787	5	35.55	44.122						
PC03-1012	I	02-17500 1767	5	35.61	42.791						
TB-01	A	02-03500 0608					5	30.67	28.230		

TtNUS Form 0040

V. Duca

Note: Tare weight = vial, preservative, cap and magnetic stirrer, if applicable
Severe effervescence: Yes ☐ No ☐

Laboratory Analysts Initials: _____ Date: _____

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CT0842 FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-S-TB01

Tetra Tech NUS Job No./PMS 5152-0501
QC Information: TRIP BLANK (if applicable)

Sample Method/Device: LAB SUPPLIED
Depth Sampled: ___ feet Total Depth ___ feet (SW Only)
Sample Date & Time: 8/12/03 0800 hours
Sampler(s): T. DORGAN

Date Recorded By: T. Dorgan
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- X Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

* LAB SUPPLIED *

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: ___ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

T. Dorgan

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
VOCs				

T. Dorgan

Tt NUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CT0842 FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-S-TB01

Tetra Tech NUS Job No./PMS 5152-0501
QC Information: TRIP BLANK (if applicable)

Sample Method/Device: LAB SUPPLIED
Depth Sampled: ___ feet Total Depth ___ feet (SW Only)
Sample Date & Time: 8/12/03 0800 hours
Sampler(s): T. DORGAN

Date Recorded By: T. Dorgan
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- X Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*Include sample source & lot No.

* LAB SUPPLIED *

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

T. Dorgan

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
VOCs				

T. Dorgan

Tt NUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CTO 842 - FORMER MENVILLE NORTH LANDFILL
Sample ID: FMNLF-S-RB01

Tetra Tech NUS Job No./PMS 5152-054
QC Information: RINSATE BLANK (SOILS) (if applicable)

Sample Method/Device: DIRECT POUR
Depth Sampled: ____ feet Total Depth ____ feet (SW Only)
Sample Date & Time: 8/14/03 0930 hours
Sampler(s): T. DORGAN

Date Recorded By: T. Dorgan
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

VOC = STORE PURCH. POLAND SPRING
NERL DIUF WATER - LOT-0714093
EXP. - 07-2004
FOR TPH SAMPLE

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: CLEAR Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ____ ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				DIRECT POURED WATER INTO A
TPH - DRO				FRESHLY DECONNED STAINLESS-STEEL
				BOWL (LAST USED @ FMNLF-S-PC03-1012)
				W/ DISP. TROWL INSIDE. THEN POURED
				WATER RINSATE INTO LAB BOTTLEWARE.

Tt NUS Form 0004

TETRA TECH NUS, INC.

SAMPLE COLLECTION SUMMARY RECORD

PROJECT NAME: CT0842 - Former Melville North Landfill TETRA TECH NUS JOB NO./PMS 5152-

SAMPLING EVENT: GW/SOIL SAMPLING CASE NO.: DAS NO

DATE 2003	TIME	SAMPLE LOCATION	FIELD QC	VOCS LOW	VOCS MED-HIGH	TPH				COMMENTS
8/12	1042	FMNLF-S-PC01-0204	—							
8/12	1340	FMNLF-S-PC02-0608	—							
8/13	0910	FMNLF-S-PC03-0406	D1							
↓	0915	FMNLF-S-BUP-01	D1							
8/13	0940	FMNLF-S-PC03-1012	MS/MSD							HEAVY PET. IN SOILS.
8/12	0600	FMNLF-S-TB01	T1							
8/14	0930	FMNLF-S-RB01	R1							

Tt NUS Form 0012

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CTO842 - FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-PC01-B-01

Tetra Tech NUS Charge No. 5152
QC Information: _____ (if applicable)

Sample Method/Device: DISP. BAILER
Depth Sampled: 13.5 feet BGS Total Depth _____ feet (SW Only)
Sample Date & Time: 8/18/03 ~~1650~~ 1750 hours
Sampler(s): J. DORLMAN

Recorded By: J. Dorlman
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	14.62 feet	Purge Start	1715 hrs
Inside Diameter	2 Inches	Purge Stop Time	1745 hrs
Water Level	6.05 feet	Total Gallons Purged	~5
Well Volume	1.4 gal.	Purge Method	DISP. BAILER

Color: BROWN/BLACK Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data: BAILER PURGE BEGAN FOLLOWED LOW-FLOW PURGE & SAMPLE.

Vol. #	Temp °C	pH	Spec. Cond.	DO
0	18.01	6.88	4905	3.82
1	16.96	6.89	4844	2.57
~~3~~ 2	16.40	6.89	4980	5.11
~~4~~ 3	16.44	6.91	4965	5.70

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				STRONG H_2S ODOR. VERY TURBID.
SVOC				NO PET. ODOR OR SHEEN NOTED.
GRO				
DRO				
PEST.				
PCB				
TOT. METALS				

TtNUS Form 0004

ALL DEPTHS BELOW M.P. ON TOP OF PVC RISER.

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: CTO842 - FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-PC02-LF-01

Tetra Tech NUS Job No./PMS 5152
QC: MS/MSD (If applicable)

Sample Method: LOW FLOW - PERI - PUMP
Depth Sampled: 12 Feet BGS Screened Interval Depth 5.59-15.59 feet BGS
Sample Date & Time: 6/19/03 1145 hours ____ Dup
Sampler(s): T. DURGMAN
Data Recorded By: T. Dougc Signature:
Notes:
NO ODOR OR SHEEN NOTED ON PURGE H_2O. SLIGHTLY TURBID. COLOR = LT. GRAY/BROWN.

H&S Survey Meter ____ PPM Field Instrument Group (A)/B/C/D
Pre-pump insertion WL 6.32 ft Post - pump insertion WL ____ ft
POSS SHEEN NOTED BY INTERFACE PROBE. WILL CHECK W/ BAILER. — NO SHEEN OR SIGN OF LNAPL FOUND.

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
VOC		SVOC		TOT. METAL	
GRO		PEST.			
DRO		PCB			

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1010	6.32										
1024	START PUMP										
1026	6.32		205		20.06	269	5.83	202.3	2.29	90	
1035					19.09	257	5.79	247.1	1.36	21	
1045					18.93	256	5.79	258.5	0.83	14	PLACED SHADE
1052	~~6.34~~ 6.34				18.78	255	5.80	274.1	1.19	12	AROUND FLOW-
1056					18.65	254	5.80	278.6	1.25	11	CELL
1100					18.59	254	5.78	291.0	0.76	10	
1107	6.27				18.53	255	5.79	296.4	0.88	6.8	
1115	6.26			~3 GAL.	18.57	254	5.79	303.2	0.67	6.1	
1120	6.25				18.53	254	5.79	311.4	0.63	4.3	
1123	6.25				18.54	254	5.80	314.5	0.61	4.1	
1126	6.26				18.54	254	5.80	315.1	0.61	3.9	
1129	6.24				18.53	254	5.80	315.7	0.64	3.5	
	STOP	PURGE	& SAMPLE.	TOTAL		PURGE	=	5 GAL.			

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

WATER LEVEL RISING EVEN THOUGH CONSTANT PURGE RATE. (TIDE IS RISING TOWARD'S FULL TIDE @ ~1300 TODAY!

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CTO842 - FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-PC02-B-01

Tetra Tech NUS Charge No. 5152
QC Information: _____ (if applicable)

Sample Method/Device: DISP. BAILER
Depth Sampled: 15.5 feet BGS Total Depth _____ feet (SW Only)
Sample Date & Time: 8/19/03 1430 hours
Sampler(s): [signature]

Recorded By: [signature] Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

* include sample source & lot No

WELL PURGE DATA:

Well Depth	18.95' feet BTPVC	Purge Start	1400 hrs
Inside Diameter	2 Inches	Purge Stop Time	1425 hrs
Water Level	5.94 feet	Total Gallons Purged	~7
Well Volume	2.1 gal.	Purge Method	DISP. BAILER

Color: LT. BROWN Turbidity: CLR/SL CLDY CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	TURB.	Temp °C	pH	Spec. Cond.	DO
0	60	23.18	5.93	295	3.55
1	OFF SCALE	19.68	5.90	269	4.99
~~2~~ 2	"	18.04	5.95	256	5.16
~~3~~ 3	OFF SCALE	18.07	5.89	255	5.41

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				CONDUCTED LOW-FLOW PURGE & SAMPLE
SVOC				INC. MS/MSD PRIOR TO BAILER SAMPLE
GRO				
DRO				
PEST/PCB				
TOT. METALS				

TtNUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: CT0482- FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-PC03-LF-01

Tetra Tech NUS Job No./PMS 5152
QC: DUP 01 (If applicable)
FMNLF-GW-DUP01

Sample Method: LOW FLOW - PERI-PUMP
Depth Sampled: 11.5 Feet BGS Screened Interval Depth 4.1-12.1 feet BGS
Sample Date & Time: 8/19/13 1630 hours 1200 Dup
Sampler(s): T. MORGAN
Data Recorded By: T. Morgan Signature:
Notes:
STRONG PET. ODOR. NO SHEEN OR FREE OIL NOTED
-OUTGOING TIDE! WATER LEVEL CONT. DROPPING

H&S Survey Meter ____ PPM Field Instrument Group A/B/C/D
Pre-pump insertion WL 9.00 ft, Post - pump insertion WL ____ ft
STEADY LNAPL SIGNAL 0.01' THICK W/ INT. PROBE CHECK W/ BAILER & FIND NO OIL OR SHEEN, BUT A NOTICABLE PET. ODOR.

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
VOC		GRO		TOT. METALS	
SVOC		PEST.			
DRO		PCB			

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1512	START PUMP										
1517	9.13		165		17.76	292	5.30	252.7	5.00	100	
1525	9.13				17.07	286	5.26	319.6	3.82	60	
1535	9.15				17.23	286	5.27	336.9	3.70	37	
1545	9.19				17.11	285	5.26	345.4	3.64	20	
1555	9.21				16.87	284	5.25	353.8	3.53	9.1	
1600	9.24				16.71	282	5.25	362.1	3.46	7.9	
1605	9.25				17.03	284	5.24	358.8	3.51	5.7	
1610	9.26				17.07	286	5.24	357.1	3.43	5.5	
1615	9.27				16.82	284	5.23	360.7	3.38	4.7	
1620	9.29				17.18	286	5.24	355.0	3.32	4.5	
1628	9.31				17.12	286	5.23	350.7	3.30	3.5	
1630	9.32				17.14	286	5.23	353.1	3.31	3.6	
	END PURGE - BEGIN SAMPLING										

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CTD842 - FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-PC03-B-01

Tetra Tech NUS Charge No. 5152
QC Information: — (if applicable)

Sample Method/Device: DISP. BAILER
Depth Sampled: 12 feet BGS Total Depth ____ feet (SW Only)
Sample Date & Time: 8/19/03 1820 hours
Sampler(s): T. DORGAN

Recorded By: T. Dorgan
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

* include sample source & lot No

WELL PURGE DATA:

Well Depth	13.5 STICK feet	Purge Start	1800 hrs
Inside Diameter	2 Inches	Purge Stop Time	18 hrs
Water Level	9.67 feet 1755	Total Gallons Purged	~3-4 GAL.
Well Volume	0.62 gal.	Purge Method	DISP. BAILER

Color: BROWN W/ PET. SHEEN Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	TURB.	Temp °C	pH	ORP	Spec. Cond.	DO
0	OFF SCALE	17.23	5.56		297	6.20
1		15.68	5.61		303	5.31
2		15.41	5.62	180.3	293	5.56
3		15.32	5.61	173.3	291	6.01

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	INORGANIC	COMMENTS
VOC				PET. ODOR & SHEEN ON PURGE WATER
SVOC				
DRO				
GRO				
PEST./PCB				
TOT. METALS				

T. Dorgan

TtNUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CT0842 FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-TB01

Tetra Tech NUS Job No./PMS 5152-0501
QC Information: TRIP BLANK (if applicable)

Sample Method/Device: LAB SUPPLIED
Depth Sampled: ___ feet Total Depth ___ feet (SW Only)
Sample Date & Time: 8/18/03 1000 hours
Sampler(s): T. DORGAN

Date Recorded By: T. Dorgan
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- X Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

* LAB SUPPLIED *

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: ___ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
		ORGANIC	INORGANIC	
VOCS				

Tt NUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CTDSHZ-FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-RB01-01

Tetra Tech NUS Job No./PMS 5152-0507
QC Information: RINSATE (if applicable)

Sample Method/Device: DIRECT PUMP (PERISTALTIC) FROM SOURCE TO BOTTLE
Depth Sampled: ____ feet Total Depth ____ feet (SW Only)
Sample Date & Time: 8/20/03 0930 hours
Sampler(s): T. DURGAN

Date Recorded By: T. Durgan
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

GRO & VOC = STORE PURCH. POLAND SPRING
*Include sample source & lot No.
ALL OTHERS = NERL DIUF WATER LOT-0714093
↳ EXP. 07-2004.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: ____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ____ ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				USED PERI-PUMP WITH FRESH TEFLON
SVOC				TUBING ON INTAKE & DISCHARGE &
DRO				FRESH PHARM.-GRADE SILICON TUBING
GRO				IN PUMP HEAD.
PEST./PCB				
TOT. METALS				

Tt NUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CTO842 - FORMER MELVILLE NORTH LANDFILL
Sample ID: FMNLF-GW-RB02-01

Tetra Tech NUS Job No./PMS 5152-0507
QC Information: RINSATE (if applicable)

Sample Method/Device: DIRECT POUR - DISPOSABLE BAILER
Depth Sampled: ____ feet Total Depth ____ feet (SW Only)
Sample Date & Time: 8/20/03 1015 hours
Sampler(s): T. DURGAN
Date Recorded By: T. Durgan
Signature

TYPE OF SAMPLE: (Check all that apply)

- ____ Groundwater
- ____ Surface Water
- ____ Residential Supply
- X Grab
- ____ Composite
- ____ Trip Blank*
- X Rinsate Blank*
- ____ Field Duplicate Collected
- ____ Other (Specify):

VOC + GRO = POLAND SPRING WATER
*Include sample source & lot No.
ALL OTHERS = NERL DIUF WATER

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: CLEAR Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: 6UT-0714093 EXP. 07-2004 ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

T. Durgan

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				DIRECT POUR WATER INTO NEW
SVOC				DISP. BAILER THEN INTO BOTTLEWARE.
DRO				
GRO				
PEST./PCB				
TOT./METALS				

Tt NUS Form 0004

TETRA TECH NUS, INC.

SAMPLE COLLECTION SUMMARY RECORD

PROJECT NAME: CT0842- FORMER MELVILLE NORTH LANDFILL

TETRA TECH NUS JOB NO./PMS: 5152-

SAMPLING EVENT: ROUND 1 GROUNDWATER SAMP.

CASE NO.:

DAS NO.:

DATE 2003	TIME	SAMPLE LOCATION	FIELD QC	VOC 40 ML	GRO 40 ML	DRO 1L.	SVOC 1L.	PEST. 1L.	PCB 1L.	TOT. METALS 500 ML	COMMENTS
8/18	1000	FMNLF-GW-TB-01	T1	2	—	—	—	—	—	—	
↓	1615	FMNLF-GW-PC01-LF-01	—	2	2	1	1	1	1	1	FLUSHED ACID FROM 40 ML. VIALS DUE TO VERY STRONG REACTION.
8/18	1750	FMNLF-GW-PC01-B-01	—	2	2	1	1	1	1	1	SAME AS ABOVE.
8/19	1145	FMNLF-GW-PC02-LF-01	MS/MSD	6	6	3	3	3	3	3	
	1430	FMNLF-GW-PC02-B-01	—	2	2	1	1	1	1	1	
	1630	FMNLF-GW-PC03-LF-01	DUP	2	2	1	1	1	1	1	LT. PET. ODOR NOTED. NO SHEEN.
↓	1200	FMNLF-GW-DUP01-01	DUP	2	2	1	1	1	1	1	" ↓
8/19	1820	FMNLF-GW-PC03-B-01		2	2	1	1	1	1	1	MOD.-HEAVY PET. ODOR W/ LIGHT. PET. SHEEN.
8/20	0930	FMNLF-GW-RB01-01	R1	2	2	1	1	1	1	1	
8/20	1015	FMNLF-GW-RB02-01	R2	2	2	1	1	1	1	1	

NUS Form 0012

CTO842

TETRA TECH NUS, INC.

ANALYTICAL SERVICE
Packing List/Chain-of-Custody

Case No.

Subcontract No.

Page 1 of

Project No. 5152-0601

Laboratory Name: MITKEM CORP.

Sampler Signatures: [signature]

Date Shipped: 8-20-03

Carrier: LAB PICKUP

Airbill No.

No. of Coolers

Sample Number	Matrix	Date/Time (2003)	Sample Location	Tag Number(s)	QC	Container Type: 40 ml VIAL AMB.	Container Type: 40 ml VIAL AMB.	Container Type: 1 L. AMB.		Container Type: 1 L. AMB.		Container Type: 500 ml POLY
						Analysis: VOC 8260B	Analysis: GRO 8015B	Analysis: DRO 8015B	Analysis: SVOC 8270	Analysis: PESTICIDES 8081	Analysis: PCB 8082	Analysis: TOTAL METALS 6010
						Preservative: HCl	Preservative: HCl	Preservative: ICE	Preservative: ICE	Preservative: ICE	Preservative: ICE	Preservative: HNO_3
	AQ.	8/18/1000	FMNLF-GW-TB01		TB	2	—	—	—	—	—	—
		/1615	FMNLF-GW-PC01-LF-01			2 *	2 *	1	1	1	1	1
		8/18/1750	FMNLF-GW-PC01-B-01			2 *	2 *	1	1	1	1	1
		8/19/1145	FMNLF-GW-PC02-LF-01		MS/MSD	6	6	3	3	3	3	3
		/1430	FMNLF-GW-PC02-B-01			2	2	1	1	1	1	1
		/1630	FMNLF-GW-PC03-LF-01		DUP	2	2	1	1	1	1	1
		/1200	FMNLF-GW-DUP01-01		DUP	2	2	1	1	1	1	1
		8/19/1820	FMNLF-GW-PC03-B-01			2	2	1	1	1	1	1
		8/20/1930	FMNLF-GW-RB01-01		RB	2	2	1	1	1	1	1
	AQ.	8/20/1015	FMNLF-GW-RB02-01		RB	2	2	1	1	1	1	1

Relinquished By: (Signature)	Date/Time	Received By: (Signature)	Shipment for Case Complete?	Remarks
[signature]	8/20/03 1200	[signature] 8-20-03 12:00	YES (circled) NO	* = UNPRESERVED DUE TO STRONG REACTION WITH HCl. FMNLF-GW-PC03-LF-01 = PETROLEUM ODOR. FMNLF-GW-PC03-B-01 = HEAVY PET. ODOR + SHEEN.
Relinquished By: (Signature)	Date/Time	Received for Laboratory By:	Date/Time	

Tt NUS Form 0022

01559

APPENDIX A-2

FIELD RECORDS, GROUNDWATER SAMPLE COLLECTION, APRIL 2004

TETRA TECH NUS, INC.

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER: PC-01

PROJECT NAME: Melville Landfill

DATE/TIME: 4/20/04 0945

PROJECT MANAGER: S. Parker

INSPECTED BY: J. Lambert
S. Danieli

VENT WELL

MONITORING INSTRUMENT READING: 0.0

LEL/02 READING: —

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 14.93

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 6.76

WELL STICK-UP 1.45

CASING STICK-UP (FEET) 2.0'

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC in steel casing

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES, refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS: No LNAPL + DNAPL tone - well + bailer in good condition.

Tt NUS Form 0021

TETRA TECH NUS, INC.

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER: PC-02

PROJECT NAME: Melville Landfill

DATE/TIME: 4/20/04 0935

PROJECT MANAGER: S. Parker

INSPECTED BY: J Lambert, J. Daniel

VENT WELL

MONITORING INSTRUMENT READING: 0.0

LEL/02 READING: N/A

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 18.87

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 3.66

WELL STICK-UP ~~1.3'~~ 3.4'

CASING STICK-UP (FEET) ~~1.3'~~ 4.0'

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC in steel casing

LOCKED UPON ARRIVAL?	(YES)	NO
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	(NO)
SLUG TEST CONDUCTED?	YES	(NO) (If YES, refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS: NO LNAPL/DNAPL tone - well + bailer in good condition - surrounding area wet.

Tt NUS Form 0021

TETRA TECH NUS, INC.	WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER: PC-03 PROJECT NAME: Melville Landfill

DATE/TIME: 4/20 0930 PROJECT MANAGER: S. Parker

INSPECTED BY: S. Lambert, S. Daneli

VENT WELL

MONITORING INSTRUMENT READING: 0.0

LEL/02 READING: —

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 19.59

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 6.91

WELL STICK-UP ~~3.4' TC~~ 1.3'

CASING STICK-UP (FEET) ~~4.0' TC~~ 1.5'

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES, refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS: no LNAPL fine, no DNAPL - bailer in well. All in good condition

Tt NUS Form 0021

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: CTO 842 · Former Melville North Landfill
Sample ID: FMNLF-GW-PC03-LF-02

Tetra Tech NUS Job No./PMS 5152-0503
QC: DUP01 (FMNLF-GW-DUP01-02 (If applicable)

Sample Method: low-flow
Depth Sampled: 12 Feet* Screened Interval Depth 4.1-12.1 feet
Sample Date & Time: 4/20/04 1435 hours 1440 Dup
Sampler(s): J. Lambert
Data Recorded By: J. Lambert Signature: J. Lambert
Notes: *MP = Top of PVC (1' above ground surface)

TIDE DROPPING
purge water clear, no sheen

H&S Survey Meter 0.0 PPM Field Instrument Group A/B/C/D
Pre-pump insertion WL 8.10 ft Post - pump insertion WL — ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
VOC	SVOC	metals			
GRO	Pest				
DRO	PCB				

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
1330	8.10	Begin purge									
1335	8.11		230		8.88	321	5.50	183.7	3.26	11.8	0.15
1340	8.12		220		8.83	317	5.46	204.7	2.80	9.53	0.15
1345	8.11		220		9.49	313	5.42	218.0	2.49	6.32	0.15
1350	8.11		220		9.50	314	5.41	226.3	2.34	6.67	0.15
1355	8.11		220		9.44	312	5.37	254.8	2.08	6.67	0.15
1400	8.12		220		9.34	310	5.35	263.6	1.99	4.58	0.15
1405	8.12		220		9.31	310	5.33	277.6	1.90	5.32	0.15
1410	8.12		220		9.29	309	5.32	287.5	1.88	3.57	0.15
1415	8.12		220		9.37	309	5.31	298.1	1.84	2.31	0.15
1420	8.12		220		9.36	308	5.30	307.6	1.76	1.21	0.15
1425	8.12		220		9.33	308	5.29	312.6	1.72	1.22	0.15
1430	8.13		220	4.0	9.47	308	5.30	314.2	1.66	1.19	0.15

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: CTO 842 · Former Melville North Landfill
Sample ID: FMNLF-GW-PC01-LF-02

Tetra Tech NUS Job No./PMS 5152-0503
QC: N/A (If applicable)

Sample Method: low flow
Depth Sampled: 8' Feet Screened Interval Depth 3.5-13.5 feet
Sample Date & Time: 9/20/09 1155 hours N/A /Dup
Sampler(s): J. Lambert
Data Recorded By: J. Lambert Signature: [signature]
Notes:
TIDE DROPPING

H&S Survey Meter ____ PPM Field Instrument Group A/B/C/D
Pre-pump insertion WL 6.72 ft Post - pump insertion WL ____ ft

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
VOC	SVOC				
GRO	Pest/PCB				
DRO	metals				

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged ~~liters~~ gal	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Sal. ~~Comments~~
0955	6.72	begin pump; adjusting flow									
1000	7.50		75 - slower pump		ule to	100 ml/min; unable to reduce flow further					
1005 1105	7.50		100 -		9.60	1187	6.45	659	4.54	4.33	0.59
1010	7.62		100		10.18	1217	6.46	31.9	2.98	3.92	0.61
1015	7.71		100		10.20	1276	6.47	15.5	2.45	2.04	—
1020	7.74		100		10.09	1474	6.51	-51.3	1.25	2.17	0.60
1025	7.79		100		10.23	1507	6.53	-66.1	1.07	2.07	0.78
1030	7.80		100		10.37	1576	6.55	-80.3	0.90	1.90	0.80
1035	7.80		100		10.35	1610	6.56	-88.0	0.80	2.13	0.82
1040	7.81		100		10.27	1630	6.56	-89.9	0.66	1.82	0.83
1145	7.83		100		10.31	1627	6.56	-90.6	0.63	2.13	0.83
1150	7.85		100	2.5	10.40	1622	6.57	-89.7	0.62	2.20	0.82

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

note - as turb. has been fluctuating around 2 NTU (less than 5) for in total other

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: CTO 842 · Former Melville North Landfill
Sample ID: FMNLF-GW-PC02-LF-02

Tetra Tech NUS Job No./PMS 5152-0503
QC: matrix Spike (If applicable)

Sample Method: Low Flow
Depth Sampled: 5 Feet below mp Screened Interval Depth _____ feet
Sample Date & Time: 4/20/04 1244 hours NA /Dup
Sampler(s): J. Danielli
Data Recorded By: J. Danielli Signature: J. Danielli
Notes: mp = top of PVC
Top of Casing = Ft above G.S.
Top of PVC = ft above G.S.

H&S Survey Meter 0 PPM Field Instrument Group A/B/C/D
Pre-pump insertion WL 3.7 ft below mp Post - pump insertion WL 3.7 ft below mp

Analysis	Bottle Lot#	Analysis	Bottle Lot #	Analysis	Bottle Lot #
VOC		Pest/PCB			
TPH		Metals			
SVOC					

Clock Time 24hr	Water Depth below MP ft below mp	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged liters	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Salinity ~~Comments~~
1130	Begin Purge										
1135	3.90		350		10.89	256	6.01	104.5	8.00	55	0.12
1140	3.90		350		10.50	254	5.99	110.1	7.45	—	0.12
1145	3.92		350		10.07	252	6.01	112.8	7.49	28	0.12
1148	3.93		250		10.56	251	5.99	120.4	7.61	25	0.12
1153	3.95		250		10.63	251	5.98	122.8	7.57	20	0.12
1156	3.98		250		10.89	251	5.99	124.9	7.53	18	0.12
1201	3.98		200		11.20	251	5.99	126.2	7.55	16	0.12
1205	4.00		210		11.48	250	5.99	128.1	7.61	12	0.12
1210	4.00		210		11.35	252	6.99	130.9	7.66	12	0.12
1215	4.00		210		11.60	252	6.00	132.2	7.59	11	0.12
1220	4.01		175		11.90	251	6.00	133.4	7.53	11	0.12
1225	4.09		175		12.35	251	6.00	134.8	7.44	10	0.12
1228	4.10		175		12.35	251	6.00	134.8	7.38	7.0	0.12
1231	4.10		175		12.51	250	6.00	135.5	7.39	7.0	0.12
1234	4.10		175		12.39	250	6.00	136.7	7.46	6.6	

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

Note = No Sheen noted on water.

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Melville Landfill - CTO 842
Sample ID: FMNLF-GW-PC03z-LF02

Tetra Tech NUS Job No./PMS: 5152-0503
QC: Matrix Spike (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cum. Volume Purged ~~liters~~ gals	Temp °C	Spec. Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	~~Comments~~ Salinity
1238	4.10		175	5 gals	12.33	249	6.00	139.1	7.50	5.9	0.12
1240	Stop Purging										
1244	Start Sampling			~6 gals							

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

Tt NUS Form 0009

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Melville
Sample ID: FMNL-GW-RB01-LF-02

Tetra Tech NUS Job No./PMS 5152-0503
QC Information: Rinsate Blank (if applicable)

Sample Method/Device: Pump DI Water through Sampler tubing
Depth Sampled: NA feet Total Depth NA feet (SW Only)
Sample Date & Time: 7/20/04 1446 hours
Sampler(s): Jessica Danieli

Date Recorded By: J. Danieli
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIWF=0907223

*include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				
GRO				
DRO				
Pest.				
PCB				
SVOC				
Metals				

Tt NUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: CTO 842 Former Melville North Landfill
Sample ID: FMNLF-GW-TB01-02

Tetra Tech NUS Charge No. 5152-0503
QC Information: TB (if applicable)

Sample Method/Device: TB provided by lab
Depth Sampled: NA feet Total Depth NA feet (SW Only)
Sample Date & Time: 4/20/04 1100 hours
Sampler(s): NA

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- ___ Grab
- ___ Composite
- X Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): provided by lab

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				
GRO				

TtNUS Form 0004

TETRA TECH NUS, INC.

SAMPLE COLLECTION SUMMARY RECORD

PROJECT NAME: Melville Landfill · CTO 842 TETRA TECH NUS JOB NO./PMS: 5152-0503

SAMPLING EVENT: GW Sampling - round 2 CASE NO.: DAS NO.:

DATE	TIME	SAMPLE LOCATION	FIELD QC	VOC	GRO	PRO	SVOC	Pest	PCB	metals	COMMENTS
4/20/04	1100	FMNLF-GW-TB01-LF-02	TB	1	1	-	-	-	-	-	
	1155	FMNLF-GW-~~RB01~~ PC01-LF-02	RB	2	2	1	1	1	1	1	
	1244	FMNLF-GW-PC02-LF-02	MS	6	6	3	3	3	3	3	
	1435	FMNLF-GW-PC03-LF-02	DUP	2	2	1	1	1	1	1	
	1440	FMNLF-GW-DUP01-LF-02	DUP	2	2	1	1	1	1	1	Duplicate of FMNLF-GW-PC03-LF-02
	1446	FMNLF-GW-RB01-LF-02	RB	2	2	1	1	1	1	1	

JC 4/20/04

Tt NUS Form 0012

MITKEM CORPORATION
175 Metro Center Boulevard
Warwick, Rhode Island 02886-1755
(401) 732-3400 • Fax (401) 732-3499
email: mitkem@mitkem.com

CHAIN-OF-CUSTODY RECORD

REPORT TO		INVOICE TO		
COMPANY: Tetra Tech NUS	PHONE: 1-978-658-7899	COMPANY: SAME	PHONE:	LAB PROJECT #:
NAME: ~~55 Jon~~ Steve Parker	FAX: 1-978-658-7878	NAME: ←	FAX:	
ADDRESS: 55 Jonspin Rd		ADDRESS:		TURNAROUND TIME:
CITY/ST/ZIP: Wilmington MA 01887		CITY/ST/ZIP:		

CLIENT PROJECT NAME: Melville Landfill
CLIENT PROJECT #: 5152-0503
CLIENT P.O.#:

REQUESTED ANALYSES: VOC - 8260B (40 mL Vial Amber); CBD 8015B - 40mL Amber; DRO - 8015B 1L Amber; SVOC - 8270 1L Amber; Pesticide 8081 - 1L Amber; PCB 8082 - 1L Amber; TAL Metals - 4oz Jar

SAMPLE IDENTIFICATION	DATE/TIME SAMPLED	COMPOSITE	GRAB	WATER	SOIL	OTHER	LAB ID	# OF CONTAINERS	VOC - 8260B	CBD 8015B	DRO	SVOC	Pesticide	PCB	TAL Metals					COMMENTS
FMML-GW-TF01-LFG2	4/20/04 1100		X	X				2	2											
FMML-GW-CP01-LFG2	4/20/04 1140		X	X				9	2	2	1	1	1	1	1					
FMML-GW-PC01-LFG2	4/20/04 1155		X	X				9	2	2	1	1	1	1	1					
FMML-GW-PC03-LFG2	4/20/04 1135		X	X				9	2	2	1	1	1	1	1					
FMML-GW-PC02-LFG2	4/20/04 1244		X	X				27	6	6	3	3	3	3	3					Lab QC - Matrix Spike
FMML-GW-DUP01-LFG2	4/20/04 1140		X	X				9	2	2	1	1	1	1	1					

TSF#	RELINQUISHED BY	DATE/TIME	ACCEPTED BY	DATE/TIME	ADDITIONAL REMARKS:	COOLER TEMP:
	Fmma Lanucci	4/20/04 1610	[illegible]	4-20-04 16.00	21- BA DUPE PCOST	

WHITE: LABORATORY COPY YELLOW: REPORT COPY PINK: CLIENT'S COPY

APPENDIX A-3

FIELD RECORDS, GROUNDWATER SAMPLE COLLECTION, AUGUST 2004

TETRA TECH NUS, INC.

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER: PC-01

PROJECT NAME: Melville

DATE/TIME: 8/25/04 / 1520

PROJECT MANAGER: S. Parker

INSPECTED BY: J. Lambert

VENT WELL

MONITORING INSTRUMENT READING: 0.0

LEL/02 READING: NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 14.98

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 6.55

WELL STICK-UP 1.45'

CASING STICK-UP (FEET) 2.0'

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC

LOCKED UPON ARRIVAL?	(YES)	NO
LOCKED REPLACED?	(YES)	NO
OBSTRUCTIONS?	YES	(NO)
WELL RELABELED?	YES	(NO)
SLUG TEST CONDUCTED?	YES	(NO) (If YES, refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS: No LNAPL, DNAPL tone detected w/ interface probe. (no sheen on water/evidence of product in bailer)

Tt NUS Form 0021

TETRA TECH NUS, INC.

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER: PC-02

PROJECT NAME: Melville

DATE/TIME: 8/25/04 / 1525

PROJECT MANAGER: S. Parker

INSPECTED BY: J. Lambert

VENT WELL

MONITORING INSTRUMENT READING: 0.0

LEL/02 READING: NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 19.41

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 6.90

WELL STICK-UP ~~1.5~~ JC ~~3.0~~ JC 3.4

CASING STICK-UP (FEET) ~~1.5~~ JC 4.0

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCK~~ED~~ REPLACED?	YES	NO JC
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES, refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS: no LNAPL / DNAPL from interface probe. No sheen / product in bailer (top or bottom)

Tt NUS Form 0021

TETRA TECH NUS, INC.

WELL INSPECTION AND GROUNDWATER LEVEL MEASUREMENT SHEET

WELL NUMBER: PC-03

PROJECT NAME: Melville

DATE/TIME: 8/25/04 / 1535

PROJECT MANAGER: S. Parber

INSPECTED BY: J. Lambert

VENT WELL

MONITORING INSTRUMENT READING: 0.0

LEL/O2 READING: NA

WELL INSPECTION/GROUNDWATER LEVEL MEASUREMENT

WELL DEPTH (FEET FROM TOP OF PVC) 13.45

WATER LEVEL DEPTH (FEET FROM TOP OF PVC) 9.15

WELL STICK-UP 1.3'

CASING STICK-UP (FEET) 1.5'

WELL DIAMETER (INCHES) 2"

WELL CONSTRUCTION (PVC, STEEL, ETC.) PVC

LOCKED UPON ARRIVAL?	YES	NO
LOCKED REPLACED?	YES	NO
OBSTRUCTIONS?	YES	NO
WELL RELABELED?	YES	NO
SLUG TEST CONDUCTED?	YES	NO (If YES, refer to "Hydraulic Conductivity Testing Data Sheet")

GENERAL CONDITION/COMMENTS: no LNAPL/DNAPL from interface probe; no sheen/product in bailer

Tt NUS Form 0021

TETRA TECH NUS, INC.

SAMPLE COLLECTION SUMMARY RECORD

PROJECT NAME: Melville

TETRA TECH NUS JOB NO./PMS: 8152-0503

SAMPLING EVENT: Round 3

CASE NO.:

DAS NO.:

DATE YR=2004	TIME	SAMPLE LOCATION	FIELD QC	VOC	GRO	DRO	Pest/PCB	SVOC	metals	COMMENTS
8/19/04	1030	FMNLF-GW-TB01-03	TB	3	2	–	–	–	–	
8/26/04	~~1805~~ 1750	FMNLF-GW-PC03-LF-03	MS	~~9~~	~~6~~	~~6~~	~~6~~	~~6~~	2	
8/26/04	1805	FMNLF-GW-PC03-B-03	MS/MSD	9	6	6	6	6	–	
8/27/04	0915	FMNLF-GW-PC01-LF03	–	–	–	–	–	–	1	
8/27	0950	FMNLF-GW-PC02-LF-03	D1	–	–	–	–	–	1	
8/27	0955	FMNLF-GW-DUP01-LF-03	D1	–	–	–	–	–	1	
8/27	1000	FMNLF-GW-PC01-B-03	–	3	2	2	2	2	–	
8/27	1025	FMNLF-GW-PC02-B-03	D1	3	2	2	2	2	–	
8/27	1040	FMNLF-GW-DUP01-B-03	D1	3	2	2	2	2	–	
8/27	1120	FMNLF-GW-SB01-03	SB	3	2	2	2	2	1	
8/27	1200	FMNLF-GW-RB01-03	RB1	3	2	2	2	2	1	
8/27	1300	FMNLF-GW-RB02-03	RB2	–	–	–	–	2	–	SVOC only

Tt NUS Form 0012

Katahdin ANALYTICAL SERVICES
340 County Road No 5
P O Box 720
Westbrook, ME 04092
Tel: (207) 874-2400
Fax: (207) 775-4029

CHAIN of CUSTODY

PLEASE BEAR DOWN AND PRINT LEGIBLY IN PEN

Client: Tetra Tech NUS
Contact: Steve Parker
Phone #: (978) 658-7899
Fax #: (978) 658-7

Address: 55 Jonspin Rd.
City: Wilmington
State: MA
Zip Code: 01887

Purchase Order #:
Proj. Name / No.: Melville - CTO 842 (6 coolers)
Katahdin Quote #:

Bill (if different than above):
Address:

Sampler (Print / Sign): J. Lambert / [signature]
Copies To:

LAB USE ONLY — WORK ORDER #:
KATAHDIN PROJECT NUMBER:
REMARKS:

SHIPPING INFO: ☐ FED EX ☐ UPS ☐ CLIENT
AIRBILL NO:
TEMP C: ☐ TEMP BLANK ☐ INTACT ☐ NOT INTACT

ANALYSIS AND CONTAINER TYPE PRESERVATIVES

*	Sample Description	Date / Time coll'd YR=2004	Matrix	No. of Cntrs.	VOC 40mL vial/HCl	SVOC 40mL vial/HCl	DRO 1L amber/HCl	SVOC 1L amber/ice only	Pest./PCB 1L amber/ice only	Metals 500mL poly/HNO3				
	FMNLF-GW-TB01-03	8/19 / 1030	AQ	4	2	2	—	—	—	—				
*	FMNLF-GW-PC03-LF-03	8/26 / 1750	GW	2	—	—	—	—	—	2				
*	FMNLF-GW-PC03-B-03	8/26 / 1805	GW	33 45 9	6	6	6	6	—					
	FMNLF-GW-PC01-LF-03	8/27 / 0915	GW	21	—	—	—	—	—	21				
D	FMNLF-GW-PC02-LF-03	8/27 / 0950	GW	21	—	—	—	—	—	21				
D	FMNLF-GW-DUP01-LF-03	8/27 / 0955	GW	1	—	—	—	—	—	1				
	FMNLF-GW-PC01-B-03	8/27 / 1000	GW	11	3	2	2	2	2	—				
D	FMNLF-GW-PC02-B-03	8/27 / 1025	GW	11	3	2	2	2	2	—				
D	FMNLF-GW-DUP01-B-03	8/27 / 1040	GW	11	3	2	2	2	2	—				
	FMNLF-GW-SB01-03	8/27 / 1120	AQ	12	3	2	2	2	2	1				
	FMNLF-GW-RB01-03	8/27 / 1200	AQ	12	3	2	2	2	2	1				
	FMNLF-GW-RB02-03	8/27 / 1300	AQ	2	—	—	—	2	—	—				
		/												
		/												
		/												
		/												

COMMENTS: * FMNLF-GW-PC03-LF-03 = 196 QC
" B-03

Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)
[signature]	8/27/04 1400	[signature]			
Relinquished By: (Signature)	Date / Time	Received By: (Signature)	Relinquished By: (Signature)	Date / Time	Received By: (Signature)

THE TERMS AND CONDITIONS ON THE REVERSE SIDE HEREOF SHALL GOVERN SERVICES, EXCEPT WHEN A SIGNED CONTRACTUAL AGREEMENT EXISTS.

KAS-COC1

CUSTOMER COPY

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Melville N. Landfill
Sample ID: FMNLF-GW-1B01-03

Tetra Tech NUS Charge No. 5152-0503
QC Information: NA (if applicable)

Sample Method/Device: provided by lab - sample date/time on cont
Depth Sampled: NA feet Total Depth NA feet (SW Only)
Sample Date & Time: ~~8/26/04~~ 8/19/04 1030 hours
Sampler(s): provided by lab

Recorded By: [signature] 8/26/04
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- X Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): provided by lab

* include sample source & lot No.

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO.		COMMENTS
VOC		ORGANIC	INORGANIC	
GRO				

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TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Melville
Sample ID: FMMF-GW-SB01-03

Tetra Tech NUS Charge No. 5152-0503
QC Information: NA (if applicable)

Sample Method/Device: direct pour
Depth Sampled: NA feet Total Depth NA feet (SW Only)
Sample Date & Time: 8/27/04 ~~1115~~ 1120 hours
Sampler(s): J. Lambert, D. Wieland

Recorded By: J Lambert
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- X Other (Specify): source blank DIUF: 0406224

* include sample source & lot No

polar spring water: 080404-0358

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

JC 8/27/04

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

JC 8/27/04

-note- source blank water used only for rinsates/equipment blanks - all new equip. used; no decon required

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				
GRO				
SVOC				
DRO				
metals				

TtNUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Melville
Sample ID: FMNLF-GW-RB01-03

Tetra Tech NUS Charge No. 5152-0503
QC Information: NA (if applicable)

Sample Method/Device: See Notes.
Depth Sampled: NA feet Total Depth NA feet (SW Only)
Sample Date & Time: 8/27/04 1200 hours
Sampler(s): D. Wielandt

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

* include sample source & lot No

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

JL 8/27/04

Notes-
VOCs - pour poland springs into bailer, then dispense into vials
metals- pump DIUF water into containers with peristaltic pump
all other parameters- pour DIUF into bailer, then dispense into containers.

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				
GRO				
DRO				
SVOC				
pest/PCB				
Metals				

TtNUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Melville
Sample ID: FMNLF-GW-RB02-03

Tetra Tech NUS Charge No. 5152-0503
QC Information: NA (if applicable)

Sample Method/Device: See notes
Depth Sampled: NA feet Total Depth NA feet (SW Only)
Sample Date & Time: 8/27/04 1300 hours
Sampler(s): S. Lambert, D. Wieland

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- ___ Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- X Trip Blank*
- X Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify): DIUF-0406224 exp 4/05

*include sample source & lot No

WELL PURGE DATA:

Well Depth	feet	Purge Start	hrs
Inside Diameter	Inches	Purge Stop Time	hrs
Water Level	feet	Total Gallons Purged	
Well Volume	gal.	Purge Method	

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Temp °C	pH	Spec. Cond.	DO
0				
1				
3				
4				

S. Lambert 8/27/04

Notes - add ~50' of bailer mason line to SVOC container, add water, let sit in sun for 1/2 hr. (blank of thread for caprolactum)

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
SVOC only				

TtNUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: MALLEVILLE
Sample ID: FMNLF-GW-P001-LF-03

Tetra Tech NUS Charge No. 5152 0503
QC: NA (If applicable)

Sample Method: EPA LOW FLOW
Depth Sampled: 9' Feet Screened Interval Depth 5-18 feet
Sample Date & Time: 8/27/04 9:15 hours N/A /Dup
Sampler(s): D. WIELANDT
Data Recorded By: D. WIELANDT Signature: [signature]
Notes: TD = 14.98 MP=TOC
pH · SP.CND. & TURB ≠ 10%

H&S Survey Meter ____ PPM
Pre-pump insertion WL 6.38 ft
Field Instrument Group A/B/C/D
Post - pump insertion WL ____ ft

Analysis	Bottle Lot #	Analysis	Bottle Lot #	Analysis	Bottle Lot #
~~VOC~~		METALS			
~~SVOC~~					
~~PEST~~					

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm. Volume Purged liters	Temp °C	Spec Cond 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	~~Comments~~
8:30	7.32		200 adjusted down to				Begin	Purge			
8:35	7.67		220								
8:40	7.81		230		17.95	431	6.44	-11.4	0.68	12.7	0.21
8:45					18.15	408	6.40	-15.5	0.68	6.68	0.20
8:50	7.95		250 adjusted down		18.11	397	6.33	-15.9	0.66	5.09	0.19
8:55					18.02	396	6.34	-14.9	0.66	3.52	0.19
9:00	7.86		190		17.93	387	6.39	-13.9	0.65	2.86	0.19
9:05					17.82	376	6.42	-12.9	0.63	2.92	0.18
9:10	7.95		190		17.82	367	6.44	-12.8	0.62	3.01	0.18

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1 Pump dial setting (for example. hertz, cycle/min, etc.)
2 Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh)

BRINY SMELL - unable to purge slower
water murky pump set @ minimum

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: NGLEVILLE 1
Sample ID: FINAL-GW-PC03-B-03

Tetra Tech NUS Charge No. 5152-0503
QC Information: NA (if applicable)

Sample Method/Device: BAILER
Depth Sampled: ~8 feet Total Depth NA feet (SW Only)
Sample Date & Time: 8/27/04 10:00 hours
Sampler(s): D. WIELANDT

Recorded By: Dan Wieland
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

*include sample source & lot No.

WELL PURGE DATA:

Well Depth	14.98 feet	Purge Start	hrs 9:20
Inside Diameter	2 Inches	Purge Stop Time	hrs 10:00
Water Level	6.38 feet	Total Gallons Purged	~5 GAL.
Well Volume	1.3 gal.	Purge Method	BAILER

PID/FID Monitor Reading: ppm

Color: ___ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Comments:

V=H×0.16 H = 14.98 − 6.38 = 8.2

Slight sheen, murky BR/NY

Sampling/Purge Data

Vol. #	Turbidity	Temp °C	Salinity	pH	ORP	Spec. Cond	DO
0	16.9	16.65	0.40	6.49	55.0	960	3.49
1	11.7	17.80	0.19	6.96	57.6	388	3.80
2	8.13	17.93	0.17	6.72	65.1	361	2.94
3	6.12	17.83	0.17	6.76	69.3	363	3.93
4							
5							
6							
7							
8							

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
VOC				
SVOC				
P/PCB				
PRO				
GRO				

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.16
12.5
32
16
206

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Melville North Landfill
Sample ID: FMNLF-GW-PC02-LF-03

Tetra Tech NUS Charge No. 5152-0503
QC: DUP 01 (If applicable)

Sample Method: EPA* low-flow
Depth Sampled: 15 Feet Screened Interval Depth 9-19' feet
Sample Date & Time: 8/27/04 0950 hours 0955 Dup
Sampler(s): J. Lambert
Data Recorded By: J. Lambert Signature: J. Lambert
Notes: No NAPL time
TD = 19.41 water table = 19.41 - 7.00 = 12.41
12x MP-Tbc
-PID out of commission. = 2 gal/well vol.

H&S Survey Meter ____ PPM Field Instrument Group A/B/C/D
Pre-pump insertion WL 7.00 ft Post - pump insertion WL ____ ft

Analysis	Bottle Lot #	Analysis	Bottle Lot #	Analysis	Bottle Lot #
GRO	HCl	SVOC	Ice		
VOCs	↓	Pest/PCB	↓		
DRO		metals	HNO_3		

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm. Volume Purged liters	Temp °C	Spec Cond 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments sal.
0810	7.00	filling	flow through cell								
0820	7.06		280		17.43	184	5.79	250.8	1.07	10.59	0.09
0825	7.07		280*		17.48	182	5.77	257.1	0.98	13.2	0.09
0830	7.08		210		17.61	180	5.77	259.4	0.95	11.6	0.08
0835	7.09		210		17.73	178	5.78	258.7	0.93	10.87	0.08
0840	7.10		200		17.77	176	5.77	267.5	0.92	8.42	0.08
0850	7.13		200		18.10	174	5.76	274.0	0.91	12.6	0.08
0855	7.14		200		17.92	172	5.74	278.6	0.91	7.90	0.08
0900	7.15		200		17.88	171	5.74	279.6	0.94	6.05	0.08
0905	7.16		200		17.69	169	5.73	284.8	0.89	5.19	0.08
0910	7.17		200		17.72	168	5.74	284.3	0.89	5.34	0.08
0915	7.18		200		17.77	168	5.75	286.0	0.89	3.85	0.08
0920	7.20		200		17.66	166	5.74	288.4	0.87	2.34	0.08
0925	7.21		190	see pg 2	17.73	166	5.74	287.6	0.87	2.91	0.08

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pH, cond, turb.
* turned pump dial down

1. Pump dial setting (for example: hertz, cycle/min, etc.)
2. Siemens per cm (same as umhos/cm) at 25 °C
3. Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: Melville
Sample ID: FMNLF-GW-PC02-LF-03

Tetra Tech NUS Charge No. 5152-0503
QC: DUP01 (If applicable)

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm. Volume Purged liters ~~gal~~	Temp °C	Spec Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	Comments
0930	7.23		190		17.61	165	5.74	288.4	0.90	2.70	0.08
0935	7.24		190		17.60	165	5.74	287.5	0.93	1.72	0.08
0940	7.25		190		17.59	164	5.74	289.5	0.92	1.78	0.08
0945	7.25		190	5.5	17.60	164	5.75	287.8	0.93	1.69	0.08
	— parameters stabilized as per workplan										

TtNUS Form 0009

1 Pump dial setting (for example hertz, cycle/min, etc)
2. Siemens per cm (same as umhos/cm) at 25 °C.
3. Oxidation reduction potential (stand in for Eh).

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: Melville North Landfill
Sample ID: FMNLF-GW-PC02-B-03

Tetra Tech NUS Charge No. 5152-0503
QC Information: DUP01 @ 1640 (if applicable)

Sample Method/Device: bailer
Depth Sampled: ~10 feet Total Depth NA feet (SW Only)
Sample Date & Time: 8/27/04 1025 hours
Sampler(s): J. Lambert

Recorded By: [signature]
Signature

TYPE OF SAMPLE: (Check all that apply)

- X Groundwater
- ___ Surface Water
- ___ Residential Supply
- X Grab
- ___ Composite
- ___ Trip Blank*
- ___ Rinsate Blank*
- ___ Field Duplicate Collected
- ___ Other (Specify):

* include sample source & lot No

WELL PURGE DATA:

Well Depth	19.41 feet	Purge Start	0955 hrs
Inside Diameter	2 Inches	Purge Stop Time	1015 hrs
Water Level	7.00 feet	Total Gallons Purged	6.5
Well Volume	~2 gal	Purge Method	bailer

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Micro Tip/OVA Monitor Reading: ppm

Sampling/Purge Data:

Vol. #	Turb. NTU	Temp °C	pH	ORP mV	Spec. Cond. (uS/cm)	DO mg/L
0	6.80	~~20.71~~ 19.49	~~6.38~~ 6.04	~~287.6~~ 304.7	166	4.69
1	284	17.70	6.03	305.7	162	3.44
~~#~~ 2	427	17.86	5.92	303.3	160	2.78
~~#~~ 3	~~269~~	17.44	6.03	303.9	160	3.34

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS

TtNUS Form 0004

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - "LOW FLOW" GROUNDWATER

Site Name: NELEVILLE
Sample ID: FMNLF-GW-PC03-LF-03

Tetra Tech NUS Charge No. 5152-0503
QC: MS/MSD ~~N/A~~ (If applicable)

Sample Method: low-flow
Depth Sampled: 12 Feet Screened Interval Depth 13.5-5.5 feet
Sample Date & Time: 8/26/04 1750 hours NA /Dup
Sampler(s): D. WIELANDT
Data Recorded By: D. WIELANDT Signature: [signature]
Notes: TD = 13.45 - NO DNAPL MP = TOC
pH cond & TURB ≤ 10%

H&S Survey Meter 425 PPM
Pre-pump insertion WL 9.39 ft
Field Instrument Group A/B/C/D
Post - pump insertion WL ____ ft

Analysis	Bottle Lot #	Analysis	Bottle Lot #	Analysis	Bottle Lot #
VOC (9)		Pest/PCB (6)			
GRO (6)		SVOC (6)			
DRO (6)		metals (2)			

Clock Time 24hr	Water Depth below MP ft	Pump Dial 1	Purge Rate ml/min	Cumm. Volume Purged liters	Temp °C	Spec Cond. 2 uS/cm	pH	ORP/Eh3 mv	DO mg/L	Turbidity NTU	~~Comments~~ SALINITY
16:05	9.51		240	Begin	Purge						
16:16					13.82	240	5.42	283.6	4.74	28.9	0.11
16:20	9.51		250		16.57	240	5.29	300.6	4.60	15.5	0.11
16:25					16.29	240	5.25	310.6	4.60	9.64	0.11
16:30	9.50		270		16.20	237	5.21	319.4	4.43	5.91	0.11
16:35					16.20	237	5.20	324.3	4.42	3.90	0.11
16:40	9.41		280		16.17	237	5.19	328.4	4.38	2.85	0.11
16:45					16.20	237	5.19	331.2	4.38	2.04	0.11
16:50	9.39		280		16.12	236	5.18	335.5	4.27	2.42	0.11
16:55					16.08	236	5.19	337.2	4.28	1.92	0.11
17:00	9.34		280		16.08	235	5.18	337.4	4.23	2.57	0.11
17:05					16.10	234	5.18	342.3	4.20	1.95	0.11

TtNUS Form 0009

1 Pump dial setting (for example. hertz, cycle/min, etc)
2 Siemens per cm (same as umhos/cm) at 25 °C.
3 Oxidation reduction potential (stand in for Eh)

TETRA TECH NUS, INC.

SAMPLE LOG SHEET - LIQUID PHASE

Site Name: MELVILLE
Sample ID: FMNLF-GW-RC03-B-03

Tetra Tech NUS Charge No. 5152-0503
QC Information: ~~NA~~ MS/MSD (if applicable)

Sample Method/Device: Bailer
Depth Sampled: ~11 feet Total Depth NA feet (SW Only)
Sample Date & Time: 8/26/04 18:00 hours
Sampler(s): D. WIELAND
J. LAMBERT
Recorded By: Dan Wieland
Signature

TYPE OF SAMPLE: (Check all that apply)

- [x] Groundwater
- [ ] Surface Water
- [ ] Residential Supply
- [x] Grab
- [ ] Composite
- [ ] Trip Blank*
- [ ] Rinsate Blank*
- [ ] Field Duplicate Collected
- [ ] Other (Specify):

*include sample source & lot No.

WELL PURGE DATA:

Well Depth	13.45 feet	Purge Start	hrs 17:25
Inside Diameter	2 Inches	Purge Stop Time	hrs 18:00
Water Level	9.39 feet	Total Gallons Purged	~4 Gal.
Well Volume	~0.64 gal.	Purge Method	Bailer

Color: _____ Turbidity: CLR/SL CLDY/CLDY/OPAQ

Comments:

V = H x 0.16 H = 13.45 - 9.39 =

PID/FID Monitor Reading: ppm

Sampling/Purge Data

Vol. #	Turbidity	Temp °C	Salinity	pH	ORP	Spec. Cond.	DO
0	110	17.42	0.11	5.34	346.5	234	5.32
1	210	16.17	0.4	5.45	358.3	233	5.57
2	90	16.22	0.11	5.48	354.7	234	
3	90	18.40	0.11	5.61	363.3	232	
4							
5							
6							
7							
8							

ANALYSIS	BOTTLE LOT NO.	TRAFFIC REPORT NO. ORGANIC	TRAFFIC REPORT NO. INORGANIC	COMMENTS
8260				
VOC				
8260				
PRO				
MRO				

TtNUS Form 0004

APPENDIX B

SOIL ANALYTICAL RESULTS

Soil Total P troleum Hydrocarbon Analysis By 8100M/8015M (mg/kg)
Site: Former Melville North Landfill
Case: 0849; SDG: FMNLF-S-DUP-01

EPA Sample Number	FMNLF-S-DUP-01		FMNLF-S-PC01-0204		FMNLF-S-PC02-0608		FMNLF-S-PC03-0406		FMNLF-S-PC03-1012	
Station Location	FMNLF-S-DUP-01		FMNLF-S-PC01-0204		FMNLF-S-PC02-0608		FMNLF-S-PC03-0406		FMNLF-S-PC03-1012	
Date Sampled	8/13/03		8/12/03		8/12/03		8/13/03		8/13/03	
Date Extracted	8/14/2003		8/14/2003		8/14/2003		8/14/2003		8/14/2003	
Date Analyzed	8/22/2003		8/22/2003		8/22/2003		8/22/2003		8/22/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids	91.0		89 0		92.0		92.0		85 0	
QC Identifier	Field Dup FMNLF-S-PC03-0406		None		None		Field Dup. FMNLF-S-PC03-0406		None	
Total Petroleum Hydrocarbons	23		19		11	U	13		190	

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB/TB - Equipment/Trip Blank contamination

Soil Volatile Organic Analysis By 8260B (ug/kg)
Site: Former Melville North Landfill
Case: 0849; SDG: FMNLF-S-DUP-01

EPA Sample Number	FMNLF-S-DUP-01		FMNLF-S-DUP-01DL		FMNLF-S-PC01-0204		FMNLF-S-PC02-0608	
Station Location	FMNLF-S-DUP-01		FMNLF-S-DUP-01		FMNLF-S-PC01-0204		FMNLF-S-PC02-0608	
Date Sampled	8/13/03		8/13/03		8/12/03		8/12/03	
Date Extracted								
Date Analyzed	8/19/2003		8/22/2003		8/19/2003		8/19/2003	
Dilution Factor	1		1		1		1	
Percent Solids	91.0		91.0		89 0		92 0	
QC Identifier	Field Dup FMNLF-S-PC03-0406		Field Dup FMNLF-S-PC03-0406		None		None	
Dichlorodifluoromethane	3	U	210	U	3	U	4	U
Chloromethane	3	U	210	U	3	U	4	U
Vinyl Chloride	3	U	210	U	3	U	4	U
Bromomethane	3	U	210	U	3	U	4	U
Chloroethane	3	U	210	U	3	U	4	U
Trichlorofluoromethane	3	U	210	U	3	U	4	U
1,1-Dichloroethene	3	U	210	U	3	U	4	U
1,1,2-Trichloro-1,2,2-trifluoroethane	3	U	210	U	3	U	4	U
Acetone	270	EB	210	U	24	B	68	B
Carbon Disulfide	3	U	210	U	3	U	4	U
Methyl Acetate	3	U	210	U	1	J	4	U
Methylene Chloride	16	B	190	DJ	10	B	17	B
trans-1,2-Dichloroethene	3	U	210	U	3	U	4	U
Methyl tert-Butyl Ether	3	U	210	U	3	U	4	U
1,1-Dichloroethane	3	U	210	U	3	U	4	U
cis-1,2-Dichloroethene	3	U	210	U	3	U	4	U
2-Butanone	2	J	210	U	2	J	2	J
Chloroform	3	U	210	U	3	U	4	U
1,1,1-Trichloroethane	3	U	210	U	3	U	4	U
Cyclohexane	3	U	210	U	3	U	4	U
Carbon Tetrachloride	3	U	210	U	3	U	4	U
Benzene	3	U	210	U	3	U	4	U
1,2-Dichloroethane	3	U	210	U	3	U	4	U
Trichloroethene	3	U	210	U	3	U	4	U
Methylcyclohexane	3	U	210	U	3	U	4	U
1,2-Dichloropropane	3	U	210	U	3	U	4	U
Bromodichloromethane	3	U	210	U	3	U	4	U
cis-1,3-Dichloropropene	3	U	210	U	3	U	4	U
4-Methyl-2-Pentanone	3	U	210	U	3	U	4	U
Toluene	3	U	210	U	3	U	4	U
trans-1,3-Dichloropropene	3	U	210	U	3	U	4	U
1,1,2-Trichloroethane	3	U	210	U	3	U	4	U
Tetrachloroethene	3	U	210	U	3	U	4	U
2-Hexanone	3	U	210	U	3	U	4	U
Dibromochloromethane	3	U	210	U	3	U	4	U
1,2-Dibromoethane	3	U	210	U	3	U	4	U

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate,
* - From dilution analysis; R - Rejected; EB/TB - Equipment/Trip Blank contamination

Soil Volatile Organic Analysis By 8260B (ug/kg)
Site: Former Melville North Landfill
Case: 0849; SDG: FMNLF-S-DUP-01

EPA Sample Number	FMNLF-S-DUP-01		FMNLF-S-DUP-01DL		FMNLF-S-PC01-0204		FMNLF-S-PC02-0608	
Station Location	FMNLF-S-DUP-01		FMNLF-S-DUP-01		FMNLF-S-PC01-0204		FMNLF-S-PC02-0608	
Date Sampled	8/13/03		8/13/03		8/12/03		8/12/03	
Date Extracted								
Date Analyzed	8/19/2003		8/22/2003		8/19/2003		8/19/2003	
Dilution Factor	1		1		1		1	
Percent Solids	91 0		91 0		89 0		92 0	
QC Identifier	Field Dup. FMNLF-S-PC03-0406		Field Dup. FMNLF-S-PC03-0406		None		None	
Chlorobenzene	3	U	210	U	3	U	4	U
Ethylbenzene	3	U	210	U	3	U	4	U
Total Xylenes	3	U	210	U	3	U	4	U
o-Xylene	3	U	210	U	3	U	4	U
m&p-Xylene	3	U	210	U	3	U	4	U
Styrene	3	U	210	U	3	U	4	U
Bromoform	3	U	210	U	3	U	4	U
Isopropylbenzene	3	U	210	U	3	U	4	U
1,1,2,2-Tetrachloroethane	3	U	210	U	3	U	4	U
1,3-Dichlorobenzene	3	U	210	U	3	U	4	U
1,4-Dichlorobenzene	3	U	210	U	3	U	4	U
1,2-Dichlorobenzene	3	U	210	U	3	U	4	U
1,2-Dibromo-3-chloropropane	3	U	210	U	3	U	4	U
1,2,4-Trichlorobenzene	3	U	210	U	3	U	4	U

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

Soil Volatile Organic Analysis By 8260B (ug/kg)
Site: Former Melville North Landfill
Case: 0849; SDG: FMNLF-S-DUP-01

EPA Sample Number	FMNLF-S-PC03-0406		FMNLF-S-PC03-0406DL		FMNLF-S-PC03-1012	
Station Location	FMNLF-S-PC03-0406		FMNLF-S-PC03-0406		FMNLF-S-PC03-1012	
Date Sampled	8/13/03		8/13/03		8/13/03	
Date Extracted						
Date Analyzed	8/19/2003		8/22/2003		8/19/2003	
Dilution Factor	1		1		1	
Percent Solids	92 0		92 0		85 0	
QC Identifier	Field Dup. FMNLF-S-PC03-0406		Field Dup. FMNLF-S-PC03-0406		None	
Dichlorodifluoromethane	4	U	220	U	4	U
Chloromethane	4	U	220	U	4	U
Vinyl Chloride	4	U	220	U	4	U
Bromomethane	4	U	220	U	4	U
Chloroethane	4	U	220	U	4	U
Trichlorofluoromethane	4	U	220	U	4	U
1,1-Dichloroethene	4	U	220	U	4	U
1,1,2-Trichloro-1,2,2-trifluoroethane	4	U	220	U	4	U
Acetone	160	EB	220	U	62	B
Carbon Disulfide	4	U	220	U	4	U
Methyl Acetate	4	U	220	U	4	U
Methylene Chloride	16	B	660	D	20	B
trans-1,2-Dichloroethene	4	U	220	U	4	U
Methyl tert-Butyl Ether	4	U	220	U	4	U
1,1-Dichloroethane	4	U	220	U	4	U
cis-1,2-Dichloroethene	4	U	220	U	4	U
2-Butanone	3	J	220	U	2	J
Chloroform	4	U	220	U	4	U
1,1,1-Trichloroethane	4	U	220	U	4	U
Cyclohexane	4	U	220	U	4	U
Carbon Tetrachloride	4	U	220	U	4	U
Benzene	4	U	220	U	4	U
1,2-Dichloroethane	4	U	220	U	4	U
Trichloroethene	4	U	220	U	4	U
Methylcyclohexane	4	U	220	U	4	U
1,2-Dichloropropane	4	U	220	U	4	U
Bromodichloromethane	4	U	220	U	4	U
cis-1,3-Dichloropropene	4	U	220	U	4	U
4-Methyl-2-Pentanone	4	U	220	U	4	U
Toluene	4	U	220	U	4	U
trans-1,3-Dichloropropene	4	U	220	U	4	U
1,1,2-Trichloroethane	4	U	220	U	4	U
Tetrachloroethene	4	U	220	U	4	U
2-Hexanone	4	U	220	U	4	U
Dibromochloromethane	4	U	220	U	4	U
1,2-Dibromoethane	4	U	220	U	4	U

U - Not detected; UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB/TB - Equipment/Trip Blank contamination

Soil Volatil Organic Analysis By 8260B (ug/kg)
Site: Former Melville North Landfill
Case: 0849; SDG: FMNLF-S-DUP-01

EPA Sample Number	FMNLF-S-PC03-0406		FMNLF-S-PC03-0406DL		FMNLF-S-PC03-1012	
Station Location	FMNLF-S-PC03-0406		FMNLF-S-PC03-0406		FMNLF-S-PC03-1012	
Date Sampled	8/13/03		8/13/03		8/13/03	
Date Extracted						
Date Analyzed	8/19/2003		8/22/2003		8/19/2003	
Dilution Factor	1		1		1	
Percent Solids	92.0		92 0		85 0	
QC Identifier	Field Dup. FMNLF-S-PC03-0406		Field Dup FMNLF-S-PC03-0406		None	
Chlorobenzene	4	U	220	U	4	U
Ethylbenzene	4	U	220	U	4	U
Total Xylenes	4	U	220	U	4	U
o-Xylene	4	U	220	U	4	U
m&p-Xylene	4	U	220	U	4	U
Styrene	4	U	220	U	4	U
Bromoform	4	U	220	U	4	U
Isopropylbenzene	4	U	220	U	4	U
1,1,2,2-Tetrachloroethane	4	U	220	U	4	U
1,3-Dichlorobenzene	4	U	220	U	4	U
1,4-Dichlorobenzene	4	U	220	U	4	U
1,2-Dichlorobenzene	4	U	220	U	4	U
1,2-Dibromo-3-chloropropane	4	U	220	U	4	U
1,2,4-Trichlorobenzene	4	U	220	U	4	U

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected, EB/TB - Equipment/Trip Blank contamination

APPENDIX C

GROUNDWATER ANALYTICAL RESULTS

APPENDIX C-1

GROUNDWATER ANALYTICAL RESULTS, AUGUST 2003

Aqueous Volatile Organic Analysis By 8260B (ug/l)
Site: Form r Melvill North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Station Location	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Date Sampled	8/19/03		8/18/03		8/18/03		8/19/03		8/19/03	
Date Extracted										
Date Analyzed	8/25/2003		8/27/2003		8/27/2003		8/25/2003		8/25/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC03-LF-01		None		None		None		None	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Acetone	9		5	U	28		5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	2	J	5	U	5	U
Chloroform	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U

U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis; R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous Volatile Organic Analysis By 8260B (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Station Location	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Date Sampled	8/19/03		8/18/03		8/18/03		8/19/03		8/19/03	
Date Extracted										
Date Analyzed	8/25/2003		8/27/2003		8/27/2003		8/25/2003		8/25/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC03-LF-01		None		None		None		None	
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
Total Xylenes	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m&p-Xylene	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate,
* - From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous Volatile Organic Analysis By 8260B (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01		FMNLF-GW-TB01	
Station Location	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01		FMNLF-GW-TB01	
Date Sampled	8/19/03		8/19/03		8/20/03		8/20/03		8/18/03	
Date Extracted										
Date Analyzed	8/25/2003		8/25/2003		8/25/2003		8/25/2003		8/25/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		Field Dup FMNLF-GW-PC03-LF-01		Rinsate Blank		Rinsate Blank		Trip Blank	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U	5	U
Vinyl Chloride	5	U	5	U	5	U	5	U	5	U
Bromomethane	5	U	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U	5	U
Acetone	20		9		9		9		5	U
Carbon Disulfide	5	U	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U	16	
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U	5	U
Chloroform	5	U	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U	5	U

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous Volatile Organic Analysis By 8260B (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01		FMNLF-GW-TB01	
Station Location	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01		FMNLF-GW-TB01	
Date Sampled	8/19/03		8/19/03		8/20/03		8/20/03		8/18/03	
Date Extracted										
Date Analyzed	8/25/2003		8/25/2003		8/25/2003		8/25/2003		8/25/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		Field Dup. FMNLF-GW-PC03-LF-01		Rinsate Blank		Rinsate Blank		Trip Blank	
Chlorobenzene	5	U	5	U	5	U	5	U	5	U
Ethylbenzene	5	U	5	U	5	U	5	U	5	U
Total Xylenes	5	U	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U	5	U
m&p-Xylene	5	U	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U	5	U

U - Not detected; UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous Semivolatile Organic Analysis By 8270C (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Station Location	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Date Sampled	8/19/03		8/18/03		8/18/03		8/19/03		8/19/03	
Date Extracted	8/24/2003		8/24/2003		8/24/2003		8/24/2003		8/24/2003	
Date Analyzed	8/28/2003		8/27/2003		8/28/2003		8/29/2003		8/29/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC03-LF-01		None		None		None		None	
Benzaldehyde	10	U	10	U	10	U	10	U	10	U
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	10	U	10	U	10	U	10	U	10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
Caprolactam	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	10	U
Hexachlorocyclopentadiene	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	25	U	25	U	25	U	25	U	25	U
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	25	U	25	U	25	U	25	U	25	U
Dimethylphthalate	10	U	1	J	2	J	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	25	U	25	U	25	U	25	U	25	U
Acenaphthene	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrophenol	25	U	25	U	25	U	25	U	25	U
4-Nitrophenol	25	U	25	U	25	U	25	U	25	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis; R - Rejected; EB/TB - Equipment/Trip Blank contamination

Aqueous Semivolatile Organic Analysis By 8270C (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Station Location	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Date Sampled	8/19/03		8/18/03		8/18/03		8/19/03		8/19/03	
Date Extracted	8/24/2003		8/24/2003		8/24/2003		8/24/2003		8/24/2003	
Date Analyzed	8/28/2003		8/27/2003		8/28/2003		8/29/2003		8/29/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC03-LF-01		None		None		None		None	
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
Fluorene	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
4-Nitroaniline	25	U	25	U	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	25	U	25	U	25	U	25	U	25	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Atrazine	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	25	U	25	U	25	U	25	U	25	U
Phenanthrene	10	U	10	U	10	U	10	U	10	U
Anthracene	10	U	10	U	10	U	10	U	10	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	10	U	10	U	10	U	10	U
Fluoranthene	10	U	10	U	10	U	10	U	10	U
Pyrene	10	U	10	U	10	U	10	U	10	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	10	U
Chrysene	10	U	10	U	10	U	10	U	10	U
bis(2-Ethylhexyl)phthalate	10	U	10	U	10	U	10	U	10	U
Di-n-octylphthalate	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous Semivolatile Organic Analysis By 8270C (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01	
Station Location	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01	
Date Sampled	8/19/03		8/19/03	
Date Extracted	8/24/2003		8/24/2003	
Date Analyzed	8/27/2003		8/29/2003	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	None		Field Dup. FMNLF-GW-PC03-LF-01	
Benzaldehyde	10	U	10	U
Phenol	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U
2-Chlorophenol	10	U	10	U
2-Methylphenol	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U
4-Methylphenol	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U
Hexachloroethane	10	U	10	U
Nitrobenzene	10	U	10	U
Isophorone	10	U	10	U
2-Nitrophenol	10	U	10	U
2,4-Dimethylphenol	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U
2,4-Dichlorophenol	10	U	10	U
Naphthalene	10	U	10	U
4-Chloroaniline	10	U	10	U
Hexachlorobutadiene	10	U	10	U
Caprolactam	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U
2-Methylnaphthalene	10	U	10	U
Hexachlorocyclopentadiene	10	U	10	U
2,4,6-Trichlorophenol	10	U	10	U
2,4,5-Trichlorophenol	25	U	25	U
1,1'-Biphenyl	10	U	10	U
2-Chloronaphthalene	10	U	10	U
2-Nitroaniline	25	U	25	U
Dimethylphthalate	10	U	10	U
2,6-Dinitrotoluene	10	U	10	U
Acenaphthylene	10	U	10	U
3-Nitroaniline	25	U	25	U
Acenaphthene	10	U	10	U
2,4-Dinitrophenol	25	U	25	U
4-Nitrophenol	25	U	25	U
Dibenzofuran	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U

U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous Semivolatile Organic Analysis By 8270C (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01	
Station Location	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01	
Date Sampled	8/19/03		8/19/03	
Date Extracted	8/24/2003		8/24/2003	
Date Analyzed	8/27/2003		8/29/2003	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	None		Field Dup FMNLF-GW-PC03-LF-01	
Diethylphthalate	10	U	10	U
Fluorene	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U
4-Nitroaniline	25	U	25	U
4,6-Dinitro-2-methylphenol	25	U	25	U
N-Nitroso-diphenylamine	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U
Hexachlorobenzene	10	U	10	U
Atrazine	10	U	10	U
Pentachlorophenol	25	U	25	U
Phenanthrene	10	U	10	U
Anthracene	10	U	10	U
Carbazole	10	U	10	U
Di-n-Butylphthalate	10	U	10	U
Fluoranthene	10	U	10	U
Pyrene	10	U	10	U
Butylbenzylphthalate	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U
Benzo(a)anthracene	10	U	10	U
Chrysene	10	U	10	U
bis(2-Ethylhexyl)phthalate	4	J	10	U
Di-n-octylphthalate	10	U	10	U
Benzo(b)fluoranthene	10	U	10	U
Benzo(k)fluoranthene	10	U	10	U
Benzo(a)pyrene	10	U	10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U
Dibenzo(a,h)anthracene	10	U	10	U
Benzo(g,h,i)perylene	10	U	10	U

U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis, R - Rejected; EB/TB - Equipment/Trip Blank contamination

Aqueous Pesticide/PCB Analysis By 8082 (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC01-LF-01RE		FMNLF-GW-PC02-B-01	
Station Location	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01	
Date Sampled	8/19/03		8/18/03		8/18/03		8/18/03		8/19/03	
Date Extracted	8/23/2003		8/23/2003		8/23/2003		8/28/2003		8/23/2003	
Date Analyzed	8/26/2003		8/26/2003		8/26/2003		9/3/2003		8/26/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC03-LF-01		None		None		None		None	
alpha-BHC	0.010	U	0.010	U	0.010	U	0.010	U	0 010	U
beta-BHC	0.010	U	0 010	U	0.010	U	0.010	U	0 010	U
delta-BHC	0.010	U	0 010	U	0 010	U	0.010	U	0 010	U
gamma-BHC	0 010	U	0.010	U	0 010	U	0.010	U	0 010	U
Heptachlor	0 010	U	0 010	U	0 010	U	0 010	U	0 010	U
Aldrin	0 010	U	0 010	U	0.010	U	0 010	U	0 010	U
Heptachlor Epoxide	0.010	U	0 010	U	0 010	U	0 010	U	0 010	U
Endosulfan I	0 010	U	0.010	U	0 010	U	0 010	U	0 010	U
Dieldrin	0 020	U	0.020	U	0 020	U	0.020	U	0 020	U
4,4'-DDE	0 020	U	0 020	U	0.020	U	0 020	U	0.020	U
Endrin	0.020	U	0.020	U	0.020	U	0.020	U	0 020	U
Endosulfan II	0.020	U	0 020	U	0.020	U	0.020	U	0.020	U
4,4'-DDD	0.020	U	0 020	U	0 020	U	0.020	U	0 020	U
Endosulfan Sulfate	0.020	U	0.020	U	0 020	U	0.020	U	0.020	U
4,4'-DDT	0.020	U	0.020	U	0 020	U	0 020	U	0.020	U
Methoxychlor	0 10	U	0.10	U	0.10	U	0 10	U	0.10	U
Endrin Ketone	0 020	U	0.020	U	0 020	U	0.020	U	0 020	U
Endrin Aldehyde	0.020	U	0 020	U	0 020	U	0 020	U	0 020	U
alpha-Chlordane	0.010	U	0 010	U	0 010	U	0.010	U	0 010	U
gamma-Chlordane	0 010	U	0.010	U	0 010	U	0 010	U	0.010	U
Toxaphene	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1016	0 20	U	0 20	U	0 20	U	0.20	U	0.20	U
Aroclor-1221	0 20	U	0 20	U	0 20	U	0 20	U	0 20	U
Aroclor-1232	0 20	U	0 20	U	0 20	U	0.20	U	0 20	U
Aroclor-1242	0.20	U	0 20	U	0 20	U	0 20	U	0.20	U
Aroclor-1248	0.20	U	0 20	U	0.20	U	0 20	U	0 20	U
Aroclor-1254	0 20	U	0 20	U	0 20	U	0 20	U	0.20	U
Aroclor-1260	0.20	U	0 20	U	0.20	U	0.20	U	0 20	U

U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous Pesticide/PCB Analysis By 8082 (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-PC02-LF-01		FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01	
Station Location	FMNLF-GW-PC02-LF-01		FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01	
Date Sampled	8/19/03		8/19/03		8/19/03		8/20/03		8/20/03	
Date Extracted	8/23/2003		8/23/2003		8/23/2003		8/23/2003		8/23/2003	
Date Analyzed	8/26/2003		8/27/2003		8/26/2003		8/27/2003		8/27/2003	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	None		None		Field Dup. FMNLF-GW-PC03-LF-01		Rinsate Blank		Rinsate Blank	
alpha-BHC	0 010	U	0 010	U	0.010	U	0 010	U	0 010	U
beta-BHC	0.010	U	0.010	U	0.010	U	0 010	U	0.010	U
delta-BHC	0.010	U	0.010	U	0.010	U	0 010	U	0 010	U
gamma-BHC	0 010	U	0.010	U	0 010	U	0 010	U	0 010	U
Heptachlor	0 010	U	0.010	U	0.010	U	0 010	U	0 010	U
Aldrin	0 010	U	0 010	U	0.010	U	0 010	U	0.010	U
Heptachlor Epoxide	0 010	U	0.010	U	0.010	U	0.010	U	0 010	U
Endosulfan I	0.010	U	0.010	U	0 010	U	0 010	U	0 010	U
Dieldrin	0 020	U	0 020	U	0 020	U	0 020	U	0 020	U
4,4'-DDE	0 020	U	0 020	U	0.020	U	0 020	U	0 020	U
Endrin	0 020	U	0 020	U	0 020	U	0 020	U	0 020	U
Endosulfan II	0.020	U	0.020	U	0 020	U	0 020	U	0 020	U
4,4'-DDD	0.020	U	0 020	U	0 020	U	0 020	U	0 020	U
Endosulfan Sulfate	0 020	U	0 020	U	0 020	U	0.020	U	0 020	U
4,4'-DDT	0.020	U	0 020	U	0 020	U	0 020	U	0.020	U
Methoxychlor	0.10	U	0 10	U	0 10	U	0.10	U	0 10	U
Endrin Ketone	0.020	U	0.020	U	0.020	U	0.020	U	0.020	U
Endrin Aldehyde	0.020	U	0.020	U	0 020	U	0 020	U	0 020	U
alpha-Chlordane	0.010	U	0.010	U	0.010	U	0.010	U	0 010	U
gamma-Chlordane	0.010	U	0 010	U	0.010	U	0.010	U	0 010	U
Toxaphene	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Aroclor-1016	0 20	U	0.20	U	0.20	U	0 20	U	0.20	U
Aroclor-1221	0.20	U	0 20	U	0.20	U	0.20	U	0.20	U
Aroclor-1232	0.20	U	0.20	U	0.20	U	0 20	U	0 20	U
Aroclor-1242	0.20	U	0.20	U	0.20	U	0 20	U	0.20	U
Aroclor-1248	0.20	U	0.20	U	0 20	U	0.20	U	0 20	U
Aroclor-1254	0.20	U	0.20	U	0.20	U	0 20	U	0.20	U
Aroclor-1260	0.20	U	0.20	U	0 20	U	0 20	U	0.20	U

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate,
* - From dilution analysis, R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous TAL Metal Analysis By 6010B (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Station Location	FMNLF-GW-DUP01-01		FMNLF-GW-PC01-B-01		FMNLF-GW-PC01-LF-01		FMNLF-GW-PC02-B-01		FMNLF-GW-PC02-LF-01	
Date Sampled	8/19/03		8/18/03		8/18/03		8/19/03		8/19/03	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup FMNLF-GW-PC03-LF-01		None		None		None		None	
Aluminum	72.2	B	4280		73 6	B	25000		38 2	B
Antimony	3.0	U	3 0	U	3.0	U	3.0	U	3 0	U
Arsenic	3.0	U	3 0	U	3 0	U	24 1		3 0	U
Barium	46.4	B	72 6	B	91.6	B	107	B	15.5	B
Beryllium	0 30	U	0 30	U	0.30	U	1.0	B	0.30	U
Cadmium	0 21	B	0 20	U	0.20	U	0.20	U	0 20	U
Calcium	15100		55700		61500		22700		19100	
Chromium	0 40	U	9.8	B	1 8	B	39 9		0.40	U
Cobalt	2 3	B	5 1	B	1.7	B	30 5	B	1.6	B
Copper	4 5	B	13 0	B	3.4	B	44.9		4 5	B
Iron	73 9	B	7450		311		50600		68.5	B
Lead	0.80	U	10 1		0.80	U	29 1		0.80	U
Magnesium	6210		87800		84700		14100		6300	
Manganese	879		2180		4040		1250		21.6	B
Mercury	0.12	U	0.14	U	0 14	U	0 13	U	0.13	U
Nickel	5.6	B	7.7	B	1.7	B	43.3	B	2 0	B
Potassium	2560	E	74000	E	73200	E	7190	E	5770	E
Selenium	3.3	B	4 3	B	5 6	B	3.0	U	3.0	U
Silver	0.60	U	0.60	U	0.60	U	3 7	B	0.60	U
Sodium	29600		1330000		1260000		16900		16800	
Thallium	4 0	U	4 0	U	4.0	U	4.0	U	4.0	U
Vanadium	0.40	U	11 2	B	3.7	B	33 7	B	0 40	U
Zinc	6 1	B	22.9	B	3 0	U	101		5 6	B

U - Not detected, UJ - Detection limit approximate, J - Quantitation approximate;
* - From dilution analysis; R - Rejected, EB/TB - Equipment/Trip Blank contamination

Aqueous TAL Metal Analysis By 6010B (ug/l)
Site: Former Melville North Landfill
Case: 0842; SDG: FMNLF-GW-DUP01-

EPA Sample Number	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01	
Station Location	FMNLF-GW-PC03-B-01		FMNLF-GW-PC03-LF-01		FMNLF-GW-RB01-01		FMNLF-GW-RB02-01	
Date Sampled	8/19/03		8/19/03		8/20/03		8/20/03	
Date Extracted								
Date Analyzed								
Dilution Factor	1		1		1		1	
Percent Solids								
QC Identifier	None		Field Dup. FMNLF-GW-PC03-LF-01		Rinsate Blank		Rinsate Blank	
Aluminum	14200		83 6	B	112	B	76.9	B
Antimony	3 0	U	3 0	U	3 0	U	3 0	U
Arsenic	9.0	B	3.0	U	3.0	U	3 0	U
Barium	118	B	48 8	B	1.6	B	2 7	B
Beryllium	0 68	B	0 30	U	0.30	U	0 30	U
Cadmium	0 56	B	0 20	U	0.20	U	0 20	U
Calcium	17600		15600		62.0	U	62 0	U
Chromium	20.1		0.40	U	0.40	U	0 40	U
Cobalt	16 1	B	2 3	B	0 50	U	0 50	U
Copper	29.0	B	6 6	B	2 9	B	2 9	B
Iron	24900		87.9	B	6.8	B	6 2	B
Lead	24.2		0.80	U	0.80	U	0.88	B
Magnesium	10500		6390		8 3	B	11 9	B
Manganese	2030		919		1.2	B	0 82	B
Mercury	0.14	U	0.13	U	0.14	U	0 14	U
Nickel	25.0	B	5.7	B	0.60	U	0 60	U
Potassium	3790	E	2570	E	124	BE	137	BE
Selenium	3.0	U	3.0	U	3.0	U	3 0	U
Silver	2.0	B	0.60	U	0 60	U	0 60	U
Sodium	30500		29700		35.3	B	34 0	U
Thallium	4.0	U	4 0	U	4.0	U	4.0	U
Vanadium	17.4	B	0.40	U	0 40	U	0.40	U
Zinc	68 0		7 1	B	3.5	B	9 9	B

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate,
* - From dilution analysis; R - Rejected, EB/TB - Equipment/Trip Blank contamination

MITKEM CORPORATION

Analysis Report: Gasoline Range Organics (GRO)

Client: Tetra_Navy
Analysis: Method 8015M
Matrix: Aqueous

Concentration in: ug/L

Lab ID	Client ID	Result	Reporting Limit	Surrogate % Recovery	Analysis Date	Dilution
B1320-04A	GWPC02LF01	ND	50	92	08/26/03	
B1320-04AMS	GWPC02LF01MS	ND	50	102	08/26/03	
B1320-04AMSD	GWPC02LF01MSD	ND	50	94	08/26/03	
B1320-05A	GWPC02B01	ND	50	95	08/26/03	
B1320-07A	GWDUP0101	ND	50	76	08/26/03	

QA/QC

Method Blank					
V4B0826A	VBLK4A	ND	50	109	08/26/03
Lab Control Sample (% Recovery)					
V4L0826A	V4ALCS	96		106	08/26/03
V4L0826B	V4ALCSD	95		102	08/26/03

ND = Not Detected

*Outside QC limits due to matrix interference verified by reanalysis

MITKEM CORPORATION

Analysis Report: Gasoline Range Organics (GRO)

Client: Tetra_Navy
Analysis: Method 8015M
Matrix: Aqueous

Concentration in: ug/L

Lab ID	Client ID	Result	Reporting Limit	Surrogate % Recovery	Analysis Date	Dilution
B1320-02A	GWPC01LF01	ND	50	104	08/27/03	
B1320-03A	GWPC01B01	ND	50	106	08/27/03	
B1320-06A	GWPC03LF01	ND	50	95	08/27/03	
B1320-08A	GWPC03B01	ND	50	100	08/27/03	
B1320-09A	GWRB0101	ND	50	105	08/27/03	
B1320-10A	GWRB0201	ND	50	92	08/27/03	

QA/QC

Method Blank

V4B0827A	VBLK4B	ND	50	108	08/27/03

Lab Control Sample (% Recovery)

V4L0827A	V4BLCS	97		105	08/27/03

ND = Not Detected

MITKEM CORPORATION

Analysis Report: Gasoline Range Organics (GRO)

Matrix Spike Summary

Client: Tetra_Navy
Client ID: GWPC02LF01
Lab ID for Matrix Spike: B1320-04AMS
Lab ID for Matrix Spike Duplicate: B1320-04AMSD
Spike Concentration: 0.5 mg/L

Matrix: Aqueous

Analysis Date for Matrix Spike: 8/26/03
Analysis Date for Matrix Spike Duplicate: 8/26/03

%Recovery

Analyte	Matrix Spike	Matrix Spike Dup.	% RPD
GRO	83	81	2

MITKEM CORPORATION

Analysis Report: Total Petroleum Hydrocarbons - Diesel Range Organics (DRO)

Client: Tetra Tech NUS, Inc
Analysis TPH-DRO by GC-FID
Matrix. Aqueous

Concentration in: mg/L
Date Extracted: 8/22/03

Lab ID	Client ID	Result	Reporting Limit	p-Terphenyl Surrogate % Recovery	Analysis Date
B1320-02C	GWPC01LF01	ND	0.28	50	8/25/03
B1320-03C	GWPC01B01	ND	0.28	27	8/25/03
B1320-04C	GWPC02LF01	ND	0.28	64	8/25/03
B1320-05C	GWPC02B01	ND	0.28	42	8/25/03
B1320-06C	GWPC03LF01	ND	0.28	70	8/25/03
B1320-07C	GWDUP0101	ND	0.28	60	8/25/03
B1320-08C	GWPC03B01	0.54	0.28	40	8/26/03
B1320-09C	GWRB0101	ND	0.28	31	8/26/03
B1320-10C	GWRB0201	ND	0 28	33	8/25/03

QA/QC

Method Blank MB-8761		ND	0.28	52	8/25/03
Lab Control Sample (% Recovery) LCS-8761		70		69	8/25/03

ND = Not Detected

MITKEM CORPORATION

Analysis Report: Total Petroleum Hydrocarbons - DRO

Matrix Spike Summary

Client: Tetra Tech NUS, Inc.
Client ID: GWPC02LF01
Lab ID for Matrix Spike: B1320-04CMS
Lab ID for Matrix Spike Duplicate. B1320-04CMSD
Analysis: Method 8100M/8015M

Matrix: Soil
Analysis Date for Matrix Spike: 8/25/03
Analysis Date for Matrix Spike Duplicate: 8/25/03

% Recovery

Analyte	Matrix Spike	Matrix Spike Dup.	% RPD
Diesel	67	71	6

The samples were quantitated using aliphatics C10-C28 as standard.

APPENDIX C-2

GROUNDWATER ANALYTICAL RESULTS, APRIL 2004

ANALYTICAL RESULTS
FORMER MELVILE NORTH LANDFILL
NEWPORT, RHODE ISLAND

Sample Number	FMNL-GW-PC01-LF02		FMNL-GW-PC02-LF02		FMNL-GW-PC03-LF02		FMNL-GW-DUP01-LF02		FMNL-GW-TB01-LF02		FMNL-GW-RB01-LF02	
Sample Location	PC01-LF		PC02-LF		PC03-LF		PC03-LF		Blank		Blank	
Date Sampled	4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004	
QC Identifier	None		None		Field Dup. FMNL-GW-PC03-LF02		Field Dup FMNL-GW-PC03-LF02		Trip Blank		Rinsate Blank	
Volatile Organic Analysis (UG/L)												
1,1,1-Trichloroethane	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2,2-Tetrachloroethane	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloro-1,2,2-trifluoroethane	10	U	10	U	10	U	10	U	10	U	10	U
1,1,2-Trichloroethane	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethane	10	U	10	U	10	U	10	U	10	U	10	U
1,1-Dichloroethene	10	U	10	U	10	U	10	U	10	U	10	U
1,2,4-Trichlorobenzene	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dibromo-3-chloropropane	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dibromoethane	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloroethane	10	U	10	U	10	U	10	U	10	U	10	U
1,2-Dichloropropane	10	U	10	U	10	U	10	U	10	U	10	U
1,3-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U	10	U
1,4-Dichlorobenzene	10	U	10	U	10	U	10	U	10	U	10	U
2-Butanone	10	U	10	U	10	U	10	U	10	U	24	
2-Hexanone	10	U	10	U	10	U	10	U	10	U	10	U
4-Methyl-2-Pentanone	10	U	10	U	10	U	10	U	10	U	10	U
Acetone	10	U	10	U	10	U	10	U	10	U	33	
Benzene	10	U	10	U	10	U	10	U	10	U	10	U
Bromodichloromethane	10	U	10	U	10	U	10	U	10	U	10	U
Bromoform	10	U	1	J	10	U	10	U	10	U	10	U
Bromomethane	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Disulfide	10	U	10	U	10	U	10	U	10	U	10	U
Carbon Tetrachloride	10	U	10	U	10	U	10	U	10	U	10	U
Chlorobenzene	10	U	10	U	10	U	10	U	10	U	10	U
Chloroethane	10	U	10	U	10	U	10	U	10	U	10	U
Chloroform	10	U	10	U	10	U	10	U	10	U	10	U
Chloromethane	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,2-Dichloroethene	10	U	10	U	10	U	10	U	10	U	10	U
cis-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U	10	U
Cyclohexane	10	U	10	U	10	U	10	U	10	U	10	U
Dibromochloromethane	10	U	10	U	10	U	10	U	10	U	10	U
Dichlorodifluoromethane	10	U	10	U	10	U	10	U	10	U	10	U
Ethylbenzene	10	U	10	U	10	U	10	U	10	U	10	U
Isopropylbenzene	10	U	10	U	10	U	10	U	10	U	10	U
m&p-Xylene	10	U	10	U	10	U	10	U	10	U	10	U
Methyl Acetate	10	U	10	U	10	U	10	U	10	U	10	U
Methyl tert-Butyl Ether	10	U	10	U	10	U	10	U	10	U	10	U
Methylcyclohexane	10	U	10	U	10	U	10	U	10	U	10	U
Methylene Chloride	10	U	10	U	10	U	10	U	10	U	10	U
o-Xylene	10	U	10	U	10	U	10	U	10	U	10	U
Styrene	10	U	10	U	10	U	10	U	10	U	10	U
Tetrachloroethene	10	U	10	U	10	U	10	U	10	U	10	U
Toluene	10	U	10	U	10	U	10	U	10	U	10	U
Total Xylenes	10	U	10	U	10	U	10	U	10	U	10	U
trans-1,2-Dichloroethene	10	U	10	U	10	U	10	U	10	U	10	U
trans-1,3-Dichloropropene	10	U	10	U	10	U	10	U	10	U	10	U
Trichloroethene	10	U	10	U	10	U	10	U	10	U	10	U
Trichlorofluoromethane	10	U	10	U	10	U	10	U	10	U	10	U
Vinyl Chloride	10	U	10	U	10	U	10	U	10	U	10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate;
* - From dilution analysis, R - Rejected; NA - Not Analyzed

ANALYTICAL RESULTS
FORMER MELVILE NORTH LANDFILL
NEWPORT, RHODE ISLAND

Sample Number	FMNL-GW-PC01-LF02		FMNL-GW-PC02-LF02		FMNL-GW-PC03-LF02		FMNL-GW-DUP01-LF02		FMNL-GW-TB01-LF02		FMNL-GW-RB01-LF02	
Sample Location	PC01-LF		PC02-LF		PC03-LF		PC03-LF		Blank		Blank	
Date Sampled	4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004	
QC Identifier	None		None		Field Dup FMNL-GW-PC03-LF02		Field Dup FMNL-GW-PC03-LF02		Trip Blank		Rinsate Blank	
Semivolatile Organic Analysis (UG/L)												
1,1'-Biphenyl	10	U	10	U	10	U	10	U	NA		10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	NA		10	U
2,4,5-Trichlorophenol	20	U	20	U	20	U	20	U	NA		20	U
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	NA		10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	NA		10	U
2,4-Dimethylphenol	10	U	10	U	10	U	10	U	NA		10	U
2,4-Dinitrophenol	20	U	20	U	20	U	20	U	NA		20	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	NA		10	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	NA		10	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	NA		10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	NA		10	U
2-Methylnaphthalene	10	U	10	U	10	U	10	U	NA		10	U
2-Methylphenol	10	U	10	U	10	U	10	U	NA		10	U
2-Nitroaniline	20	U	20	U	20	U	20	U	NA		20	U
2-Nitrophenol	10	U	10	U	10	U	10	U	NA		10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U	NA		10	U
3-Nitroaniline	20	U	20	U	20	U	20	U	NA		20	U
4,6-Dinitro-2-methylphenol	20	U	20	U	20	U	20	U	NA		20	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	NA		10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	NA		10	U
4-Chloroaniline	10	U	10	U	10	U	10	U	NA		10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	NA		10	U
4-Methylphenol	10	U	10	U	10	U	10	U	NA		10	U
4-Nitroaniline	20	U	20	U	20	U	20	U	NA		20	U
4-Nitrophenol	20	U	20	U	20	U	20	U	NA		20	U
Acenaphthene	10	U	10	U	10	U	10	U	NA		10	U
Acenaphthylene	10	U	10	U	10	U	10	U	NA		10	U
Acetophenone	10	U	10	U	10	U	10	U	NA		10	U
Anthracene	10	U	10	U	10	U	10	U	NA		10	U
Atrazine	10	U	10	U	10	U	10	U	NA		10	U
Benzaldehyde	10	U	10	U	10	U	10	U	NA		10	U
Benzo(a)anthracene	10	U	10	U	10	U	10	U	NA		10	U
Benzo(a)pyrene	10	U	10	U	10	U	10	U	NA		10	U
Benzo(b)fluoranthene	10	U	10	U	10	U	10	U	NA		10	U
Benzo(g,h,i)perylene	10	U	10	U	10	U	10	U	NA		10	U
Benzo(k)fluoranthene	10	U	10	U	10	U	10	U	NA		10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	NA		10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	NA		10	U
bis(2-Ethylhexyl)phthalate	7	J	4	J	4	J	4	J	NA		6	J
Butylbenzylphthalate	10	U	10	U	10	U	10	U	NA		10	U
Caprolactam	10	U	10	U	10	U	10	U	NA		10	U
Carbazole	10	U	10	U	10	U	10	U	NA		10	U
Chrysene	10	U	10	U	10	U	10	U	NA		10	U
Dibenzo(a,h)anthracene	10	U	10	U	10	U	10	U	NA		10	U
Dibenzofuran	10	U	10	U	10	U	10	U	NA		10	U
Diethylphthalate	10	U	10	U	10	U	10	U	NA		10	U
Dimethylphthalate	10	U	10	U	10	U	10	U	NA		10	U
Di-n-Butylphthalate	10	U	10	U	10	U	10	U	NA		10	U
Di-n-octylphthalate	10	U	10	U	10	U	10	U	NA		10	U
Fluoranthene	10	U	10	U	10	U	10	U	NA		10	U

U - Not detected; UJ - Detection limit approximate; J - Quantitation approximate,
* - From dilution analysis; R - Rejected; NA - Not Analyzed

ANALYTICAL RESULTS
FORMER MELVILE NORTH LANDFILL
NEWPORT, RHODE ISLAND

Sample Number	FMNL-GW-PC01-LF02		FMNL-GW-PC02-LF02		FMNL-GW-PC03-LF02		FMNL-GW-DUP01-LF02		FMNL-GW-TB01-LF02		FMNL-GW-RB01-LF02	
Sample Location	PC01-LF		PC02-LF		PC03-LF		PC03-LF		Blank		Blank	
Date Sampled	4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004	
QC Identifier	None		None		Field Dup FMNL-GW-PC03-LF02		Field Dup. FMNL-GW-PC03-LF02		Trip Blank		Rinsate Blank	
Fluorene	10	U	10	U	10	U	10	U	NA		10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	NA		10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	NA		10	U
Hexachlorocyclopentadiene	10	U	10	U	10	U	10	U	NA		10	U
Hexachloroethane	10	U	10	U	10	U	10	U	NA		10	U
Indeno(1,2,3-cd)pyrene	10	U	10	U	10	U	10	U	NA		10	U
Isophorone	10	U	10	U	10	U	10	U	NA		10	U
Naphthalene	10	U	10	U	10	U	10	U	NA		10	U
Nitrobenzene	10	U	10	U	10	U	10	U	NA		10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	NA		10	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	NA		10	U
Pentachlorophenol	20	U	20	U	20	U	20	U	NA		20	U
Phenanthrene	10	U	10	U	10	U	10	U	NA		10	U
Phenol	10	U	10	U	10	U	10	U	NA		10	U
Pyrene	10	U	10	U	10	U	10	U	NA		10	U
Pesticide/PCB Analysis (UG/L)												
4,4'-DDD	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
4,4'-DDE	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
4,4'-DDT	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
Aldrin	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
alpha-BHC	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
alpha-Chlordane	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
Aroclor-1016	1.0	U	1.0	U	1.0	U	1.0	U	NA		1.0	U
Aroclor-1221	1.0	U	1.0	U	1.0	U	1.0	U	NA		1.0	U
Aroclor-1232	1.0	U	1.0	U	1.0	U	1.0	U	NA		1.0	U
Aroclor-1242	1.0	U	1.0	U	1.0	U	1.0	U	NA		1.0	U
Aroclor-1248	1.0	U	1.0	U	1.0	U	1.0	U	NA		1.0	U
Aroclor-1254	1.0	U	1.0	U	1.0	U	1.0	U	NA		1.0	U
Aroclor-1260	1.0	U	1.0	U	1.0	U	1.0	U	NA		1.0	U
beta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
delta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
Dieldrin	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
Endosulfan I	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
Endosulfan II	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
Endosulfan Sulfate	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
Endrin	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
Endrin Aldehyde	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
Endrin Ketone	0.10	U	0.10	U	0.10	U	0.10	U	NA		0.10	U
gamma-BHC	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
gamma-Chlordane	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
Heptachlor	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
Heptachlor Epoxide	0.050	U	0.050	U	0.050	U	0.050	U	NA		0.050	U
Methoxychlor	0.50	U	0.50	U	0.50	U	0.50	U	NA		0.50	U
Toxaphene	5.0	U	5.0	U	5.0	U	5.0	U	NA		5.0	U

U - Not detected; UJ - Detection limit approximate, J - Quantitation approximate,
* - From dilution analysis; R - Rejected, NA - Not Analyzed

ANALYTICAL RESULTS
FORMER MELVILE NORTH LANDFILL
NEWPORT, RHODE ISLAND

Sample Number	FMNL-GW-PC01-LF02		FMNL-GW-PC02-LF02		FMNL-GW-PC03-LF02		FMNL-GW-DUP01-LF02		FMNL-GW-TB01-LF02		FMNL-GW-RB01-LF02	
Sample Location	PC01-LF		PC02-LF		PC03-LF		PC03-LF		Blank		Blank	
Date Sampled	4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004		4/20/2004	
QC Identifier	None		None		Field Dup FMNL-GW-PC03-LF02		Field Dup FMNL-GW-PC03-LF02		Trip Blank		Rinsate Blank	
Gasoline Range Organic Analysis (UG/L)												
Gasoline Range Organics	50	U	50	U	50	U	50	U		NA	50	U
TAL Metal Analysis (UG/L)												
Aluminum	14.6	B	126	B	50 5	B	57 5	B		NA	13 7	B
Antimony	6.6	B	6.7	B	5 2	B	5 5	B		NA	4 6	B
Arsenic	4.4	B	3.0	U	3.0	U	3 0	U		NA	3 0	U
Barium	53.5	B	10.6	B	23.2	B	22 6	B		NA	2 2	B
Beryllium	0 30	U	0.30	U	0.30	U	0 30	U		NA	0 30	U
Cadmium	0.20	U	0 20	U	0 20	U	0 20	U		NA	0.20	U
Calcium	83400		21000		19200		17600			NA	74 0	U
Chromium	0.40	U	2.8	B	0 40	U	0.40	U		NA	0 40	U
Cobalt	9 6	B	1.6	B	0 57	B	0 61	B		NA	0.30	U
Copper	0.90	U	3.7	B	5 1	B	4.4	B		NA	5 8	B
Iron	5340		75 6	B	30 4	B	22 9	B		NA	11 6	B
Lead	2 0	U	2 0	U	2 0	U	2 0	U		NA	2 0	U
Magnesium	30000		6740		7350		6870			NA	9 9	B
Manganese	13300		6.9	B	377		328			NA	2.8	B
Mercury	0.15	U	0 15	U	0.14	U	0 14	U		NA	0 14	U
Nickel	0 50	U	2.8	B	1 0	B	1 6	B		NA	0 50	U
Potassium	11000	E	4000	E	2050	E	1920	E		NA	330	BE
Selenium	4 0	U	4.0	U	4.0	U	4 0	U		NA	4 0	U
Silver	19 1	B	2 3	B	2 3	B	2 0	B		NA	2.0	U
Sodium	162000		16600		26800		25300			NA	178	B
Thallium	3.0	U	3 0	U	3.0	U	3.0	U		NA	3 0	U
Vanadium	0.70	U	0.70	U	0.70	U	0 70	U		NA	0.70	U
Zinc	3.1	B	6.0	B	5 6	B	4 9	B		NA	7 4	B
Total Petroleum Hydrocarbon Analysis (MG/L)												
Total Petroleum Hydrocarbons	0.35	U	0 35	U	0.35	U	0 35	U		NA	0 35	U

U - Not detected, UJ - Detection limit approximate; J - Quantitation approximate,
* - From dilution analysis; R - Rejected; NA - Not Analyzed

APPENDIX C-3

GROUNDWATER ANALYTICAL RESULTS, AUGUST 2004

Aqueous TAL Metal Analysis by SW6010B/7470A (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-DUP01-LF-03		FMNLF-GW-PC01-LF-03		FMNLF-GW-PC02-LF-03		FMNLF-GW-PC03-LF-03		FMNLF-GW-RB01-03	
Station Location	FMNLF-GW-DUP01-LF-03		FMNLF-GW-PC01-LF-03		FMNLF-GW-PC02-LF-03		FMNLF-GW-PC03-LF-03		FMNLF-GW-RB01-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04		8/27/04	
Date Extracted										
Date Analyzed										
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC02-LF-03		None		Field Dup. FMNLF-GW-PC02-LF-03		None		Rinsate Blank	
Aluminum	18.30	U	40.5	B	18.30	U	18 30	U	18 30	U
Antimony	2.34	U	2 34	U	2 9	B	2.34	U	2.34	U
Arsenic	3 03	U	3.03	U	3 03	U	3 03	U	3 03	U
Barium	7 4		16.7		7.2		20 0		0 17	U
Beryllium	0 53	B	0 46	B	0 48	B	0 62	B	0 51	B
Cadmium	0.30	U	0 30	U	0.30	U	0 44	B	0 32	B
Calcium	22000		43300		21600		18000		28.8	B
Chromium	0 80	U	0 80	U	0 80	U	0 80	U	0.80	U
Cobalt	1 3	B	0.64	U	1 6	B	0 64	U	0 64	U
Copper	1.4	B	4.2	B	6 7	B	3 0	B	2 1	B
Iron	31 5	B	3450		24 7	B	10 70	U	10.70	U
Lead	1 70	U	1.70	U	1.70	U	1 70	U	1 70	U
Magnesium	6730		8370		6590		6700		7.52	U
Manganese	2.3	B	1250		2.0	B	114		0.13	B
Mercury	0.01	U	0.02	B	0 01	U	0 01	B	0 01	U
Nickel	1.6	B	1 2	B	1 7	B	2 0	B	0 85	U
Potassium	5170		13500		5010		2040		238 00	U
Selenium	3 71	U	3.71	U	3.71	U	3 71	U	3 71	U
Silver	0 70	U	0.70	U	0.70	U	0.70	U	0 70	U
Sodium	18900		64400		18500		26500		136	B
Thallium	4.09	U	8.5	B	5 3	B	4 09	U	4.6	B
Vanadium	0.75	U	2 7	B	0.75	U	0 75	U	0 75	U
Zinc	1.8	B	2.8	B	4.7	B	9 1	B	0 89	B

Aqueous TAL Metal Analysis by SW6010B/7470A (ug/l)
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

TIER 1 VALIDATED DATA

EPA Sample Number	FMNLF-GW-SB01-03	
Station Location	FMNLF-GW-SB01-03	
Date Sampled	8/27/04	
Date Extracted		
Date Analyzed		
Dilution Factor	1	
Percent Solids		
QC Identifier	Source Blank	
Aluminum	18 30	U
Antimony	2 34	U
Arsenic	3 03	U
Barium	0 17	U
Beryllium	0 49	B
Cadmium	0 30	U
Calcium	36 0	B
Chromium	0.80	U
Cobalt	0 64	U
Copper	3 0	B
Iron	10.70	U
Lead	1.70	U
Magnesium	7 52	U
Manganese	0 13	U
Mercury	0 01	B
Nickel	0.85	U
Potassium	238.00	U
Selenium	3 71	U
Silver	0 70	U
Sodium	140	B
Thallium	7.8	B
Vanadium	0 75	U
Zinc	0 77	B

U - Not detected, B - Below PQL but > IDL

Aqueous Volatile Organic Analysis By SW8260 (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04	
Date Extracted								
Date Analyzed	9/3/2004		9/3/2004		9/3/2004		9/3/2004	
Dilution Factor	1		1		1		1	
Percent Solids								
QC Identifier	Field Dup. FMNLF-GW-PC02-B-03		None		Field Dup. FMNLF-GW-PC02-B-03		None	
Dichlorodifluoromethane	5	U	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U	5	U
Vinyl Chloride	2	U	2	U	2	U	2	U
Bromomethane	5	U	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U	5	U
Acetone	4	J	4	J	2	J	5	U
trans-1,2-Dichloroethene	5	U	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U	5	U
1,2-Dichloroethene (total)	10	U	10	U	10	U	10	U
Chloroform	5	U	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U	5	U
Benzene	5	U	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U	5	U
Toluene	5	U	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U	1	J
trans-1,3-Dichloropropene	5	U	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U	5	U

Aqueous Volatile Organic Analysis By SW8260 (ug/l)
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

TIER 1 VALIDATED DATA

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04	
Date Extracted								
Date Analyzed	9/3/2004		9/3/2004		9/3/2004		9/3/2004	
Dilution Factor	1		1		1		1	
Percent Solids								
QC Identifier	Field Dup. FMNLF-GW-PC02-B-03		None		Field Dup FMNLF-GW-PC02-B-03		None	
Ethylbenzene	5	U	5	U	5	U	5	U
Total Xylenes	5	U	5	U	5	U	5	U
m&p-Xylene	5	U	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U	5	U
Styrene	5	U	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U	5	U

U - Not detected; J - Estimated value below CRQL

Aqueous Volatile Organic Analysis By SW8260 (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-RB01-03		FMNLF-GW-SB01-03		FMNLF-GW-TB01-03	
Station Location	FMNLF-GW-RB01-03		FMNLF-GW-SB01-03		FMNLF-GW-TB01-03	
Date Sampled	8/27/04		8/27/04		8/19/04	
Date Extracted						
Date Analyzed	9/3/2004		9/3/2004		9/3/2004	
Dilution Factor	1		1		1	
Percent Solids						
QC Identifier	Rinsate Blank		Source Blank		Trip Blank	
Dichlorodifluoromethane	5	U	5	U	5	U
Chloromethane	5	U	5	U	5	U
Vinyl Chloride	2	U	2	U	2	U
Bromomethane	5	U	5	U	5	U
Chloroethane	5	U	5	U	5	U
Trichlorofluoromethane	5	U	5	U	5	U
1,1-Dichloroethene	5	U	5	U	5	U
Carbon Disulfide	5	U	5	U	5	U
1,1,2-Trichloro-1,2,2-trifluoroethane	5	U	5	U	5	U
Methylene Chloride	5	U	5	U	5	U
Acetone	3	J	3	J	8	
trans-1,2-Dichloroethene	5	U	5	U	5	U
Methyl tert-Butyl Ether	5	U	5	U	5	U
1,1-Dichloroethane	5	U	5	U	5	U
cis-1,2-Dichloroethene	5	U	5	U	5	U
1,2-Dichloroethene (total)	10	U	10	U	10	U
Chloroform	5	U	5	U	5	U
Carbon Tetrachloride	5	U	5	U	5	U
1,1,1-Trichloroethane	5	U	5	U	5	U
2-Butanone	5	U	5	U	5	U
Benzene	5	U	5	U	5	U
Cyclohexane	5	U	5	U	5	U
1,2-Dichloroethane	5	U	5	U	5	U
Trichloroethene	5	U	5	U	5	U
1,2-Dichloropropane	5	U	5	U	5	U
Bromodichloromethane	5	U	5	U	5	U
cis-1,3-Dichloropropene	5	U	5	U	5	U
Toluene	5	U	5	U	5	U
4-Methyl-2-Pentanone	5	U	5	U	5	U
Tetrachloroethene	5	U	5	U	5	U
trans-1,3-Dichloropropene	5	U	5	U	5	U
1,1,2-Trichloroethane	5	U	5	U	5	U
Dibromochloromethane	5	U	5	U	5	U
1,2-Dibromoethane	5	U	5	U	5	U
2-Hexanone	5	U	5	U	5	U
Chlorobenzene	5	U	5	U	5	U

U - Not detected, J - Estimated value below CRQL

Aqueous Volatile Organic Analysis By SW8260 (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-RB01-03		FMNLF-GW-SB01-03		FMNLF-GW-TB01-03	
Station Location	FMNLF-GW-RB01-03		FMNLF-GW-SB01-03		FMNLF-GW-TB01-03	
Date Sampled	8/27/04		8/27/04		8/19/04	
Date Extracted						
Date Analyzed	9/3/2004		9/3/2004		9/3/2004	
Dilution Factor	1		1		1	
Percent Solids						
QC Identifier	Rinsate Blank		Source Blank		Trip Blank	
Ethylbenzene	5	U	5	U	5	U
Total Xylenes	5	U	5	U	5	U
m&p-Xylene	5	U	5	U	5	U
o-Xylene	5	U	5	U	5	U
Styrene	5	U	5	U	5	U
Bromoform	5	U	5	U	5	U
Isopropylbenzene	5	U	5	U	5	U
1,1,2,2-Tetrachloroethane	5	U	5	U	5	U
1,2-Dichlorobenzene	5	U	5	U	5	U
1,3-Dichlorobenzene	5	U	5	U	5	U
1,2-Dibromo-3-chloropropane	5	U	5	U	5	U
1,4-Dichlorobenzene	5	U	5	U	5	U
1,2,4-Trichlorobenzene	5	U	5	U	5	U
Methyl Acetate	5	U	5	U	5	U
Methylcyclohexane	5	U	5	U	5	U

Aqueous Semivolatile Organic Analysis By SW846 M8270C (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04		8/27/04	
Date Extracted	9/3/2004		9/3/2004		9/3/2004		9/1/2004		9/3/2004	
Date Analyzed	9/7/2004		9/4/2004		9/7/2004		9/4/2004		9/7/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup FMNLF-GW-PC02-B-03		None		Field Dup FMNLF-GW-PC02-B-03		None		Rinsate Blank	
Phenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U	10	U	10	U	10	U
2-Chlorophenol	10	U	10	U	10	U	10	U	10	U
2-Methylphenol	10	U	10	U	10	U	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U	10	U	10	U	10	U
4-Methylphenol	10	U	10	U	10	U	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U	10	U	10	U	10	U
Hexachloroethane	10	U	10	U	10	U	10	U	10	U
Nitrobenzene	10	U	10	U	10	U	10	U	10	U
Isophorone	10	U	10	U	10	U	10	U	10	U
2-Nitrophenol	10	U	10	U	10	U	10	U	10	U
2,4-Dimethylphenol	10	U	10	U	10	U	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U	10	U	10	U	10	U
2,4-Dichlorophenol	10	U	10	U	10	U	10	U	10	U
Naphthalene	0 2	U	0.2	U	0 2	U	0.2	U	0 2	U
4-Chloroaniline	10	U	10	U	10	U	10	U	10	U
Hexachlorobutadiene	10	U	10	U	10	U	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U	10	U	10	U	10	U
2-Methylnaphthalene	0 2	U	0.2	U	0 2	U	0 2	U	0.2	U
Hexachlorocyclopentadiene	10	U	10	U	10	U	10	U	10	U
2,4,6-Trichlorophenol	10	U	10	U	10	U	10	U	10	U
2,4,5-Trichlorophenol	25	U	25	U	25	U	25	U	25	U
2-Chloronaphthalene	10	U	10	U	10	U	10	U	10	U
2-Nitroaniline	25	U	25	U	25	U	25	U	25	U
Dimethylphthalate	10	U	10	U	10	U	10	U	10	U
Acenaphthylene	0.2	U	0 2	U	0 2	U	0 2	U	0 2	U
2,6-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
3-Nitroaniline	25	U	25	U	25	U	25	U	25	U
Acenaphthene	0 2	U	0.2	U	0 2	U	0 2	U	0 2	U
2,4-Dinitrophenol	25	U	25	U	25	U	25	U	25	U
4-Nitrophenol	25	U	25	U	25	U	25	U	25	U
Dibenzofuran	10	U	10	U	10	U	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U	10	U	10	U	10	U
Diethylphthalate	10	U	10	U	10	U	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Fluorene	0 2	U	0 2	U	0.2	U	0 2	U	0 2	U

Aqueous Semivolatile Organic Analysis By SW846 M8270C (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF, SDG: WU2690

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04		8/27/04	
Date Extracted	9/3/2004		9/3/2004		9/3/2004		9/1/2004		9/3/2004	
Date Analyzed	9/7/2004		9/4/2004		9/7/2004		9/4/2004		9/7/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup FMNLF-GW-PC02-B-03		None		Field Dup FMNLF-GW-PC02-B-03		None		Rinsate Blank	
4-Nitroaniline	25	U	25	U	25	U	25	U	25	U
4,6-Dinitro-2-methylphenol	25	U	25	U	25	U	25	U	25	U
N-Nitroso-diphenylamine	10	U	10	U	10	U	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U	10	U	10	U	10	U
Hexachlorobenzene	10	U	10	U	10	U	10	U	10	U
Pentachlorophenol	25	U	25	U	25	U	25	U	25	U
Phenanthrene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Anthracene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Carbazole	10	U	10	U	10	U	10	U	10	U
Di-n-Butylphthalate	10	U	10	U	10	U	10	U	10	U
Fluoranthene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Pyrene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Butylbenzylphthalate	10	U	10	U	10	U	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U	10	U	10	U	10	U
Benzo(a)anthracene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Chrysene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
bis(2-Ethylhexyl)phthalate	10	U	10	U	10	U	10	U	10	U
Di-n-octylphthalate	10	U	10	U	10	U	10	U	10	U
Benzo(b)fluoranthene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Benzo(k)fluoranthene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Benzo(a)pyrene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Indeno(1,2,3-cd)pyrene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Dibenzo(a,h)anthracene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Benzo(g,h,i)perylene	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
1,1'-Biphenyl	10	U	10	U	10	U	10	U	10	U
Acetophenone	10	U	10	U	10	U	10	U	10	U
Atrazine	10	U	10	U	10	U	10	U	10	U
Benzaldehyde	10	U	10	U	10	U	10	U	8	J
Caprolactam	38		40		16		10	U	10	U

Aqueous Semivolatile Organic Analysis By SW846 M8270C (ug/l) TIER 1 VALIDATED DATA
Site. CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-RB02-03		FMNLF-GW-SB01-03	
Station Location	FMNLF-GW-RB02-03		FMNLF-GW-SB01-03	
Date Sampled	8/27/04		8/27/04	
Date Extracted	9/3/2004		9/3/2004	
Date Analyzed	9/8/2004		9/8/2004	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	Rinsate Blank		Source Blank	
Phenol	10	U	10	U
Bis(2-Chloroethyl)ether	10	U	10	U
2-Chlorophenol	10	U	10	U
2-Methylphenol	10	U	10	U
2,2'-oxybis(1-Chloropropane)	10	U	10	U
4-Methylphenol	10	U	10	U
N-Nitroso-di-n-propylamine	10	U	10	U
Hexachloroethane	10	U	10	U
Nitrobenzene	10	U	10	U
Isophorone	10	U	10	U
2-Nitrophenol	10	U	10	U
2,4-Dimethylphenol	10	U	10	U
Bis(2-Chloroethoxy)methane	10	U	10	U
2,4-Dichlorophenol	10	U	10	U
Naphthalene	0.2	U	0 2	U
4-Chloroaniline	10	U	10	U
Hexachlorobutadiene	10	U	10	U
4-Chloro-3-methylphenol	10	U	10	U
2-Methylnaphthalene	0.099	J	0 085	J
Hexachlorocyclopentadiene	10	U	10	U
2,4,6-Trichlorophenol	10	U	10	U
2,4,5-Trichlorophenol	25	U	25	U
2-Chloronaphthalene	10	U	10	U
2-Nitroaniline	25	U	25	U
Dimethylphthalate	10	U	10	U
Acenaphthylene	0.2	U	0 2	U
2,6-Dinitrotoluene	10	U	10	U
3-Nitroaniline	25	U	25	U
Acenaphthene	0 2	U	0 2	U
2,4-Dinitrophenol	25	U	25	U
4-Nitrophenol	25	U	25	U
Dibenzofuran	10	U	10	U
2,4-Dinitrotoluene	10	U	10	U
Diethylphthalate	10	U	10	U
4-Chlorophenyl-phenylether	10	U	10	U
Fluorene	0 2	U	0 2	U

Aqueous Semivolatile Organic Analysis By SW846 M8270C (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-RB02-03		FMNLF-GW-SB01-03	
Station Location	FMNLF-GW-RB02-03		FMNLF-GW-SB01-03	
Date Sampled	8/27/04		8/27/04	
Date Extracted	9/3/2004		9/3/2004	
Date Analyzed	9/8/2004		9/8/2004	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	Rinsate Blank		Source Blank	
4-Nitroaniline	25	U	25	U
4,6-Dinitro-2-methylphenol	25	U	25	U
N-Nitroso-diphenylamine	10	U	10	U
4-Bromophenyl-phenylether	10	U	10	U
Hexachlorobenzene	10	U	10	U
Pentachlorophenol	25	U	25	U
Phenanthrene	0 2	U	0 2	U
Anthracene	0 2	U	0.2	U
Carbazole	10	U	10	U
Di-n-Butylphthalate	2	J	10	U
Fluoranthene	0 2	U	0 2	U
Pyrene	0 2	U	0.2	U
Butylbenzylphthalate	10	U	10	U
3,3'-Dichlorobenzidine	10	U	10	U
Benzo(a)anthracene	0 2	U	0.2	U
Chrysene	0.2	U	0 2	U
bis(2-Ethylhexyl)phthalate	8	J	10	U
Di-n-octylphthalate	10	U	10	U
Benzo(b)fluoranthene	0 2	U	0 2	U
Benzo(k)fluoranthene	0 2	U	0.2	U
Benzo(a)pyrene	0 2	U	0.2	U
Indeno(1,2,3-cd)pyrene	0.2	U	0 2	U
Dibenzo(a,h)anthracene	0 2	U	0 2	U
Benzo(g,h,i)perylene	0 2	U	0 2	U
1,1'-Biphenyl	10	U	10	U
Acetophenone	10	U	10	U
Atrazine	10	U	10	U
Benzaldehyde	8	J	8	J
Caprolactam	10	U	10	U

Aqueous Pesticide Analysis By SW8081 (ug/l)
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

TIER 1 VALIDATED DATA

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04		8/27/04	
Date Extracted	8/31/2004		8/31/2004		8/31/2004		8/31/2004		8/31/2004	
Date Analyzed	9/7/2004		9/7/2004		9/4/2004		9/4/2004		9/7/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC02-B-03		None		Field Dup FMNLF-GW-PC02-B-03		None		Rinsate Blank	
alpha-BHC	0.050	U	0.050	U	0.050	U	0 050	U	0.050	U
beta-BHC	0.050	U	0 050	U	0 050	U	0.050	U	0 050	U
delta-BHC	0.050	U	0.050	U	0.050	U	0.050	U	0.050	U
gamma-BHC	0 050	U	0 050	U	0.050	U	0.050	U	0 050	U
Heptachlor	0.050	U	0.050	U	0.050	U	0.050	U	0 050	U
Aldrin	0.050	U	0 050	U	0 050	U	0 050	U	0 050	U
Heptachlor Epoxide	0.050	U	0.050	U	0.050	U	0 050	U	0 050	U
Endosulfan I	0 050	U	0.050	U	0 050	U	0 050	U	0 050	U
Dieldrin	0 10	U	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDE	0 10	U	0.10	U	0 10	U	0 10	U	0 10	U
Endrin	0 10	U	0.10	U	0.10	U	0.10	U	0 10	U
Endosulfan II	0 10	U	0 10	U	0.10	U	0.10	U	0.10	U
4,4'-DDD	0.10	U	0.10	U	0 10	U	0.10	U	0 10	U
Endosulfan Sulfate	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
4,4'-DDT	0 10	U	0 10	U	0.10	U	0.10	U	0 10	U
Methoxychlor	0.50	U	0 50	U	0.50	U	0.50	U	0.50	U
Endrin Ketone	0 10	U	0.10	U	0 10	U	0 10	U	0.10	U
Endrin Aldehyde	0.10	U	0.10	U	0.10	U	0.10	U	0.10	U
alpha-Chlordane	0.050	U	0 050	U	0.050	U	0.050	U	0.050	U
gamma-Chlordane	0.050	U	0 050	U	0 050	U	0.050	U	0.050	U
Toxaphene	1.0	U	1 0	U	1.0	U	1.0	U	1.0	U

U - Not detected: J - Estimated value below CRQL

Aqueous Pesticide Analysis By SW8081 (ug/l)
Site. CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

TIER 1 VALIDATED DATA

EPA Sample Number	FMNLF-GW-SB01-03	
Station Location	FMNLF-GW-SB01-03	
Date Sampled	8/27/04	
Date Extracted	8/31/2004	
Date Analyzed	9/7/2004	
Dilution Factor	1	
Percent Solids		
QC Identifier	Source Blank	
alpha-BHC	0 050	U
beta-BHC	0 050	U
delta-BHC	0.050	U
gamma-BHC	0 050	U
Heptachlor	0 050	U
Aldrin	0 050	U
Heptachlor Epoxide	0 050	U
Endosulfan I	0 050	U
Dieldrin	0 10	U
4,4'-DDE	0 10	U
Endrin	0.10	U
Endosulfan II	0.10	U
4,4'-DDD	0 10	U
Endosulfan Sulfate	0 10	U
4,4'-DDT	0.10	U
Methoxychlor	0 50	U
Endrin Ketone	0.10	U
Endrin Aldehyde	0.10	U
alpha-Chlordane	0.050	U
gamma-Chlordane	0.050	U
Toxaphene	1 0	U

U - Not detected: J - Estimated value below CRQL

Aqueous PCB Analysis By SW8082 (ug/l)
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

TIER 1 VALIDATED DATA

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04		8/27/04	
Date Extracted	8/31/2004		8/31/2004		8/31/2004		8/31/2004		8/31/2004	
Date Analyzed	9/3/2004		9/3/2004		9/3/2004		9/3/2004		9/3/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup FMNLF-GW-PC02-B-03		None		Field Dup. FMNLF-GW-PC02-B-03		None		Rinsate Blank	
Aroclor-1016	0 50	U	0.50	U	0 50	U	0 50	U	0 50	U
Aroclor-1221	0 50	U	0 50	U	0.50	U	0.50	U	0 50	U
Aroclor-1232	0 50	U	0 50	U	0 50	U	0.50	U	0.50	U
Aroclor-1242	0 50	U	0 50	U	0 50	U	0 50	U	0 50	U
Aroclor-1248	0 50	U	0 50	U	0.50	U	0 50	U	0.50	U
Aroclor-1254	0 50	U	0 50	U	0 50	U	0.50	U	0 50	U
Aroclor-1260	0 50	U	0.50	U	0.50	U	0.50	U	0 50	U

U - Not detected; J - Estimated value below CRQL

Aqueous PCB Analysis By SW8082 (ug/l)
Site. CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

TIER 1 VALIDATED DATA

EPA Sample Number	FMNLF-GW-SB01-03	
Station Location	FMNLF-GW-SB01-03	
Date Sampled	8/27/04	
Date Extracted	8/31/2004	
Date Analyzed	9/3/2004	
Dilution Factor	1	
Percent Solids		
QC Identifier	Source Blank	
Aroclor-1016	0.50	U
Aroclor-1221	0 50	U
Aroclor-1232	0 50	U
Aroclor-1242	0 50	U
Aroclor-1248	0 50	U
Aroclor-1254	0 50	U
Aroclor-1260	0 50	U

U - Not detected, J - Estimated value below CRQL

Aqueous Gasoline Range Organic Analysis By SW846 M8015B (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04		8/27/04	
Date Extracted										
Date Analyzed	9/7/2004		9/7/2004		9/7/2004		9/7/2004		9/7/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup. FMNLF-GW-PC02-B-03		None		Field Dup FMNLF-GW-PC02-B-03		None		Rinsate Blank	
Gasoline Range Organics	10	U	10	U	10	U	10	U	10	U

Aqueous Gasoline Range Organic Analysis By SW846 M8015B (ug/l) TIER 1 VALIDATED DATA
Site. CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-SB01-03		FMNLF-GW-TB01-03	
Station Location	FMNLF-GW-SB01-03		FMNLF-GW-TB01-03	
Date Sampled	8/27/04		8/19/04	
Date Extracted				
Date Analyzed	9/7/2004		9/2/2004	
Dilution Factor	1		1	
Percent Solids				
QC Identifier	Source Blank		Trip Blank	
Gasoline Range Organics	10	U	10	U

Aqueous Diesel Range Organic Analysis By SW846 M8015B (ug/l) TIER 1 VALIDATED DATA
Site: CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Station Location	FMNLF-GW-DUP01-B-03		FMNLF-GW-PC01-B-03		FMNLF-GW-PC02-B-03		FMNLF-GW-PC03-B-03		FMNLF-GW-RB01-03	
Date Sampled	8/27/04		8/27/04		8/27/04		8/26/04		8/27/04	
Date Extracted	8/31/2004		8/31/2004		8/31/2004		8/31/2004		8/31/2004	
Date Analyzed	9/9/2004		9/9/2004		9/9/2004		9/9/2004		9/9/2004	
Dilution Factor	1		1		1		1		1	
Percent Solids										
QC Identifier	Field Dup FMNLF-GW-PC02-B-03		None		Field Dup FMNLF-GW-PC02-B-03		None		Rinsate Blank	
Diesel Range Organics	62		390		50	U	140		96	

Aqueous Diesel Range Organic Analysis By SW846 M8015B (ug/l) TIER 1 VALIDATED DATA
Site. CTO 842, Former Melville North Landfill
Case: FMNLF; SDG: WU2690

EPA Sample Number	FMNLF-GW-SB01-03	
Station Location	FMNLF-GW-SB01-03	
Date Sampled	8/27/04	
Date Extracted	8/31/2004	
Date Analyzed	9/9/2004	
Dilution Factor	1	
Percent Solids		
QC Identifier	Source Blank	
Diesel Range Organics	50	