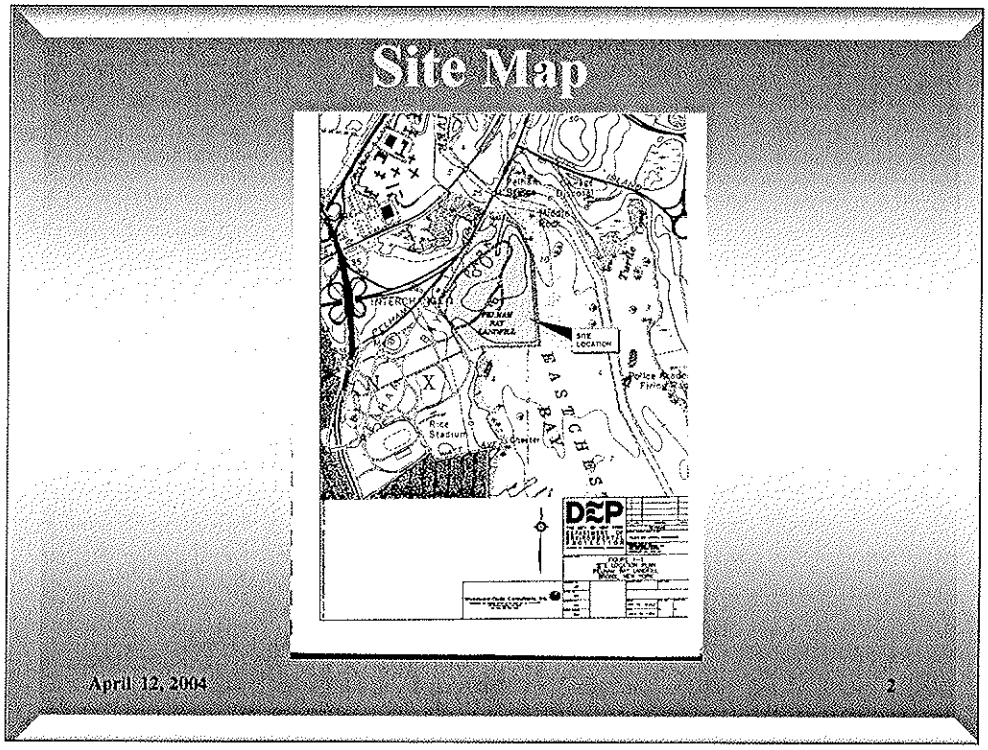

Pelham Bay Landfill
Bronx, New York
Operations, Maintenance & Monitoring
Part I
April 12th, 2004
DEP

Title Page

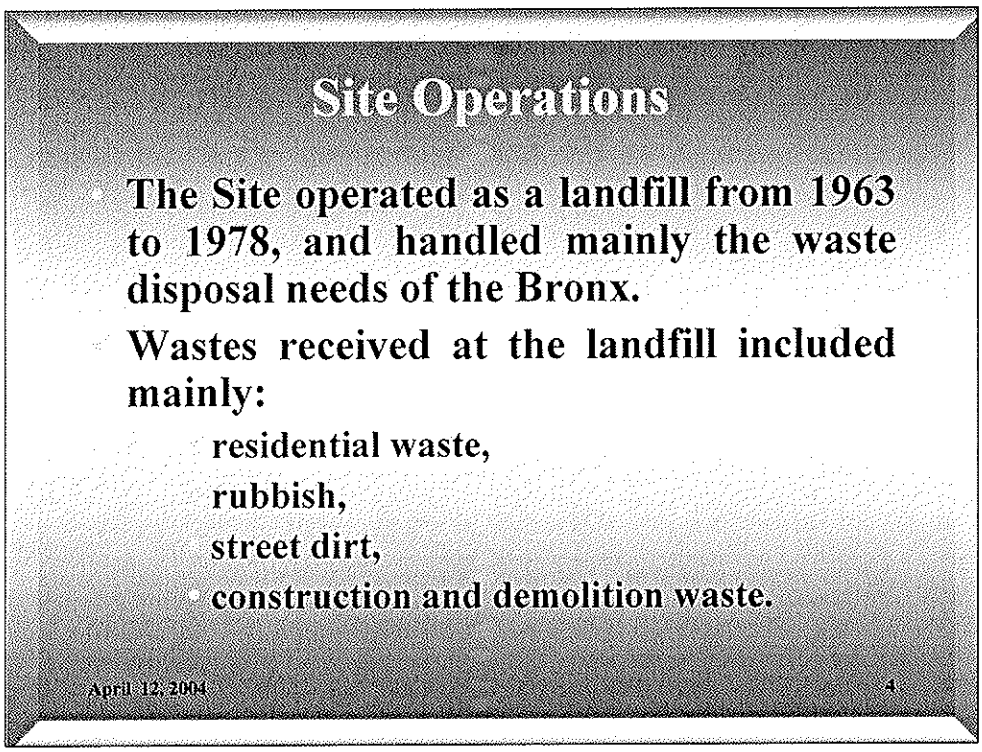


1.3 SITE DESCRIPTION

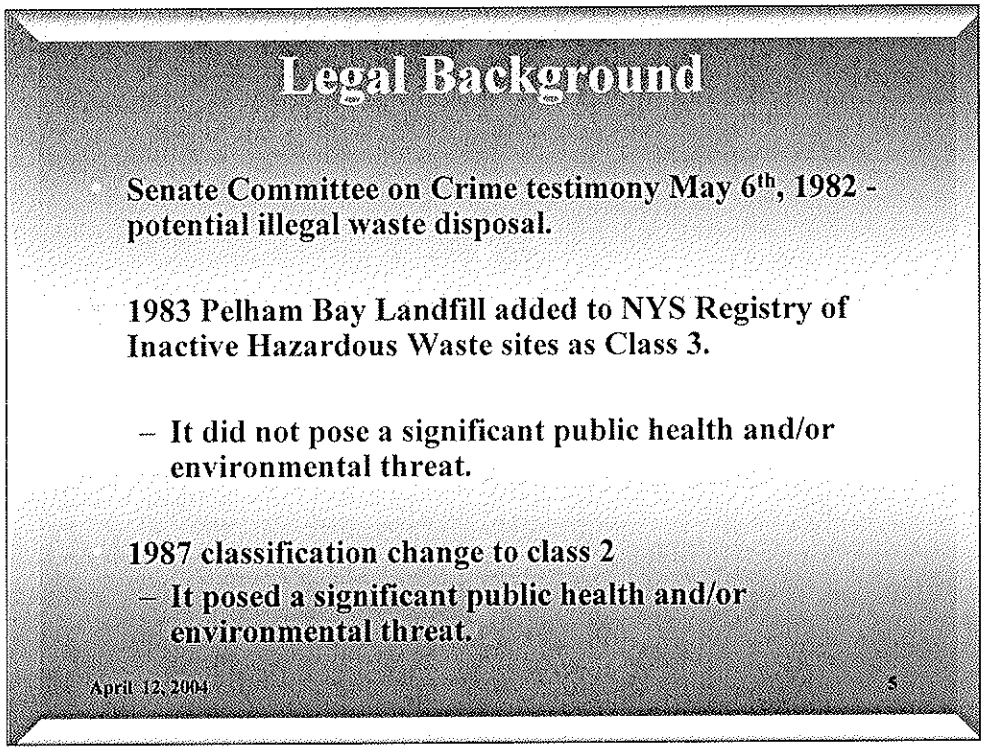
Pelham Bay Landfill covers an approximate area of 87 acres and is bordered by the Hutchinson River to the north and east, the Eastchester Bay to the east and south, and Pelham Bay Park to the southwest. The New England Thruway (I-95) is less than one-half mile west of the Site. The Co-op City housing complex is located approximately one-half mile northwest of the Site.

The landfill has a top elevation of approximately 130 feet above mean sea level (MSL). The volume of the landfill, including waste and cover soils, was calculated to be approximately 8,130,000 cubic yards.

Before November, 1963, the area now containing the Pelham Bay Landfill was a partially wooded, grassy area of approximately 25 acres owned and operated by the New York City Department of Parks and Recreation (NYCDPR). The New York City Department of Sanitation (NYCDOS) assumed operation of the area in the early 1960's. On November 18, 1963, Pelham Bay Landfill was officially opened as a municipal solid waste disposal facility to handle waste from the Bronx.



The Site operated as a landfill until 1978 by Department of Sanitation, and handled mainly the waste disposal needs of the Bronx. Wastes received at the landfill included residential waste, rubbish, street dirt, construction and demolition waste.



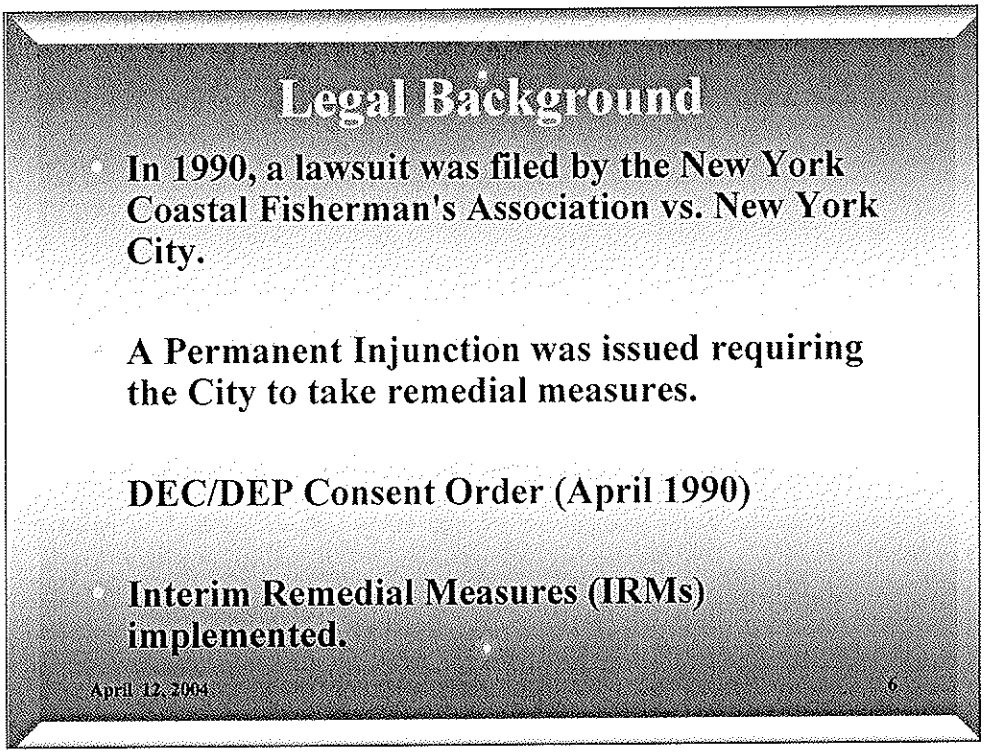
During testimony on May 6, 1982, before a Senate Committee on Crime, a dispatcher for the Hudson Oil Refining Company indicated that waste oil sludges, metal plating wastes, lacquer, and solvents were illegally disposed of at several New York City landfills, including Pelham Bay Landfill. The testimony was never confirmed.

In 1983, the Pelham Bay Landfill was added to the New York State DEC Registry of Inactive Hazardous Waste Disposal Sites as Class 3, meaning that it did not present a significant threat to public health and/or the environment. In 1987, its classification was changed to a Class 2, a significant threat to public health and/or the environment, because the NYSDEC possessed information that hazardous waste was possibly disposed of at the landfill.

Reference

In 1982, the landfill was covered with a final layer of soil (WCCI, 1983). Subsequent to this, WCCI conducted a Phase I Preliminary Investigation of the site for the NYSDEC. This investigation included development of a draft Hazard Ranking System (HRS) score of 13.1 for the Pelham Bay Landfill site. Problems such as steep slopes, landfill odors, and limited security measures were noted during the investigation (WCCI, 1983).

Inspections of the site by the NYSDEC in 1984 also noted similar problems: steep slopes, leachate seeps and ponds, and security problems. As a result of the 1983 Phase I report and the results of sampling activities, NYSDEC



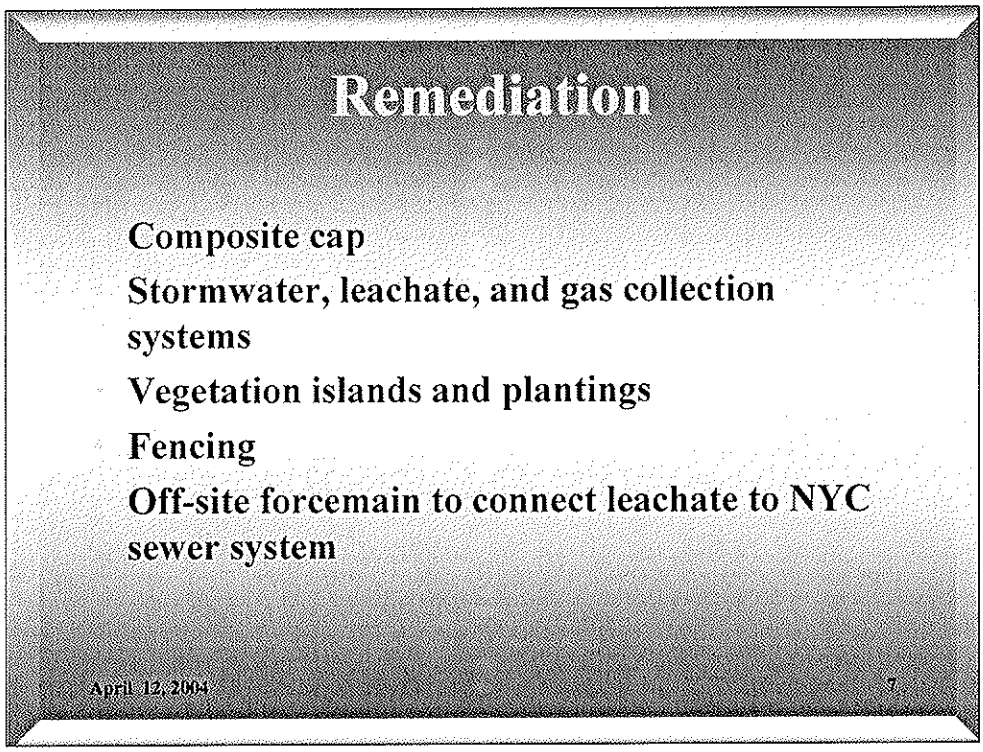
In 1990, a lawsuit was filed by the New York Coastal Fisherman's Association against New York City for violations of the Federal Clean Water Act. As a result of this litigation, a Permanent Injunction was issued requiring the City to take remedial measures. A Consent Order was agreed to with DEC. **Interim Remedial Measures (IRMs) were implemented.**

As a result of an Administrative Consent Order dated April 17, 1990 between the City of New York and NYSDEC, the City of New York conducted a RI/FS at the Pelham Bay Landfill (NYSDEC, 1990a). The purpose of this RI/FS is to investigate the nature and extent of contamination at the Pelham Bay Landfill site, to assess the risks to human health and the environment, and to develop and evaluate remedial action alternatives.

Reference:

Remedial work consisted of the construction of the 150-day system This construction included the installation of five above-ground tanks, each having 20,000 gallons storage capacity, five interceptor wells, an above-ground forcemain that conveys the discharge from the interceptor wells and a nearby sump to the storage tanks, expansion of the existing french drain system, and ancillary work.

Remedial work also included the installation of a soil-bentonite cut-off wall, installation of two collector drains, one on either side of the cut-off wall, dismantling of the above-ground forcemain and replacing it with a below-grade forcemain (including manholes and sumps), and other miscellaneous Site improvement work (e.g., road widening and fencing).



Remedial work included:

the installation of a composite cap (including geosynthetics, soil, and topsoil layers), stormwater, leachate and gas collection systems, vegetation islands and plantings, fencing and an off-site forcemain to connect the leachate collection system to a NYC sewer manhole located at Burr Avenue;

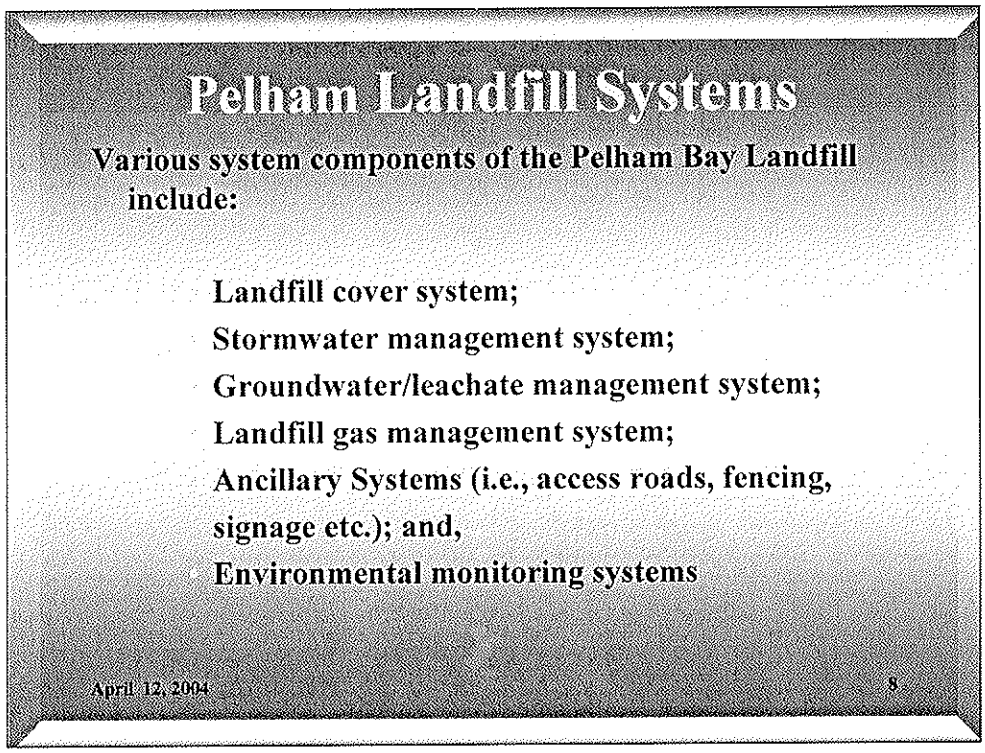
The leachate storage tanks are used to store leachate during storm and rain events.

Reference:

Under contract HP-877, remedial work included the construction of an off-site forcemain to connect the leachate collection system installed under contract 875-HP to a NYC sewer manhole located at Burr Avenue; therefore, bypassing the leachate storage tanks.

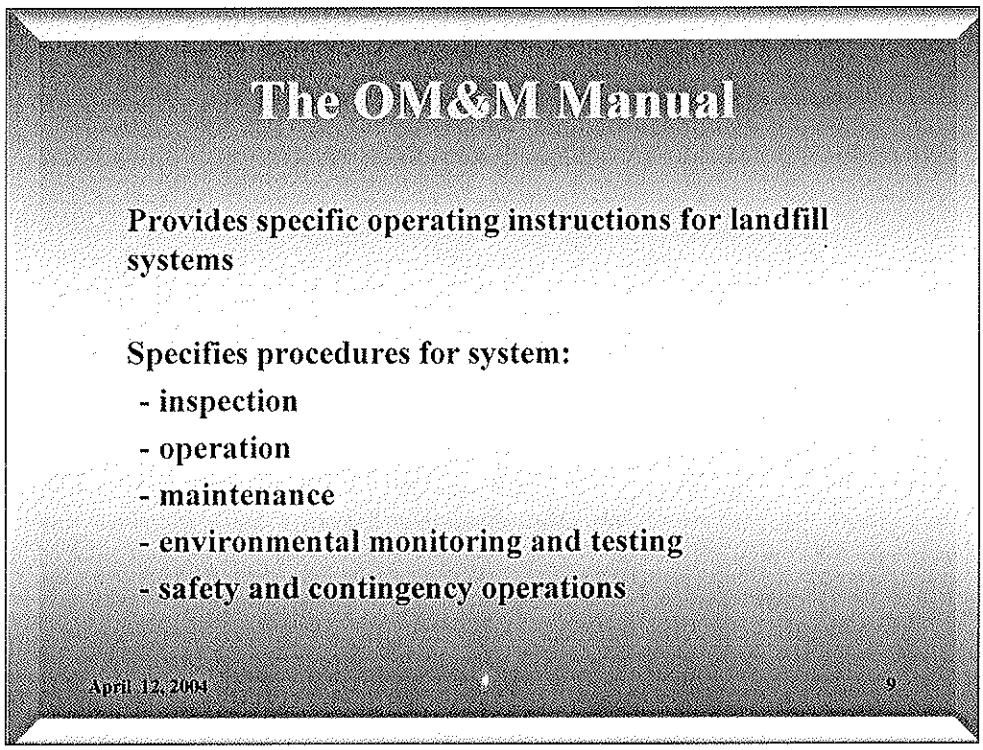
To minimize the impact on public health and the environment, NYCDOS implemented several temporary remedial actions in October, 1988. These actions included constructing french drains to collect leachate, rehabilitating parts of the on-site road, installing additional fencing around the landfill perimeter, re-grading and seeding portions of the site, constructing a riprap swale on the east edge of the landfill, and constructing a conduit from a leachate seep on the east edge of the landfill into Eastchester Bay.

On November 30, 1988, the New York City Department of Health (NYCDOH) released a report on childhood leukemia in the Pelham Bay area of the Bronx. This report concluded that the incidence of leukemia within a five mile radius of the landfill was no higher than that observed in the remainder of New York City



Various system components of the Pelham Bay Landfill include:

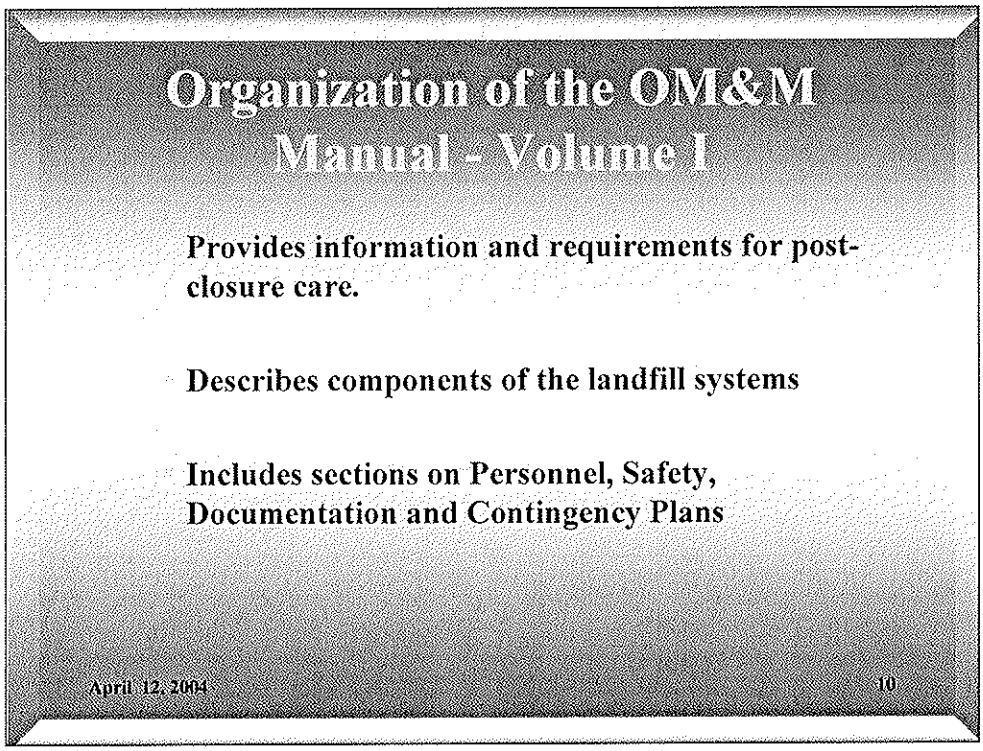
- Landfill cover system;
- Stormwater management system;
- Groundwater/leachate management system;
- Landfill gas management system;
- Ancillary Systems (i.e., access roads, fencing, signage, etc.); and,
- Environmental monitoring systems



The OM&M is the guidebook for operation of the PBLF. .

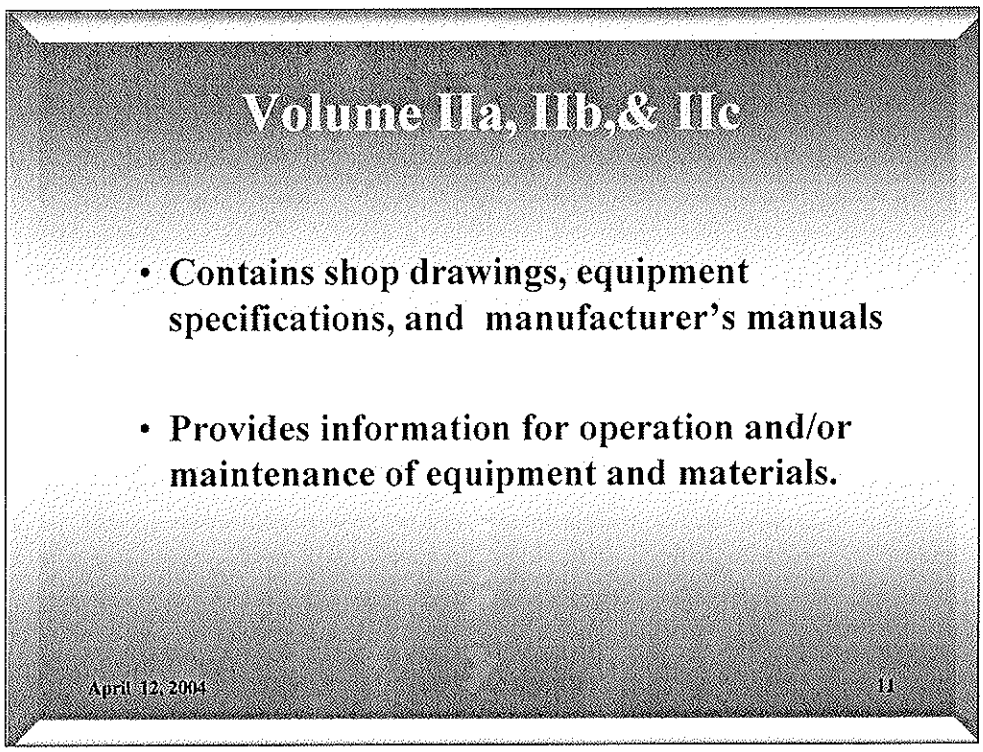
Specifies procedures for system:

- inspection
- operation
- maintenance
- environmental monitoring and testing for groundwater, surface water, leachate and landfill gas
- safety and contingency operations

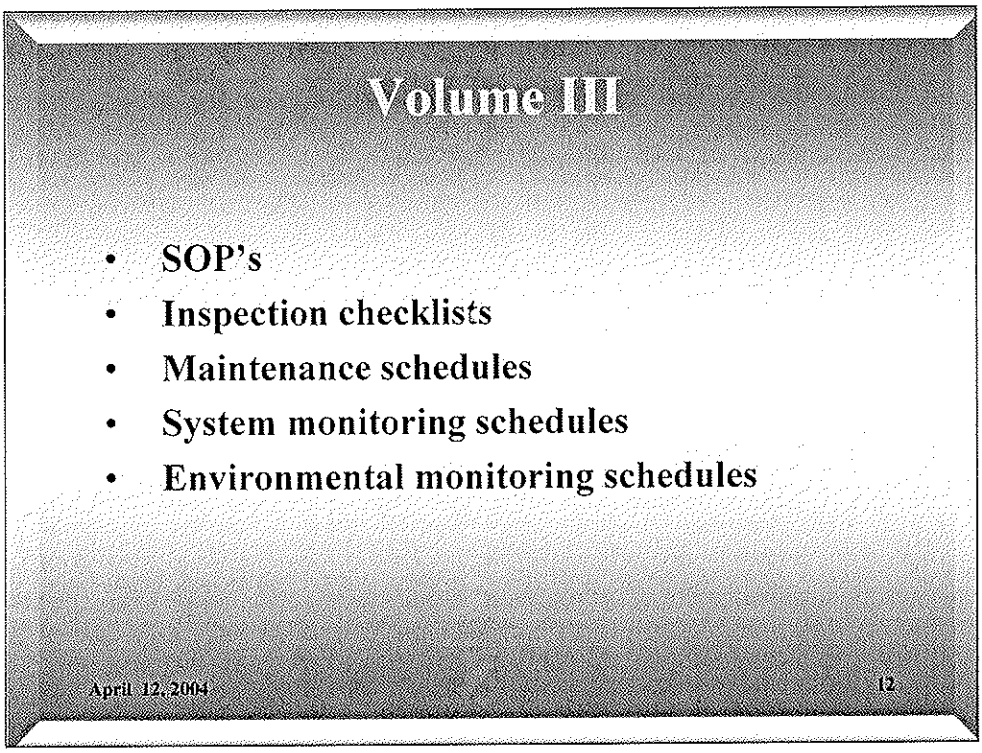


The manual has been structured as three volumes. It p**rovides information and requirements for post-closure care.**

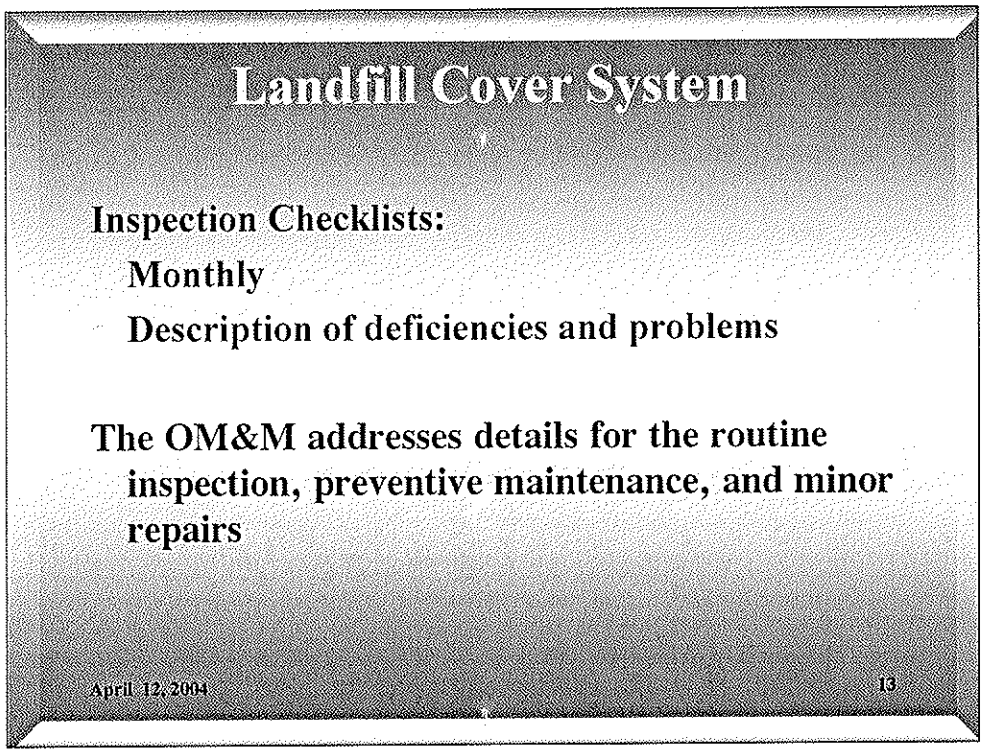
It describes components of the landfill systems and includes sections on Personnel, Safety, Documentation and Contingency Plans



Volume II is bound into three sub-volumes and contains shop drawings, manufacturers manuals and additional submissions provided with the equipment and materials installed under the listed contracts. It provides relevant information for the operation and/or maintenance of the equipment and materials. It is not available electronically.



Volume III contains standard operating procedures, inspection checklists, regular and preventive maintenance schedules, performance monitoring schedules, and environmental monitoring schedules for the closure and remediation systems installed at the Site.

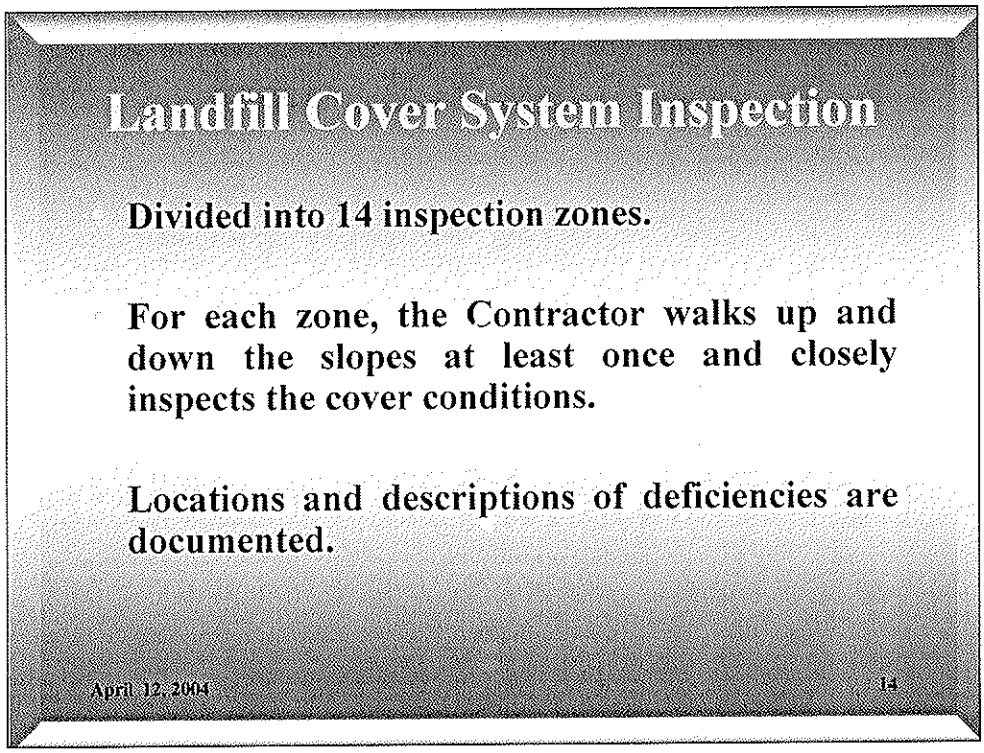


LCS Inspection Checklists include

Form FCS-1: Monthly Inspection Checklist - Final Cover System.

Form DP-1: Description of Deficiencies and Problems.

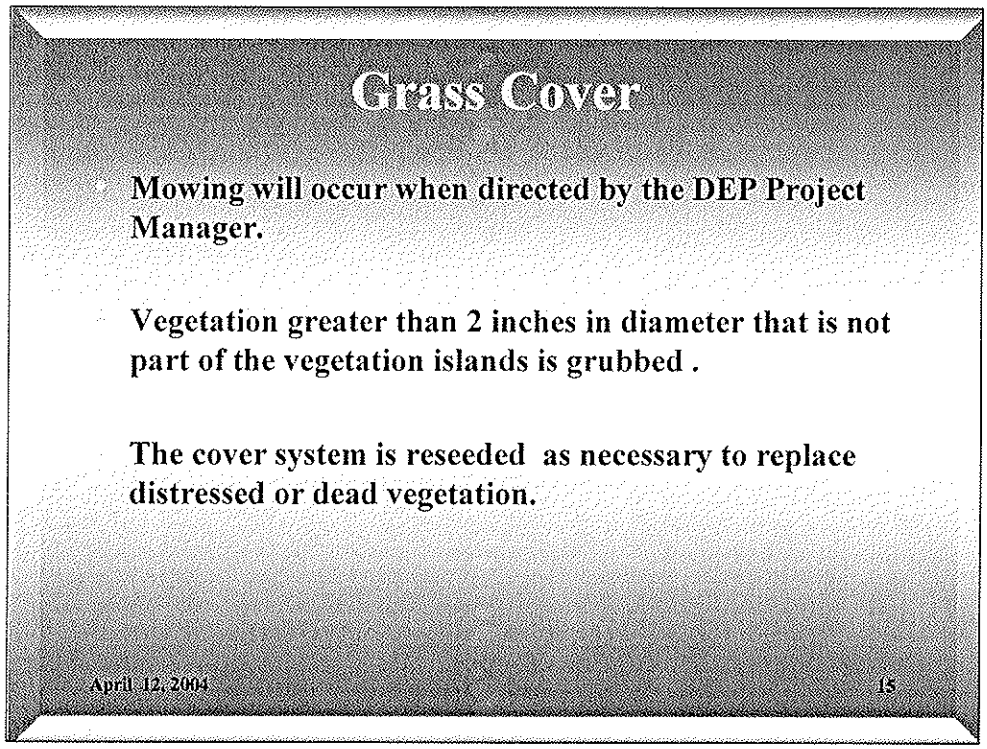
Additional details for the routine inspection, preventive maintenance, and minor repairs for the landfill cover system are available in the O&M Manual, Volume III, Section 2.0.



The landfill cover system is divided into 14 inspection zones. The Contractor inspects each zone on a monthly basis.

For each zone, the Contractor walks up and down the slopes at least once and closely inspects the cover conditions for the items listed on Form FCS-1. The Contractor shall spend a minimum of 20 minutes inspecting each zone.

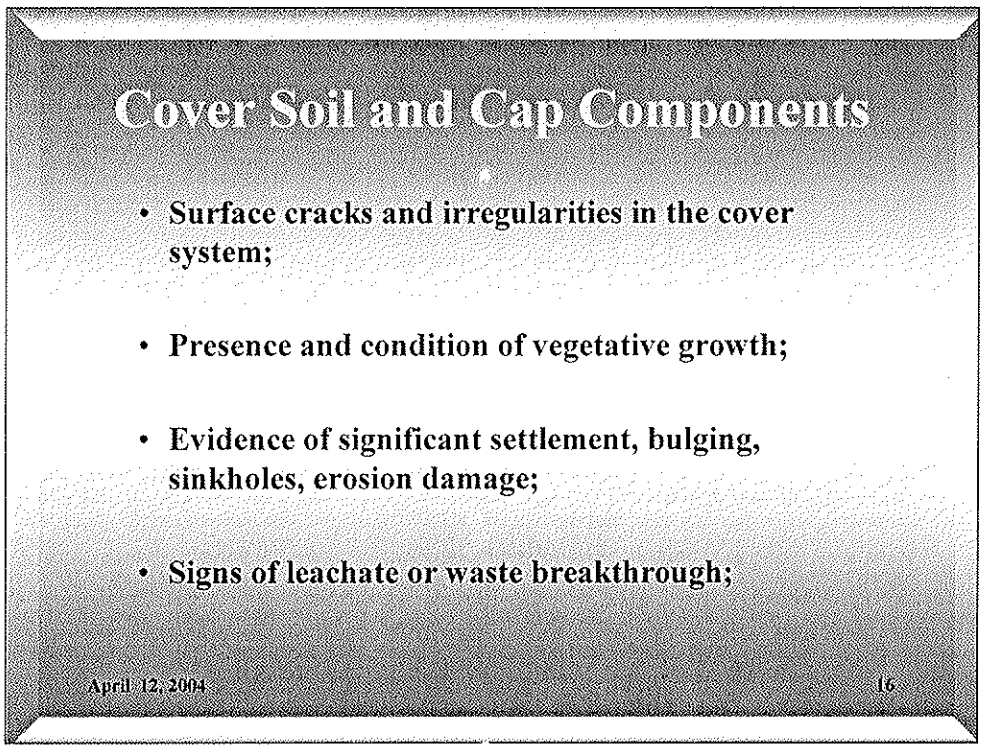
The Contractor shall record deficiencies observed during the inspection on Form DP-1.



Here are some of the items included in the inspection. Mowing will occur when directed by the DEP Project Manager. It is anticipated that the mowing will be done in 25% increments, each increment separated from the next by six months. Mowing has not been necessary to date.

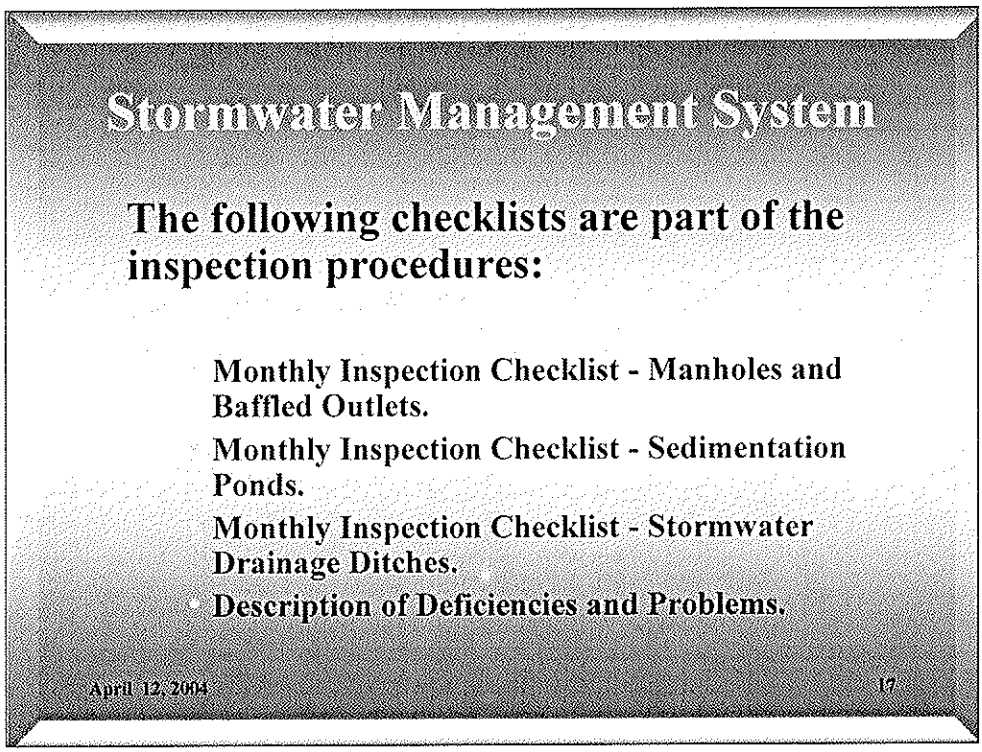
Vegetation greater than 2 inches in diameter that is not part of the vegetation islands is grubbed .

The cover system is reseeded as necessary to replace distressed or dead vegetation.



The inspection of the Cover Soil and Cap Components covers the following elements:

X Surface cracks and irregularities in the cover system;
X Presence and condition of vegetative growth;
X Presence of burrowing animals;
X Evidence of significant settlement, bulging or sinkholes;
X Signs of erosion damage;
X Signs of unstable conditions;
X Signs of leachate or waste breakthrough;
X Presence of ponded water or water seepage; and,
X Evidence of unauthorized access (vehicular tracks or disturbed cover soil).



STORMWATER MANAGEMENT SYSTEM

Inspection Checklists

Form SMS-1: Monthly Inspection Checklist - Stormwater Drainage Ditches.

Form SMS-2: Monthly Inspection Checklist - Manholes and Baffled Outlets.

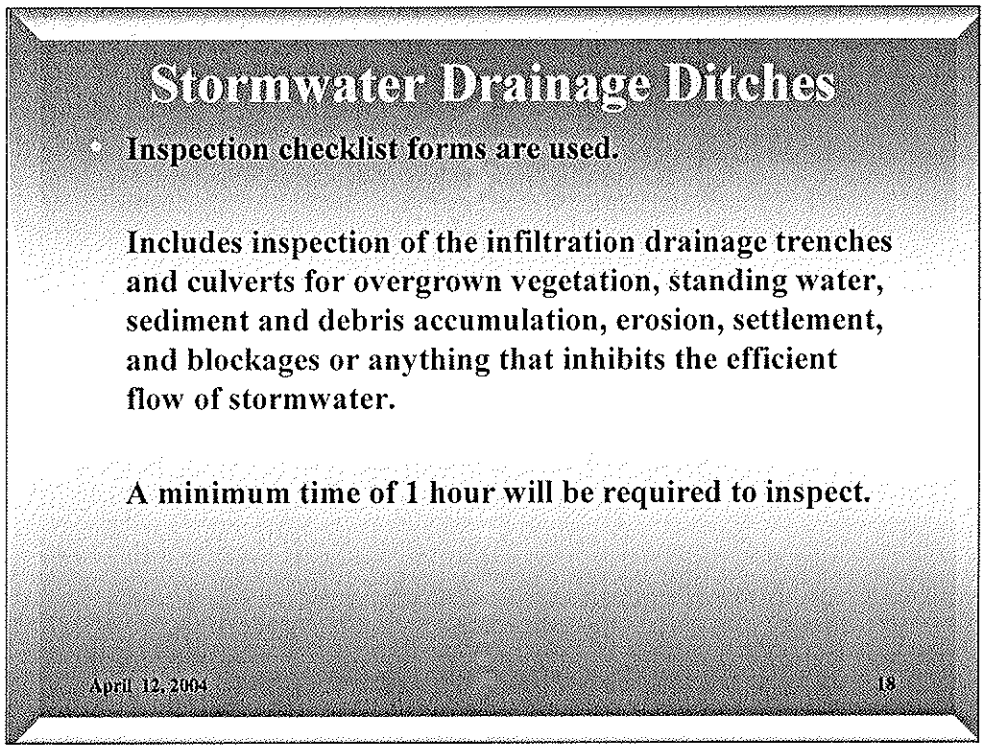
Form SMS-3: Monthly Inspection Checklist - Sedimentation Ponds.

Form DP-1: Description of Deficiencies and Problems.

REFERENCE:

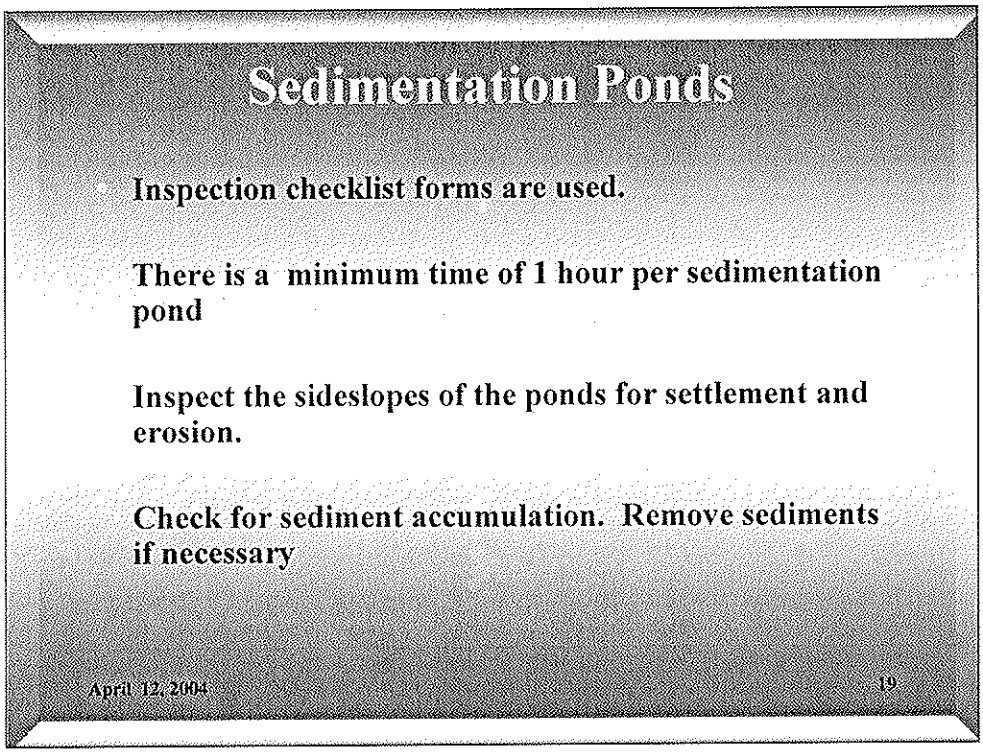
These forms and instructions to complete Forms SMS-1, SMS-2, SMS-3, and DP-1 are provided in ATTACHMENT A.

Additional details for the routine inspection, preventive maintenance, and minor repairs for the stormwater management system are available in the O&M Manual, Volume III, Section 3.0.



Inspections of stormwater drainage ditches includes inspection of the infiltration drainage trenches and culverts for overgrown vegetation, standing water, sediment and debris accumulation, erosion, settlement, and blockages or anything that inhibits the efficient flow of stormwater. In the past, we had some clogging of the ditches due to erosion. However, there is little now.

A minimum time of 1 hour will be required to inspect.



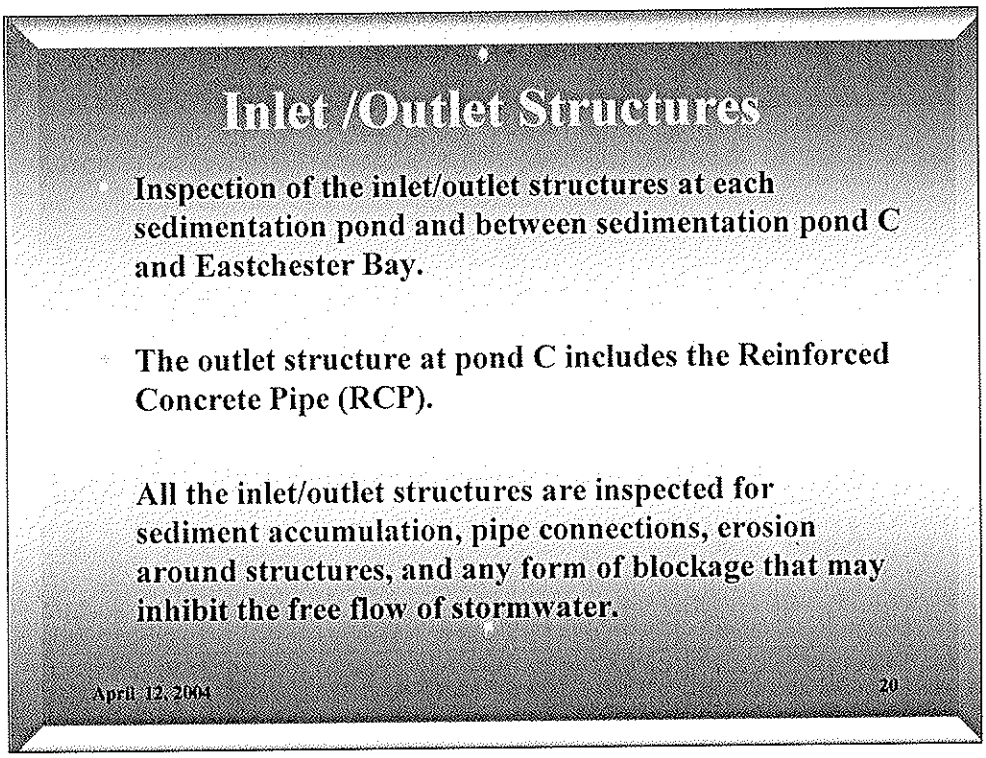
Sedimentation Ponds

Inspection checklist forms are used.

There is a minimum time of 1 hour per sedimentation pond

Inspect the sideslopes of the ponds for settlement and erosion.

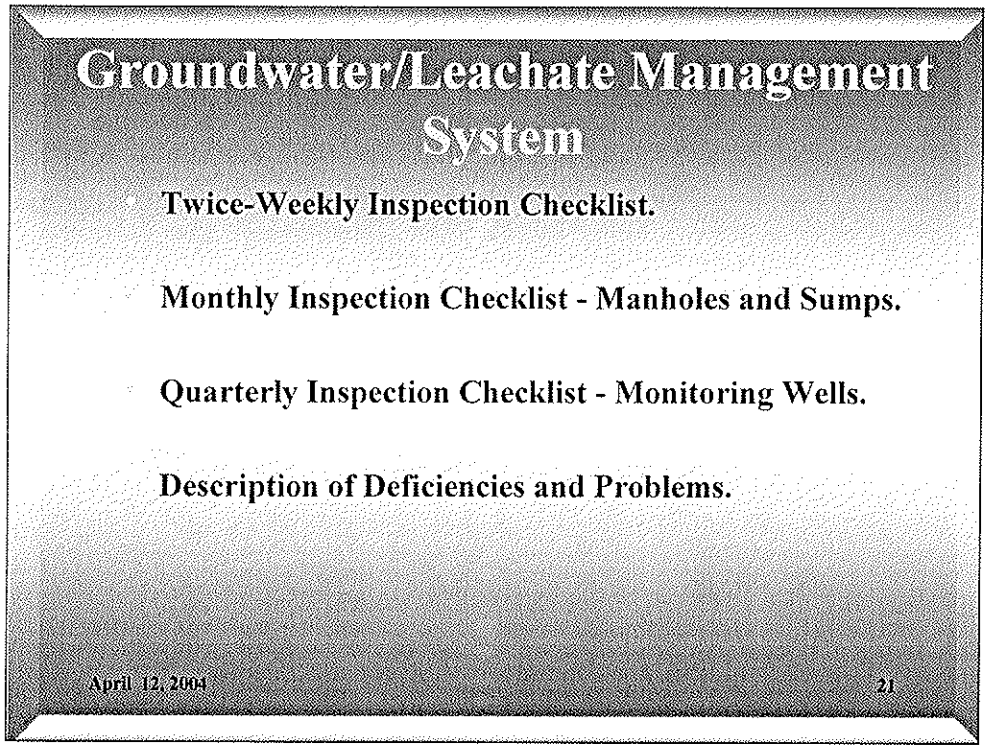
Check for sediment accumulation. Remove sediments if necessary. A line item in the contract is available for this.



There are three ponds for stormwater on PLBL, termed A,B, and C. Stormwater flows from one to the next until it empties into Eastchester Bay.

The inlet/outlet structures at each sedimentation pond and between sedimentation pond C and Eastchester Bay are inspected.

They are inspected for sediment accumulation, pipe connections, erosion around structures, and any form of blockage that may inhibit the free flow of stormwater.



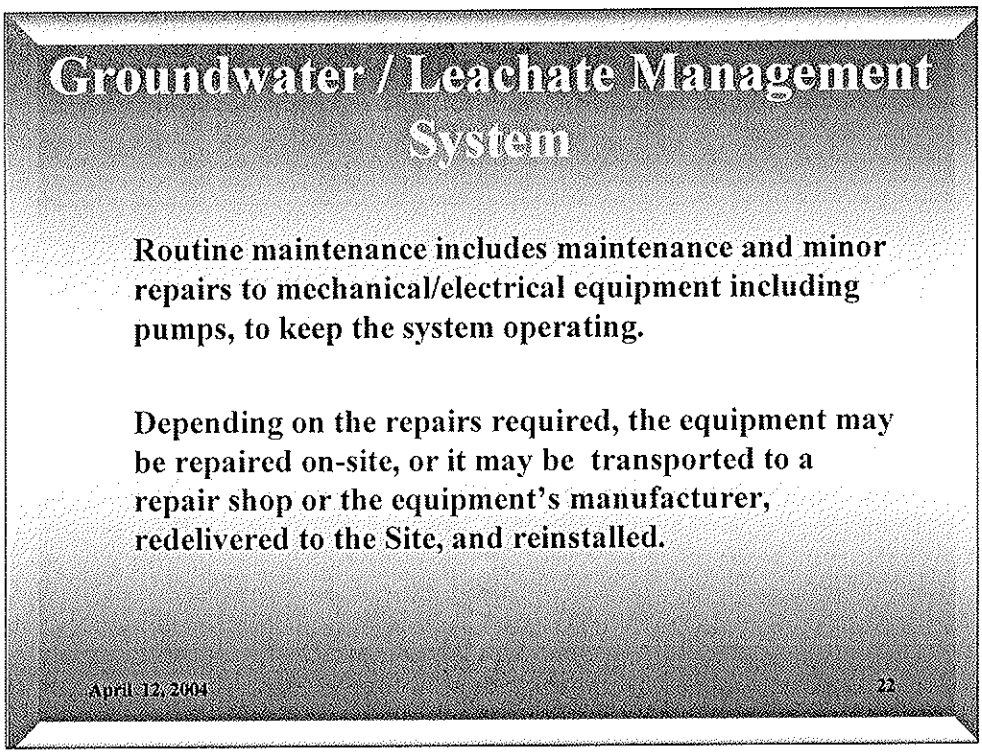
Groundwater/Leachate Management System

Twice-Weekly Inspection Checklist.

Monthly Inspection Checklist - Manholes and Sumps.

Quarterly Inspection Checklist - Monitoring Wells.

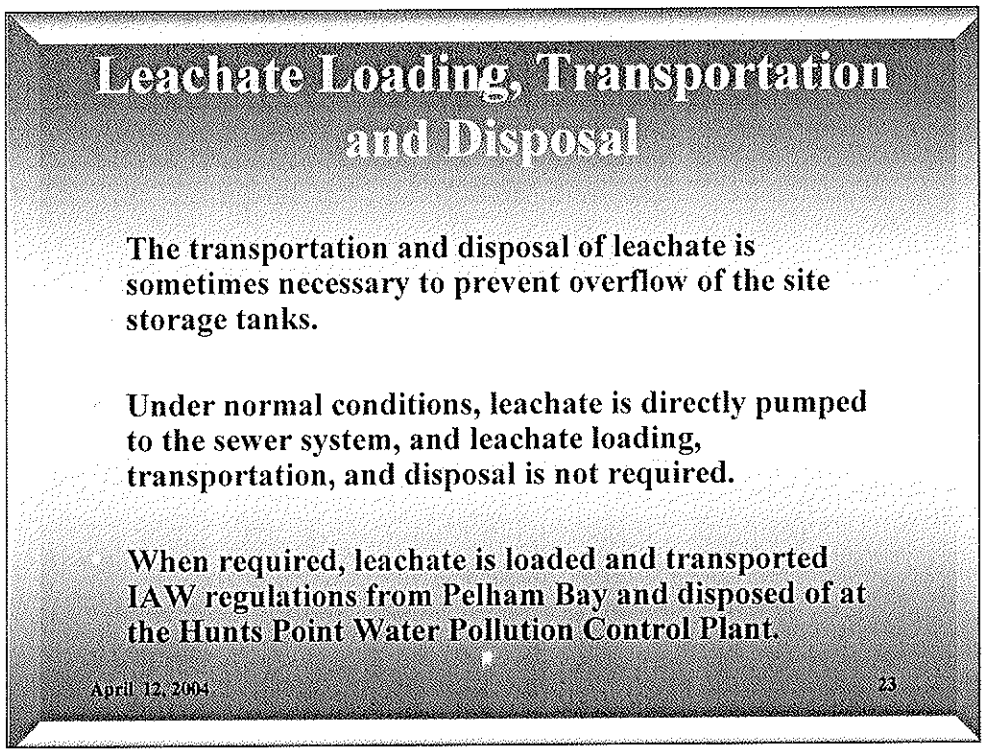
Description of Deficiencies and Problems.



Groundwater / Leachate Management System

Routine maintenance includes maintenance and minor repairs to mechanical/electrical equipment including pumps, to keep the system operating.

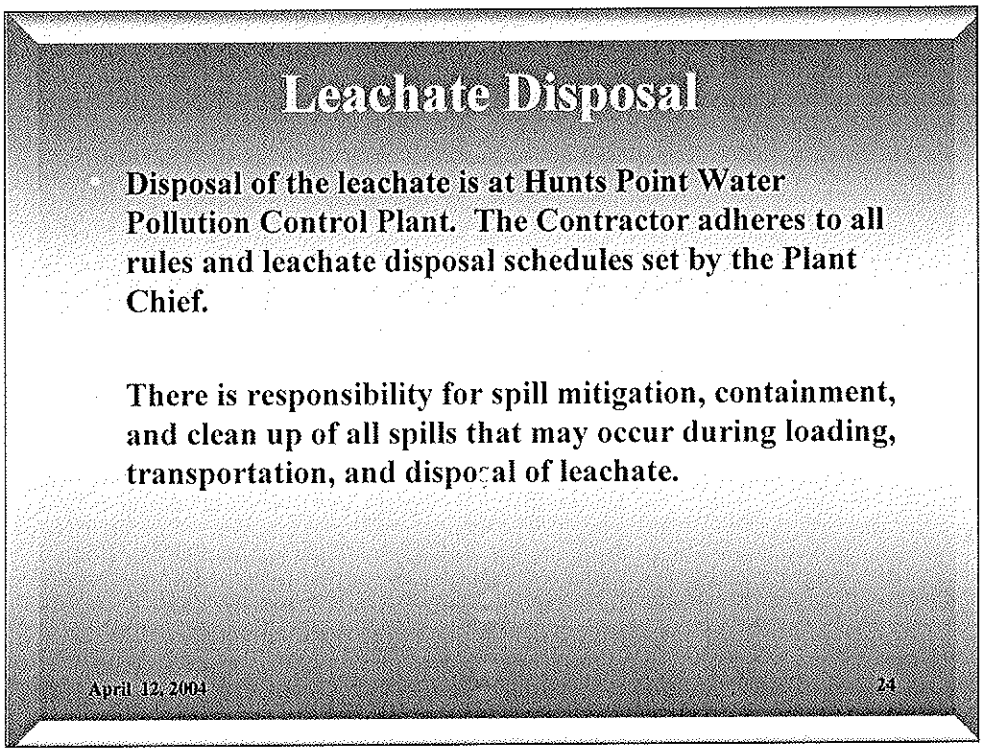
Depending on the repairs required, the equipment may be repaired on-site, or it may be transported to a repair shop or the equipment's manufacturer, redelivered to the Site, and reinstalled.



The transportation and disposal of leachate is sometimes necessary to prevent overflow of the site storage tanks.

Under normal conditions, leachate is directly pumped to the sewer system, and leachate loading, transportation, and disposal is not required.

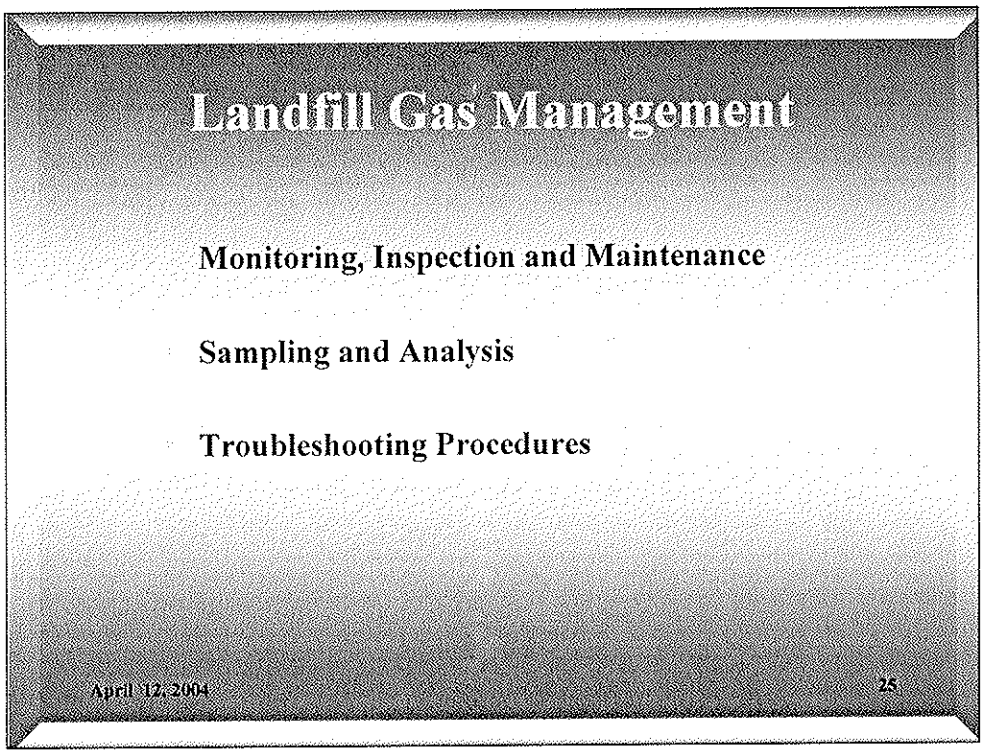
When required, leachate is loaded and transported IAW regulations from Pelham Bay and disposed of at the Hunts Point Water Pollution Control Plant.



Leachate Disposal

There is disposal of the leachate at the designated scavenger manhole located at the intersection of Ryawa Avenue and Faile Street, Hunts Point Water Pollution Control Plant. The Contractor shall adhere to all rules and leachate disposal schedules set by the Plant Chief.

There is responsibility for spill mitigation, containment, and clean up of all spills that occurred during loading, transportation, and disposal of leachate.

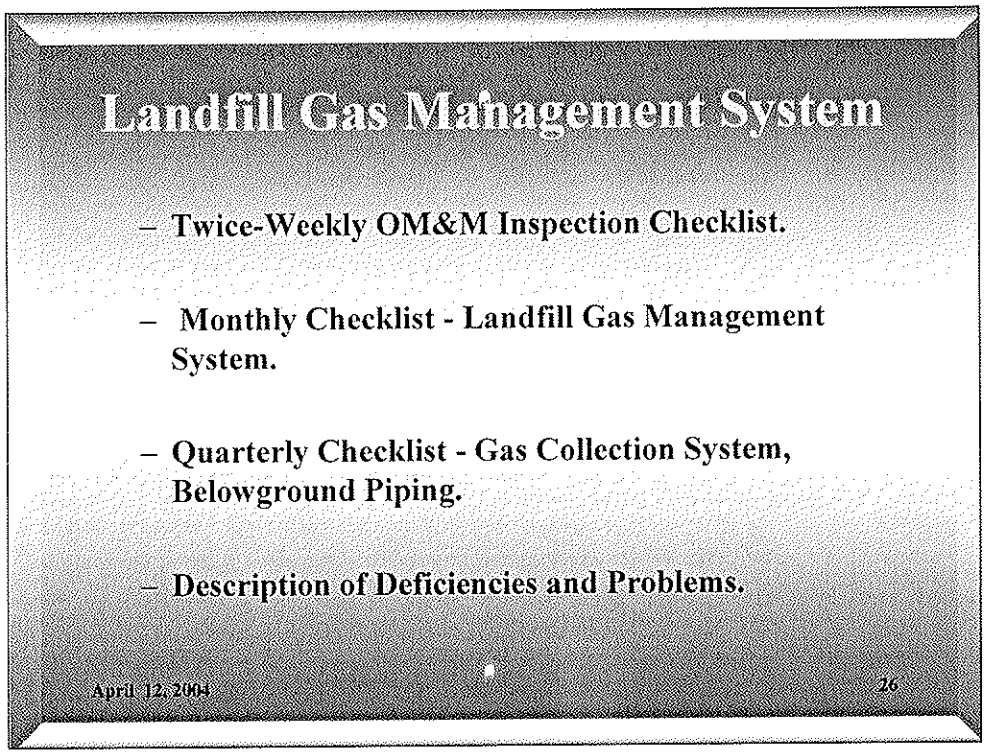


Now we will talk a bit about the Landfill Gas Management System

Monitoring, Inspection and Maintenance

Sampling and Analysis

Troubleshooting Procedures

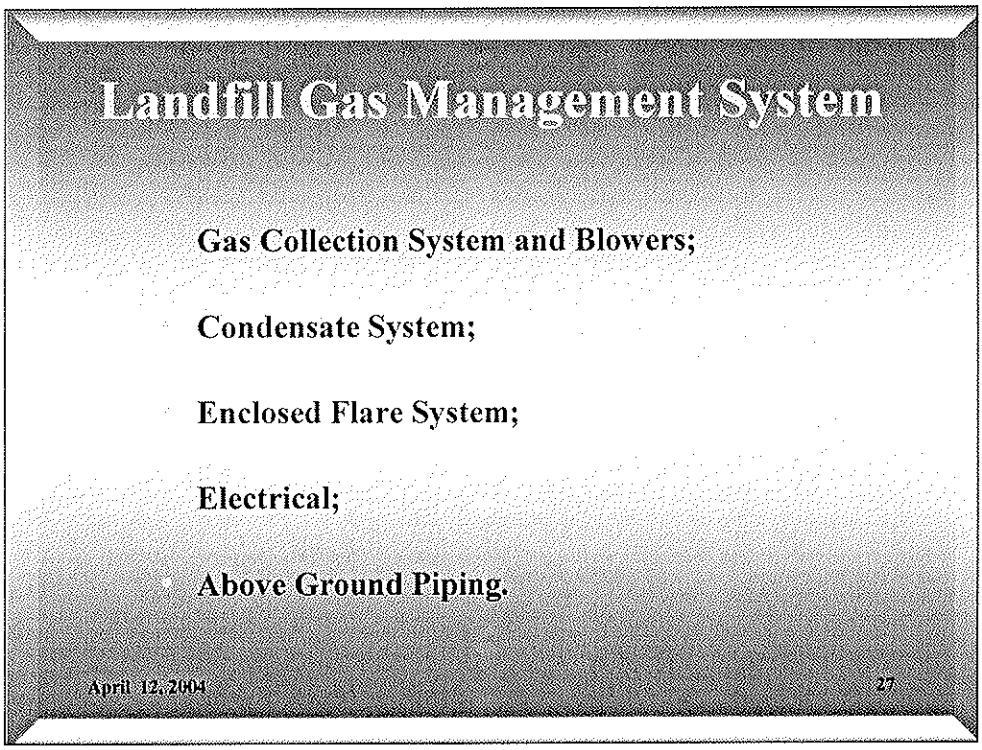


Twice-Weekly OM&M Inspection Checklist.

Monthly Checklist - Landfill Gas Management System.

Quarterly Checklist - Gas Collection System, Belowground Piping.

Description of Deficiencies and Problems.



Landfill Gas Management System Inspection Procedures look at:

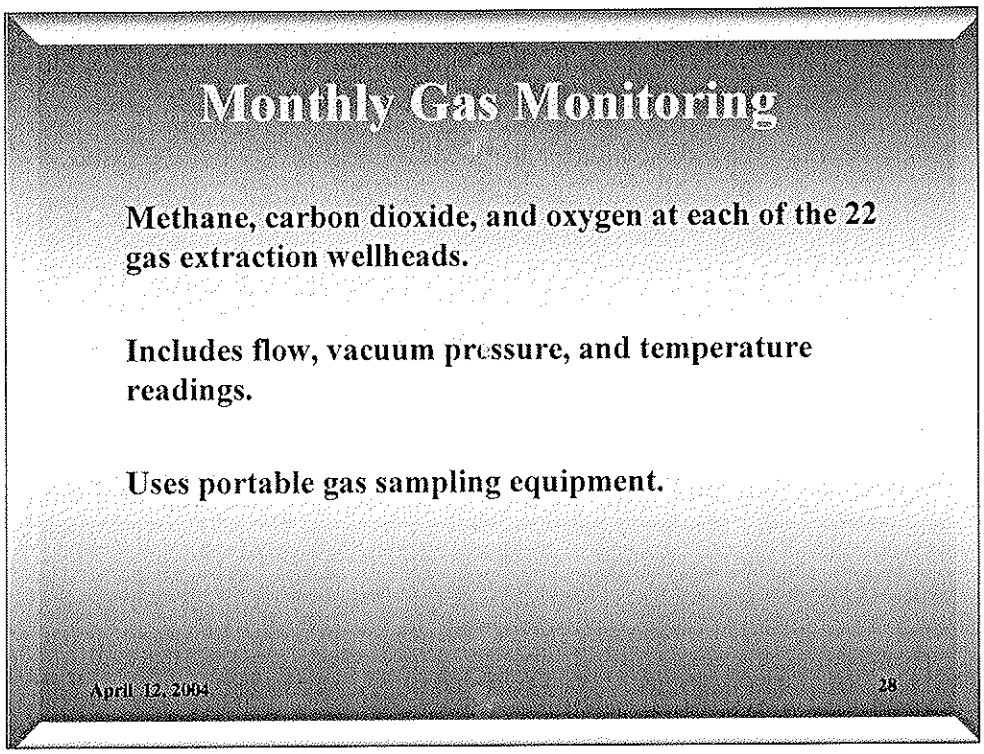
The Gas Collection System and Blowers;

Condensate System;

Enclosed Flare System;

Electrical;

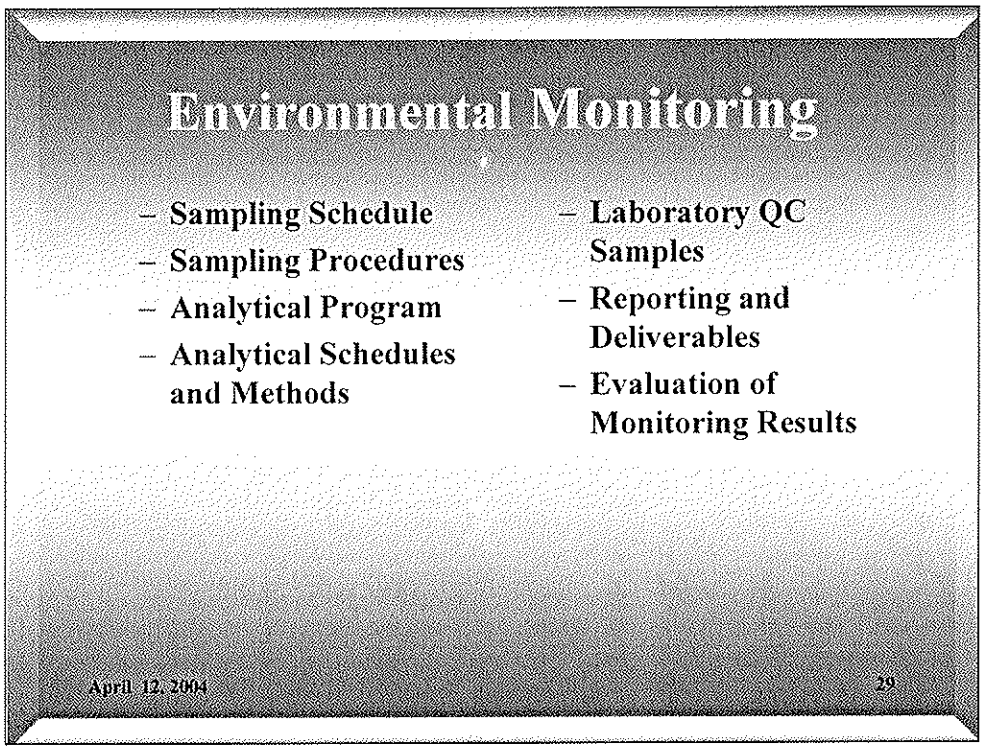
Above Ground Piping.



Methane, carbon dioxide, and oxygen at each of the 22 gas extraction wellheads.

Includes flow, vacuum pressure, and temperature readings.

Uses portable gas sampling equipment.



The Environmental monitoring for PBLF is comprehensive and addresses the items on the screen. The overall goal is to somehow measure the effectiveness of the remedial measures over time. The term monitoring is broadly defined to include sampling and environmental analysis.

Sampling Schedule

Sampling Procedures

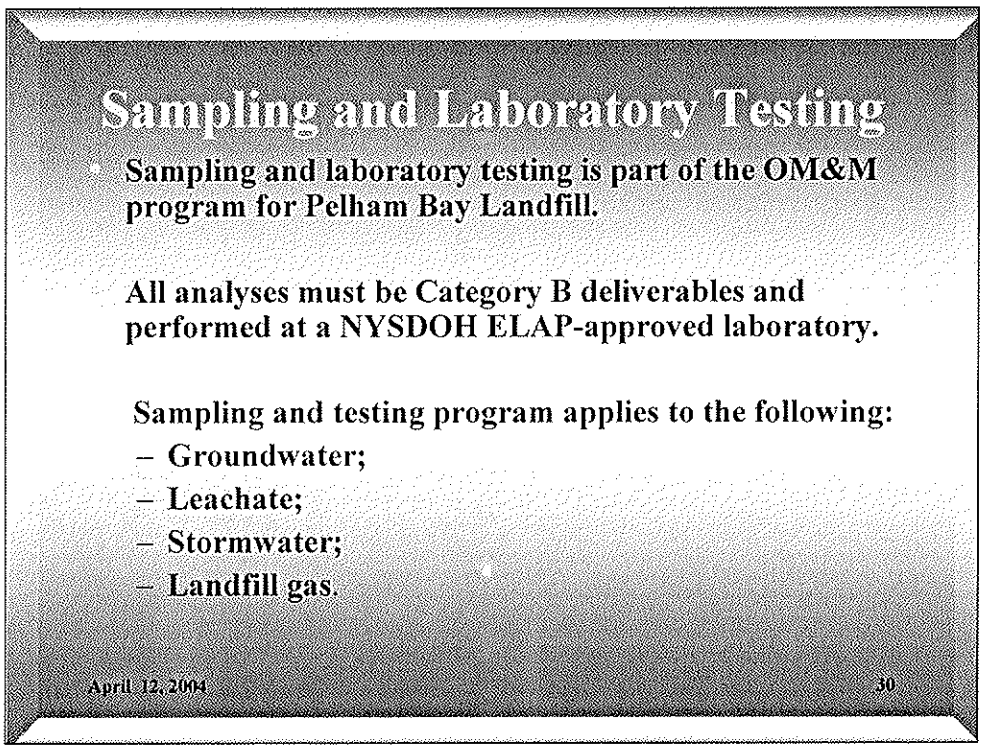
Analytical Program

Analytical Schedules and Methods

Laboratory QC Samples

Reporting and Deliverables

Evaluation of Monitoring Results Sampling Schedule



Sampling and laboratory testing is part of the OM&M program for Pelham Bay Landfill.

All analyses must be Category B deliverables and performed at a NYSDOH ELAP-approved laboratory.

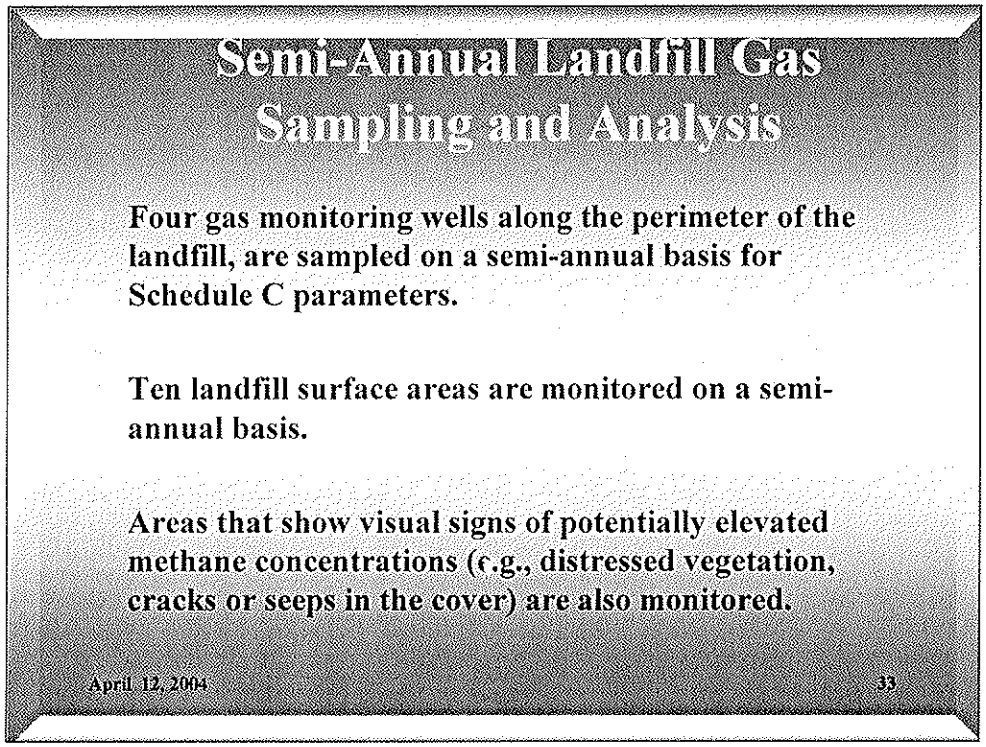
Sampling and testing program applies to the following:

Groundwater;

Leachate;

Stormwater; and,

Landfill gas.



Four gas monitoring wells along the perimeter of the landfill, are sampled on a semi-annual basis for Schedule C parameters. Methane, O2, CO2

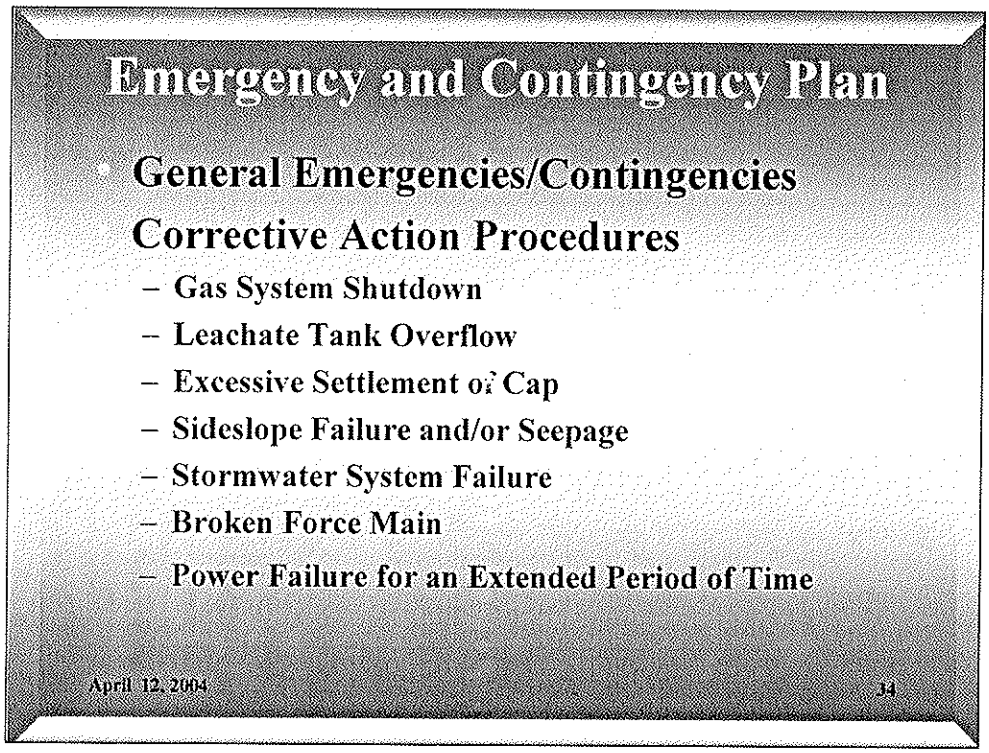
Ten landfill surface areas are monitored on a semi-annual basis.

Areas that show visual signs of potentially elevated methane concentrations (e.g., distressed vegetation, cracks or seeps in the cover) are also monitored.

Reference

Methane concentrations are measured within 5 to 10 cm of the landfill surface using a portable organic vapor analyzer (OVA), flame ionization detector (FID), or similar monitoring device which meets the instrument criteria specified in USEPA Reference Method 21, Section 3.

Sampling of the selected monitoring areas shall be conducted during "typical" meteorological conditions, and in accordance with the procedures outlined in USEPA Method 21, except that the term "methane" shall be used in place of "volatile organic compounds (VOC)", and the calibration gas is 500 ppm methane in air.



General Emergencies/Contingencies

Corrective Action Procedures

Gas System Shutdown

Leachate Tank Overflow

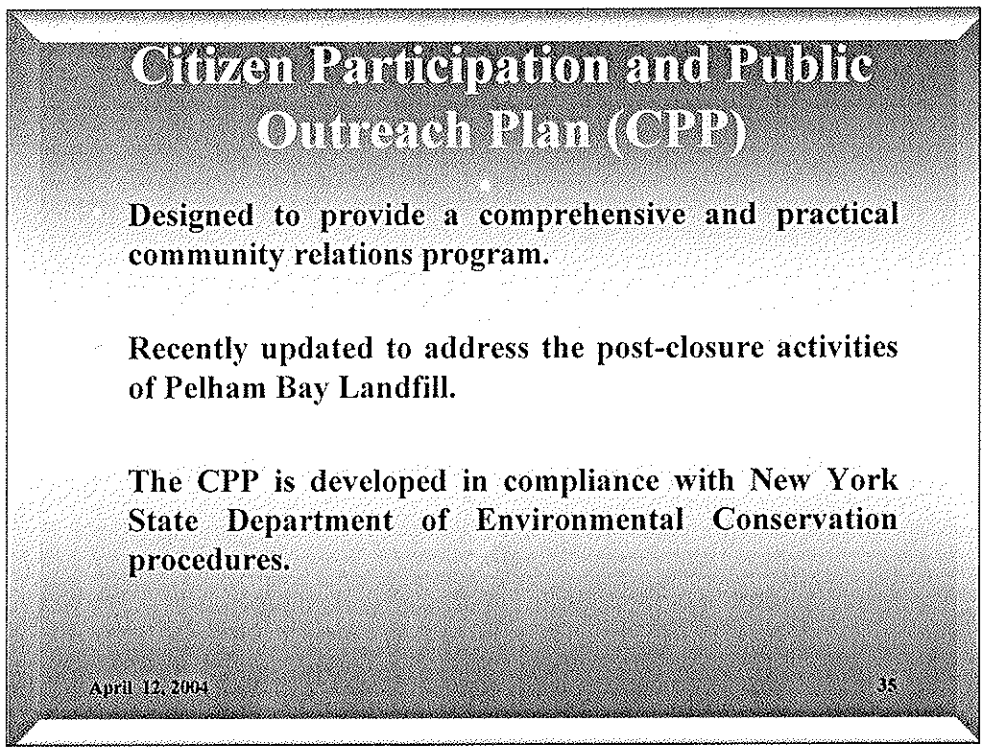
Excessive Settlement of Cap

Sideslope Failure and/or Seepage

Stormwater System Failure

Broken Force Main

Power Failure for an Extended Period of Time- Con Ed

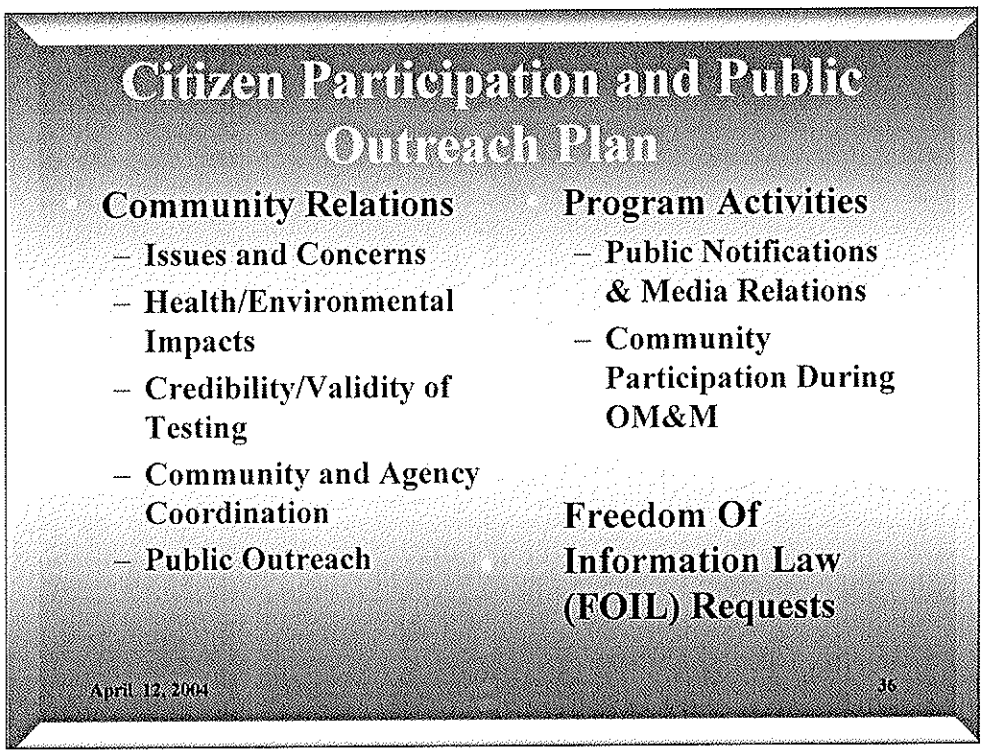


Designed to provide a comprehensive and practical community relations program.

Recently updated to address the post-closure activities of Pelham Bay Landfill.

The CPP is developed in compliance with New York State Department of Environmental Conservation procedures.

The Plan has been developed in compliance with the New York State Department of Environmental Conservation's New York State Inactive Hazardous Waste Site Citizen Participation Plan (6NYCRR Part 375.7) dated August 30, 1988. This regulation was updated May 20, 1992 and was amended January 1998.



The CPP addresses the items on the slide.

Community Relations

- Issues and Concerns
- Health/Environmental Impacts
- Credibility/Validity of Testing
- Community and Agency Coordination
- Public Outreach

Program Activities

- Public Notifications & Media Relations
- Community Participation During OM&M

Freedom Of Information Law (FOIL) Requests

Pelham Bay Landfill Update Report

4/12/04
7:30 PM to 9:00 PM
Bronx Community Board 10
3165 East Tremont Avenue
Bronx, NY 10461
(718-892-1161)

Meeting called by:	Lillie Farrell	**Type of meeting:**	Community Outreach
Facilitator:	Lillie Farrell	**Note taker:**	Lillie Farrell

Attendees:

Community Board 10 Parks & Recreation Committee
NYCDEP– Lillie Farrell, John McLaughlin, John Wuthenow
NYSDEC – Nigel Crawford, Daniel Walsh
NYSDOH – Dawn Hetrick

----- Agenda Topics -----

Introductions	Lillie Farrell	5	Minutes
Operation Maintenance and Monitoring Plan	John Wuthenow	20	
Operation Maintenance and Monitoring Results	John Wuthenow	20	
Future Plans	John Wuthenow	5	
Questions	ALL	10	

A Powerpoint Presentation will include current photos of the landfill.

REPORTED MONITORING WELL SAMPLES CONCENTRATIONS
PELHAM BAY LANDFILL

Target Compound List	Range of Concentration Measured (ppb)
Conventionals	
Ammonia	170 to 1,260,000
Chloride	11,000 to 12,250,000
Nitrate	20 to 23,000
Sulfate	46,000 to 1,690,000
Total Dissolved Solids	304,000 to 27,100,000
Inorganics	
Antimony	51.2 to 56.3
Arsenic	2.3 to 89.1
Barium	60 to 8470
Boron	1570 to 8900
Cadmium	5.4 to 29.1
Chromium	18.6 to 1240
Hexavalent Chromium	20 to 560
Cobalt	8.1 to 77.3
Copper	7.3 to 1130
Cyanide	10.8 to 267
Iron	165 to 860,000
Lead	7.7 to 2780
Magnesium	5290 to 1,936,000
Manganese	75.8 to 29,600
Mercury	0.2 to 5
Selenium	13.6
Sodium	10,700 to 8,000,000
Thallium	2.8 to 16.8
Zinc	6.5 to 7,110
Volatile Organics	
Benzene	1 to 62
Chlorobenzene	1 to 46
Ethylbenzene	3 to 36
Methylene Chloride	1 to 150
Toluene	1 to 230
Xylenes (Total)	4 to 200
Semi Volatile Organics	
Napthalene	2 to 140
1,2-Dichlorobenzene	5
1,3-Dichlorobenzene	5
1,4-Dichlorobenzene	4 to 9
Pesticides	
4,4'-DDD	0.011 to 0.078
4,4'-DDE	0.01 to 0.078
Aldrin	0.058
Dieldrin	0.0063 to 0.64

The Pelham Bay Landfill is an inactive 81-acre municipal waste landfill located in the Bronx, New York (see figure 1). The site is bordered by the Hutchinson River to the north and east, the Eastchester Bay to the east and south, the Pelham Bay Park to the southwest, and Bruckner Boulevard Extension to the northwest. The landfill has an elevation of 131 feet with steep slopes that rise to a nearly flat top. According to records, typical wastes received at the site included: residential wastes, rubbish, street dirt, construction waste and demolition debris. The facility is currently operated and maintained by Severn Trent Services ("ST"). As part of their responsibility, ST is required to periodically sample and test groundwater, leachate, storm water and gas condensate from various locations within the landfill. This reports summarizes the results of these tests, performed from sampling events during the period June 1999 through November 2003.

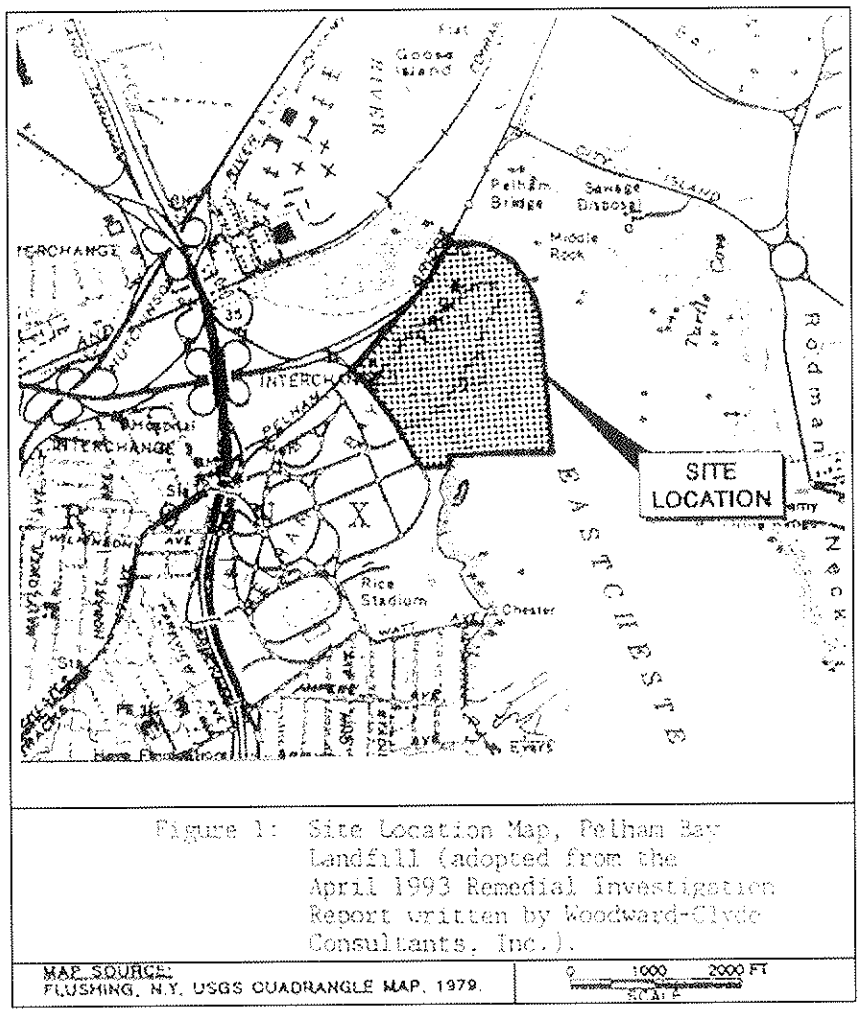


Figure 1: Site Location Map, Pelham Bay Landfill (adopted from the April 1993 Remedial Investigation Report written by Woodward-Clyde Consultants, Inc.).

MONITORING WELLS AND POINTS
PELHAM BAY LANDFILL

1. Groundwater Monitoring Well Numbers

The following eleven (11) wells within the landfill shall be sampled for analytical analysis:

MW - 104
MW - 106
MW - 109
MW - 110
MW - 113
MW - 114
MW - 119
MW - 120
MW - 120B
MW - 121
MW - 122

2. Elevation Measurement

The following fifteen (15) wells within the landfill shall be used to measure for elevation of groundwater level:

MW - 104
MW - 106
MW - 109
MW - 110
MW - 113
MW - 114
MW - 115
MW - 115 B
MW - 118
MW - 119
MW - 120
MW - 120B
MW - 121
MW - 122
MW - 126 (also referred to as PZ - 5)

The following four (4) wells located in Pelham Bay Park shall be used to measure for elevation of groundwater level:

MW - 117
MW - 117B
MW - 124
MW - 124B

(Continued)

MONITORING WELLS AND POINTS
PELHAM BAY LANDFILL

The following pairs of piezometers located upgradient and downgradient of the cut-off wall will be monitored for groundwater elevation.

- @ Cut-Off Wall Station 3+50 (2 piezometers, PZ-A and PZ-B)
- @ Cut-Off Station 7+00 (2 piezometers, PZ-C and PZ-D)
- @ Cut-Off Station 11+90 (2 piezometers, PZ-E and PZ-F)

3. Leachate

The following location shall be used to sample the leachate prior to discharge to POTW sewer system:

- Collection Sump D-1

4. Stormwater Points

The following two (2) locations shall be used to collect stormwater samples for analytical testing:

SW-1 SW-2

5. Gas Monitoring Wells

The following four (4) gas wells shall be monitored for gas concentrations:

GMW - 1 GMW - 3
GMW - 2 GMW - 4

6. Landfill Surface Gas

The following ten (10) surface locations shall be used to monitor for methane concentrations five (5) to ten (10) cm above the landfill surface:

SGM-1 through SGM-10

7. Enclosed Flare

The following location shall be used for long-term monitoring of the enclosed flare emission

- Enclosed Flare Stack EF-1 (see 6.2.1 Sampling Schedule Item 7).

ANALYTICAL SCHEDULES
PELHAM BAY LANDFILL

Schedule A
Target Compound List (TCL) • Field Parameters • Conventionals • TCL Volatile Organics • TCL Semivolatile Organics • TCL Pesticides Target Analyte List (TAL) Inorganics

Schedule B		
BOD	pH	Copper
COD	Petroleum Hydrocarbons	Lead
Chloride	Amenable Cyanide	Mercury
Suspended Solids	Arsenic	Nickel
Ammonia Nitrogen	Cadmium	Zinc
Nitrate Nitrogen	Chromium (total)	Molybdenum
TKN	Chromium (Hexavalent)	Selenium

Schedule C
CH_4 % by volume
CO_2 % by volume
O_2 % by volume

(CONTINUED)

ANALYTICAL SCHEDULES

PELHAM BAY LANDFILL

Schedule D
% Destruction for: • Methane (CH_4) • Carbon Dioxide (CO_2) • Carbon Monoxide (CO) • Non-Methane Organic Compound (NMOC) Emission Concentration for • Particulates • Sulfur Oxide (SO_x) • Nitorgen Oxides (NO_x) • Carbon Monoxide (CO)

Details on the testing performed under Schedules A and B can be found as follows

PRESERVATIVES AND SAMPLE CONTAINERS

Parameter	Volume Required	Container	Preservative (See Table 1a)	Holding Time
Cyanide	1000 ml	P,G	P-3	14 Days
Pesticides	1000 ml	G	P-1	7 Days
Phenols	500 ml	G	P-5	28 Days
PCBs	1000 ml	G	P-1	7 Days
TOC	10 ml	P,G	P-5	26 Days
Volatile Organics	40 ml	G	P-1/P-7	7 Days
BNA Extractables	2000 ml	G	P-1	7 Days
BOD	1000 ml	P,G	P-1	24 Hours
COD	50 ml	P,G	P-2	28 Days
TSS	500 ml	P,G	P-1	7 Days
TDS	100 ml	P,G	P-1	7 Days
TKN	500 ml	P,G	P-2	28 Days
TP	500 ml	P,G	P-2	28 Days
Metals*				
Aluminum	200 ml	P,G	P-4	6 Months
Antimony	200 ml	P,G	P-4	6 Months
Arsenic	200 ml	P,G	P-4	6 Months
Barium	200 ml	P,G	P-4	6 Months
Beryllium	200 ml	P,G	P-4	6 Months
Cadmium	200 ml	P,G	P-4	6 Months
Calcium	200 ml	P,G	P-4	6 Months
Chromium (Hex)	200 ml	P,G	P-1	24 Hours
Chromium (total)	200 ml	P,G	P-4	6 Months
Copper	200 ml	P,G	P-4	6 Months
Iron	200 ml	P,G	P-4	6 Months
Lead	200 ml	P,G	P-4	6 Months
Magnesium	200 ml	P,G	P-4	6 Months
Mercury	200 ml	P,G	P-4	28 Days
Nickel	200 ml	P,G	P-4	6 Months
Potassium	200 ml	P,G	P-4	6 Months
Selenium	200 ml	P,G	P-4	6 Months
Silver	200 ml	P,G	P-4	6 Months
Sodium	200 ml	P,G	P-4	6 Months
Zinc	200 ml	P,G	P-4	6 Months

*The volumes shown for each metal are those required if that metal was the only one of interest. In the more usual case, where a combination of metals are requested, a total sample volume of 500 ml is required.

P = Plastic Bottles

G = Glass Bottles

PRESERVATIVES

P-1 Cool to 4°C in an ice chest (cooler).

P-2 Preserve with concentrated sulfuric acid to pH ≤2. Do not add an excess amount of acid. cool 4°C..

P-3 preserve with 10N sodium hydroxide to pH > 12 and cool to 4°C in an ice chest.

P-4 Acidify sample with concentrated nitric acid to pH <2 and cool to 4°C.

P-5 Preserve with concentrated sulfuric acid or concentrated hydrochloric acid to pH ≤2 and cool to 4°C in an ice chest.

P-6 No preservative, determine on site.

Note: When fixing samples with acid or base to a specific pH, the steps below should be followed:

1. add preservative to sample
2. replace cap on sample bottle and mix (shake) sample
3. remove cap and place a drop of sample on a piece of wide range pH paper.
4. if necessary, repeat steps 1 through 3 until desired pH is attained.

P-7 Preserve with concentrated hydrochloric acid to pH <2 and cool to 4°C in an ice chest.

REQUIRED ANALYSIS

Parameter	Matrix	Analysis*
Volatile Organics	Water, Water-miscible liquids, Solids, Sludges	SW846,8240
Semivolatile Organics	Water, Solids, Sludges	SW846,8240
Organic Chlorine Pesticides; PCBs	Water, Solids, Sludges	SW846-8080
Total Phenolics	Water	SW846-9066
Cyanide	Water, Solids, Sludges	SW846-9010
total Metals	Water, Solids, Sludges	SW846-6010/7000 series
Hexavalent Chromium	Water, Solids, Sludges	SW846-7195
Biological Oxygen Demand	Water	NYSDEC-ASP
Chemical Oxygen Demand	Water	NYSDEC-ASP
Total Organic Carbon	Water	NYSDEC-ASP
Total Suspended Solids	Water	NYSDEC-ASP
Total Dissolved Solids	Water	NYSDEC-ASP
Total Kjeldahl Nitrogen	Water	NYSDEC-ASP
Total Phosphates	Water	NYSDEC-ASP

* All are methods taken from SW8446, Test Methods for Evaluating Solid Waste, 3rd Edition, 1986, except as noted here:

-600 series is from 40 CFR Part 136, Federal Register, Vol. 49, No. 209
-200, 300, 400 series are from method for Chemical Analysis of Water and Wastes, EPA-600/4-79-020, revised March 1983

* As per NYSDEC ASP, September, 1989

A. GAS CONDENSATE

The following tables summarize the analytical results for the Gas Condensate testing that was performed between June 1999 and November 2003.

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GAS CONDENSATE

VOLATILE ORGANICS

Compound	Units	June 1999		Oct. 1999		Dec. 1999		May 2000		Aug. 2000		Nov. 2000		Feb. 2001		June 2001		Nov. 2001		Mar. 2003		Aug. 2003		Nov. 2003	
1 2-Dichloroethane-TCLP	ug/l	-		-		-		-		-		-		-		-		0.6	J	-		-		-	
2-Butanone (MEK)-TCLP	ug/l	-		560		1400	E	790		230		1700		3600		844		810	E	2000		140	J	390	
Benzene-TCLP	ug/l	-		-		22		-		-		25	J	32	J	-		16		-		-		-	
Chlorobenzene-TCLP	ug/l	-		23	J	58		50	J	22	J	59	J	70	J	25	J	35		55	J	26	J	-	
Chloroform-TCLP	ug/l	16		-		-		-		-		-		-		-		-		-		-		-	

SEMI VOLATILE ORGANICS

Compound	Units	June 1999		Oct. 1999		Dec. 1999		May 2000		Aug. 2000		Nov. 2000		Feb. 2001		June 2001		Nov. 2001		Mar. 2003		Aug. 2003		Nov. 2003	
1 4-Dichlorobenzene-TCLP	ug/l	-		14	J	42	J	-		27	J	140		77	J	18	J	2	J	66	J	-		-	
2-Methylphenol (o-cresol)-TCL	ug/l	-		-		98	J	-		130		680		-		37	J	-		310		230		49	
4-Methylphenol (m/p-cresol)-T	ug/l	-		840	D	3200	E	-		2400	E	9300	E	6800	D	700		7	J	5900	E	3000	E	690	E
Pyridine-TCLP	ug/l	-		19	J	120		-		45	J	-		240		-		-		-		110		27	

PESTICIDES

Compound	Units	June 1999		Oct. 1999		Dec. 1999		May 2000		Aug. 2000		Nov. 2000		Feb. 2001		June 2001		Nov. 2001		Mar. 2003		Aug. 2003		Nov. 2003	
Heptachlor-TCLP	ug/l	-		-		-		-		-		0.14		-		-		-		-		-		-	

INORGANIC

Compound	Units	June 1999		Oct. 1999		Dec. 1999		May 2000		Aug. 2000		Nov. 2000		Feb. 2001		June 2001		Nov. 2001		Mar. 2003		Aug. 2003		Nov. 2003	
Arsenic (As)-TCLP	ug/l	-		220		271		-		64.8		193		-		119		151		118		2200		699	
Barium (Ba)-TCLP	ug/l	18.5		-		2.2	B	-		1.2	B	1.8	B	-		61.5	B	7.1	B	200	B	400	B	-	
Cadmium (Cd)-TCLP	ug/l	-		-		-		-		-		-		-		-		6.3	B	-		-		-	
Chromium (Cr)-TCLP	ug/l	-		-		-		-		0.96	B	-		-		-		-		10	B	-		-	
Lead (Pb)-TCLP	ug/l	-		-		-		-		5.1		-		-		5.9		-		-		-		-	
Mercury	ug/l	-		0.56		-		-		69.6				-		-		0.5	B	-		6.3		1.5	
Silver (Ag)-TCLP	ug/l	-		-		-		-		-				-		6.8	B	2.7	B	-		-		-	

Pelham Bay Landfill
Leachate Flow Quantities to STP

Date	Gal Pumped	Gal Trucked	Total Gal generated	GPD
Jun-99	1,502,900	32,000	1,534,900	51163
Jul-99	1,230,100	0	1,230,100	39681
Aug-99	1,831,100	0	1,831,100	57222
Sep-99	1,733,300	0	1,733,300	57777
Oct-99	983,700	0	983,700	30741
Nov-99	1,081,900	49,612	1,131,512	37717
Dec-99	1,457,200	0	1,457,200	46538
Jan-00	977,000	0	977,000	30531
Feb-00	981,200	0	981,200	35043
Mar-00	1,117,600	0	1,117,600	34925
Apr-00	1,634,500	0	1,634,500	54483
May-00	1,733,000	0	1,733,000	54156
Jun-00	1,047,700	0	1,047,700	34923
Jul-00	1,113,700	0	1,113,700	34803
Aug-00	1,709,300	0	1,709,300	53416
Sep-00	937,900	0	937,900	31263
Oct-00	510,900	110,321	621,221	19413
Nov-00	384,600	0	384,600	12820
Dec-00	710,400	0	710,400	22200
Jan-01	1,852,367	0	1,852,367	57886
Feb-01	1,852,367	51,516	1,903,883	67996
Mar-01	1,852,367	312,913	2,165,280	67665
Apr-01	1,615,550	0	1,615,550	53852
May-01	1,615,550	0	1,615,550	50486
Jun-01	645,200	0	645,200	21507
Jul-01	963,550	0	963,550	30111
Aug-01	963,550	0	963,550	30111
Sep-01	1,381,800	0	1,381,800	46060
Oct-01	319,000	0	319,000	9969
Nov-01	964,600	0	964,600	32153
Dec-01	964,600	0	964,600	30144
Jan-02	1,873,480*	0	1,873,480	58546
Feb-02	1,873,480*	0	1,873,480	66910
Mar-02	1,873,480*	0	1,873,480	58546
Apr-02	1,873,480*	0	1,873,480	62449
May-02	1,873,480*	488,790	2,362,270	73821
Mar-03	1,000,000*	0	1,000,000	31250
Apr-03	1,000,000*	0	1,000,000	33333
May-03	1,000,000*	0	1,000,000	31250
Jun-03	459,417*	540,583	1,000,000	33333
Jul-03	1,000,000*	0	1,000,000	31250
Aug-03	1,000,000*	0	1,000,000	31250
Sep-03	1,000,000*	0	1,000,000	33333
Oct-03	1,000,000*	0	1,000,000	31250
Nov-03	1,000,000*	0	1,000,000	33333
Dec-03	1,210,800	0	1,210,800	37838
Jan-04	531,800	0	531,800	16619
Feb-04	1,083,300	0	1,083,300	38689
Total Estimated Cumulative Flow to STP through Force main Jun 99 - Feb 04			59,906,952	
Estimated flow through to STP through Force Main prior to Jun 1999 (based on starting flow meter reading)			10,942,300	
Total Estimated Cumulative Flow			**70,849,252**	
* Flow total for Jan 02-Nov 03 are estimated based on historical volumes				

B. LEACHATE

The following tables summarize the analytical results for the Leachate testing that was performed between June 1999 and November 2003.

PELHAM BAY LANDFILL
SCHEDULE A ANALYTICAL RESULTS FOR LEACHATE (D-1)

VOLATILE ORGANICS

Compound	Units	June 1999		Jan. 2000		Nov. 2000		Nov. 2001		Mar. 2003		Nov. 2003	
Acetone	ug/l	-		-		-		4.5	J	12		-	
Methylene chloride	ug/l	4	J	-		-		-		-		-	
Chloroform	ug/l	3	J	2	J	2	J	21		2	J	-	
Benzene	ug/l	-		-		-		-		4	J	-	
Trichloroethene	ug/l	-		-		-		-		1	J	-	
Bromodichloromethane	ug/l	-		-		-		4.1	J	-		-	
Toluene	ug/l	-		-		-		-		-		1	J
Chlorobenzene	ug/l	-		-		-		-		16		2	J

SEMI VOLATILE ORGANICS

Compound	Units	June 1999		Jan. 2000		Nov. 2000		Nov. 2001		Mar. 2003		Nov. 2003	
Diethyl phthalate	ug/l	-		-		-		-		-		7	J
Di-n-butyl phthalate	ug/l	1	J	-		-		-		-		-	
Bis(2-ethylhexyl)phthalate	ug/l	-		-		1	J	-		-		-	

PESTICIDES

Compound	Units	June 1999		Jan. 2000		Nov. 2000		Nov. 2001		Mar. 2003		Nov. 2003	
beta-BHC	ug/l	-		-		-		-		-		0.031	J

PELHAM BAY LANDFILL
SCHEDULE A ANALYTICAL RESULTS FOR LEACHATE (D-1)

INORGANIC

Compound	Units	June 1999		Jan. 2000		Nov. 2000		Nov. 2001		Mar. 2003		Nov. 2003	
Aluminum (Al)	ug/l	58.2	B	63.2	B	828		3450		455		90.6	B
Antimony (Sb)	ug/l	-		-		-		-		6.1	B	-	
Arsenic (As)	ug/l	3.7	B	5.5	B	-		6.6	B	9.8	B	-	
Barium (Ba)	ug/l	189	B	145	B,E	56.2	B	415		397		262	B
Beryllium (Be)	ug/l	0.6	B	-		-		0.25	B	-		-	
Cadmium (Cd)	ug/l	0.3	B	-		-		1.1	B	-		-	
Calcium (Ca)	ug/l	43300		117000		249000	E	40900		71500		125000	
Chromium (Cr)	ug/l	21.3		13.9		3	B	20.1		58.4		20.1	B
Cobalt (Co)	ug/l	5.2	B	3	B	-		9.3	B	15.3	B	-	
Copper (Cu)	ug/l	10.5	B	10	B	16.4	B	6.3	B	28.1		48.7	B
Iron (Fe)	ug/l	1010		732		1090		30400		5750		2300	
Lead (Pb)	ug/l	4.6		-		7.3		100		6.3		-	
Magnesium (Mg)	ug/l	25300		32100		39200		12300		31500		56200	
Manganese (Mn)	ug/l	167		133		138		1600		662		454	
Nickel (Ni)	ug/l	21.2	B	14.1	B	5.1	B	34	B	33.1		21.8	B
Potassium (K)	ug/l	57400		40000		23800	E	7570		156000	E	85600	E
Silver (Ag)	ug/l	-		-		3.8	B	-		1.9		-	
Sodium (Na)	ug/l	486000	E	338000	E	63600	E	55400		899000	E	639000	
Thallium (Tl)	ug/l	-		-		2		-		-		-	
Vanadium (V)	ug/l	43.2	B	22.2	B	4.2	B	94.4		67.4		31.7	B
Zinc (Zn)	ug/l	10.2	B	14.2	B	144		261		70.8		78.1	B
Mercury (Hg)	ug/l	-		-		-		0.3		-		-	

PELHAM BAY LANDFILL
SCHEDULE B ANALYTICAL RESULTS FOR LEACHATE (D-1)

Compound	Units	Jun-99		Sep-99		Dec-99		May-00		Nov-00		Jun-01		Mar-03		Nov-03	
BOD	mg/l	12.6		4.2		8.9		7.5		14.4		39.6		137		20.2	
COD	mg/l	381		486		180		108		170		146		1400		276	
Chloride	mg/l			785		486		290		377		328		1600		670	
Suspended Solids	mg/l	5		-		19		5.6		7.2		11		102			
Ammonia Nitrogen	mg/l	65.1		73.7		73.7		26.6		41.1		34.2		532		59.4	
Nitrate-Nitrite	mg/l					1.8	B									1.78	
TKN	mg/l	68.8		58.9	N	84.5		36.1		64.3		50		776		64.5	
pH		8.3		8.2		8.2		8		7.6		7.4		8.25		7.97	
Petroleum Hydrocarbons	mg/l	0.3		-		-		-		-		-		-		-	
Amenable Cyannide	ug/l	21		25.1		30	N			20.8		-		62			
Arsenic	ug/l	-		6.9	B	3.9	B	-		3	B	3.9	B	22.7		-	
Cadmium	ug/l	-		0.8	B	-		-		-		-		-		-	
Chromium (total)	ug/l	21		20.4		22		7.7	B	15.5		12.6		143		-	
Chromium (Hexavalent)	mg/l	-		-		-		-		-		-		0.01	B		
Copper	ug/l	24	B	27.3		7.3	B	19.4		19.5	B	87.5	E	78.5		-	
Lead	ug/l	5		5.2		3.4		3.2		4.5		4.8		13.3		-	
Mercury	ug/l	-		-		-		-		-		-		0.39		-	
Nickel	ug/l	19	B	17.4	B	20	B	17.1	B	14.8		14.7	B	84.2		-	
Zinc	ug/l	21		38.2		9.8	B	37		142		305	N	101		148	
Molybdenum	ug/l	17	B	-		-		-		25.7	B	14	B	-		-	
Selenium	ug/l	-		3	B	3	B	-		-		-		-		-	

Pelham Bay Landfill
Leachate Flow Quantities to STP

Date	Gal Pumped	Gal Trucked	Total Gal generated	GPD
Jun-99	1,502,900	32,000	1,534,900	51163
Jul-99	1,230,100	0	1,230,100	39441
Aug-99	1,831,100	0	1,831,100	57222
Sep-99	1,733,300	0	1,733,300	57777
Oct-99	983,700	0	983,700	30741
Nov-99	1,081,900	49,612	1,131,512	37717
Dec-99	1,457,200	0	1,457,200	46538
Jan-00	977,000	0	977,000	30531
Feb-00	981,200	0	981,200	35043
Mar-00	1,117,600	0	1,117,600	34925
Apr-00	1,634,500	0	1,634,500	54483
May-00	1,733,000	0	1,733,000	54156
Jun-00	1,047,700	0	1,047,700	34923
Jul-00	1,113,700	0	1,113,700	34803
Aug-00	1,709,300	0	1,709,300	53416
Sep-00	937,900	0	937,900	31263
Oct-00	510,900	110,321	621,221	19413
Nov-00	384,600	0	384,600	12820
Dec-00	710,400	0	710,400	22200
Jan-01	1,852,367	0	1,852,367	57886
Feb-01	1,852,367	51,516	1,903,883	67996
Mar-01	1,852,367	312,913	2,165,280	67665
Apr-01	1,615,550	0	1,615,550	53852
May-01	1,615,550	0	1,615,550	50486
Jun-01	645,200	0	645,200	21507
Jul-01	963,550	0	963,550	30111
Aug-01	963,550	0	963,550	30111
Sep-01	1,381,800	0	1,381,800	46060
Oct-01	319,000	0	319,000	9969
Nov-01	964,600	0	964,600	32153
Dec-01	964,600	0	964,600	30144
Jan-02	1,873,480*	0	1,873,480	58546
Feb-02	1,873,480*	0	1,873,480	66910
Mar-02	1,873,480*	0	1,873,480	58546
Apr-02	1,873,480*	0	1,873,480	62449
May-02	1,873,480*	488,790	2,362,270	73821
Mar-03	1,000,000*	0	1,000,000	31250
Apr-03	1,000,000*	0	1,000,000	33333
May-03	1,000,000*	0	1,000,000	31250
Jun-03	459,417*	540,583	1,000,000	33333
Jul-03	1,000,000*	0	1,000,000	31250
Aug-04 3	1,000,000*	0	1,000,000	31250
Sep-03	1,000,000*	0	1,000,000	33333
Oct-03	1,000,000*	0	1,000,000	31250
Nov-03	1,000,000*	0	1,000,000	33333
Dec-03	1,210,800	0	1,210,800	37838
Jan-04	531,800	0	531,800	16619
Feb-04	1,083,300	0	1,083,300	38689
Total Estimated Cumulative Flow to STP through Force main Jun 99 - Feb 04			59,906,952	
Estimated flow through to STP through Force Main prior to Jun 1999 (based on starting flow meter reading)			10,942,300	
Total Estimated Cumulative Flow			**70,849,252**	
* Flow total for Jan 02-Nov 03 are estimated based on historical volumes				

C. STORM WATER

The following tables summarize the analytical results for the Storm Water testing that was performed between June 1999 and November 2003.

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR STORM WATER SAMPLES (SW-1)

VOLATILE ORGANICS

Compound	Units	Oct 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	
Acetone	ug/l	5	J	-		-		-		-		4.1	J	-	
Chloroform	ug/l	-		-		-		-		-		-		2	J

SEMI VOLATILE ORGANICS

Compound	Units	Oct 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	
Bis(2-chloroethoxy)methane	ug/l	-		2	J	-		-		-		-		-	
Naphthalene	ug/l	-		-		-		2	J	-		-		-	
2-Methylnaphthalene	ug/l	-		-		-		1	J	-		-		-	
Dimethyl phthalate	ug/l	-		-		-		-		-		-		6	J
Bis(2-ethylhexyl)phthalate	ug/l	-		-		2	J	11	B	11		-		-	

PESTICIDES

Compound	Units	Oct 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	

INORGANIC

Compound	Units	Oct 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	
Aluminum (Al)	ug/l	1850	E	2480	E	154	B	628	E	-		-		-	
Arsenic (As)	ug/l	-		-		2.6	B	6.8	B	-		-		-	
Barium (Ba)	ug/l	91	B	78.2	B	153	B	60.6	B	57.6	B	-		80.8	B
Beryllium (Be)	ug/l	0.3	B	-		-		0.35	B	0.32	B	-		-	
Cadmium (Cd)	ug/l	-		-		-		0.31	B	0.39	B	-		-	
Calcium (Ca)	ug/l	346000		251000		55000	E	306000		270000		202000		259000	
Chromium (Cr)	ug/l	-		4.4	B	12.1		-		2.5	B	-		-	
Cobalt (Co)	ug/l	2.4	B	1.8	B	3.4	B	-		-		-		-	
Copper (Cu)	ug/l	18.4	B	23.7	B	11.8	B	13.7	B	17.9	B	-		47.7	B
Iron (Fe)	ug/l	2240		3360		679		1160		59.5	B	870		2540	
Lead (Pb)	ug/l	16.9		16.1		-		7.8		2.4	B	-		-	
Magnesium (Mg)	ug/l	49500		38400		34800		50800		53200		31700		36900	
Manganese (Mn)	ug/l	652		221		133		265		7.2	B	882		981	
Nickel (Ni)	ug/l	7.1	B	7.2	B	17.3	B	6.9	B	2.4	B	-		12.6	B
Potassium (K)	ug/l	18400	E	14900		53200	E	28200		30300	E	12500	E	13300	B
Silver (Ag)	ug/l	8.6	B	2.4	B	-		5.5	B	2.1	B	-		13.3	B
Sodium (Na)	ug/l	68500		42100		472000	E	78800	E	103000	E	21400	E	26700	
Thallium (Tl)	ug/l	-		-		-		-		3.3	B	-		-	
Vanadium (V)	ug/l	8.3	B	8.3	B	18.4	B	4	B	3.5	B	-		-	
Zinc (Zn)	ug/l	19.2	B	79.4		30.6		49.9		45.1	E	-		55.1	B
Mercury (Hg)	ug/l	-		-		-		-		-		-		0.2	
Selenium (Se)	ug/l	-		-		-		-		2.6	B	-		-	

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR STORM WATER SAMPLES (SW-2)

VOLATILE ORGANICS

Compound	Units	Oct. 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	
Carbon disulfide	ug/l	-		-		1	J	-		-					

SEMI VOLATILE ORGANICS

Compound	Units	Oct. 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	
Phenol	ug/l	-		1	J	-		-		-					
Naphthalene	ug/l	-		-		-		2	J	-					
2-Methylnaphthalene	ug/l	-		-		-		2	J	-					
Bis(2-ethylhexyl)phtha	ug/l	-		2	J	1	J	18	B	-					

PESTICIDES

Compound	Units	Oct. 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	

INORGANIC

Compound	Units	Oct. 1999		May 2000		Nov. 2000		Apr. 2001		Nov. 2001		Mar. 2003		Nov. 2003	
Aluminum (Al)	ug/l	35.5	B,E	28	B,E	66.3	B	12.6	B,E	-		See Note 3 in Section IV		See Note 3 in Section IV	
Arsenic (As)	ug/l	-		8	B	2.6	B	-		-					
Barium (Ba)	ug/l	59.2	B	63.7	B	64.3	B	63.6	B,E	83.1	B				
Cadmium (Cd)	ug/l	-		-		-		-		13.4					
Calcium (Ca)	ug/l	505000		400000		305000	E	367000		386000					
Copper (Cu)	ug/l	17.6	B	19.5	B	15	B	13.4	B,E	25	B				
Cyanide, Total	ug/l	10.3		-		-		79		-					
Iron (Fe)	ug/l	5240		1960		2430		1350		145					
Lead (Pb)	ug/l	-		3.3	B	-		3.2		3	B				
Magnesium (Mg)	ug/l	74400		67500		50400		62400		57900					
Manganese (Mn)	ug/l	1320		954		626		865		-					
Nickel (Ni)	ug/l	5.2	B	4.4	B	3.5	B	5.4	B	3.1	B				
Potassium (K)	ug/l	21100	E	19900		23000	E	25500		32600	E				
Silver (Ag)	ug/l	10.3	B	13	B	6.4	B	3.2	B	2.7	B				
Sodium (Na)	ug/l	101000		63100		74200	E	67100	E	94900	E				
Thallium (Tl)	ug/l	-		-		3.4	B	-		2.7					
Vanadium (V)	ug/l	2.2	B	-		-		-		2	B				
Zinc (Zn)	ug/l	36.6	B	44.6		41.3		65.4		81.8	E				
Mercury (Hg)	ug/l	-		-		-		-		0.34					
Selenium (Se)	ug/l	-		-		-		-		3.7	B				

D. MONITORING WELLS

The following tables summarize the analytical results for the Monitoring Well testing that was performed between June 1999 and November 2003.

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-104)

VOLATILE ORGANICS

Compound	Units	Sep. 1999		Nov. 1999		Feb. 2000		May 2000		Nov. 2000		Mar. 2001		Oct. 2001		Aug. 2003	
Carbon disulfide	ug/l	-		9	J	4	J	-		2	J	150		4.3	J	-	
Acetone	ug/l	7	J,B	5	J	6	J	5	J	-		-		6.9	J	2	J
4-Methyl-2-pentanone (MIBK)	ug/l	-		-		-		-		3	J	-		-		-	
Chlorobenzene	ug/l	3	J	3	J	4	J	3	J	2	J	2	J	-		-	

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Benzyl alcohol	ug/l	-		-		-		-		-		-		-		2.7	J
Acenaphthene	ug/l	1	J	-		-		1	J	-		-		1	J	-	
Fluoranthene	ug/l	-		2	J	-		-		-		2	J	-		-	
Pyrene	ug/l	-		2	J	-		-		-		2	J	-		-	
Bis(2-ethylhexyl)phthalate	ug/l	-		-		-		-		2	J	9	B,J	-		-	

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
4 4'-DDE	ug/l	-		-		-		-		-		-		-		0.031	J

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	40800		9330		996		337	B	960		621		389	B	1820	
Antimony (Sb)	ug/l	20.3	B	-		-		-		-		-		-		-	
Arsenic (As)	ug/l	-		-		-		-		-		-		7.3	B	-	
Barium (Ba)	ug/l	1480		920		918		585	B	655	B	585	B	1390		586	
Beryllium (Be)	ug/l	1.7	B	-		-		-		-		-		-		-	
Cadmium (Cd)	ug/l	3.3	B	1.8	B	-		-		-		-		-		-	
Calcium (Ca)	ug/l	423000		353000		399000		413000		323000		287000	E	402000	E	316000	
Chromium (Cr)	ug/l	89.5		26.9	B	7.5	2	B		5.4	B	2.9	B	14.2	B	7.9	B
Cobalt (Co)	ug/l	35.2	B	12.4	B	-		-		-		-		5.4	B	5.2	B
Copper (Cu)	ug/l	248		56.2	B	14.3	B	-		19	B	10.9	B	15.8	B	37.3	B
Cyanide, Total	ug/l	14.2		40		10		-		-		-		90		15	
Iron (Fe)	ug/l	55800		26100		3240		1230		1130		1290	N,E	1290		6600	E
Lead (Pb)	ug/l	511		129		22.5		7.1	B	10.6	B	13.4		9.3	B	37.2	
Magnesium (Mg)	ug/l	793000		722000		771000		912000		801000		639000		728000		828000	
Manganese (Mn)	ug/l	888		503		209		208		89		89.3		117		63.9	
Molybdenum (Mo)	ug/l	0.87						-									
Nickel (Ni)	ug/l	94.3	B	32	B	8.8	B	-		-		-		25.7	B	12.1	B
Potassium (K)	ug/l	314000		342000		366000		369000	E	466000		411000	E	687000	E	386000	
Silver (Ag)	ug/l	-		11.6	B	-		-		-		-		-		-	
Sodium (Na)	ug/l	7390000		6730000	E	6700000		7290000	E	7380000		10700000		9950000	E	7360000	
Thallium (Tl)	ug/l	-		-		-		-		-		-		-		14	
Vanadium (V)	ug/l	131	B	48	B	27.1	B	13.8	B	15.6	B	12.8	B	26.5	B	14.8	B
Zinc (Zn)	ug/l	626		174		108		-		34.2	B	90.1		27.9	B	81.7	
Mercury (Hg)	ug/l	0.81		0.22		-		-		-		-		-		0.31	
Selenium (Se)	ug/l	-		-		11.1	B	25.1	B,N	-		-		-		-	

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-106)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99	Feb-00	May-00	Nov-00		Mar-01	Oct-01	Aug-03	Dec-03
Acetone	ug/l	5	B				-					

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99	Feb-00	May-00	Nov-00		Mar-01	Oct-01	Aug-03	Dec-03
Bis(2-ethylhexyl)phthalate	ug/l	-					1	J				

PESTICIDES

Compound	Units	Sep-99		Nov-99	Feb-00	May-00	Nov-00		Mar-01	Oct-01	Aug-03	Dec-03

INORGANIC

Compound	Units	Sep-99		Nov-99	Feb-00	May-00	Nov-00		Mar-01	Oct-01	Aug-03	Dec-03
Aluminum (Al)	ug/l	10200		Well was dry at the time of sampling	Well was dry at the time of sampling	Well was dry at the time of sampling	1480		Well was dry at the time of sampling	Well was dry at the time of sampling	Well was dry at the time of sampling	Well was reported vandalized at the time of sampling
Arsenic (As)	ug/l	42.1	B				-					
Barium (Ba)	ug/l	3770					422	B				
Cadmium (Cd)	ug/l	24.9	B				-					
Calcium (Ca)	ug/l	431000					326000					
Chromium (Cr)	ug/l	88.5					12.7	B				
Cobalt (Co)	ug/l	28.2	B				-					
Copper (Cu)	ug/l	926					278					
Cyanide, Total	ug/l	13.4					-					
Iron (Fe)	ug/l	226000					12500					
Lead (Pb)	ug/l	684					66.4					
Magnesium (Mg)	ug/l	929000					884000	E				
Manganese (Mn)	ug/l	356					120					
Nickel (Ni)	ug/l	80	B				19.8	B				
Potassium (K)	ug/l	346000					478000					
Silver (Ag)	ug/l	-					4.7	B				
Sodium (Na)	ug/l	8410000					8440000					
Vanadium (V)	ug/l	436					29.8	B				
Zinc (Zn)	ug/l	1080					472					
Mercury (Hg)	ug/l	0.63					-					

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-109)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Acetone	ug/l	-				-		-				-				1.9	J

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Phenol	ug/l	-				-		-				-				6.7	J
Benzyl alcohol	ug/l	-				-		-				-				4.9	J
2-Methylphenol (o-cresol)	ug/l	-				-		-				-				1.2	J
4-Methylphenol (m/p-cresol)	ug/l	-				-		-				-				2.8	J
Naphthalene	ug/l	-				-		-				-				130	E,B
2-Methylnaphthalene	ug/l	-				-		-				-				15	
Dibenzofuran	ug/l	-				-		-				-				1.8	J
Fluorene	ug/l	-				-		-				-				1.1	J
Bis(2-ethylhexyl)phthalate	ug/l	-				2	J	-				6	B,J			-	

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	-		Well was dry at the time of sampling		6580		17800		Well was dry at the time of sampling		6770		Well was dry at the time of sampling		9170	
Arsenic (As)	ug/l	-				4.3	B	-				2.7	B			3.6	B
Barium (Ba)	ug/l	-				98.7	B	233				91.7	B			181	B
Beryllium (Be)	ug/l	-				0.46	B	0.4	B			-				-	
Cadmium (Cd)	ug/l	-				1.2	B	0.76	B			-				-	
Calcium (Ca)	ug/l	-				185000		238000				218000	E			156000	
Chromium (Cr)	ug/l	-				16.8		51.1				20.9				29.7	
Cobalt (Co)	ug/l	-				27.9	B	16.1	B			5.9	B			15	B
Copper (Cu)	ug/l	-				41.8		36.3				17	B			18.6	B
Iron (Fe)	ug/l	-				11900		18700				7920	N,E			29800	E
Lead (Pb)	ug/l	-				31.3		24				18.9				13.7	
Magnesium (Mg)	ug/l	-				60700		70400				56800				33600	
Manganese (Mn)	ug/l	-				1480		697				130				7030	
Nickel (Ni)	ug/l	-				328		174				79.6				72.9	
Potassium (K)	ug/l	-				9780		13300	E			10300	E			10300	
Silver (Ag)	ug/l	-				-		9	B			3.4	B			-	
Sodium (Na)	ug/l	-				126000	E	139000				90900				36500	
Vanadium (V)	ug/l	-				26.4	B	41.7	B			16.7	B			18.4	B
Zinc (Zn)	ug/l	-				66.3		93				29.3				70.1	
Selenium (Se)	ug/l	-				-		-				-				1.9	B

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-110)

VOLATILE ORGANICS

Compound	Units	Sep-99	Nov-99	Feb-00	May-00	Nov-00	Mar-01	Oct-01	Aug-03
Carbon disulfide	ug/l	-	-	-	-	-	2 J	-	
Acetone	ug/l	-	-	-	-	-	-	5.1 J	

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99	Nov-99	Feb-00	May-00	Nov-00	Mar-01	Oct-01	Aug-03
Naphthalene	ug/l	-	-	-	0.01 J	-	-	-	
Phenanthrene	ug/l	-	1 J	-	-	-	-	-	
Fluoranthene	ug/l	-	2 J	1 J	-	-	-	-	
Pyrene	ug/l	-	1 J	1 J	-	-	-	-	
Bis(2-ethylhexyl)p	ug/l	-	2 J	-	-	-	13 B	-	

PESTICIDES

Compound	Units	Sep-99	Nov-99	Feb-00	May-00	Nov-00	Mar-01	Oct-01	Aug-03

INORGANIC

Compound	Units	Sep-99	Nov-99	Feb-00	May-00	Nov-00	Mar-01	Oct-01	Aug-03
Aluminum (Al)	ug/l	-	3790	1130	2850	3910	6530 N	9520	Well was dry at the time of sampling
Arsenic (As)	ug/l	-	-	-	-	-	-	13.5 B	
Barium (Ba)	ug/l	-	116 B	58.7 B	104 B	93.9 B	78.3 B,E	308 B	
Cadmium (Cd)	ug/l	-	3.5 B	5.2 B	8.2 B	-	-	5.5 B	
Calcium (Ca)	ug/l	-	379000	381000	453000	366000 E	241000	495000 E	
Chromium (Cr)	ug/l	-	8.9 B	-	-	8.7 B	10 B,N	22.4 B	
Cobalt (Co)	ug/l	-	9.4 B	7.3 B	6.1 B	9.6 B	-	13.2 B	
Copper (Cu)	ug/l	-	78.8 B	30.5 B	149	86.7 B	56 B	213	
Iron (Fe)	ug/l	-	12000	4320	11300	9000	11800	25500	
Lead (Pb)	ug/l	-	76.2	89.8	98.6	64.1	60.3 N	158	
Magnesium (Mg)	ug/l	-	809000	786000 E	1000000	877000	595000		
Manganese (Mn)	ug/l	-	253	223	334	247	182 N	283	
Nickel (Ni)	ug/l	-	40.7 B	40.2 B	42.4 B	43.9 B	29.6 B,N	71.9 B	
Potassium (K)	ug/l	-	323000	312000	363000 E	478000	392000 E	689000 E	
Silver (Ag)	ug/l	-	-	-	-	-	-	-	
Sodium (Na)	ug/l	-	7520000 E	6600000	10500000 E	7960000 E	6910000 E	1.3E+07 E	
Vanadium (V)	ug/l	-	21.6 B	16.7 B	17.7 B	19.5 B	21.2 B,N	38.2 B	
Zinc (Zn)	ug/l	-	629	2900	2410	413	292 N	1070	
Mercury (Hg)	ug/l	-	-	-	-	-	0.3	3.2	
Selenium (Se)	ug/l	-	-	-	21.6 B,N	-	-	-	

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-113)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Acetone	ug/l	10	B	-		5	J	6	J	-		-					
Benzene	ug/l	2	J	2	J	2	J	-		-		-					
Chlorobenzene	ug/l	15		17		14		9	J	9	J	4	J				
1 3-Dichlorobenzene	ug/l	2	J	-		-		-		-							

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
1 4-Dichlorobenzene	ug/l	2	J	-		2		-		2	J	-					
Bis(2-ethylhexyl)phtha	ug/l	-		-		-		-		2	J	7	B,J				

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	20500		3620		604		354	B	508		2630		Well was dry at the time of sampling		Well was dry at the time of sampling	
Arsenic (As)	ug/l	-		4.2	B	-		-		6	B	6.8	B				
Barium (Ba)	ug/l	730	B	559		530		434	B	329		268					
Beryllium (Be)	ug/l	1	B	-		-		-		0.23	B	-					
Cadmium (Cd)	ug/l	-		-		0.93	B	-		-		0.44	B				
Calcium (Ca)	ug/l	255000		218000		184000		168000		152000	E	130000	E				
Chromium (Cr)	ug/l	71.2		21.6		12.9		8.8	B	11.4		15.1					
Cobalt (Co)	ug/l	66.9	B	40.7	B	36.3	B	25.8	B	23	B	18.2	B				
Copper (Cu)	ug/l	101	B	19.5	B	27.9		20.5	B	16.9	B	18.6	B				
Cyanide, Total	ug/l	35.4		20		20		-		-		-					
Iron (Fe)	ug/l	28000		9980		4420		2940		8790		15400	N,E				
Lead (Pb)	ug/l	46.3		14.1		6.3		-		3.4		14					
Magnesium (Mg)	ug/l	121000		99300		89400		73200		64000		52400					
Manganese (Mn)	ug/l	4080		3350		2840		2490		2580		2260					
Nickel (Ni)	ug/l	489		325		323		261		212		169					
Potassium (K)	ug/l	131000		135000		130000		122000	E	155000	E	126000	E				
Silver (Ag)	ug/l	15.9	B	2.6	B	-		3.9	B	-		-					
Sodium (Na)	ug/l	609000	E	602000	E	518000	E	602000		574000	E	460000					
Vanadium (V)	ug/l	45.8	B	9.4	B	6	B	4.3	B	4.8	B	12	B				
Zinc (Zn)	ug/l	175		59.7		29.3		24.2	B	28.3		32.2					

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-114)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Bis(2-ethylhexyl)phthalate	ug/l											1	B,J				

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	Well was dry at the time of sampling		Well was dry at the time of sampling		Well was dry at the time of sampling		Well was dry at the time of sampling		Well was dry at the time of sampling		4920		Well was dry at the time of sampling		Well was dry at the time of sampling	
Arsenic (As)	ug/l											4.3	B				
Barium (Ba)	ug/l											62.5	B				
Cadmium (Cd)	ug/l											0.42	B				
Calcium (Ca)	ug/l											420000					
Chromium (Cr)	ug/l											14.5					
Cobalt (Co)	ug/l											4.1	B				
Copper (Cu)	ug/l											32.8					
Iron (Fe)	ug/l											6360					
Lead (Pb)	ug/l											24.4					
Magnesium (Mg)	ug/l											57800					
Manganese (Mn)	ug/l											134					
Nickel (Ni)	ug/l											24.1	B				
Potassium (K)	ug/l											31900	E				
Silver (Ag)	ug/l											4.9	B				
Sodium (Na)	ug/l											87600	E				
Vanadium (V)	ug/l											11.6	B				
Zinc (Zn)	ug/l											83.7					

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-119)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Carbon disulfide	ug/l	-		-		-		-		-		12		-		-	
Acetone	ug/l	4	B	-		-		-		-		-		-		2.3	J

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Benzyl alcohol	ug/l	-		-		-		-		-		-		-		2.8	J
Di-n-butyl phthalate	ug/l	-		1	J	-		-		-		-		-		-	
Butyl benzyl phthalate	ug/l	-		-		-		-		-		3	J	-		-	
Bis(2-ethylhexyl)phthalate	ug/l	-		1	J	-		-		1	J	9	B,J	-		-	

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	1070		118	B	242	B	969		1020		571	B	415		1130	
Antimony (Sb)	ug/l	30.7		-		-		-		-		-		-		-	
Arsenic (As)	ug/l	-		-		-		-		-		-		9.4	B	-	
Barium (Ba)	ug/l	94.1		72	B	71.3	B	68.9	B	87.7	B	72	B	123	B	89.3	B
Cadmium (Cd)	ug/l	-		-		-		-		-		-		0.97	B	-	
Calcium (Ca)	ug/l	419000		353000		415000		405000		355000	E	353000	E	468000	E	366000	
Chromium (Cr)	ug/l	-		-		-		-		5.9	B	-		2.8	B	4.6	B
Copper (Cu)	ug/l	38.3	B	8.9	B	-		-		21.1	B	20.1	B	15.4	B	21.7	B
Cyanide, Total	ug/l	-		-		-		-		-		-		-		-	
Iron (Fe)	ug/l	4000		1260		2440		5130		3560		3930	N,E	19900		7430	E
Lead (Pb)	ug/l	57.2		14	B	12.4		9.4	B	9.1	B	13.4		12		16.7	
Magnesium (Mg)	ug/l	945000		846000		864000	E	902000		876000		807000		904000		831000	
Manganese (Mn)	ug/l	498		305		371		316		342		458		531		839	
Nickel (Ni)	ug/l	11.4	B	-		5.3	B	5.2	B	-		-		11.9	B	3.8	B
Potassium (K)	ug/l	332000		359000		346000		395000	E	8170000	E	421000	E	463000	E	402000	
Silver (Ag)	ug/l	-		-		-		8.4	B	-		-		-		-	
Sodium (Na)	ug/l	8290000	E	7580000	E	7230000		9300000	E	489000	E	8720000		12400000	E	7540000	
Vanadium (V)	ug/l	6.8	B	-		6.7	B	8.6	B	8.3		-		13	B	10.5	B
Zinc (Zn)	ug/l	13.2	B	-		39.3	B	99.6		58.7	B	23.4	B	26.5	B	70.1	
Selenium (Se)	ug/l	-		-		8	B	20.8	B,N	-		-		-		8	B

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-120)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Chloromethane	ug/l	2	J	-		-		-		-		-		-		-	
Carbon disulfide	ug/l	-		-		-		-		-		5	J	-		-	
Acetone	ug/l	11	B	-		4	J	-		-		-		5.5	J	2.8	J

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Phenol	ug/l	-		-		-		-		-		-		-		6.8	J
Benzyl alcohol	ug/l	-		-		-		-		-		-		-		8.8	J
4-Methylphenol (m/p-cresol)	ug/l	-		-		-		-		-		-		-		2.6	J
Hexachlorobutadiene	ug/l	-		-		-		-		-		-		-		130	E,B
2-Methylnaphthalene	ug/l	-		-		-		-		-		-		-		15	
Dibenzofuran	ug/l	-		-		-		-		-		-		-		1.7	J
Fluorene	ug/l	-		-		-		-		-		-		-		1	J
Butyl benzyl phthalate	ug/l	-		-		-		-		-		5	J	-		-	
Bis(2-ethylhexyl)phthalate	ug/l	-		1	J	-		-		1	J	18	B	-		1.6	J
Di-n-octyl phthalate	ug/l	-		-		-		-		-		1	J	-		-	

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	3440		108	B	148	B	139	B	659	B	373	B	150	B	-	
Barium (Ba)	ug/l	574	B	105	B	111	B	122	B	114	B	69.6	B	116	B	113	B
Beryllium (Be)	ug/l	-		-		-		1.1	B	-		-		-		-	
Calcium (Ca)	ug/l	3620000		569000		654000		679000		601000	E	337000	E	570000	E	653000	
Copper (Cu)	ug/l	137	B	10.1	B	-		14.2	B	16.6	B	16.4	B	8.2	B	9.6	B
Cyanide, Total	ug/l	-		-		-		-		-		-		-		-	
Iron (Fe)	ug/l	17900		3260		3160		3280		3980		703	E	269		3410	E
Lead (Pb)	ug/l	235		13.1		8.6	B	-		9.8	B	17		10.2		5.3	B
Magnesium (Mg)	ug/l	3510000		632000		612000	E	717000		683000	E	320000		616000		650000	
Manganese (Mn)	ug/l	7840		1430		1490		1710		1690		638		424		1420	
Molybdenum (Mo)	ug/l	-															
Nickel (Ni)	ug/l	-		6.9	B	5.5	B	8.9	B	8.9	B	4.1	B	11.9	B	9.7	B
Potassium (K)	ug/l	745000		174000		179000		242000	E	7960000	E	149000	E	322000	E	208000	
Silver (Ag)	ug/l	-		-		5.1	B	6.7	B	-		-		-		-	
Sodium (Na)	ug/l	38500000	E	7040000	E	6640000		8720000		257000	E	4380000		9440000	E	6960000	
Vanadium (V)	ug/l	-		-		4	B	5.1	B	-		-		3.7	B	4.9	B
Zinc (Zn)	ug/l	-		-		58.1	B	10.8	B	-		12.4	B	7.9	B	-	
Selenium (Se)	ug/l	-		-		-		17	B	-		-		-		-	

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-120B)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Carbon disulfide	ug/l	-				5	J	-		2	J	7	J	-		-	
Acetone	ug/l	-				11	J	7	J	4	J	-		14		3.3	J
Methylene chloride	ug/l	-				-		2	J	-		-		-		-	
2-Butanone (MEK)	ug/l	-				2	J	-		-		-		-		-	
Benzene	ug/l	-				2	J	2	J	2	J	-		-		-	
Toluene	ug/l	-				1	J	-		-		-		-		-	
Chlorobenzene	ug/l	-				5	J	5	J	4	J	-		-		1.3	J
Ethylbenzene	ug/l	-				2	J	2	J	-		-		-		-	
1 4-Dichlorobenzene	ug/l	-				2	J					-		-		1.2	J

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
1 4-Dichlorobenzene	ug/l	-				-		1	J,B	2	J	-		-		-	
Benzyl alcohol	ug/l	-				-		-		-		-		-		2.7	J
2 4-Dimethylphenol	ug/l	-				-		1	J	-		-		-		-	
Naphthalene	ug/l	-				3	J	14		-		-		-		1.5	J
4-Chloro-3-methylphenol	ug/l	-				-		-		5	J	-		-		-	
Acenaphthylene	ug/l	-				-		2	J	-		-		-		-	
Acenaphthene	ug/l	-				-		-		2	J	-		-		-	
Fluorene	ug/l	-				-		1	J	1	J	-		-		-	
Carbazole	ug/l	-				-		2	J	2	J	-		-			
Butyl benzyl phthalate	ug/l	-				-		-		-		6	J	-		-	
Bis(2-ethylhexyl)phthalate	ug/l	-				-		-		1	J	20	B	-		-	

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	-		Well was dry at the time of sampling		203		128	B	299	B	249		255		120	B
Antimony (Sb)	ug/l	-				-		10.3	B	-		-		-		-	
Arsenic (As)	ug/l	-				7.9	B	14.5	B	-		-		13.4		-	
Barium (Ba)	ug/l	-				362		579	B	559	B	197	B	254		523	
Beryllium (Be)	ug/l	-				-		0.88	B	-		-		0.25	B	-	
Cadmium (Cd)	ug/l	-				-		-		-		-		0.36	B	-	
Calcium (Ca)	ug/l	-				96200		181000		227000		94400	E	146000	E	318000	
Chromium (Cr)	ug/l	-				162		132		85.6		91.5		81.8		30.5	
Cobalt (Co)	ug/l	-				16.7	B	16.3	B	14.8	B	10	B	9.9	B	7.7	B
Copper (Cu)	ug/l	-				-		-		15.4	B	11.6	B	14.8	B	14.5	B
Cyanide, Total	ug/l	-				-		-		-		-		40		-	
Iron (Fe)	ug/l	-				231		239	B	1210		494	N,E	1200		1310	E
Lead (Pb)	ug/l	-				2.3	B	-		-		8		8.8		10.2	
Magnesium (Mg)	ug/l	-				217000	E	538000		688000		212000		349000		733000	
Manganese (Mn)	ug/l	-				159		114		149		151		186		484	
Nickel (Ni)	ug/l	-				42.8		53.1	B	45.3	B	31.5	B	34.4	B	36.7	B
Potassium (K)	ug/l	-				361000		446000	E	6900000		226000	E	349000	E	440000	
Silver (Ag)	ug/l	-				6.7	B	-		-		4.2	B	-		-	
Sodium (Na)	ug/l	-				3350000		6500000	E	551000		2090000		4340000	E	6790000	
Vanadium (V)	ug/l	-				433		284		177	B	206		153		64.1	B
Zinc (Zn)	ug/l	-				22.4		-		-		36.8		43.2		40.6	
Mercury (Hg)	ug/l	-				-		-		-		-		0.5		-	
Selenium (Se)	ug/l	-				-		-		-		-		-		9	B

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-121)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Carbon disulfide	ug/l	-		2	J	2	J	4	J	1	J	-		1	J	-	
Acetone	ug/l	15	B	6	J	13		13		7	J	-		34		7.3	J
Benzene	ug/l	-		-		1	J	-		-		-		0.72	J	1.4	J
Chlorobenzene	ug/l	-		-		-		-		-		-		2.2	J	-	
Ethylbenzene	ug/l	-		-		1	J	-		-		-		-		2.7	J
1 4-Dichlorobenzene	ug/l	-		-		-		-		1	TIC	-		-		-	

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Phenol	ug/l	-		-		-		-		-		-		-		6.1	J
Benzyl alcohol	ug/l	-		-		-		-		-		-		-		6.1	J
4-Methylphenol (m/p-cresol)	ug/l	-		-		-		-		-		-		-		3	J
Naphthalene	ug/l	-		2	J	1	J	1	J	2	J	-		-		110	E,B
2-Methylnaphthalene	ug/l	-		-		-		-		-		-		-		12	
Acenaphthene	ug/l	-		2	J	-		2	J	2	J	-		-		1.6	J
Dibenzofuran	ug/l	-		-		-		-		-		-		-		1.8	J
Fluorene	ug/l	-		-		-		-		-		-		-		1.3	J
Phenanthrene	ug/l	-		-		-		-		-		-		-		1	J
Fluoranthene	ug/l	-		-		-		-		1	J	-		-		-	
Pyrene	ug/l	-		-		-		-		2	J	-		-		-	
Bis(2-ethylhexyl)phthalate	ug/l	-		1	J	-		-		-		8	B,J	-		-	
Di-n-octyl phthalate	ug/l	-		-		-		-		-		1	J	-		-	

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	2770		926		1460		14700		7980		2830		2110		3720	
Arsenic (As)	ug/l	21.6	B	8	B	6.2	B	14.7	B	10.5	B	3.6	B	11.9		7.3	B
Barium (Ba)	ug/l	782	B	438		462		585	B	642		48.8	B	906		391	
Beryllium (Be)	ug/l	2.3	B	-		-		0.47	B	-		-		-		-	
Cadmium (Cd)	ug/l	2.5	B	-		-		-		-		0.36	B	-		-	
Calcium (Ca)	ug/l	248000		110000		83200		114000		124000	E	25400	E	102000	E	43800	
Chromium (Cr)	ug/l	67.2		40		66		79.1		88.6		11.9		56.3		83.4	
Cobalt (Co)	ug/l	39.5	B	21.2		34.5	B	31.7	B	38.8	B	3.2	B	54.6		41.5	B
Copper (Cu)	ug/l	53	B	8.4	B	9.5	B	91.3		63.2		19	B	22.9	B	24.5	B
Cyanide, Total	ug/l	16		30		-		-		-		-		60		16	
Iron (Fe)	ug/l	3060		988		2750		19200		11400		3440	N,E	5110		5530	E
Lead (Pb)	ug/l	35.3		10.8		15.8		151		79.4		30.9		24.2		43.1	
Magnesium (Mg)	ug/l	383000		264000		220000		290000		373000		16200		239000		150000	
Manganese (Mn)	ug/l	574		350		366		533		540		72.7		261		305	
Nickel (Ni)	ug/l	168	B	68.7	B	150		116	B	152		14.1	B	405		191	
Potassium (K)	ug/l	295000		244000		350000		244000	E	4550000	E	22900	E	349000	E	304000	
Sodium (Na)	ug/l	4750000	E	3140000	E	3030000	E	3630000		471000	E	232000		3650000	E	3120000	
Vanadium (V)	ug/l	68.7	B	39.6	B	61.3		73.2	B	74.7	B	12.2	B	35.5	B	60.6	
Zinc (Zn)	ug/l	88.6	B	9.7	B	18.7	B	213		134		52.5		66.1		104	
Mercury (Hg)	ug/l	-		-		-		0.23	N	-		-		0.3		-	
Selenium (Se)	ug/l	-		-		1.8	B	-		-		-		-		7.5	B

PELHAM BAY LANDFILL
ANALYTICAL RESULTS FOR GROUND MONITORING WELLS (MW-122)

VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Carbon disulfide	ug/l	2	J	-		-		-		-		-		-		-	
Acetone	ug/l	20	B	12		10		14		13		10		26		23	
Benzene	ug/l	4	J	5	J	5	J	5	J	4	J	4	J	-		5.2	J
Toluene	ug/l	2	J	3	J	3	J	3	J	3	J	2	J	-		3.8	J
Chlorobenzene	ug/l	21		23		23		23		-		18		3.5	J	25	
Ethylbenzene	ug/l	4	J	5	J	5	J	4	J	2	J	1	J	-		-	
Xylenes (total)	ug/l	-		3	J	2	J	-		-		-		-		2.7	J
1 3-Dichlorobenzene	ug/l	-		1	J	1	J	-				-		-		1.1	J
1 4-Dichlorobenzene	ug/l	6	J	7	J	6	J	-				-		-		6.4	J

SEMI VOLATILE ORGANICS

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Phenol	ug/l	-		-		-		-		-		-		-		6.1	J
1 4-Dichlorobenzene	ug/l	3	J	2	J	2	J	4	J	3	J	4	J	-		2.2	J
Benzyl alcohol	ug/l	-		-		-		-		-		-		-		7	J
2-Methylphenol (o-cresol)	ug/l	-		-		-		-		-		-		-		1.1	J
4-Methylphenol (m/p-cresol)	ug/l	-		-		-		-		-		-		-		3.4	J
2 4-Dimethylphenol	ug/l	4	J	3	J	3	J	-		-		-		-		-	
Naphthalene	ug/l	-		-		-		1	J	-		1	J	-		100	E,B
2-Methylnaphthalene	ug/l	-		-		-		-		-		-		-		12	
Acenaphthylene	ug/l	-		-		-		2	J	2		-		-		-	
Acenaphthene	ug/l	-		1	J	-		-		-		2	J	-		1.7	J
Dibenzofuran	ug/l	-		-		-		-		-		-		-		1.9	J
Fluorene	ug/l	-		-		-		-		-		-		-		1.1	J
Diethyl phthalate	ug/l	-		-		-		-		-		-		1	J	-	
Bis(2-ethylhexyl)phthalate	ug/l	-		1	J	-		-		-		39	B	-		-	

PESTICIDES

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	

INORGANIC

Compound	Units	Sep-99		Nov-99		Feb-00		May-00		Nov-00		Mar-01		Oct-01		Aug-03	
Aluminum (Al)	ug/l	1260		-		374	B	1620		225	B	124	B	1010		31.8	B
Arsenic (As)	ug/l	29.6	B	-		14.8	B	16.5	B	19.3	B	16.4	B	19.6		14.1	
Barium (Ba)	ug/l	2660		40.6	B	1610		2300		2000		1870		1180		2120	
Beryllium (Be)	ug/l	0.6	B	-		-		-		-		-		-		-	
Cadmium (Cd)	ug/l	1.8	B	-		-		-		-		-		-		-	
Calcium (Ca)	ug/l	118000		1940	B	84800		98700		85000	E	86400	E	93800	E	75000	
Chromium (Cr)	ug/l	53.2		-		43.4		52.8		53.2		44.6		53.1		50.4	
Cobalt (Co)	ug/l	89.5	B	1.3	B	66.1	B	71.6	B	70.8	B	62.1	B	77.1		72.1	
Copper (Cu)	ug/l	225		-		26.8	B	31.9	B	29.3	B	27.6	B	29.7		31.9	
Cyanide, Total	ug/l	-		140		-		-		-		61.6	N	10		-	
Iron (Fe)	ug/l	59000		532		18800		32100		21900		19600	N,E	5550		17800	E
Lead (Pb)	ug/l	76.5		-		10.9		11.5		3.4	B	10		11		5.3	
Magnesium (Mg)	ug/l	362000		6190		300000		321000		309000		282000		253000		280000	
Manganese (Mn)	ug/l	240		2.8	B	109		154		99.5		85.5		158		50	
Nickel (Ni)	ug/l	929		16.4	B	740		843		845		769		681		827	
Potassium (K)	ug/l	212000		6280		210000		218000	E	2360000	E	309000	E	367000	E	223000	
Silver (Ag)	ug/l	-		-		-		11.1	B	-		-		-		-	
Sodium (Na)	ug/l	2790000	E	48000	E	2200000	E	2800000		266000	E	2660000		4000000	E	2460000	
Thallium (Tl)	ug/l	-		-		-		-		-		-		-		7.7	B,N
Vanadium (V)	ug/l	49.9	B	-		25.2	B	33.9	B	26.8	B	25.8	B	21.7	B	25.6	B
Zinc (Zn)	ug/l	155		-		15.4	B	44.2	B	28.7	B	6.3	B	57.5		73.2	