



Enclosure 1
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Site Management Periodic Review Report Notice
Institutional and Engineering Controls Certification Form



Site No. 360035	Site Details	Box 1
Site Name Harrison Subresidency		
Site Address: Route 120 Zip Code:		
City/Town: Harrison		
County: Westchester		
Site Acreage: 5.0		
Reporting Period: September 15, 2006 to May 14, 2010		
		YES NO
1. Is the information above correct?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
If NO, include handwritten above or on a separate sheet.		
2. Has some or all of the site property been sold, subdivided, merged, or undergone a tax map amendment during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Has there been any change of use at the site during this Reporting Period (see 6NYCRR 375-1.11(d))?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Have any federal, state, and/or local permits (e.g., building, discharge) been issued for or at the property during this Reporting Period?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If you answered YES to questions 2 thru 4, include documentation or evidence that documentation has been previously submitted with this certification form.		
5. Is the site currently undergoing development?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Box 2
	YES NO
6. Is the current site use consistent with the use(s) listed below?	<input checked="" type="checkbox"/> <input type="checkbox"/>
7. Are all ICs/ECs in place and functioning as designed?	<input checked="" type="checkbox"/> <input type="checkbox"/>

IF THE ANSWER TO EITHER QUESTION 6 OR 7 IS NO, sign and date below and DO NOT COMPLETE THE REST OF THIS FORM.

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

SITE NO. 360035

Box 3

Description of Institutional Controls

Parcel

Owner

Institutional Control

971-22

NYS Department of Transportation

O&M Plan

Box 4

Description of Engineering Controls

Parcel

Engineering Control

971-22

Cover System

Fencing/Access Control

Control Description for Site No. 360035

Parcel: 971-22

The NYSDOT is conducting operation and maintenance of the landfill which includes surface water, sediment and groundwater monitoring and visual inspections of the cover material. Landfill inspections are conducted semi-annually and groundwater samples are collected every fifth quarter.

Periodic Review Report (PRR) Certification Statements

1. I certify by checking "YES" below that:

a) the Periodic Review report and all attachments were prepared under the direction of, and reviewed by, the party making the certification;

b) to the best of my knowledge and belief, the work and conclusions described in this certification are in accordance with the requirements of the site remedial program, and generally accepted engineering practices; and the information presented is accurate and complete.

YES NO

☒ ☐

2. If this site has an IC/EC Plan (or equivalent as required in the Decision Document), for each Institutional or Engineering control listed in Boxes 3 and/or 4, I certify by checking "YES" below that all of the following statements are true:

(a) the Institutional Control and/or Engineering Control(s) employed at this site is unchanged since the date that the Control was put in-place, or was last approved by the Department;

(b) nothing has occurred that would impair the ability of such Control, to protect public health and the environment;

(c) access to the site will continue to be provided to the Department, to evaluate the remedy, including access to evaluate the continued maintenance of this Control;

(d) nothing has occurred that would constitute a violation or failure to comply with the Site Management Plan for this Control; and

(e) if a financial assurance mechanism is required by the oversight document for the site, the mechanism remains valid and sufficient for its intended purpose established in the document.

YES NO

☒ ☐

**IF THE ANSWER TO QUESTION 2 IS NO, sign and date below and
DO NOT COMPLETE THE REST OF THIS FORM.**

A Corrective Measures Work Plan must be submitted along with this form to address these issues.

Signature of Owner, Remedial Party or Designated Representative

Date

IC CERTIFICATIONS
SITE NO. 360035

Box 6

SITE OWNER OR DESIGNATED REPRESENTATIVE SIGNATURE

I certify that all information and statements in Boxes 2 and/or 3 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gretchen Fitzgerald at 4 Burnett Blvd., Poughkeepsie, NY 12603
print name print business address

am certifying as owner (NYSDOT) (Owner or Remedial Party)

for the Site named in the Site Details Section of this form.

Gretchen Fitzgerald
Signature of Owner or Remedial Party Rendering Certification

11/23/10
Date

IC/EC CERTIFICATIONS

Box 7

Qualified Environmental Professional Signature

I certify that all information in Boxes 4 and 5 are true. I understand that a false statement made herein is punishable as a Class "A" misdemeanor, pursuant to Section 210.45 of the Penal Law.

I Gretchen Fitzgerald at 4 Burnett Blvd., Poughkeepsie, NY 12603
print name print business address

am certifying as a Qualified Environmental Professional for the NYSDOT
(Owner or Remedial Party)

Gretchen Fitzgerald
Signature of Qualified Environmental Professional, for
the Owner or Remedial Party, Rendering Certification

Stamp
(Required for PE)

11/23/10
Date

**Site Management Periodic Review Report
NYSDOT Harrison Sub-Residency
Harrison, New York
Site Number 360035
May 11, 2010**

Introduction

The New York State Department of Transportation (DOT) Harrison sub-residency site is located east of Route 120 and west of the Westchester County Airport in the Town of Harrison, Westchester County (see Figures 1 and 2).

Currently, there are two environmental concerns at the Harrison sub-residency:

- a 2.6 acre landfill, which is listed in the New York State Registry of Inactive Hazardous Waste Sites and is classified as a "Category 4", meaning that it has been remediated and only ongoing monitoring is required, and
- a "closed, does not meet standards" petroleum spill (#94-07349) which, at present, still requires monitoring.

Over the past ten years, results from extensive environmental monitoring (surface water, groundwater, sediment, landfill gas, petroleum-remediation gas emissions) indicate that these areas do not represent a significant threat to the environment, including the nearby Kensico Reservoir.

Site History

The Harrison sub-residency facility was built in 1967 to support the construction and operation of Interstate 684. Roadside and highway construction debris were disposed on-site in a landfill between 1967 and 1976. The area was fenced in 1972. In April 1993 a 55-gallon drum of road striping paint was removed from the landfill during a test pit excavation. Because the paint contained toluene (a solvent), the site was placed on the New York State Registry of Inactive Hazardous Waste Sites.

DOT consulted with the New York State Department of Environmental Conservation (DEC) and the New York State Department of Health (DOH) and performed an expedited, comprehensive investigation (i.e., Preliminary Site Assessment) of the landfill and its vicinity in 1995. Several drums containing hazardous or suspected hazardous waste, mostly paint products, were encountered and removed from the landfill. Based on the results of the investigation, DEC, DOH and DOT indicated that the landfill was not a significant threat to the reservoir.

After consulting with DEC, DOH, and the New York City Department of Environmental Protection (DEP), the landfill was re-graded and capped in accordance with stringent DEC landfill closure requirements on August 31, 1999. The cap includes a durable polyethylene liner to prevent the infiltration of water and subsequent leaching of contaminants into the

environment. A small stream that drains into the reservoir was rerouted around the landfill so that it could not act as a collector trench for contaminants (see Figure 3). The plastic liner extends beneath the repositioned stream, so that any leachate generated within the fill cannot discharge into surface water. Environmental monitoring results have shown no evidence of toxic contaminants from the landfill with the potential of reaching the reservoir.

DOT also identified a petroleum spill at the vicinity of the fuel tank area. With DEC approval, in August 1994, DOT removed three underground petroleum storage tanks (two 400-gallon and one 2000-gallon), 130 cubic yards of contaminated soil, and 8,000 gallons of contaminated water. There are currently no tanks remaining on this property. Monitoring results at the petroleum spill area suggested that the spill had not migrated off-site and was not a significant threat to the reservoir.

Landfill monitoring has been conducted on a quarterly basis since 2000. In February 2010, with concurrence from DOH and DEP, DEC granted permission to DOT to change this frequency to semi-annually. These monitoring reports have been and continue to be submitted to DEC, DOH and DEP.

Beginning in 2000, DOT completed quarterly groundwater, surface water, and sediment sampling and reports at the landfill area, and groundwater sampling and reports at the petroleum spill area. The quarterly reports changed to every-5th quarter reports in October 2005. These reports have been and continue to be submitted to DEC, DOH and DEP.

At the request of DOH and in coordination with DEC, a sub-slab soil gas investigation was conducted in March 2006 at two locations within the sub-residency building beneath the concrete slab foundation (see Figure 17). The purpose of the sub-slab soil gas investigation was to assess the potential for vapor intrusion into the sub-residency building from the potential presence of volatile organic compounds in the groundwater and/or sub-surface soil adjacent to and/or beneath the building. DEC reviewed the results of the sub-slab investigation and concluded that the low levels of site-related volatile organic compounds detected in the sub-slab vapor of the sub-residency building indicated that the potential for exposure to site-related compounds via indoor vapor intrusion was unlikely. In addition, the presence of non-site related compounds at the levels detected in the sub-slab soil vapor did not represent an exposure concern considering the current use of the building.

Institutional and Engineering Controls

- Air Sparge/Soil Vapor Extraction System

On October 31, 2000, DOT started operating an Air Sparge/Soil Vapor Extraction (AS/SVE) system at the petroleum spill area. This system was highly successful: a 90% overall reduction of contaminants was achieved in less than a year due to volatilization and bioremediation of the petroleum product. Because contaminant levels significantly decreased in the first year and then remained relatively constant (i.e., natural attenuation processes were/are effectively reducing and containing the plume), and it was agreed that the maximum benefits of the

system had been achieved, the remedial system was taken off-line in October 2002. The pipes were plugged by DOT Maintenance in October 2006.

In March 2008, DEC determined that the remedial work performed at the site, specifically the past operations of the AS/SVE system and the monitoring program which is ongoing, had addressed the open spill number 94-07349. The spill was declared "Closed, does not meet standards". (The official spill closure date is 10/10/02, which is when the AS/SVE system was shut down). The ongoing monitoring program serves to document the status of the residual contamination.

In May –June 2008, after discussions among DOT, DEC, DOH, and DEP, thirteen (13) wells in the petroleum spill area were "closed" or decommissioned. In June of 2008, two new wells were installed (see Figures 7-9).

- Fence

The Harrison sub-residency site is secured with a fence and a locked gate. There is also a fence surrounding the entire perimeter of the landfill. The Town of Harrison operates a leaf transfer station at the Harrison sub-residency. The Town operates out of the old sub-residency garage that is on-site. While the Town is not involved in the groundwater monitoring or landfill inspections, they are responsible for maintaining the area where they work. Any damage to the landfill fence is noted on the quarterly (now semi-annual) landfill inspection reports. Any necessary repairs to the fence are made by DOT. On occasion, the Town of Harrison has been asked to fix portions of the fence that have been damaged by their operations.

- Landfill Cap

The landfill was re-graded and capped in accordance with stringent DEC landfill closure requirements on August 31, 1999. The cap includes a durable polyethylene liner to prevent the infiltration of water and subsequent leaching of contaminants into the environment. Minor erosion on the western slope of the landfill became an issue in 2006 (see Figure 16). DOT Region 8 Maintenance applied wood chips to the area in the Spring of 2007. A permanent fix to the erosion/soil slump took place in May 2009 when it was repaired by DOT Residency 8-9 personnel. Approximately 6 inches of #2 crushed stone (NYSDOT Standard Spec. 623.12) was placed on the slump then covered with approximately 12 inches of fine stone fill (NYSDOT Standard Spec. 620.02). Repair suggestions were provided by the DOT Region 8 Geotechnical Group.

- Operations and Maintenance Plan

An Operations and Maintenance (O+M) plan was developed by DOT when well sampling and landfill monitoring began. The O+M plan has been updated throughout the years as necessary and is always shared with and agreed upon by DEC, DOH, and DEP. The most current O+M plan is dated February 2010 (see Figure 10).

Please see the attached figures for more information:

Figure 1 – Site Location Map 1

Figure 2 – Site Location Map 2

Figure 3 – Site Map

Figure 4 – Groundwater Sample Locations – Landfill

Figure 5 – Surface Water and Sediment Sample Locations - Landfill

Figure 6 – Gas Vent Locations - Landfill

Figure 7 – Landfill and Petroleum Spill Area Monitoring Well Locations as of June 2008

Figure 8 – Petroleum Spill Area Monitoring Well Locations as of June 2008

Figure 9 – Petroleum Spill Area Historic Well Locations

Figure 10 – Operations and Maintenance Plan for the Landfill and Petroleum Spill Area

Figure 11 – Groundwater Data Summary – Petroleum Spill Area – January 2010

Figure 12 – Groundwater Data Summary – Landfill Area – January 2010

Figure 13 – Surface Water Data Summary – Landfill Area – January 2010

Figure 14 – Sediment Data Summary – Landfill Area – January 2010

Figure 15 – Monitoring Well Historic Data Summary (May 2000 – October 2008) (10 pages)

Figure 16 – Erosion Area – Landfill Area – January 2008

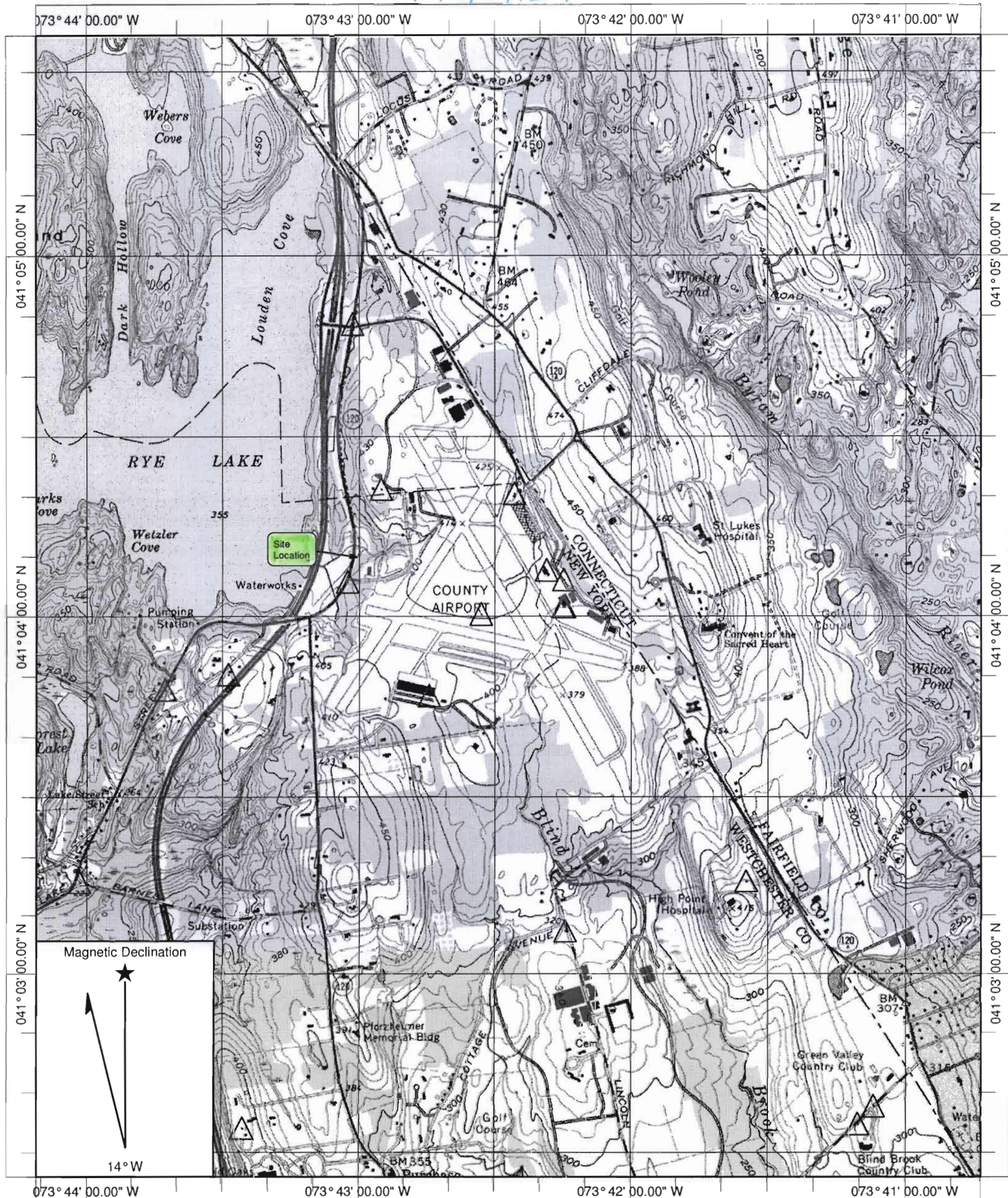
Figure 17 – Proposed Soil Vapor Points

Figure 18 – Groundwater Contamination Plume – Petroleum Spill Area – 1997 – 2004

Figure 19 – Groundwater Contamination Plume – Petroleum Spill Area – 2004 vs. 2005/2006

Figure 20 – Groundwater Contamination Plume – Petroleum Spill Area – October 2005/March 2006

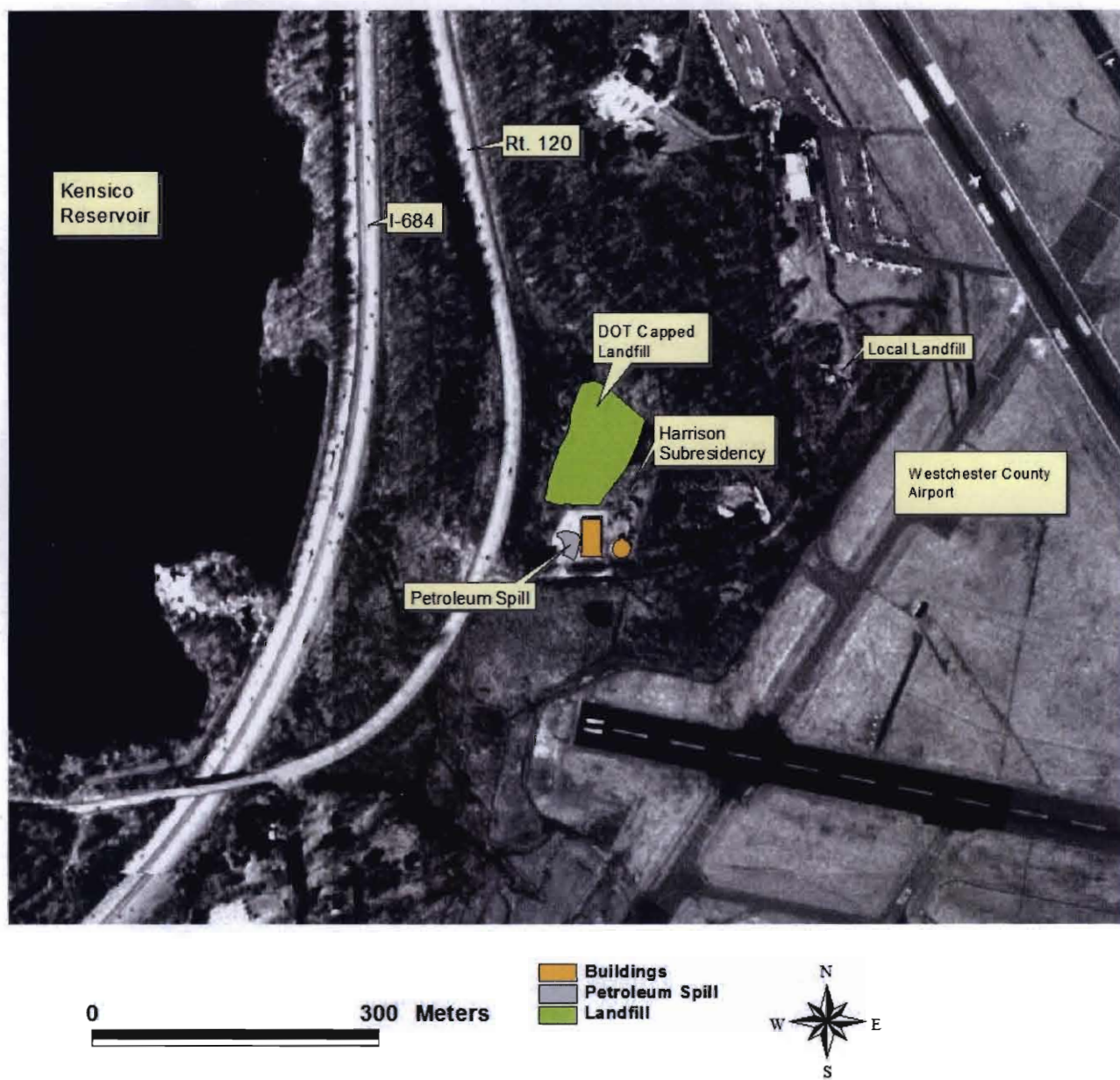
FIGURE 1



Name: GLENVILLE
 Date: 1/23/2008
 Scale: 1 inch equals 2000 feet

Location: 041° 04' 00.92" N 073° 42' 27.38" W NAD 27
 Caption: Figure 1 - Site Location
 Harrison Subresidency Site

FIGURE 2



NYSDOT
Environmental Analysis Bureau
October 1, 2001

FIGURE 1. HARRISON SUBRESIDENCY, WESTCHESTER COUNTY. SITE LOCATION

FIGURE 3

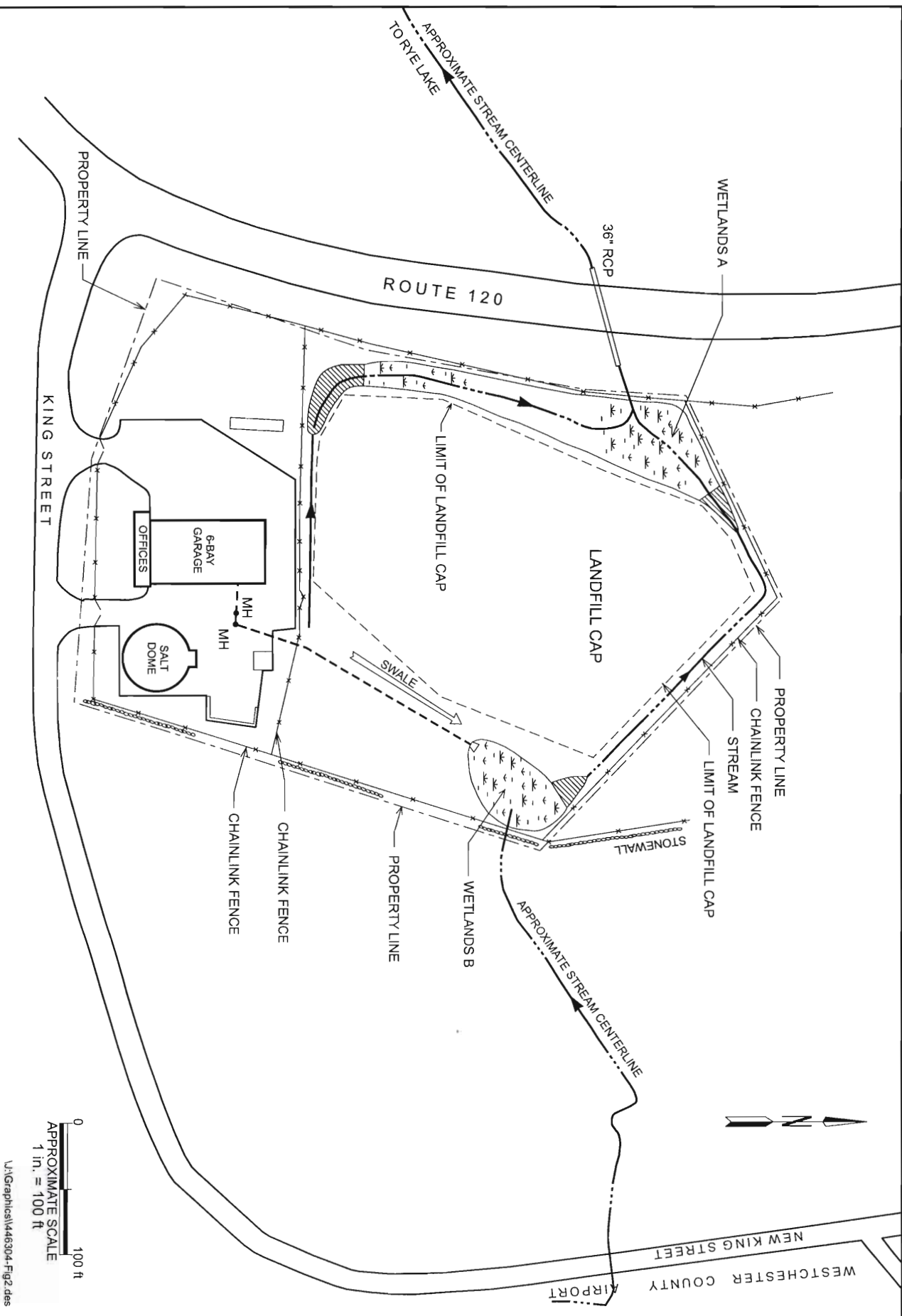


FIGURE 4

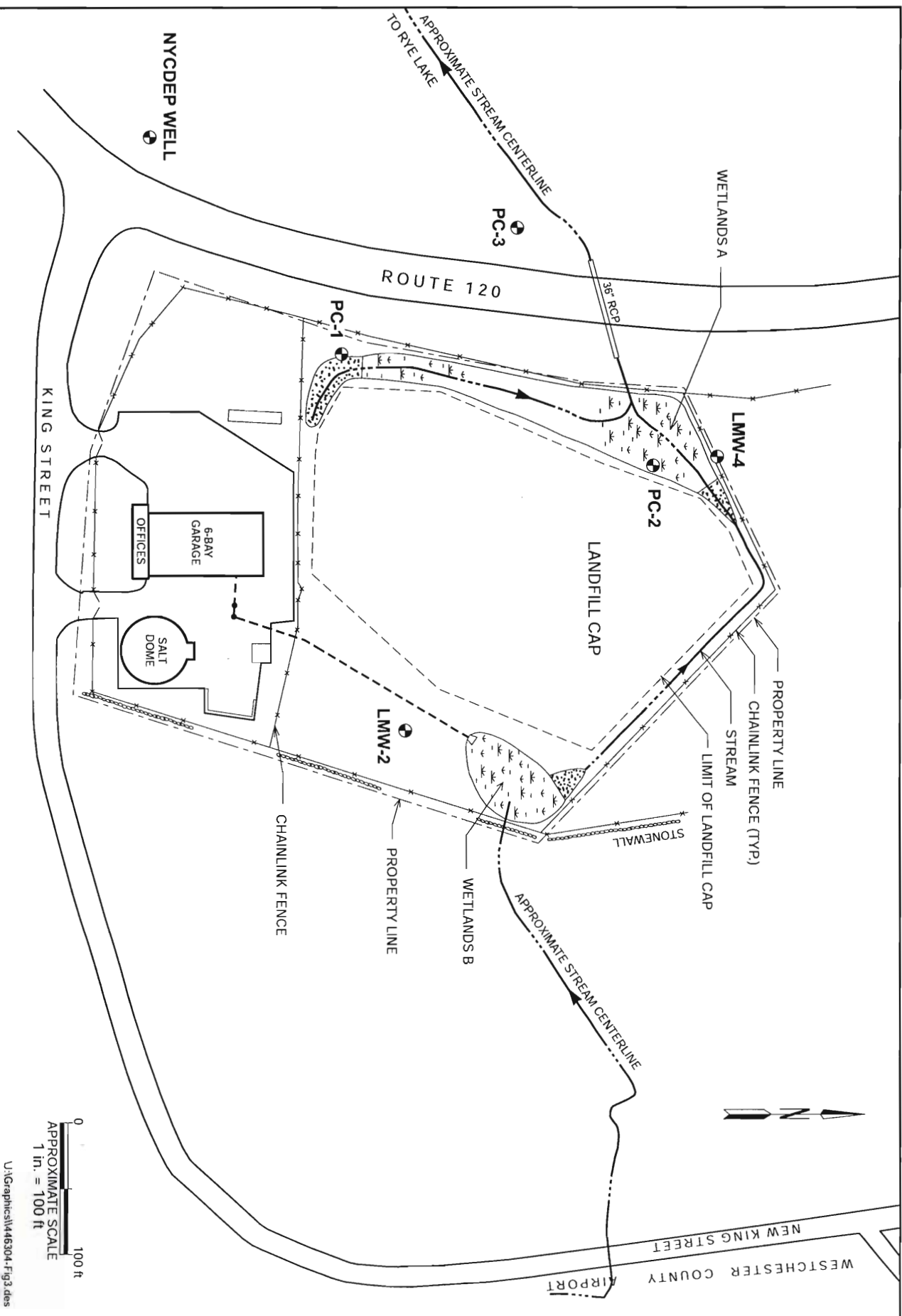
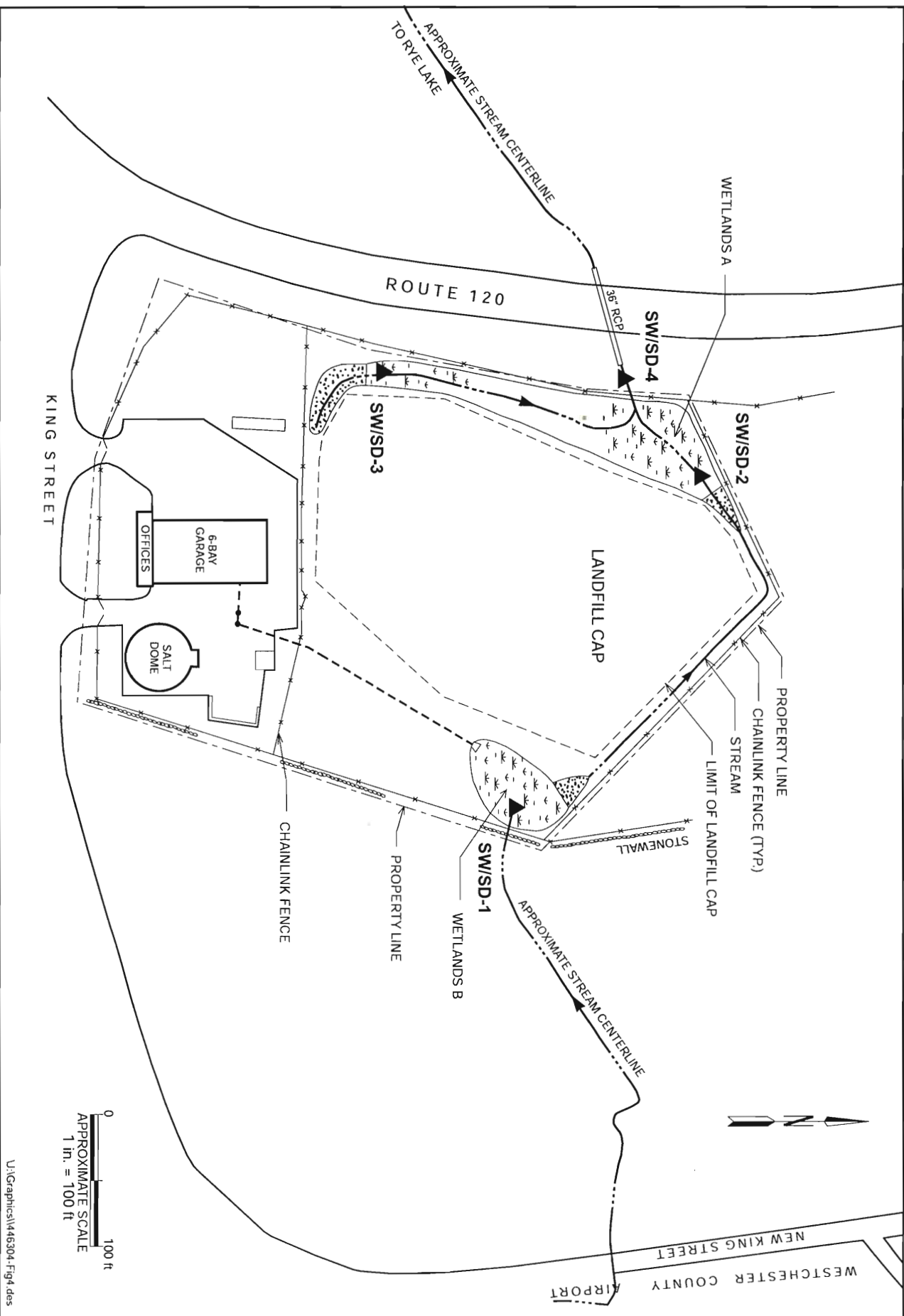


FIGURE 5



U:\Graphics\1446304.Fig4.dwg

HDR

Henningson, Durham & Richardson
Architecture and Engineering, P.C.
in association with HDR Engineering, Inc.
One Blue Hill Plaza
Pearl River, NY 10965

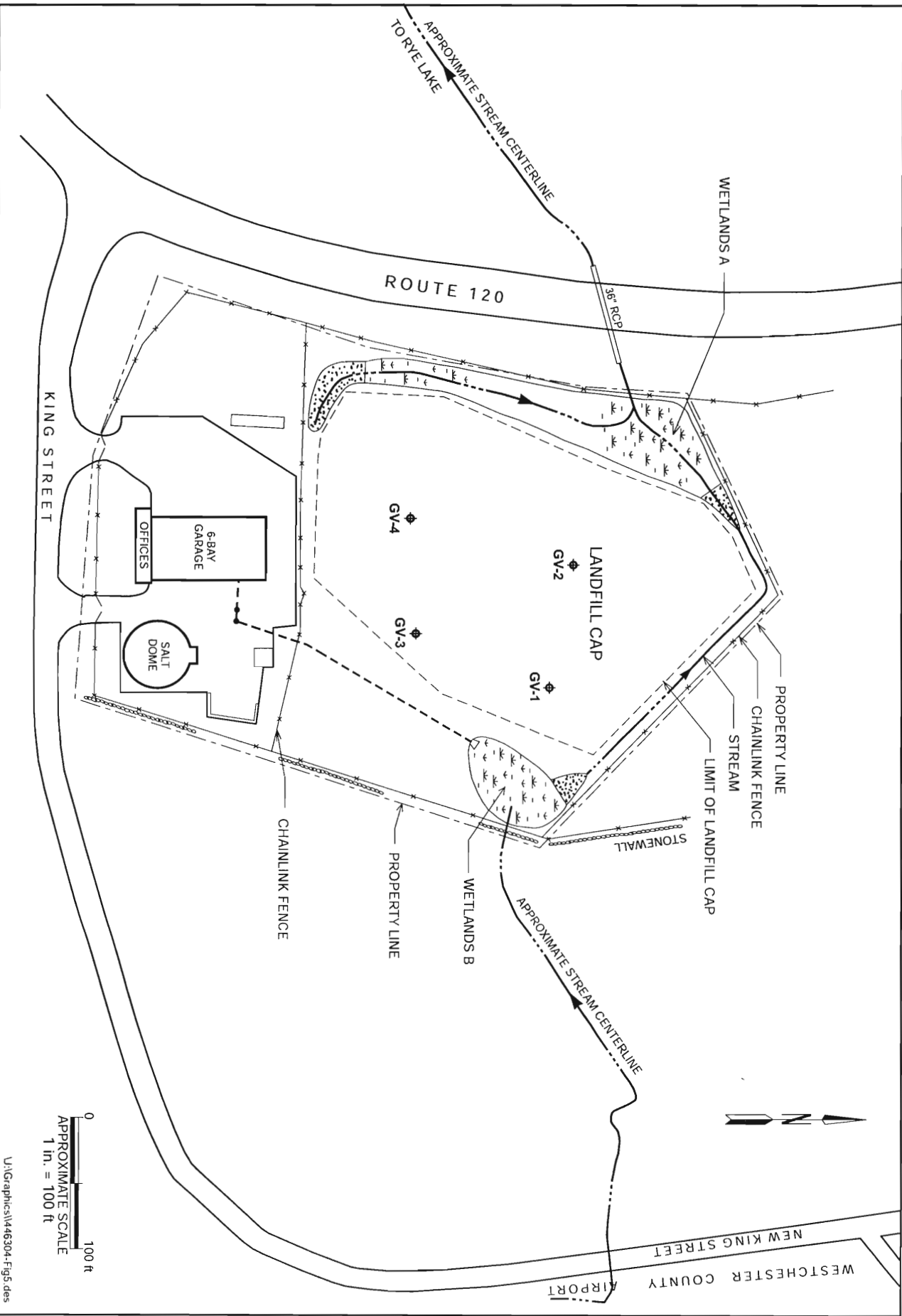
Surface Water and Sediment Sample Locations

HARRISON SUBRESIDENCY POST-CLOSURE QUARTERLY MONITORING REPORT

NYS DOT PIN: 8806.51.301

Figure

FIGURE 6



Herrington, Durham & Richardson
Architecture and Engineering, P.C.
in association with HDR Engineering, Inc.
One Blue Hill Plaza
Peelt River, NY 10965

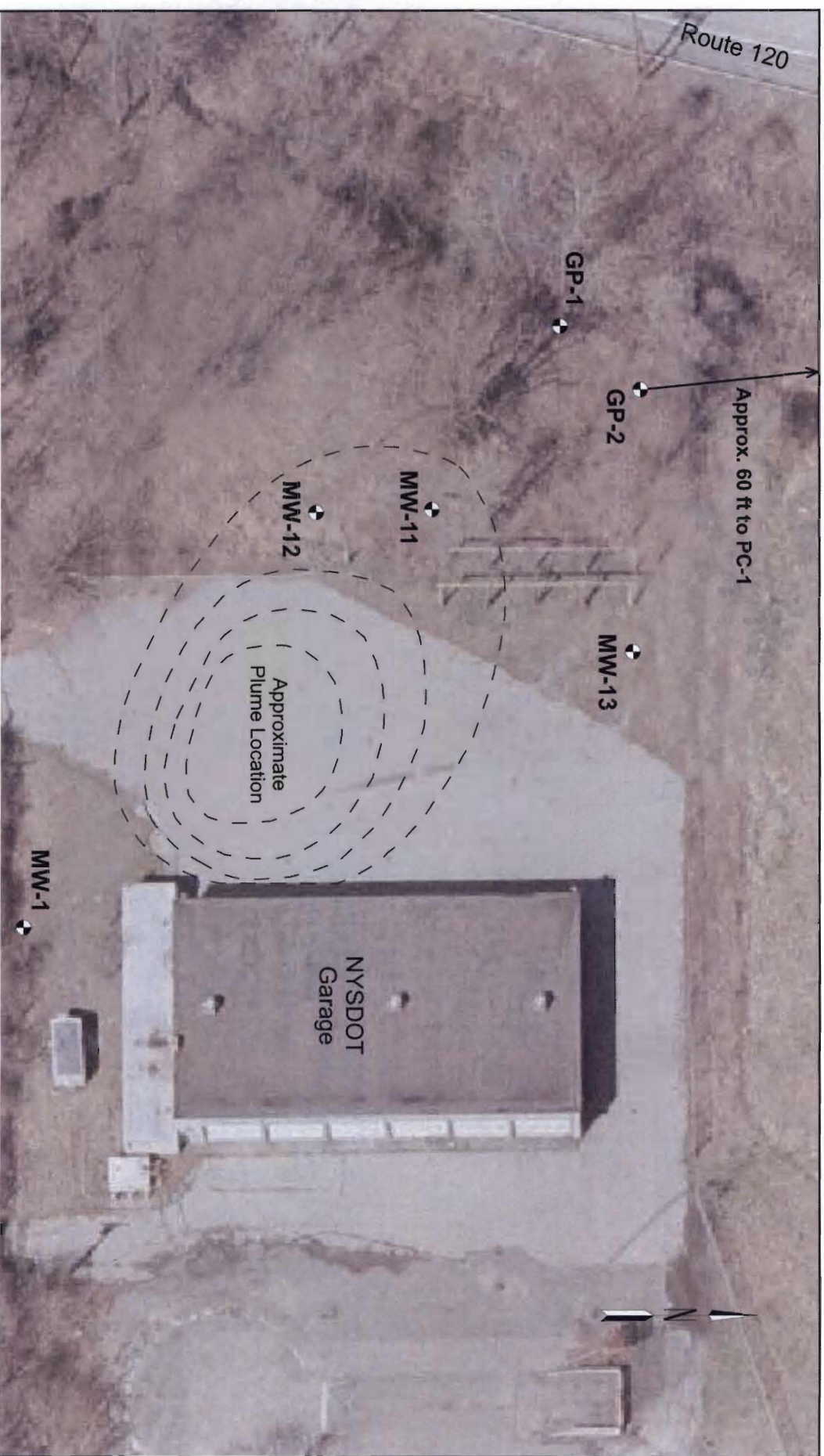
HARRISON SUBSIDIENCY POST-CLOSURE QUARTERLY MONITORING REPORT

Gas Vent Locations

NYS DOT PIN: 8806.51.301

Figure

FIGURE 8



LEGEND

- Monitoring well location

NOTE:

Monitoring Well PC-1 is located north of the site within the Landfill Area

Source: NYSDOT



\\MGraphics\HarrisonGarage\Figure_Rev15Dec08.dwg

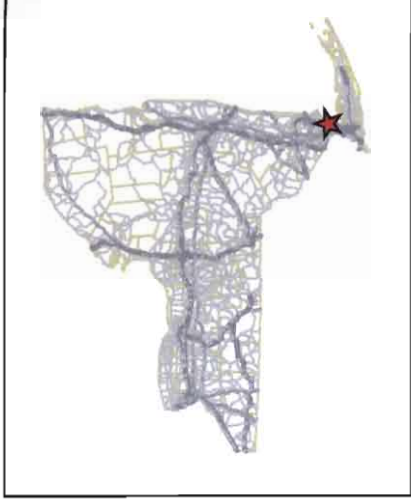


Hemmingson, Durham & Richardson
Architecture and Engineering, P.C.
One Blue Hill Plaza
Peen River, NY 10965

Spill Site Monitoring Well Locations as of June 2008

NYSDOT • Harrison, NY

Figure



Monitoring
Well Locations
May 2009
*(locations as of
June 2008)*

- Monitoring Wells
- Vents



FIGURE 9



OPERATION AND MAINTENANCE PLAN FOR THE HARRISON SUBRESIDENCY LANDFILL AND PETROLEUM SPILL AREA

February 2010

Semi-annual (DOT)

1. Inspect monitoring wells.
2. Landfill cap (including cap vegetation) inspection.
3. Inspect landfill gas vents.
4. Inspect perimeter fence, gates, and signs.

Every 5 Quarters (Consultant)

5. Measure water level from monitoring wells.

Landfill Area Only:

6. Vector and vermin inspection.
7. Perimeter drainage swales.
8. Gas monitoring at gas vents and property line perimeter.
9. Sample ground- and surface- water for field parameters: Temperature, turbidity, DO, pH, and specific conductivity. In addition, sample groundwater only for: Eh (or Redox; field parameter). (*See Note 1 below*).
10. Sample all the media for TCL VOCs, SVOCs, TAL-Metals (including cyanide and chloride). (*See Note 2, Note 3, and Note 4 below*).

Petroleum Spill Area Only:

11. Sample groundwater for field parameters: Temperature, turbidity, DO, pH, and specific conductivity, and Eh. (*See Note 1 below*).
12. Sample groundwater for BTEX, MTBE, and natural attenuation parameters: Iron (dissolved; Fe-II), Manganese (dissolved; Mn-II), Bicarbonate Alkalinity (reported as HCO₃), Alkalinity (Total), Nitrate (NO₃), and Sulfate (SO₄). Parameters can be modified based on discussions with DEC.

Other (DOT):

13. Twice a year during the growing season (e.g., End of June, Mid September): mow cap grass to a height of no lower than 15 cm.
14. After major rainfall events (5-year storms): inspect cap and drainage swales.

- *Well purge water can be discharged immediately downgradient from the well.*

Note 1: A flow cell meter must be used to measure all field parameters.

Note 2: *Groundwater:* filter samples for TAL-Metal analyses. *Surface Water:* unfiltered samples; filter samples for TAL-Metal analyses if *samples have been significantly disturbed* (e.g., the consultant dug a hole to collect a sample and water turbidity resulted from digging the hole; no unfiltered "disturbed" samples are to be collected for TAL-Metal analyses).

Note 3: Testing for pesticides and PCBs has been suspended after October 2005, because we have no evidence of any disposal of these contaminants at the site, and levels of these contaminants have not been detected or not significantly detected at site monitoring points.

Note 4: If field duplicate samples are collected, they will be performed on water samples only (not on sediment samples), since water samples are expected to be more homogeneous.

FIGURE 11

TABLE 1
GROUNDWATER DATA SUMMARY
Fifth Quarter Sampling - Harrison Spill Site
January 2010

PARAMETER	Upgradient MW-1 1/11/2010	MW-11 1/12/2010	Downgradient MW-12 1/12/2010	Sidegradient* MW-13 1/11/2010	PC-1 1/12/2010	SP-1** 1/12/2010	Trip Blank 1/11/2010	NYSDEC Class GA Standards (a)
Volatile Organic Compounds (ug/l) Benzene Ethylbenzene Toluene m&p-Xylenes o-Xylenes Total BTEX Methyl tert butyl ether (MTBE)	ND	0.88	ND	ND	ND	ND	ND	1
	ND	130	4.1	ND	ND	ND	ND	5
	ND	2.9	ND	ND	ND	ND	ND	5
	ND	35	ND	ND	ND	ND	ND	5
	ND	3.1	ND	ND	ND	ND	ND	5
Filtered Metals (ug/l) Iron Manganese	ND	171.88	4.1	ND	ND	ND	ND	100
	ND	ND	ND	ND	ND	ND	ND	50 GV
Natural Attenuation Parameters (mg/l) Total Alkalinity Bicarbonate Alkalinity Nitrate Sulfate	ND	ND	2600	ND	ND	ND	ND	300
	ND	6600	17000	170	ND	ND	ND	300
	13	270	200	220	400	390	◆	NS
	13	270	200	220	400	390	◆	NS
Field Parameters Temperature (°C) pH Specific conductivity (uS) Oxidation-Reduction Potential (mV) Dissolved Oxygen (mg/l) Turbidity (NTUs)	7.59	8.54	11.59	11.03	3.44	3.44	◆	NS
	5.1	5.7	6	6.1	5.71	5.71	◆	NS
	0.249	0.848	1.267	0.98	0.976	0.976	◆	NS
	85.8	21.4	4.3	52.1	52	52	◆	NS
	3.45	3.01	2.61	5.87	1.92	1.92	◆	NS
	0.04	26.1	3.22	41.23	0	0	◆	NS

GV - Guidance value.

◆ - Not analyzed.

NS - No standard.

ND - Not detected.

Notes:

*Piezometers GP-1 and GP-2 were dry and therefore were not sampled.

**SP-1 is the blind duplicate sample of PC-1.

TABLE 1

GROUNDWATER DATA SUMMARY

Fifth Quarter Sampling - Harrison Subpresidency Landfill Area

January 2010

PARAMETER	Site		Duplicate					NATURAL AMBIENT GROUNDWATER RANGES (n)	NYSDEC CLASS GA STANDARDS (a)
	Background		PC-1	PC-2	PC-3	PC-1 LF-1	Trip Blank		
	LMW-2 1/13/10	LMW-4 1/13/10	1/12/10	1/13/10	1/13/10	1/12/10	1/13/10		
Filtered Metals (ug/L)									
Aluminum	ND	ND	ND	ND	ND	ND	*	<5.0 - 1000	NS
Antimony	ND	ND	ND	ND	ND	ND	*	NA	3
Arsenic	ND	ND	ND	ND	ND	ND	*	<1.0 - 30	25
Barium	98	54	110	91	110	110	*	10 - 500	1000
Beryllium	ND	ND	ND	ND	ND	ND	*	<10	3.0 GV
Cadmium	ND	ND	ND	ND	ND	ND	*	<1.0	5
Calcium	82,000	45,000	140,000	68,000	49,000	140,000	*	1000 - 150000	NS
Chromium	ND	ND	ND	ND	ND	ND	*	<1.0 - 5.0	50
Cobalt	ND	18	ND	ND	ND	ND	*	<10	NS
Copper	ND	ND	ND	ND	ND	ND	*	<1.0 - 3	200
Iron	ND	22,000	ND	18,000	2,200	ND	*	10 - 10000	300 (m)
Lead	ND	ND	ND	ND	ND	ND	*	<15	25
Magnesium	32,000	19,000	20,000	20,000	14,000	20,000	*	1000 - 50000	35000 GV
Manganese	290	20,000	ND	11,000	1,900	ND	*	<1.0 - 1000	300 (m)
Mercury	ND	10	ND	ND	ND	ND	*	<1.0	0.7
Nickel	ND	ND	ND	ND	ND	ND	*	<10 - 50	100
Potassium	4,000	2,500	3,800	3,600	4,200	3,800	*	1000 - 10000	NS
Selenium	ND	ND	ND	ND	ND	ND	*	<1.0 - 10	10
Silver	ND	ND	ND	ND	ND	ND	*	<5	50
Sodium	34,000	34,000	54,000	38,000	86,000	54,000	*	500 - 120000	20000
Thallium	ND	ND	ND	ND	ND	ND	*	NA	0.5 GV
Vanadium	ND	ND	ND	ND	ND	ND	*	<1.0 - 10	NS
Zinc	ND	ND	ND	ND	ND	ND	*	<10 - 2000	2000 GV
Chloride (mg/l)	16	20	100	31	140	98	*	NA	250
Cyanide (mg/l)	ND	ND	ND	ND	ND	ND	*	NA	200
Volatile Organic Compounds (ug/L)	ND	ND	ND	ND	ND	ND	ND	NA	5
Total VOCs	ND	ND	ND	ND	ND	ND	ND	NA	5
Semivolatile Organic Compounds (ug/L)	ND	ND	ND	ND	ND	ND	*	NA	50
Total SVOCs	ND	ND	ND	ND	ND	ND	*	NA	50

(a) - NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1), June 1998, revised April 200

GV - Guidance Value

(m) - Sum of Iron and Manganese not to exceed 500 ug/

(n) - Dragun, J., The Soil Chemistry of Hazardous Material;

NA - Not applicable.

ND - Not detected at analytical detection limit.

J- Detected below the detection limit.

NS - No standard.

* - Not analyzed.

FIGURE 13

TABLE 2
SURFACE WATER DATA SUMMARY
Fifth Quarter Sampling - Harrison Subpresidency Landfill Area
January 2010

PARAMETER	Site Background SW-1 1/13/10	SW-2*	SW-3*	SW-4 1/13/10	Field Blank 1/13/2010	Trip Blank 1/13/2010	NATURAL AMBIENT GROUNDWATER RANGES (n)	NYSDEC CLASS GA STANDARDS (a)	NYSDEC CLASS A STANDARDS (a)
TAL Metals (ug/L)									
Aluminum	240	*	*	160	ND	*	<5.0 - 1000	NS	100 ²
Antimony	ND	*	*	ND	ND	*	NA	3	3 ¹
Arsenic	ND	*	*	ND	ND	*	<1.0 - 30	25	50 ¹ , 150 ² , 340 ³
Barium	34	*	*	26	ND	*	10 - 500	1000	1,000 ¹
Beryllium	ND	*	*	ND	ND	*	<10	3.0 GV	3 GV ¹
Cadmium	ND	*	*	ND	ND	*	<1.0	5	5 ¹
Calcium	36,000	*	*	33,000	ND	*	1000 - 150000	NS	NS
Chromium	ND	*	*	ND	ND	*	<1.0 - 5.0	50	50 ¹
Cobalt	ND	*	*	ND	ND	*	<10	NS	5 ²
Copper	ND	*	*	ND	ND	*	<1.0 - 3	200	200 ¹
Iron	850	*	*	570	ND	*	10 - 10000	300 (m)	300 ^{2,4}
Lead	ND	*	*	ND	ND	*	<15	25	50 ¹
Magnesium	12,000	*	*	9,800	ND	*	1000 - 50000	35000 GV	35,000 ¹
Manganese	700	*	*	130	ND	*	<1.0 - 1000	300 (m)	300 ⁴
Mercury	ND	*	*	ND	ND	*	<1.0	0.7	0.7 ¹ , 7e-4 ⁵ , 0.77 ² , 1.4 ³ , 0.0026 ⁶
Nickel	ND	*	*	ND	ND	*	<10 - 50	100	100 ¹
Potassium	ND	*	*	ND	ND	*	1000 - 10000	NS	NS
Selenium	ND	*	*	ND	ND	*	<1.0 - 10	10	10 ¹ , 4.6 ²
Silver	ND	*	*	ND	ND	*	<5	50	50 ¹
Sodium	9,200	*	*	16,000	ND	*	500 - 120000	20000	NS
Thallium	ND	*	*	ND	ND	*	NA	0.5 GV	0.5 GV ¹ , 8 ²
Vanadium	ND	*	*	ND	ND	*	<1.0 - 10	NS	14 ²
Zinc	ND	*	*	ND	ND	*	<10 - 2000	2000 GV	2,000 GV ¹ , 5,000 GV ⁴
Chloride (mg/l)	6.4	*	*	19	ND	*	NA	250	250,000 ¹
Cyanide (mg/l)	ND	*	*	ND	ND	*	NA	200	200 ¹ , 9,000 ⁵ , 5.2 ² , 22 ³
Volatile Organics (ug/L)									
Total VOCs	ND	*	*	ND	ND	ND	NA	5	NA
Semi-Volatile Organics (ug/L)									
Total SVOCs	ND	*	*	ND	ND	*	NA	50	NA

(a) - NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1), June 1998, revised April 2000
 (m) - Sum of Iron and Manganese not to exceed 500 ug/L
 (n) - Dragun, J., The Soil Chemistry of Hazardous Materials
 Class A Standards for Surface Water as a source of Drinking Water¹ as these are tributaries to Kensico Reservoir.
 Other Class A Standards are for Fish Propagation² Fish Survival³ Aesthetic⁴ Human Consumption of Fish⁵, and Wildlife Protection⁶
 GV - Guidance Value.
 ND - Not detected at analytical detection limit
 * - Not analyzed; Locations SW-2 and SW-3 were frozen - no samples collected
 NS - No Standard
 NA - Not applicable.
 Note - results in **bold** exceed one or more of the standards.
 - select Class A standards are specific to sample conditions and require hardness concentrations; therefore, these were not included.

TABLE 3

SEDIMENT DATA SUMMARY

Fifth Quarter Sampling - Harrison Subresidency Landfill Area
January 2010

PARAMETER	Site Background				Sediment Criteria (a)	
	SD-1 1/13/10	SD-2*	SD-3*	SD-4 1/13/10	LEL ¹	SEL ²
TAL Metals (mg/kg)						
Aluminum	9,000	*	*	4,000	NA	NA
Antimony	ND	*	*	ND	2	25
Arsenic	ND	*	*	3.9	6	33
Barium	97	*	*	43	NA	NA
Beryllium	ND	*	*	ND	NA	NA
Cadmium	ND	*	*	ND	0.6	9
Calcium	1,900	*	*	12,000	NA	NA
Chromium	20	*	*	7.3	26	110
Cobalt	7.7	*	*	4.8	NA	NA
Copper	20	*	*	7.4	16	110
Iron	19,000	*	*	12,000	20000	40000
Lead	ND	*	*	9.4	31	110
Magnesium	4,200	*	*	8,700	NA	NA
Manganese	990	*	*	1,600	460	1100
Mercury	ND	*	*	ND	0.15	1.3
Nickel	16	*	*	10	16	50
Potassium	2,900	*	*	1,100	NA	NA
Selenium	ND	*	*	ND	NA	NA
Silver	ND	*	*	ND	1	2.2
Sodium	ND	*	*	ND	NA	NA
Thallium	ND	*	*	ND	NA	NA
Vanadium	30	*	*	ND	NA	NA
Zinc	45	*	*	44	120	270
Chloride	ND	*	*	ND	NA	NA
Cyanide	ND	*	*	ND	NA	NA
Volatile Organic Compounds (mg/kg)					Sediment Criteria (a) Water Qual.	
Acetone	0.042	*	*	ND	NA	
Semivolatile Organic Compounds (mg/kg)						
Total SVOCs	ND	*	*	ND	NA	

(a) - NYSDEC Technical Guidance for Screening Contaminated Sediments.
November 1993, revised January 1999.

1 - Lowest Effect Level

2 - Severe Effect Level

ND - Not detected at analytical detection limit.

B - Detected in laboratory sample.

NA - No applicable criterion.

Note - results exceeding the LEL and SEL are shown in **bold** and underlined, respectively.

ATTACHMENT A
MONITORING WELL HISTORICAL DATA SUMMARY
 May 2000 to October 2008
 (Page 1 of 10)
 Harrison Subresidency Spill Site

WELL ID: MW 1	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	ND	54	ND	ND	ND	ND	ND	ND	ND	ND	50
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
m,p-Xylene	ND	ND	-	-	ND	ND	ND	ND	ND	ND	-
O-Xylene	ND	ND	-	-	ND	ND	ND	ND	ND	ND	-
Xylenes (total)	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	-
TOTAL BTEX	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	*	*	*	*	*	*	*	50
Napthalene			ND	*	*	*	*	*	*	*	25
Metals (ug/L)											
Chloride	7,000	*	*	*	*	*	*	*	*	*	250,000
Sodium	27,000	*	*	*	*	*	*	*	*	*	20,000
Iron (total)	ND	*	207	3,760	264	*	*	5810	4840	*	300
Iron (dissolved)	ND	*	ND	298	35	85.1 B	56.5 B	58 B	96.1 B	ND	300
Lead	ND	*	*	*	*	*	*	*	*	*	25
Other											
Nitrogen, Nitrate (ug/L)	4,100	*	11,000	3,000	7,700	6,200	6,800	6,200	6,900	2,500	10,000
Sulfate (ug/L)	15,000	*	13,000	17,000	15,000	17,000	14,000	17,000	13,000	17,000	250,000
TOC (ug/L)	4,000	*	9,000	8,000	ND	*	*	*	*	*	N/A
Petroleum Hydrocarbons (ug/L)	*	*	*	*	*	*	*	*	*	*	N/A
Carbon Dioxide (ug/L)	97,400	*	59,000	42,000	30,000	16,000	45,000 H	56,000	73,000	*	N/A
Dissolved Oxygen (mg/L)	3.6	1.97	6.42	8.3	2.5	3.89	4.2	5.9	7.36	5.10	N/A

WELL ID: MW 2	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	5.5	15	ND	ND	ND	ND	ND	ND	ND	*	50
Benzene	2.1	ND	ND	ND	ND	ND	ND	ND	ND	*	-
Toluene	8.0	2	ND	ND	ND	ND	ND	ND	ND	*	-
Ethylbenzene	2.7	ND	ND	ND	ND	ND	ND	ND	ND	*	-
m,p-Xylene	ND	-	-	-	ND	ND	ND	ND	ND	*	-
O-Xylene	3.8	-	-	-	ND	ND	ND	ND	ND	*	-
Xylenes (total)	3.8	2	ND	ND	ND	ND	ND	ND	ND	*	-
TOTAL BTEX	16.6	4	ND	ND	ND	ND	ND	ND	ND	*	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	*	*	*	*	*	*	*	50
Napthalene			ND	*	*	*	*	*	*	*	25
Metals (ug/L)											
Chloride	10,000	*	*	*	*	*	*	*	*	*	250,000
Sodium	22,000	*	*	*	*	*	*	*	*	*	20,000
Iron (total)	*	*	6,330	75,600	10,400	*	*	3780	12,800	*	300
Iron (dissolved)	*	*	646	4,240	2,770	5,860	6,780	187	1,310	*	300
Lead	*	*	*	*	*	*	*	*	*	*	25
Other											
Nitrogen, Nitrate (ug/L)	*	*	ND	ND *	81	58	70	230	87	*	
Sulfate (ug/L)	*	*	14,000	150,000	25,000	15,000	15,000	26,000	9,700	*	
TOC (ug/L)	*	*	17,000	18,000	ND	*	*	*	*	*	
Petroleum Hydrocarbons (ug/L)	*	*	*	*	*	*	*	*	*	*	
Carbon Dioxide (ug/L)	*	*	49,000	40,000	23,000	33,000	43,000 H	46,000	51,000	*	
Dissolved Oxygen (mg/L)	2.6	3.08	4.23	3.6	1.5	1.07	1.3	1.7	3.0		

FIGURE 15

ATTACHMENT A
MONITORING WELL HISTORICAL DATA SUMMARY
May 2000 to October 2008
(Page 2 of 10)
Harrison Subresidency Spill Site

WELL ID: MW 3	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	50	21	ND	ND	ND	ND	ND	ND	ND	*	50
Benzene	64	ND	2	3	ND	ND	ND	ND	ND	*	-
Toluene	21	ND	2	3	ND	ND	ND	ND	1J	*	-
Ethylbenzene	350	ND	ND	40	82	120	61	ND	82	*	-
m,p-Xylene	460	-	-	-	44	56	15	20	10	*	-
O-Xylene	65	-	-	-	6	5	1 J	2J	ND	*	-
Xylenes (total)	525	2	170	110	50	61	16	22	10	*	-
TOTAL BTEX	960.0	2	174	156	132	181	77	22	93	*	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene	*		ND	*	*	*	*	*	*	*	50
Napthalene	160		4 J	*	*	*	*	*	*	*	25
Metals (ug/L)											
Chloride	24,000	*	*	*	*	*	*	*	*	*	250,000
Sodium	43,000	*	*	*	*	*	*	*	*	*	20,000
Iron (total)	18,000	*	8,880	35,100	14,400	*	*	20,800	17,200	*	300
Iron (dissolved)	ND	*	2,410	4,000	7,250	6,870	7,030	5,260	4,610	*	300
Lead	8	*	*	*	*	*	*	*	*	*	25
Other											
Nitrogen, Nitrate (ug/L)	ND	*	ND	ND *	ND	ND	ND	32	ND	*	10,000
Sulfate (ug/L)	ND	*	18,000	24,000	27,000	6,500	7,300	14,000	ND	*	250,000
TOC (ug/L)	10,000	*	27,000	70,000	6,300	*	*	*	*	*	N/A
Petroleum Hydrocarbons (ug/L)	9,200	*	*	*	*	*	*	*	*	*	N/A
Carbon Dioxide (ug/L)	105,000	*	48,000	70,000	45,000	84,000	51,000 H	61,000	65,000	*	N/A
Dissolved Oxygen (mg/L)	2.1	2.93	1.89	3.0	1.1	1.36	1.04	1.26	1.33	*	N/A

WELL ID: MW 4	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	13	3	ND	ND	ND	ND	ND	ND	ND	*	50
Benzene	4.4	ND	ND	ND	ND	ND	ND	ND	ND	*	-
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	*	-
Ethylbenzene	22	2	2	ND	16	ND	1 J	2J	ND	*	-
m,p-Xylene	*	-	-	-	1	ND	ND	ND	ND	*	-
O-Xylene	*	-	-	-	ND	ND	ND	ND	ND	*	-
Xylenes (total)	13	ND	1	ND	1	ND	ND	ND	ND	*	-
TOTAL BTEX	39.4	2	3	ND	17	ND	1	2	ND	*	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	*	*	*	*	*	*	*	50
Napthalene			ND	*	*	*	*	*	*	*	25
Metals (ug/L)											
Chloride	8,000	*	*	*	*	*	*	*	*	*	250,000
Sodium	22,000	*	*	*	*	*	*	*	*	*	20,000
Iron (total)	*	*	1,360	1,330	3,480	*	*	307	14,600	*	300
Iron (dissolved)	*	*	1,010	ND	2,740	61.0 B	635	55.1 B	199B	*	300
Lead	*	*	*	*	*	*	*	*	*	*	25
Other											
Nitrogen, Nitrate (ug/L)	*	*	ND	3,200	ND	2400	530	450	960	*	10,000
Sulfate (ug/L)	*	*	15,000	22,000	21,000	18,000	13,000	13,000	13,000	*	250,000
TOC (ug/L)	*	*	14,000	13,000	44,000	*	*	*	*	*	N/A
Petroleum Hydrocarbons (ug/L)	*	*	*	*	*	*	*	*	*	*	N/A
Carbon Dioxide (ug/L)	*	*	55,000	40,000	55,000	21,000	65,000 H	98,000	91,000	*	N/A
Dissolved Oxygen (mg/L)	3.5	2.35	4.29	3.9	0.82	1.42	2	1.6	2.97	*	N/A

ATTACHMENT A
MONITORING WELL HISTORICAL DATA SUMMARY
 May 2000 to October 2008
 (Page 3 of 10)
 Harrison Subresidency Spill Site

WELL ID: MW 5	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	150	ND	ND	ND	ND	ND	ND	ND	ND	♦	50
Benzene	14	ND	1	ND	ND	ND	ND	ND	ND	♦	-
Toluene	32	2	2	ND	2	ND	ND	1J	ND	♦	-
Ethylbenzene	410	ND	ND	ND	150	ND	99	140	75	♦	-
m,p-Xylene	♦	-	-	-	93	ND	42	46	12	♦	-
O-Xylene	♦	-	-	-	5	ND	2 J	3J	ND	♦	-
Xylenes (total)	460	43	230	4	98	ND	44	49	12	♦	-
TOTAL BTEX	916	45	233	4	250	ND	143	190	87	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			10	♦	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	60,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	32,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	9,630	3,910	4,500	♦	♦	9770	9,830	♦	300
Iron (dissolved)	♦	♦	2,930	1,820	1,240	7,070	4,560	6,100	4,690	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND	620	210	ND	ND	220	29	♦	10,000
Sulfate (ug/L)	♦	♦	17,000	12,000	16,000	42,000	8,500	ND	ND	♦	250,000
TOC (ug/L)	♦	♦	23,000	14,000	12,000	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	68,000	12,000	28,000	100,000	73,000 H	74,000	ND	♦	N/A
Dissolved Oxygen (mg/L)	3.4	3.09	6.12	9.0	1.6	1.19	1.73	1.23	1.52	♦	N/A

WELL ID: MW 6	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	73	20	ND	ND	ND	ND	ND	ND	ND	♦	50
Benzene	7.9	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
Toluene	7	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
Ethylbenzene	98	ND	ND	3	61	ND	88	16	100	♦	-
m,p-Xylene	♦	-	-	-	30	14	37	27	28	♦	-
O-Xylene	♦	-	-	-	2	1	3 J	4J	3J	♦	-
Xylenes (total)	112	21	6	27	33	16	40	31	31	♦	-
TOTAL BTEX	224.9	21	6	30	94	16	128	47	131	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	♦	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	40,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	33,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	1,720	2,410	2,750	♦	♦	4610	5,630	♦	300
Iron (dissolved)	♦	♦	475	2,060	874	1,080	1,620	1,270	593	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND	ND *	ND	ND	ND	ND	ND	♦	10,000
Sulfate (ug/L)	♦	♦	17,000	19,000	22,000	10,000	7,400	7,200	ND	♦	250,000
TOC (ug/L)	♦	♦	17,000	25,000	ND	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	60,000	32,000	27,000	33,000	48,000	45,000	49,000	♦	N/A
Dissolved Oxygen (mg/L)	3.1	6.05	4.1	3.5	0.89	1.41	2.9	3.3	1.57	♦	N/A

ATTACHMENT A
MONITORING WELL HISTORICAL DATA SUMMARY
May 2000 to October 2008
(Page 4 of 10)
Harrison Subresidency Spill Site

WELL ID: MW 7	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	16	38	17	ND	ND	ND	ND	ND	ND	♦	50
Benzene	3.4	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
Toluene	4	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
Ethylbenzene	5.7	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
m,p-Xylene	♦	-	-	-	ND	ND	ND	ND	ND	♦	-
O-Xylene	♦	-	-	-	ND	ND	ND	ND	ND	♦	-
Xylenes (total)	4.8	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
TOTAL BTEX	17.9	ND	ND	ND	ND	ND	ND	ND	ND	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	♦	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	40,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	35,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	2,700	30,000	3,080	♦	♦	3960	18,000	♦	300
Iron (dissolved)	♦	♦	1,880	4,020	2,380	2,190	2,640	1,600	165B	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND	ND*	150	ND	160	330	ND	♦	10,000
Sulfate (ug/L)	♦	♦	15,000	38,000	20,000	8,200	13,000	11,000	7,400	♦	250,000
TOC (ug/L)	♦	♦	16,000	21,000	11,000	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	78,000	35,000	37,000	27,000	42,000	63,000	41,000	♦	N/A
Dissolved Oxygen (mg/L)	3.2	3.12	4.43	3.4	1.0	2.2	1.8	2.0	2.66	♦	N/A

WELL ID: MW 8	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	68	6	ND	ND	ND	ND	ND	ND	ND	♦	50
Benzene	110	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
Toluene	26	ND	2	ND	ND	ND	2 J	ND	ND	♦	-
Ethylbenzene	60	ND	ND	ND	2	1	41	2J	27	♦	-
m,p-Xylene	160	-	-	-	1	ND	12	7	5	♦	-
O-Xylene	40	-	-	-	ND	ND	2 J	2J	2J	♦	-
Xylenes (total)	200	ND	34	7	1	ND	14	9	7	♦	-
TOTAL BTEX	396	ND	36	7	3	1	57	11	34	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene	♦		ND	♦	♦	♦	♦	♦	♦	♦	50
Napthalene	34		ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	5,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	63,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	8,600	♦	545	4,370	3,320	♦	♦	7160	4,070	♦	300
Iron (dissolved)	230	♦	ND	48.7 B	ND	1,890	3,310	3,160	282	♦	300
Lead	ND	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	33	♦	ND	ND *	190	ND	ND	120	28	♦	10,000
Sulfate (ug/L)	ND	♦	31,000	ND	ND	ND	3,800	ND	ND	♦	250,000
TOC (ug/L)	12,000	♦	21,000	25,000	ND	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	7,600	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	264,000	♦	37,000	22,000	19,000	30,000	56,000	55,000	42,000	♦	N/A
Dissolved Oxygen (mg/L)	1.5	6.3	4.6	4.5	0.89	0.88	2.18	3.13	1.96	♦	N/A

FIGURE 15

ATTACHMENT A
MONITORING WELL HISTORICAL DATA SUMMARY
 May 2000 to October 2008
 (Page 5 of 10)
 Harrison Subresidency Spill Site

WELL ID: MW 9	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	ND	ND	ND	ND	ND	ND	ND	ND	ND	♦	50
Benzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
Toluene	ND	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
Ethylbenzene	ND	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
m,p-Xylene	♦	-	-	-	ND	ND	ND	ND	ND	♦	-
O-Xylene	♦	-	-	-	ND	ND	ND	ND	ND	♦	-
Xylenes (total)	ND	ND	ND	ND	ND	ND	ND	ND	ND	♦	-
TOTAL BTEX	ND	ND	ND	ND	ND	ND	ND	ND	ND	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			2 J	♦	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	260,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	160,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	4,570	7,870	12,600	♦	♦	232	16,000	♦	300
Iron (dissolved)	♦	♦	ND	ND	ND	32.2 B	ND	44.9 B	450	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND	690	340	730	870	770	1,100	♦	10,000
Sulfate (ug/L)	♦	♦	21,000	23,000	19,000	12,000	12,000	17,000	19,000	♦	250,000
TOC (ug/L)	♦	♦	18,000	15,000	9,000	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	ND	ND *	ND	ND	ND	ND	ND	♦	N/A
Dissolved Oxygen (mg/L)	3.3	7.5	5.49	12.3	6.30	3.65	7.60	8.20	6.65	♦	N/A

WELL ID: MW 11								(Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE								ND	ND	ND	50
Benzene								ND	ND	0.88	-
Toluene								1 J	ND	1	-
Ethylbenzene								10	3J	13	-
m,p-Xylene								7	ND	3.8	-
O-Xylene								ND	ND	1.6	-
Xylenes (total)								7	ND	5.4	-
TOTAL BTEX								18	3	20.28	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene								♦	♦	♦	50
Napthalene								♦	♦	♦	25
Metals (ug/L)											
Chloride								♦	♦	♦	250,000
Sodium								♦	♦	♦	20,000
Iron (total)								174,000	23,400	♦	300
Iron (dissolved)								1370	307	ND	300
Lead								♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)								0.98	240	ND	10,000
Sulfate (ug/L)								57,000	15,000	19	250,000
TOC (ug/L)								♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)								♦	♦	♦	N/A
Carbon Dioxide (ug/L)								230,000	140,000	♦	N/A
Dissolved Oxygen (mg/L)								3.70	5.45	3.30	N/A

FIGURE 15

ATTACHMENT A
MONITORING WELL HISTORICAL DATA SUMMARY
 May 2000 to October 2008
 (Page 6 of 10)
 Harrison Subresidency Spill Site

WELL ID: MW 12										(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE										ND	50
Benzene										ND	-
Toluene										ND	-
Ethylbenzene										23	-
m,p-Xylene										ND	-
O-Xylene										ND	-
Xylenes (total)										ND	-
TOTAL BTEX										23	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene										♦	50
Napthalene										♦	25
Metals (ug/L)											
Chloride										♦	250,000
Sodium										♦	20,000
Iron (total)										♦	300
Iron (dissolved)										650	300
Lead										♦	25
Other											
Nitrogen, Nitrate (ug/L)										ND	10,000
Sulfate (ug/L)										5.6	250,000
TOC (ug/L)										♦	N/A
Petroleum Hydrocarbons (ug/L)										♦	N/A
Carbon Dioxide (ug/L)										♦	N/A
Dissolved Oxygen (mg/L)										1.10	N/A

WELL ID: MW 13										(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE										ND	50
Benzene										ND	-
Toluene										ND	-
Ethylbenzene										ND	-
m,p-Xylene										ND	-
O-Xylene										ND	-
Xylenes (total)										ND	-
TOTAL BTEX										ND	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene										♦	50
Napthalene										♦	25
Metals (ug/L)											
Chloride										♦	250,000
Sodium										♦	20,000
Iron (total)										♦	300
Iron (dissolved)										♦	300
Lead										♦	25
Other											
Nitrogen, Nitrate (ug/L)										0.46	10,000
Sulfate (ug/L)										13	250,000
TOC (ug/L)										♦	N/A
Petroleum Hydrocarbons (ug/L)										♦	N/A
Carbon Dioxide (ug/L)										♦	N/A
Dissolved Oxygen (mg/L)										1.80	N/A

FIGURE 15

ATTACHMENT A MONITORING WELL HISTORICAL DATA SUMMARY May 2000 to October 2008 (Page 7 of 10) Harrison Subresidency Spill Site

WELL ID: SP 1	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	3.2	31	ND	ND	ND	♦	♦	♦	♦	♦	50
Benzene	1.4	ND	ND	ND	ND	♦	♦	♦	♦	♦	-
Toluene	3.7	ND	ND	ND	60	♦	♦	♦	♦	♦	-
Ethylbenzene	4.0	ND	ND	2	22	♦	♦	♦	♦	♦	-
m,p-Xylene	8.1	-	-	-	100	♦	♦	♦	♦	♦	-
O-Xylene	2.9	-	-	-	42	♦	♦	♦	♦	♦	-
Xylenes (total)	11.0	ND	ND	1	140	♦	♦	♦	♦	♦	-
TOTAL BTEX	20.1	ND	ND	3	222	♦	♦	♦	♦	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	♦	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	16,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	45,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	3,940	3,720	NA	♦	♦	♦	♦	♦	300
Iron (dissolved)	♦	♦	52.1 B	68.0 B	NA	♦	♦	♦	♦	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND*	160	NA	♦	♦	♦	♦	♦	10,000
Sulfate (ug/L)	♦	♦	48,000	46,000	NA	♦	♦	♦	♦	♦	250,000
TOC (ug/L)	♦	♦	25,000	17,000	ND	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	NA	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	18,000	19,000	NA	♦	♦	♦	♦	♦	N/A
Dissolved Oxygen (mg/L)	4.6	9.66	4.6	2.3	NA	♦	♦	♦	♦	♦	N/A

WELL ID: MW 10 B	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	4.9	♦	ND	NA	ND	ND	ND	ND	ND	♦	50
Benzene	2.1	♦	ND	NA	ND	ND	ND	ND	ND	♦	-
Toluene	ND	♦	ND	NA	ND	ND	ND	ND	ND	♦	-
Ethylbenzene	ND	♦	1	NA	9	23	8	ND	9	♦	-
m,p-Xylene	3.5	♦	-	NA	2	15	2 J	ND	2J	♦	-
O-Xylene	5.6	♦	-	NA	ND	ND	ND	ND	ND	♦	-
Xylenes (total)	9.1	♦	ND	NA	2	15	2 J	ND	2	♦	-
TOTAL BTEX	11.2	♦	1	NA	11	38	10	ND	11	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	NA	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	NA	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	34,000	♦	♦	NA	♦	♦	♦	♦	♦	♦	250,000
Sodium	27,000	♦	♦	NA	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	1,080	NA	1,190	♦	♦	1460	1,880	♦	300
Iron (dissolved)	♦	♦	32.8 B	NA	462	644	592	456	343	♦	300
Lead	♦	♦	♦	NA	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND*	NA	ND	ND	120	ND	120	♦	10,000
Sulfate (ug/L)	♦	♦	27,000	NA	19,000	9,000	12,000	12,000	8,100	♦	250,000
TOC (ug/L)	♦	♦	14,000	NA	9,400	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	NA	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	39,000	NA	39,000	25,000	32,000	25,000	14,000	♦	N/A
Dissolved Oxygen (mg/L)	4.7		4.91	NA	2.0	2.9	2.4	1.1	5.35	♦	N/A

FIGURE 15

ATTACHMENT A MONITORING WELL HISTORICAL DATA SUMMARY May 2000 to October 2008 (Page 8 of 10) Harrison Subresidency Spill Site

WELL ID: SP 2	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	18	♦	14	ND	ND	ND	ND	♦	♦	♦	50
Benzene	19	♦	ND	7	7	5	2 J	♦	♦	♦	-
Toluene	25	♦	ND	6	2	2	4 J	♦	♦	♦	-
Ethylbenzene	110	♦	1	42	ND	5	42	♦	♦	♦	-
m,p-Xylene	52	♦	-	-	4	1	13	♦	♦	♦	-
O-Xylene	11	♦	-	-	2	ND	ND	♦	♦	♦	-
Xylenes (total)	63	♦	ND	3	6	1	13	♦	♦	♦	-
TOTAL BTEX	217.0	♦	1	58	15	13	61	♦	♦	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	♦	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	36,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	75,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	9,750	7,590	2,700	♦	♦	♦	♦	♦	300
Iron (dissolved)	♦	♦	ND	126 B	ND	166 B	2,120	♦	♦	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND*	100	ND	37	ND	♦	♦	♦	10,000
Sulfate (ug/L)	♦	♦	26,000	64,000	18,000	7,900	7,200	♦	♦	♦	250,000
TOC (ug/L)	♦	♦	17,000	29,000	14,000	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	36,000	42,000	38,000	37,000	58,000	♦	♦	♦	N/A
Dissolved Oxygen (mg/L)	2.5	♦	3.1	4.0	1.0	1.47	1.7	♦	♦	♦	N/A

WELL ID: SP 3	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	38	♦	7	ND	ND	ND	ND	ND	ND	♦	50
Benzene	110	♦	ND	ND	ND	ND	ND	ND	ND	♦	-
Toluene	39	♦	1	ND	ND	ND	ND	ND	ND	♦	-
Ethylbenzene	200	♦	ND	ND	ND	ND	ND	ND	31	♦	-
m,p-Xylene	180	♦	-	-	ND	ND	ND	ND	4J	♦	-
O-Xylene	57	♦	-	-	ND	ND	ND	ND	3J	♦	-
Xylenes (total)	237	♦	15	ND	ND	ND	ND	ND	7	♦	-
TOTAL BTEX	586.0	♦	16	ND	ND	ND	ND	ND	38	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene			ND	♦	♦	♦	♦	♦	♦	♦	50
Napthalene			ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	6,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	38,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	2,970	1,060	133 B	♦	♦	3380	3,170	♦	300
Iron (dissolved)	♦	♦	ND	ND	ND	116 B	384	891	572	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND*	100	ND	25	66	ND	ND	♦	10,000
Sulfate (ug/L)	♦	♦	56,000	16,000	19,000	5,900	22,000	ND	ND	♦	250,000
TOC (ug/L)	♦	♦	11,000	18,000	41,000	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	11,000	11,000	20,000	19,000	26,000	57,000	32,000	♦	N/A
Dissolved Oxygen (mg/L)	3.4	♦	4.21	5.7	1.1	1.7	2.2	1.05	3.27	♦	N/A

FIGURE 15

ATTACHMENT A MONITORING WELL HISTORICAL DATA SUMMARY May 2000 to October 2008 (Page 9 of 10) Harrison Subresidency Spill Site

WELL ID: SP 4	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	24	♦	ND	ND	ND	ND	ND	ND	ND	♦	50
Benzene	24	♦	ND	ND	ND	ND	ND	ND	ND	♦	-
Toluene	3.8	♦	ND	ND	ND	ND	ND	ND	ND	♦	-
Ethylbenzene	35	♦	ND	3	26	ND	ND	ND	ND	♦	-
m,p-Xylene	9.5	♦	-	-	8	ND	ND	ND	ND	♦	-
O-Xylene	2.4	♦	-	-	ND	ND	ND	ND	ND	♦	-
Xylenes (total)	11.9	♦	ND	2	8	ND	ND	ND	ND	♦	-
TOTAL BTEX	74.7	♦	ND	5	34	ND	ND	ND	ND	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene		♦	ND	♦	♦	♦	♦	♦	♦	♦	50
Naphthalene		♦	ND	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	16,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	24,000	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	3,790	5,350	2,490	♦	♦	10,400	25,400	♦	300
Iron (dissolved)	♦	♦	602	1,810	1,810	2,460	44.5	953	326	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	ND*	ND*	ND	ND	150	200	ND	♦	10,000
Sulfate (ug/L)	♦	♦	34,000	22,000	37,000	26,000	8,400	24,000	13,000	♦	250,000
TOC (ug/L)	♦	♦	14,000	24,000	11,000	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	39,000	24,000	31,000	26,000	23,000	39,000	ND	♦	N/A
Dissolved Oxygen (mg/L)	4.2	♦	6.89	4.2	2.4	6.2	3.4	3.8	5.6	♦	N/A

WELL ID: GP 2	BASELINE (May 2000)	(Jan 2001)	(May 2001)	(Jan 2002)	(Jan 2003)	(Sept 2003)	(May 2004)	(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	♦	♦	♦	♦	3	ND	ND	♦	♦	♦	50
Benzene	♦	♦	♦	♦	ND	ND	ND	♦	♦	♦	-
Toluene	♦	♦	♦	♦	ND	ND	ND	♦	♦	♦	-
Ethylbenzene	♦	♦	♦	♦	ND	ND	ND	♦	♦	♦	-
m,p-Xylene	♦	♦	♦	♦	ND	ND	ND	♦	♦	♦	-
O-Xylene	♦	♦	♦	♦	ND	ND	ND	♦	♦	♦	-
Xylenes (total)	♦	♦	♦	♦	ND	ND	ND	♦	♦	♦	-
TOTAL BTEX	♦	♦	♦	♦	3	ND	ND	♦	♦	♦	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	50
Naphthalene	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Metals (ug/L)											
Chloride	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
Sodium	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	20,000
Iron (total)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	300
Iron (dissolved)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	300
Lead	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	25
Other											
Nitrogen, Nitrate (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	10,000
Sulfate (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	250,000
TOC (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Petroleum Hydrocarbons (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Carbon Dioxide (ug/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A
Dissolved Oxygen (mg/L)	♦	♦	♦	♦	♦	♦	♦	♦	♦	♦	N/A

ATTACHMENT A
MONITORING WELL HISTORICAL DATA SUMMARY
May 2000 to October 2008
(Page 10 of 10)
Harrison Subresidency Spill Site

WELL ID: PC-1								(Oct 2005)/ (Mar 2006)	(July 2007)	(Oct 2008)	TARGET EFFLUENT CRITERIA
Volatile Organics (ug/L)											
MTBE	•	•	•	•	•	•	•	ND	ND	ND	50
Benzene	•	•	•	•	•	•	•	ND	ND	ND	-
Toluene	•	•	•	•	•	•	•	ND	ND	ND	-
Ethylbenzene	•	•	•	•	•	•	•	ND	ND	ND	-
m,p-Xylene	•	•	•	•	•	•	•	ND	ND	ND	-
O-Xylene	•	•	•	•	•	•	•	ND	ND	ND	-
Xylenes (total)	•	•	•	•	•	•	•	ND	ND	ND	-
TOTAL BTEX	•	•	•	•	•	•	•	ND	ND	ND	100
Semi-volatile Org.(ug/L)											
2-Methylnaphthalene	•	•	•	•	•	•	•	•	•	•	50
Napthalene	•	•	•	•	•	•	•	•	•	•	25
Metals (ug/L)											
Chloride	•	•	•	•	•	•	•	•	•	•	250,000
Sodium	•	•	•	•	•	•	•	•	•	•	20,000
Iron (total)	•	•	•	•	•	•	•	599	952	•	300
Iron (dissolved)	•	•	•	•	•	•	•	28.6 B	425	ND	300
Lead	•	•	•	•	•	•	•	•	•	•	25
Other											
Nitrogen, Nitrate (ug/L)	•	•	•	•	•	•	•	50	ND*	ND	10,000
Sulfate (ug/L)	•	•	•	•	•	•	•	5000	37,000	34	250,000
TOC (ug/L)	•	•	•	•	•	•	•	•	•	•	N/A
Petroleum Hydrocarbons (ug/L)	•	•	•	•	•	•	•	•	•	•	N/A
Carbon Dioxide (ug/L)	•	•	•	•	•	•	•	10,000	35,000	•	N/A
Dissolved Oxygen (mg/L)	•	•	•	•	•	•	•	2.72	3.02	4.1	N/A

Notes:

ND = Non Detect

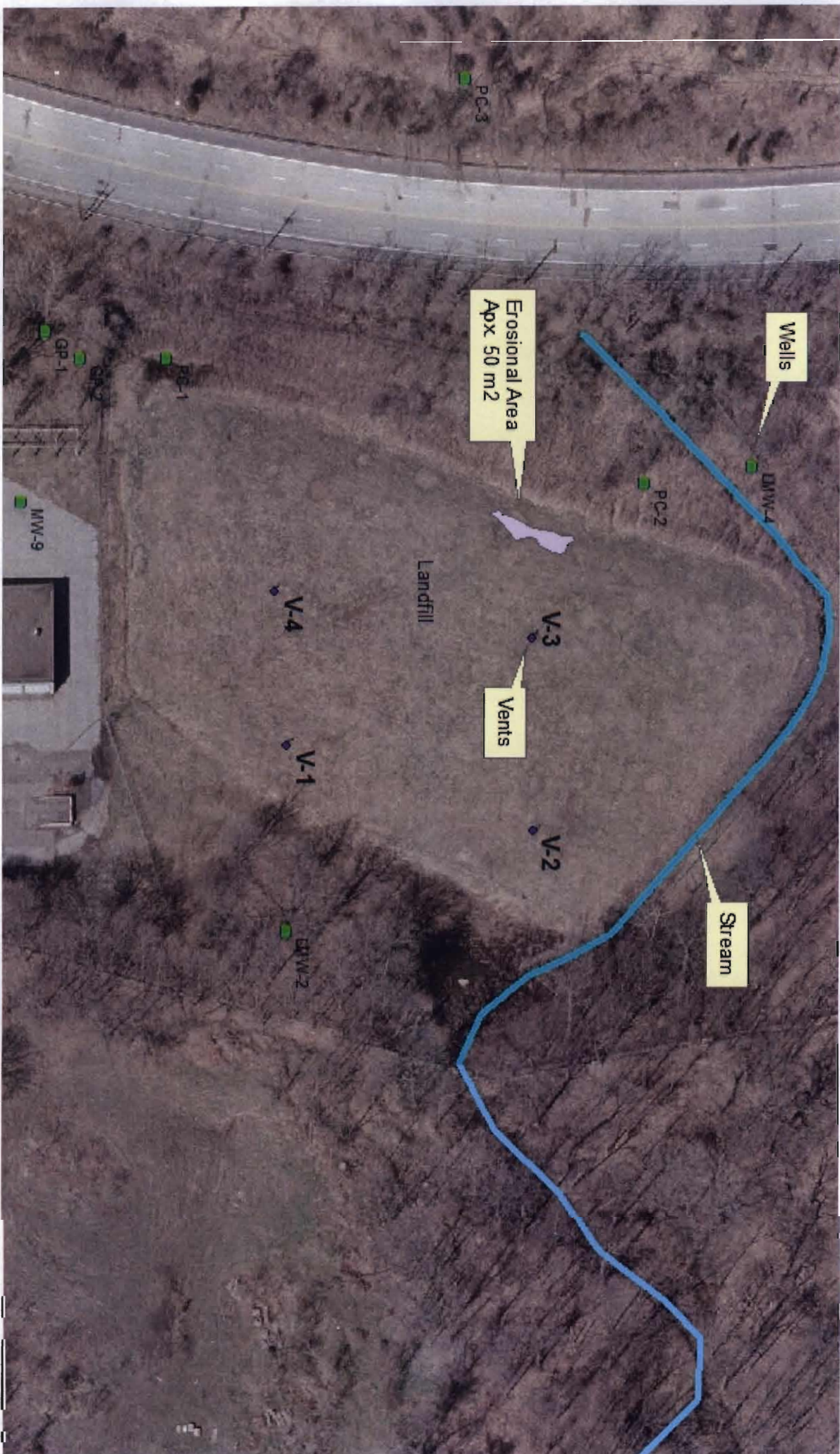
B = Concentration below the reporting limit equal to or above the detection limit.

J = Concentration below the reporting limit.

H = Analyzed outside of the holding time.

* Nitrogen, Nitrate was analyzed outside the recommended holding time for this sample and therefore the analytical results may be biased low.

FIGURE 16



January 2003

FIGURE 17

PROPOSED SOIL VAPOR
POINTS: SV_1 AND SV_2



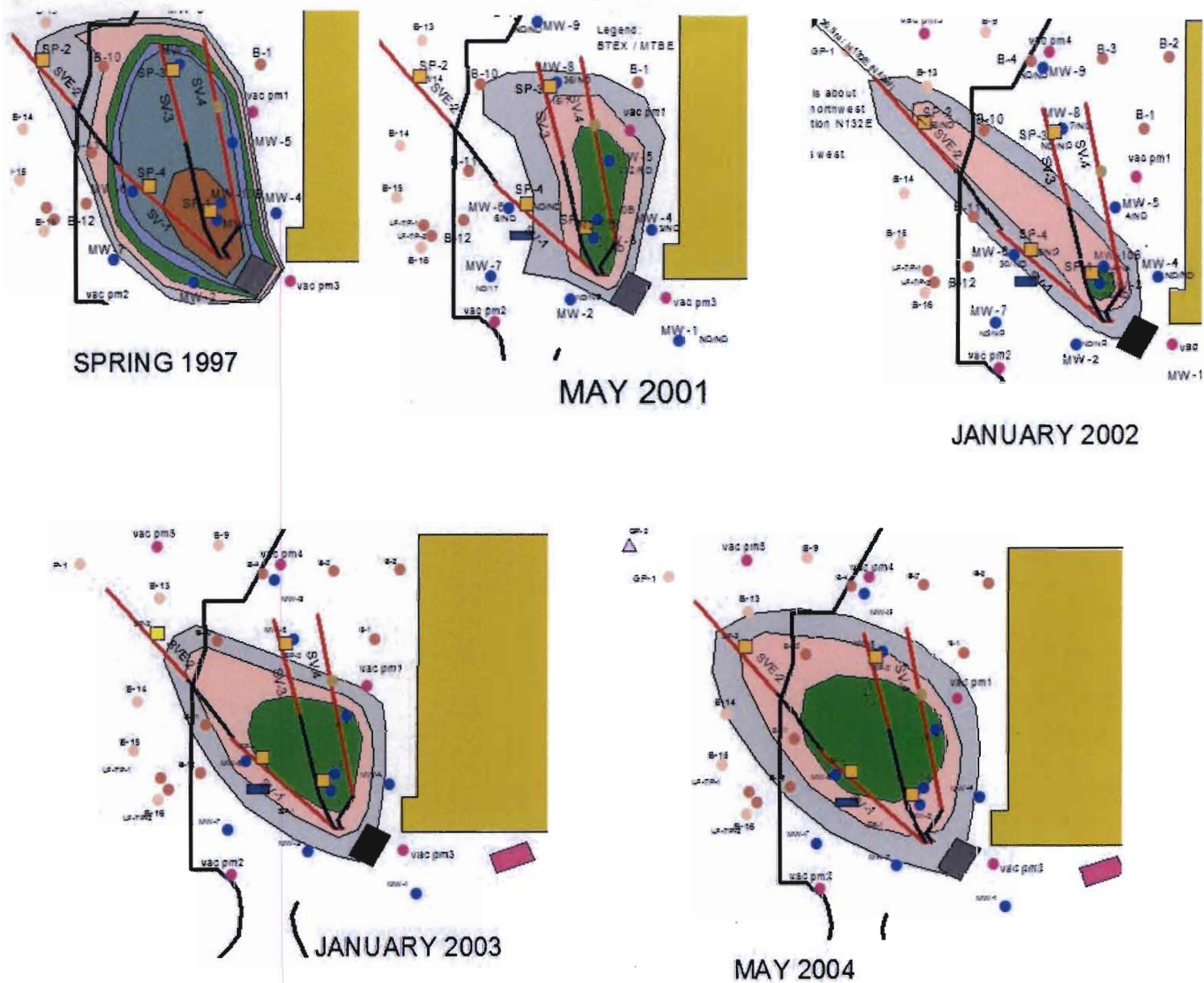
BT EX > 25 ppb

BT EX = 100-200 ppb

SV_1

SV_2

FIGURE 18



- SVE Monitoring Points
- Wells & Borings
- Boring
- Sparge Well
- Well
- Borings (appx. location)
- Extra Line - Possible SP-5

- SVE Lines
- Open
- Solid
- Pavement Edge
- Remediation Trailer
- Former UST Location (appx.)
- Buildings
- >1000 ppb BTEX & MTBE
- >750 ppb BTEX & MTBE
- >500 ppb BTEX & MTBE
- >100 ppb BTEX & MTBE
- >50 ppb BTEX & MTBE
- >25 ppb BTEX & MTBE

10 0 10 20 Meters

NOTE: BTEX stands for benzene, toluene ethyl-benzene, and xylenes. MTBE for methyl tertiary butyl ether

Contours: Approximate location of equal BTEX & MTBE concentrations in micrograms per liter (ug/l; or ppb).



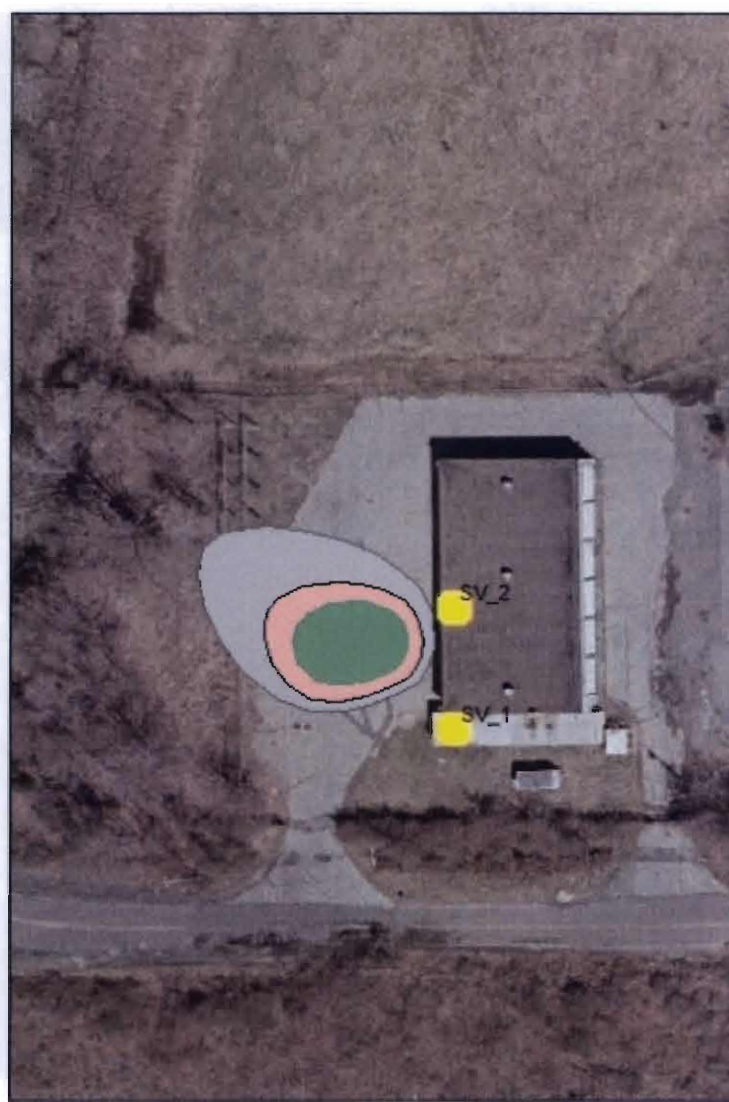
NYSDOT
Environmental Analysis Bureau
May 15, 2005

Harrison Subresidency, Westchester County. Petroleum (BTEX & MTBE)
Contaminant Plume at the Water Table Wells, Borings, and Soil Vapor Extraction Lines

FIGURE 19



May 2004



October 2005 / March 2006

Legend

-  > 25 ppb BTEX & MTBE
-  > 50 ppb BTEX & MTBE
-  > 100 ppb BTEX & MTBE (<500ppb)
-  Proposed Soil Vapor Points



30 15 0 30 Meters



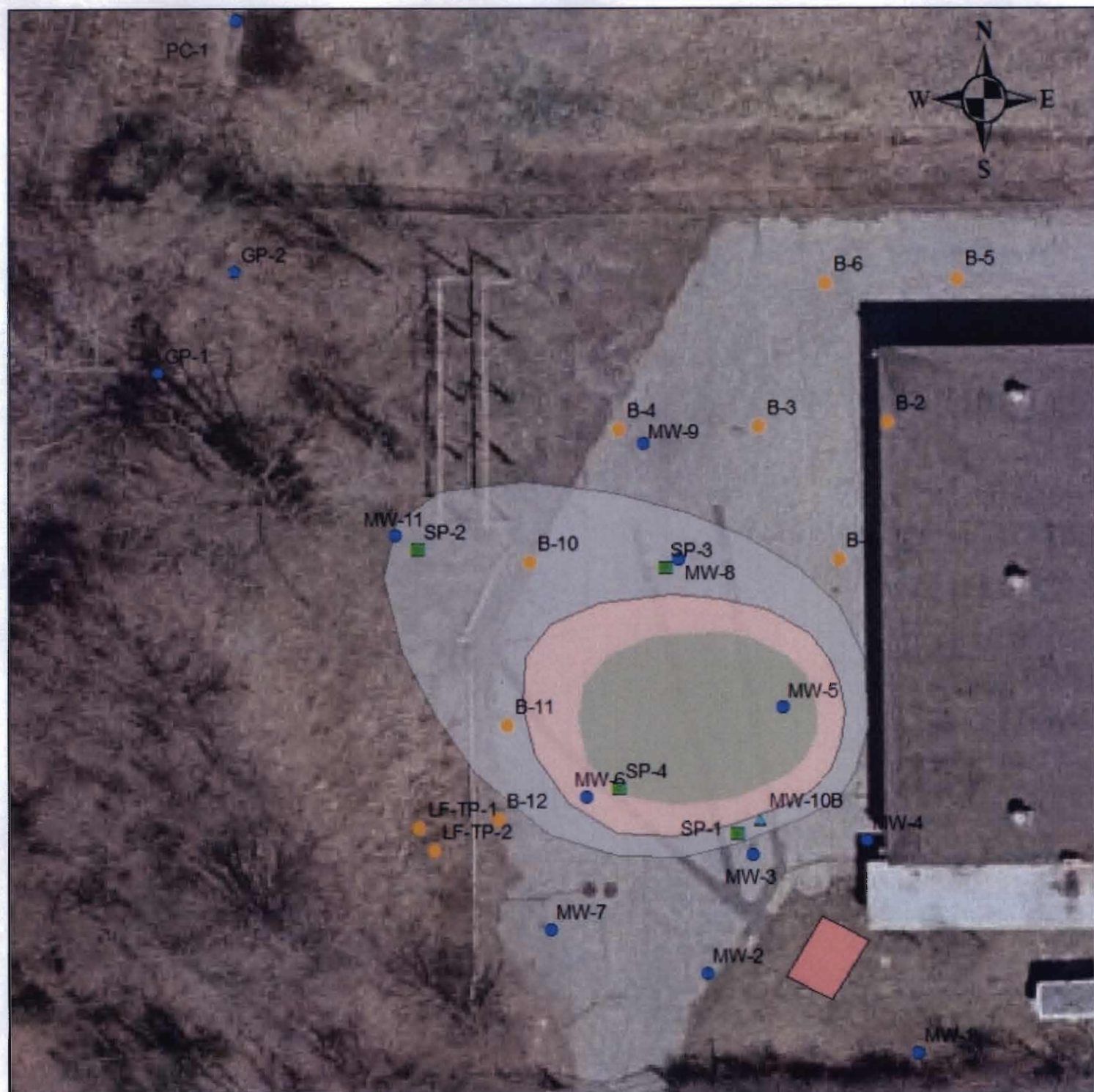
NOTE: BTEX stands for benzene, toluene ethyl-benzene, and xylenes. MTBE for methyl-tertiary butyl ether. No MTBE has been detected since September 2003

Plume Contours: Approximate location of equal BTEX & MTBE concentrations in micrograms per liter (ug/l or ppb)

NYSDOT
Environmental Analysis Bureau
December 28, 2005

Harrison Subresidency, Westchester County. Petroleum (BTEX & MTBE) Contaminant Plume at the Water Table & Proposed Soil Vapor Points

FIGURE 20



- Former boring
- ▲ Bdk/Overb. interface well
- Water table well
- Piezometer
- Overburden Sparge well

■ Former UST location (apprx.)

■ > 100 ppb BTEX & MTBE (<500ppb)

■ > 50 ppb BTEX & MTBE

■ > 25 ppb BTEX & MTBE

NOTE: BTEX stands for benzene, toluene ethyl-benzene, and xylenes. MTBE for methyl-tertiary butyl ether. No MTBE has been detected since September 2003

Plume Contours: Approximate location of equal BTEX & MTBE concentrations in micrograms per liter (ug/l or ppb)

10 5 0 10 Meters

NYSDOT
Environmental Analysis Bureau
M.Roma, September 22, 2006

**NYSDOT HARRISON SUBRESIDENCY,
WESTCHESTER CO. Petroleum (BTEX & MTBE)
Contaminant Plume at the Water Table (Oct. 2005/Mar.2006).**