PHASE I SITE ASSESSMENT REPORT

Merit Oil of New York, Inc.
Merit Greenpoint
210 Greenpoint Avenue
Brooklyn, New York

February 16, 1995

Prepared for:

Merit Oil of New York, Inc.
551 West Lancaster Avenue
Haverford, Pennsylvania 19041-1494

Prepared by:

Celeste Rufer (GA)

Celeste A. Rufer
Sr. Environmental Scientist
Project Manager

Reviewed by:

Jeffrey D. Gaal

Jeffrey L. Gaal, P.G.
Senior Project Manager/
Sr. Hydrogeologist

Groundwater &
Environmental Services, Inc.
48 South Service Road
Suite 100, Room 114
Melville, New York, 11747
516-753-1260

TABLE OF CONTENTS

Merit Greenpoint
February 16, 1995

1.0 INTRODUCTION

Groundwater & Environmental Services, Inc. (GES) was contracted by Merit Oil of New York Inc. (Merit) to complete a Phase I environmental site assessment at their gasoline station located at 210 Greenpoint Avenue, Brooklyn, New York (Merit Greenpoint). Figure 1 is an annotated US Geological Survey 7.5-minute series quadrangle map (Brooklyn, N.Y.) showing the site location, local topography, drainage patterns, and cultural features.

In June 1993, Merit decommissioned and removed four (4), 4,000-gallon, and two (2) 2,000-gallon, single walled, steel gasoline underground storage tanks (USTs); and one (1), 550-gallon, single-walled, steel waste water UST at the Greenpoint station. As a result of encountering contaminated soil during UST closure the New York State Department of Environmental Conservation (NYSDEC) assigned spill number 9303243 to the site. During UST closure, approximately 975 tons of petroleum hydrocarbon impacted soil was removed from the site by Posillico Brothers Asphalt Company, and transported to Farmingdale, New York, where it was thermally processed and recycled into hot mix asphalt. The results of the tank system closure and post-excavation soil sampling were submitted to the NYSDEC and New York City Fire Department in a report titled, Site Assessment Report, dated June 28, 1994.

2.0 CURRENT STATUS

On May 25, 1994, a soil sampling program was completed and four monitoring wells (MW-1 to MW-4) were installed onsite. GES also completed a 2,500 foot canvass of the area surrounding the site for basements, and domestic or municipal wells. On June 21, 1994, all site monitoring wells were gauged in order to assess the shallow groundwater gradient and flow direction, and to assess the presence of separate-phase product. Groundwater samples were also obtained from the wells for chemical analysis.

3.0 HEALTH AND SAFETY

A Health and Safety Plan (HASP) was prepared for all field activities conducted at the site. The plan outlines the required monitoring equipment, protective clothing, action levels, anticipated compounds, and emergency responses. Based on an evaluation of potential hazards on site, the level of personal protection worn by GES personnel was designated as "level D". Air monitoring was conducted during well installation and groundwater sampling using a photoionization detector (PID). All GES field personnel are Occupational Safety and Health Administration, health and safety trained and certified.

4.0 AREA ASSESSMENT

4.1 General Site Description

The site is an active retail gasoline station which occupies the south corner of the intersection of Greenpoint Avenue and McGuinness Boulevard. A Local Area Map is presented as Figure 2. Currently, the gasoline station has four dispenser islands, a kiosk, and a storage building. There are also five (5), 4,000-gallon, double-walled, gasoline USTs and one (1) 600-gallon, double-walled, fiberglass waste water UST. A Site Plan is presented as Figure 3.

4.2 General Area Description

The site is located in a region of mixed land use, both residential and commercial. The site is bordered to the north and east by Greenpoint Avenue and McGuinness Boulevard, respectively. Directly across McGuinness Boulevard, to the east, are commercial properties consisting of supermarkets and convenience stores. Directly across Greenpoint Avenue, to the north, are commercial properties. Directly north of the site, across Greenpoint Avenue, is a New York City Fire Department station and a Shell Gasoline Station. Abutting the site property, to the south and west are residential and commercial properties. A description of the surrounding area is depicted on Figure 2.

Several industrial facilities are located within a half mile radius of the site. A sewage treatment plant is located 2,000 feet northeast of the site. Two bulk storage facilities, operated by Mobil Oil and Metro Oil, are located approximately 3,000 feet northeast (crossgradient) of the site on Whale and Newtown Creek. Approximately 4,000 feet east of the site, abutting the East River, are several warehouses and pier facilities. Refer to Figure 1 for the locations of the above-described facilities.

4.3 Sensitive Receptor Survey

On May 25, 1994, Celeste Rufer, Project Manager/Sr. Environmental Scientist, of GES performed a 2,500-foot canvass of the area surrounding the site to identify any public supply or private wells. No public supply or private wells were located within a 2,500-feet radius of the site. The residential buildings abutting the site property to the west appear to have half basements. The nearest surface water bodies are Whale and Newtown Creek, and the East River approximately 4,000 feet northeast and southwest of the site, respectively.

Underground utilities for water, sanitary sewer and storm sewer are located adjacent to the site traversing Greenpoint Avenue and McGuinness Boulevard. Water mains in this area are installed at depths ranging from 3.5' to 4' below grade.

4.4 Regional Geology

The project site lies within the Physiographic Province of the Atlantic Coastal Plain. The hydrogeologic units that make up the coastal plain aquifer system on Long Island are the Magothy Aquifer, Raritan Clay and the Lloyd Aquifer. Overlying these units in the area of the site are the Upper Glacial Aquifer outwash deposits. The depth to bedrock at the site is approximately 500 feet.

Site geology consists of a well-sorted, fine to medium sand with varying amounts of silt, clay and peat. The depth to groundwater across the site is 7 feet to 10 feet below ground surface.

4.5 Local Water Supply

Water is supplied to the site and the area by the New York City Department Environmental Protection Water Supply Department (NYCDEP) and originates from reservoirs outside the City limits. Based on information from the NYCDEP, there are no active municipal wells in this area.

5.0 INVESTIGATION RESULTS

5.1 Monitoring Well Installation

On May 25, 1994, monitoring wells MW-1 through MW-4 were installed to assess soil and groundwater quality. The locations of the monitoring wells, as shown on Figure 3, were determined based on potential source areas, site hydrogeology, topography, and access. MW-1 through MW-4 were installed and developed by Summit Drilling Company Inc., (NYSDEC Registration #1743) of Bridgewater, New Jersey, utilizing a truck mounted auger drilling rig under the supervision of Celeste Rufer, Project Manager/Sr. Environmental Scientist, of GES.

During the drilling of the monitoring wells, split spoon soil samples were collected at selected intervals from the boreholes and the lithology was described using the modified Burmeister system of classification. Soil sample intervals were based on observed petroleum hydrocarbon impact or collected 6" above the water table. The depth to the saturated zone and any petroleum hydrocarbon staining or sheen was noted. Refer to Appendix I for soil logs of all well borings, and separate-phase hydrocarbon sheen observations.

There was no petroleum hydrocarbon odor, staining or sheen noted during drilling of MW-2 and MW-4. In MW-1 and MW-3, a petroleum hydrocarbon odor was noted between 3 and 10 feet below grade. However, there was no staining or sheen noted. Soil samples for analysis of total petroleum hydrocarbons (TPH), and benzene, toluene, ethylbenzene, total xylenes (BTEX) were collected from MW-1, MW-2 and MW-4 at 6 feet below grade.

A soil sample from MW-3 was collected at 10 feet below grade. Soil analysis for TPH and BTEX was completed utilizing via EPA methods 418.1 and 8021, respectively, and was performed by Analab of Edison, New Jersey (NY Certification #11104). Quality Assurance and Quality Control Procedures followed during soil sampling are provided in Appendix II.

BTEX was not detected in soil samples from MW-1, MW-2 and MW-4. However, ethylbenzene and o-xylene were detected in the soil sample from MW-3 at 6.07 parts per billion (ppb) and 10 ppb, respectively. TPH was detected in MW-1, MW-2 and MW-3 ranging from 27 ppm to 188 ppm. TPH was not detected in MW-4. Refer to Table 1 for a summary of the soil analyses. The laboratory soil analytical report is presented in Appendix III.

The wells were completed to a depth of 15 to 20 feet below grade with 0.02 foot slotted, 4-inch diameter PVC screen, and Schedule 40 PVC riser, a gravel filter pack, and a 0.5-foot bentonite seal. Each monitoring well was provided with a locking well plug and bolt-down manhole completed flush to grade. Refer to Appendix I for soil logs detailing the completion specifications of MW-1 through MW-4.

Following installation, all monitoring wells were developed until a turbid-free discharge was observed. Field observations made during purging and well development activities indicate the subsurface soils have a low permeability.

MW-1 through MW-4 were surveyed for elevation and location established relative to an onsite datum set at 10 feet. Refer to Table 2 for the casing elevations by Flannery, Webb and Hansen, Lakewood, New Jersey (NY certification #62380).

5.2 Site Hydrogeology

Groundwater levels in the monitoring wells were gauged by Brian Bausback, Environmental Technician of GES, in order to assess the shallow groundwater gradient and direction of flow. Depth to groundwater ranged between 7.05 feet and 10.54 feet as measured on June 21, 1994. Shallow groundwater flow was determined to be to the northwest, under an average hydraulic gradient of 0.014 feet/foot. Water levels have been tabulated and are presented on Table 1. Groundwater contours, developed from the static groundwater levels on June 21, 1994, are shown on the Figure 3.

5.3 Groundwater Sampling Analysis and Results

Groundwater samples were collected by Brian Bausback, Environmental Technician of GES, from MW-1 through MW-4 on June 21, 1994. The groundwater samples were analyzed by Analab for BTEX via USEPA method 624 modified for xylenes and methyl *tert*-butyl ether (MTBE), and TPH via USEPA method 418.1. A Quality Assurance and Quality Control document summarizing groundwater sampling field procedures followed by GES is presented in Appendix II.

BTEX was detected in the groundwater samples collected from MW-1, MW-2 and MW-3 at total concentrations of 521 ppb, 8.2 ppb and 156.3 ppb, respectively. BTEX was not detected in MW-4. MTBE was detected in the groundwater samples collected from all site wells at concentrations ranging from 40 ppb to 1,700 ppm. TPH was detected only in MW-1 and MW-2 at concentrations of 2.14 ppm and 4.05, respectively. Table 2 summarizes the groundwater analytical results for the June 21, 1994 groundwater sampling event. BTEX, MTBE and TPH concentrations for the four monitoring wells are presented on Figure 3. A summary laboratory groundwater analytical report is presented in Appendix IV.

5.4 Separate-phase Product Monitoring

On May 25, 1994 and June 21, 1994, the wells were gauged by Celeste Rufer, Project Manager/Sr. Environmental Scientist and Brian Bausback, Environmental Technician of GES, respectively, for separate-phase product utilizing a optical interface probe. No separate-phase product was detected in any of the site wells on these dates.

6.0 SUMMARY

Depth to groundwater at the site is 7 feet to 10.5 feet below grade and flow direction is to the northwest. The nearest basement abuts the station property to the west (hydraulically crossgradient) of the site. There are no active domestic or municipal wells located within a 2,500 feet radius area canvass. Water in the vicinity of the site is supplied to the site and the area by the NYCDEP.

On May 25, 1994, monitoring wells MW-1 through MW-4 were installed at the Merit Greenpoint station. Soil samples were collected from each monitor well boring and analyzed for BTEX and TPH. BTEX (Ethylbenzene and o-xylene) was detected only in the soil sample from MW-3 at levels below the NYSDEC TCLP Alternative Guidance Value of 100 ppb listed for each constituent.

On June 21, 1994, groundwater from monitoring wells MW-1 through MW-4 was sampled for analysis of BTEX, MTBE and TPH. Total BTEX was detected in the groundwater samples collected from MW-1, MW-2 and MW-3 at concentrations of 521 ppb, 8.2 ppb and 156.3 ppb, respectively. Total BTEX was not detected in MW-4. MTBE was detected in MW-1 through MW -4 at concentrations of 1700 ppb, 230 ppb, 40 ppb and 130 ppb, respectively. The NYSDEC Groundwater Quality Standards for BTEX constituents was exceeded for all monitor wells except MW-4. The NYSDEC Groundwater Quality Standards for MTBE was exceeded in all monitor wells except MW-3.

FIGURES

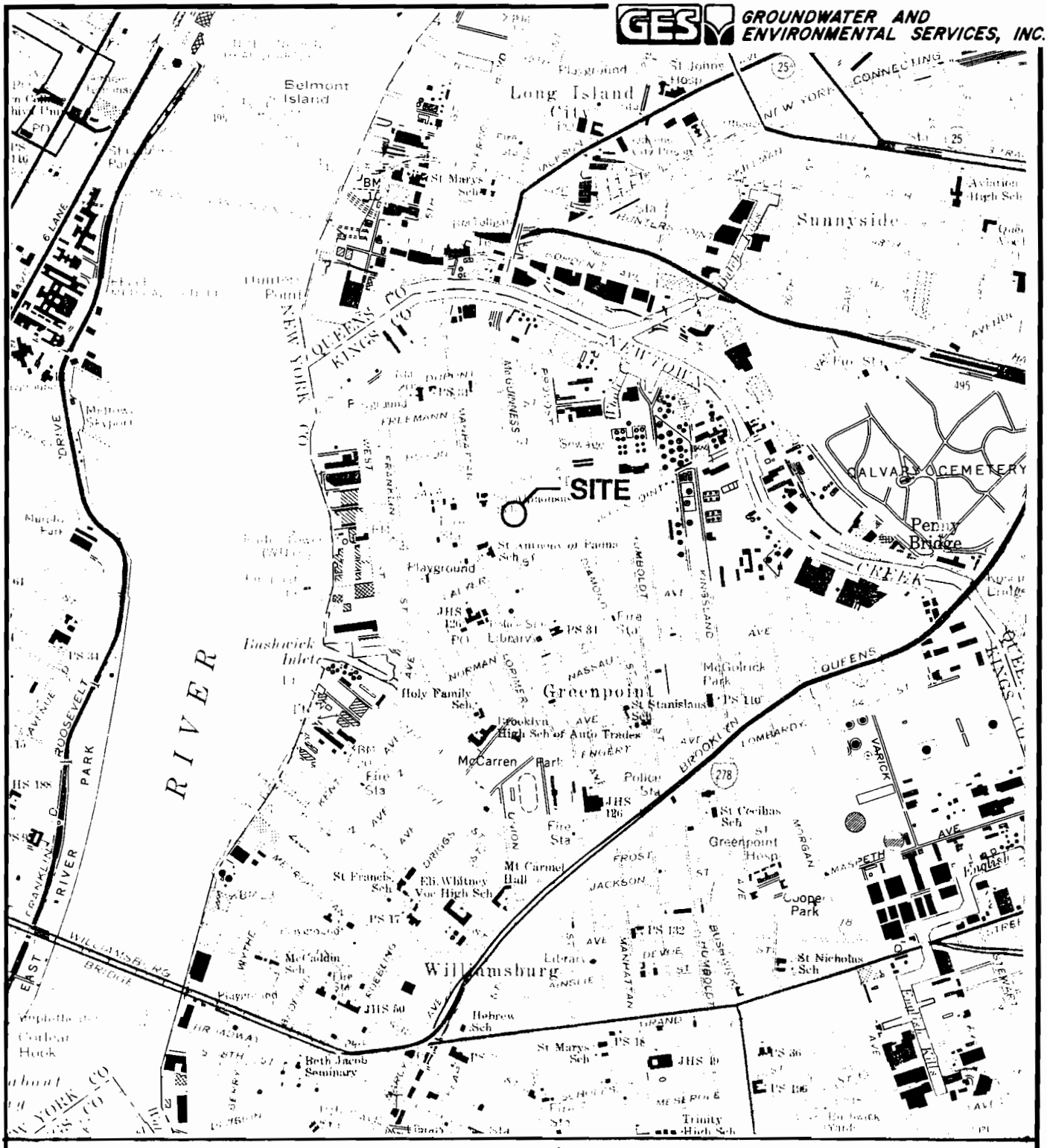
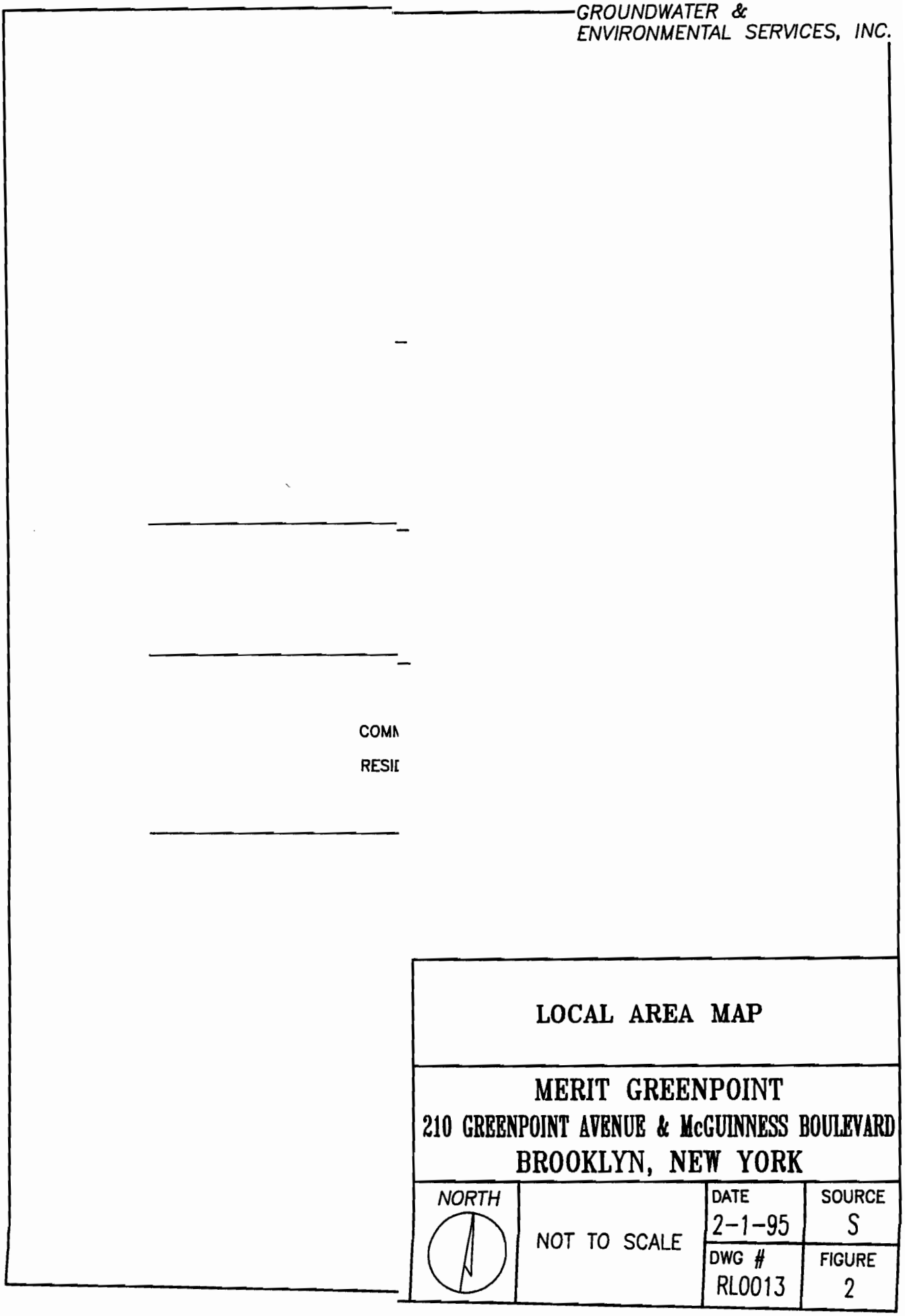


FIGURE 1
SITE LOCATION MAP
MERIT GREENPOINT
210 GREENPOINT AVE & McGUINNESS BLVD
BROOKLYN, NEW YORK

GROUNDWATER &
ENVIRONMENTAL SERVICES, INC.



LOCAL AREA MAP

MERIT GREENPOINT
210 GREENPOINT AVENUE & McGUINNESS BOULEVARD
BROOKLYN, NEW YORK

NORTH		DATE	SOURCE
	NOT TO SCALE	2-1-95	S
		DWG # RL0013	FIGURE 2

TABLE

Soil Samp

TABLE 1
SOIL SAMPLING ANALYTICAL DATA
MERIT GREENPOINT
210 GREENPOINT AVENUE
BROOKLYN, NEW YORK

All results in parts per billion unless noted otherwise

Date	Well	Benzene/MDL	Toluene/MDL	Ethyl-benzene/MDL	Xylenes/MDL*	Total BTEX	TPH/MDL (ppm)
5/25/94	MW-1	ND/5.00	ND/5.00	ND/5.00	ND/10.00	ND	93.7/25
5/25/94	MW-2	ND/5.00	ND/5.00	ND/5.00	ND/10.00	ND	188/25
5/25/94	MW-3	2.50J/5.00	ND/5.00	6.07/5.00	10/10.00	18.57	27/25
5/25/94	MW-4	ND/5.00	ND/5.99	ND/5.00	ND/10.00	ND	ND/25
NYSDEC TCLP Alternative Guidance Values		14	100	100	100	NG	NG

MDL = Method Detection Limit
Total BTEX = Total benzene, toluene, ethylbenzene, xylenes
ppm = parts per million
TPH = Total Petroleum Hydrocarbons
ND = Not Detected
NG = No Guidance Given
J = Below Method Detection Limit
* = o-xylene MDL is 5 ppb for all samples

TABLE 2
GROUNDWATER MONITORING AND SAMPLING ANALYTICAL DATA
MERIT GREENPOINT
210 GREENPOINT AVENUE
BROOKLYN, NEW YORK

All results in parts per billion unless noted otherwise

Date	Well	Benzene/MDL	Toluene/MDL	Ethyl-benzene/MDL	Xylenes/MDL	Total BTEX	MTBE/MDL	TPH/MDL (ppm)	Casing Elev. (ft)	DTW (ft)	DTP (ft)	Product Thickness (ft)	Adjusted Water Elev. (ft)
6/21/94	MW-1	360D/50	15/5	63/5	83/5	521	1700D/50	2.14/1.0	10.08	8.95	Clear	0.00	1.13
6/21/94	MW-2	8.2/5	ND/5	ND/5	ND/5	8.2	230E/5	4.05/1.0	9.18	7.05	Clear	0.00	2.13
6/21/94	MW-3	44/5	2.3J/5	92/5	18/5	156.3	40/5	ND/1.0	8.66	8.20	Clear	0.00	0.46
6/21/94	MW-4	ND/5	ND/5	ND/5	ND/5	ND	130/5	ND/1.0	10.88	10.54	Clear	0.00	0.34
NYSDEC Groundwater Quality Standards		0.7	5	5	5	NG	50	NG					

Total BTEX = Total benzene, toluene, ethylbenzene, xylenes
MTBE = Methyl tert butyl ether
TPH = Total Petroleum Hydrocarbons
ppm = parts per million
ND = Not Detected
NS = Not Sampled
NG = No Guidance Given
MDL = Method Detection Limit

ft = feet
Elev. = Elevation
DTW = Depth To Water
DTP = Depth To Product
E = Estimated, Exceeded Calibration Range
D = Compound detected at a secondary dilution factor
J = Estimated below detection limit

APPENDIX I

BORING LOGS AND WELL COMPLETION DIAGRAMS

Groundwater & Environmental Services, Inc.

Project: Merit Greenpoint — Owner: Merit Oil of New York

Location: 210 Greenpoint Ave.

Well number: MW-1 — Total Depth: 19.5' Diameter: 8"

Casing Elevation: 100.08' — Water Level: Initial 10' Static 10'

Screen Dia.: 4" — Length: 15' Slot Size: .020"

Casing Dia.: 4" — Length: 4.5' Type: SCH 40 PVC

Drilling Method: Air/Auger — Sample Method: Split spoon

Completion Details: Flush mount to grade with locking cap and manhole

Driller: Summit, SteveYost — Log By: Celeste Rufer Date: 5/25/94

Legend
- Cement Grout
- Bentonite Clay
- Sand Pack

Depth (feet)	Sample No.	Well Const.	Blow Count	Lithology	
1–35	1*		6,6,6,6	0-10"	Asphalt
				10"-5'	Fill - cement, wood, Gray SAND, gas odor at 3'
				5'-7'	Brown fine to medium SAND, trace clayey Silt and Gravel, gas odor, moist
				7'-10'	Brown fine to medium SAND, trace clayey Silt and Gravel, gas odor, moist
			4,3,2,2	10'-12'	Gray fine SAND, little clayey Silt, trace organic soils/roots, saturated with water, no gas odor
				12'-15'	Gray fine SAND, little clayey Silt, trace organic soils/roots, saturated with water, no gas odor
			4,6,12,20	15'-17'	Brown medium SAND, trace clayey Silt, saturated with water, no gas odor
				17'-19.5'	Brown medium SAND, trace clayey Silt, saturated with water, no gas odor

End boring @ 19.5'
1* = Collected TPH VO Sample MW1

Note: No PID readings available due to instrument malfunction.

Groundwater & Environmental Services, Inc.

Project: Merit Greenpoint — Owner: Merit Oil of New York

Location: 210 Greenpoint Av

Well number: MW-2 — Total Depth: 15' Diameter: 8"

Casing Elevation: 99.18' — Water Level: Initial 12 Static 11'

Screen Dia.: 4" — Length: 10' Slot Size: .020"

Casing Dia.: 4" — Length: 3' Type: SCH 40 PVC

Drilling Method: Air/Auger — Sample Method: Split spoon

Completion Details: Flush mount to grade with locking cap and manhole

Driller: Summit, SteveYost — Log By: Celeste Rufer Date: 5/25/94

Legend
- Cement Grout
- Bentonite Clay
- Sand Pack

Depth (feet)	Sample No.	Well Const.	Blow Count	Lithology	
1–25	2*		4,3,5,5	0-7"	Asphalt
				7"-5'	Fill - concrete, wood, bricks
				5'-6'	Brown medium to fine SAND mixed with fill materials, trace Clay, no gas odor
				6'-7'	Orange brown medium to fine SAND, little clayey Silt, trace (+) fine to medium gravel (fill)
				7'-10'	Orange brown medium to fine SAND, little clayey Silt, trace (+) fine to medium gravel (fill)
			3,2,2,6	10' -12'	Dark Brown fine SAND, trace Silt, moist, no gas odor
			4,4,5,5	12'-13'	Brown fine SAND, little clayey Silt, saturated with water
				13'-14'	Black brown PEAT, dry
				14'-15'	Fine Gray SAND, trace clayey Silt, trace organic soil, no gas odor
30–35				End boring @ 15'	
				2* = Collected TPH VO Sample MW2	

Note: No PID readings available due to instrument malfunction.

Groundwater & Environmental Services, Inc.

Project: Merit Greenpoint — Owner: Merit Oil of New York

Location: 210 Greenpoint Av

Well number: MW-3 — Total Depth: 19' Diameter: 8"

Casing Elevation: 98.66' — Water Level: Initial 10.5' Static 6.5'

Screen Dia.: 4" — Length: 15' Slot Size: .020"

Casing Dia.: 4" — Length: 4' Type: SCH 40 PVC

Drilling Method: Air/Auger — Sample Method: Split spoon

Completion Details: Flush mount to grade with locking cap and manhole

Driller: Summit, SteveYost — Log By: Celeste Rufer Date: 5/25/94

Legend
- Cement Grout
- Bentonite Clay
- Sand Pack

Depth (feet)	Sample No.	Well Const.	Blow Count	Lithology
1–35	3*		4,3,5,5	0-8" Asphalt and Roadbase 8"-2' Concrete 2'-5' Fill - bricks, no recovery 5'-7' Fill - bricks, no recovery 7'-10' Gray SAND, gas odor 10'-10.5 Gray fine SAND and CLAY 10.5-11.8' Gray fine SAND with little Clay and Silt, saturated with water, no gas odor 11.8' -12' PEAT 12'-14' Gray fine SAND, trace silt, saturated with water, no gas odor 14'-20' Brown fine SAND, saturated with water, no gas odor 20' Schist fragments, boulder?

End boring @ 20'

3* = Collected TPH VO Sample MW3

Note: No PID readings available due to instrument malfunction

Groundwater & Environmental Services, Inc.

Project: Merit Greenpoint — Owner: Merit Oil of New York

Location: 210 Greenpoint Av

Well number: MW-4 — Total Depth: 19' Diameter: 8"

Casing Elevation: 100.88' — Water Level: Initial 19' Static 10.54'

Screen Dia.: 4" — Length: 15' Slot Size: .020"

Casing Dia.: 4" — Length: 4' Type: SCH 40 PVC

Drilling Method: Air/Auger — Sample Method: Split spoon

Completion Details: Flush mount to grade with locking cap and manhole

Driller: Summit, SteveYost — Log By: Celeste Rufer Date: 5/25/94

Legend
- Cement Grout
- Bentonite Clay
- Sand Pack

Depth (feet)	Sample No.	Well Const.	Blow Count	Lithology
1–20	4*		1,1,1,3	0-8" Asphalt and Roadbase 8"-5' Fill - Gray SAND, bricks, cement 5'-10' Brown SAND, trace clayey Silt 10'-12' Brown SAND, trace Silt, saturated with water, no gas odor 12'-19' Brown SAND, trace Silt, saturated with water, no gas odor
21–35				End boring @ 20' 4* = Collected TPH VO Sample MW4 **Note: No PID readings available due to instrument malfunction.**

APPENDIX II

QUALITY ASSURANCE/QUALITY CONTROL

1.0 MONITORING WELL INSTALLATION PROCEDURES

The following information details the monitoring well installation procedures utilized during field operations. These procedures were used during the installation of monitoring wells MW-1 through MW-4. The well was constructed to standard specifications for monitoring wells completed in unconsolidated deposits.

Equipment:

1. Drill rig equipped with 8-inch diameter down-hole rotary drill bit.
2. Steam cleaner, potable water, electric source
3. 20 millimeter plastic sheeting
4. Electronic interface probe
5. Schedule 40, 4-inch ID PVC riser (flush threaded)
6. Schedule 40, 4-inch ID PVC 0.020 slot screen (flush threaded)
7. PVC well plugs
8. #2 washed gravel filter pack
9. Bentonite pellets
10. Bentonite powder
11. Cement (portland type #1)
12. Protective inner locking cap, with steel flushmount cover

Personnel:

1. Licensed driller
2. Driller's helper
3. Geologist/Hydrogeologist

Procedures:

1. The Geologist/Hydrogeologist selects well locations.

2. The drill rig and all down-hole equipment are steam cleaned with potable water, at a designated location, away from the well location.

3. The drill rig is set up over the well location, and an 8-inch diameter boring is completed using air rotary drilling.

4. The Geologist logs all cuttings and split-spoon samples, and determines first water.

5. The borehole is drilled to a minimum of 10 feet below groundwater.

6. The air rotary drill bit is retrieved from the borehole.

7. PVC screen is set inside the boring from 10 feet below to 2 feet to 5 feet above first groundwater.

8. PVC riser pipe is set inside the boring from the top of the screen to the ground surface.

9. The annular space around the screen is filled with #2 gravel filter pack to a minimum of 1 foot above the top of the screen.

10. A minimum of 1-foot thickness of bentonite pellets are added atop the filter pack; potable water is then added to the pellets. Pellets are allowed to hydrate for a minimum time of one hour to create a seal.

11. After the seal is set, the remaining annular space around the PVC riser pipe is grouted with cement or a 10% bentonite and cement grout.

12. The well is finished at the ground surface with a locking protective cap, steel casing, steel manhole cover, and cement collar.

13. The drill rig and all down-hole equipment are steam cleaned at the designated decontamination area and then moved to the next well location.

14. The above procedures are followed for all subsequently installed monitoring wells.

2.0 SOIL SAMPLING PROCEDURES

The following information details the soil sample collection procedures utilized during field operations.

Equipment:

1. Drill rig equipped with 8-inch diameter down-hole auger
2. Steam cleaner, potable water, electric source
3. Stainless steel sampling trowel
4. Stainless steel split spoon samplers
5. A sample shuttle containing all appropriate glassware for sample parameters as outlined in section 4.0 of this Appendix
6. Photoionization Detector
7. Three plastic pails
8. Distilled water
9. Liquinox/distilled water solution
10. Acetone (Only if the sample is to be analyzed for organic compounds)
11. Fiber brush
12. Latex sampling gloves

Procedure:

1. Soil samples were collected using a split spoon sampler. Sample location is determined by field assessment based on the areas most likely to be impacted by a release from the system. Field screening methods include screening with a calibrated flame ionization detector or photo ionization detector, visual observations, odors, field soil/water agitation test, and field sorption tests.

2. Samples for volatile organic compounds are collected directly from the split spoon before homogenization by mixing. Samples for total petroleum hydrocarbons are mixed until homogenized in the stainless steel bowl prior to sample collection. The samples are collected utilizing a stainless steel trowel and bowl. Prior to use, the trowel is cleaned by scrubbing with the fiber brush, washing in a liquinox/distilled water solution, rinsing in distilled water, rinsing with acetone or acid depending on the sample parameter, air drying, and then rinsing with distilled water.

3. A label is affixed to each sample container showing the project name, sample number, depth, date, and sampler's initials.

4. The sample containers are placed in a storage cooler at 4 degrees Centigrade (blue ice) for transport to the laboratory.

5. A chain of custody is filled out for the samples.

Personnel:

1. New York licensed driller
2. Driller's helper
3. GES Project Manager

3.0 GROUNDWATER SAMPLING PROCEDURES

The following information details the groundwater sample collection procedures utilized for obtaining samples after monitoring well installation. This procedure represents methods that are used to address the validity of the collection and handling procedures for water data.

Equipment:

1. Electronic water level interface probe.
2. Electric powered pump with dedicated intake and discharge hoses.
3. Disposable polypropylene rope.
4. Dedicated and lab cleaned Teflon™ bailers with bottom valves.
5. Two plastic pails.
6. Potable water.
7. Distilled water
8. Liquinox/distilled water solution
9. Acetone
10. Disposal fiber brush.
11. Laboratory cleaned, 40 milliliter glass vials with Teflon lined septum screw caps.

Personnel:

1. Two Environmental Technicians

Procedure:

1. The water level in the well is directly measured using an interface probe indicator. Prior to use, the interface tape and probe are cleaned by wiping with a paper cloth, washing in a liquinox/distilled water solution, and rinsing in distilled water.

2. Once the depth to groundwater is established, the volume of standing water in the well is calculated using the relationship that a 4-inch diameter well contains 0.653 gallons per foot.

3. The intake hose is lowered into the well, and connected to the pump.

4. The discharge hose is directed into an appropriate container.

5. Three to five time the standing water volume in the well is then pumped from the well.

6. After purging the well, the water level is allowed to recover to static water level.

7. The wells are sampled using a Teflon bailer (bottom valve) suspended from a dedicated section of polypropylene rope. The water samples are collected 2 to 3 feet below the air/water table interface.

8. The volume collected in the bailer is poured directly into the appropriate glassware (40 milliliter vials for volatile analyses) and all containers are capped. Each vial is inspected to ensure no air bubbles or head space is present.

9. A label is affixed to each sample container showing the project name, sample number, depth, date, and sampler's initials.

10. The sample containers are placed in a storage cooler at 4 degrees Centigrade (wet ice) for transport to the laboratory.

11. A chain of custody is filled out for the samples.

12. At the completion of sampling, the well is capped and locked. Sampling of all subsequent wells is done in accordance with the procedures described above.

4.0 ANALYTICAL METHODOLOGY

Sampling parameters, sample containers, preservation, holding time, and analytical methods are presented in the following table.

TABLE OF ANALYTICAL METHODS

PARAMETER	CONTAINER	PRESERVATION	HOLDING TIME	ANALYTICAL METHOD
Volatile Organics (VOC) Aqueous	Glass, 40 ml vial, plastic screw cap, Teflon lined septum	Cool, 4 deg. C. dark, HCl	14 Days	40 CFR Part 136 USEPA Method 624+15
Volatile Organics Soil/(VOC) Sediments	Glass, 4 oz Teflon liner	Cool, 4 deg. C dark	14 Days	SW-846,3rd edition Vol 1-B; GC 8010 Sludge, 8015,8020 GC/MS-8240+10
Total petroleum hydrocarbons Soil/Aqueous	Glass, 32 oz	Cool, 4 deg. C dark	7 Days	USEPA-418.1 modified for soil analysis

APPENDIX IV

GROUNDWATER ANALYTICAL REPORT

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

JUNE 14, 1994

GES, INC.
1340 CAMPUS PARKWAY
WALL, NJ 07719
Att: Lynn Reilly

Analytical Report: 94-05-0394 Project: MERIT GREENPOINT
GES#: 0150-0077

This technical report contains the analytical results of four (4) samples submitted to Analab on May 26, 1994. The following analyses were requested:

BTEX (8021) - GC (4)
TOTAL PETROLEUM HYDROCARBONS (4)

Respectfully submitted,

Raymond A. Vasolara Jr

Robert F. Hulit
Manager of Laboratory Services

RH/ms

ANALAB INC 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

LABORATORY DELIVERABLES CHECKLIST

94-05-394

THIS FORM HAS BEEN COMPLETED BY THE LABORATORY AND IS AVAILABLE TO THE ENVIRONMENTAL CONSULTANT TO ACCOMPANY ALL DATA SUBMISSIONS

The following laboratory deliverables are included in this Analytical Report. Any deviations from the accepted methodology and procedures, or performance values outside acceptable ranges are summarized in the Non-Conformance Summary.

I.	Report Cover Page, Laboratory Certification and Field Sample to Lab Sample ID Cross Reference	✓
II.	Table of Contents	✓
III.	Chain of Custody Documents	✓
IV.	Methodology Summaries	✓
V.	Laboratory Chronicle and Hold Time Checks	✓
VI.	Non-Conformance Summary	✓
VII.	Tabulated Analytical Results	✓
VIII.	Initial and Continuing Calibration Information	✓
IX.	Tune and Internal Standard Area Summaries (GC/MS)	NA
X.	Quality Control Summary Reports	✓
XI.	Surrogate Recovery Summary	✓
XII.	Raw Data Chromatograms, Blank, QCs and Samples	✓
XIII.	Subsidiary Information (Subcontract if applicable)	NA

Bakula Patel QAC
Laboratory Manager or QA/QC Coordinator

6/15/94
Date

A:\QCCLST
1/93

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111. Fax: (908) 225-4110

ANALYTICAL DATA REPORT PACKAGE

FOR

GROUNDWATER ENVIRONMENTAL SERI
WALL, NJ 07719

Client Project:MERIT GREENPOINT

Project:0150-0077

Sample(s) Received Date:05/26/94

LABORATORY SAMPLE ID	SAMPLE DESCRIPTION/LOCATION	SAMPLE DATE/TIME
94-05-0394-001	MW-1 5-7	5/25/94 ; 0930
94-05-0394-002	MW-2	5/25/94 ; 1035
94-05-0394-003	MW-3	5/25/94 ; 1200
94-05-0394-004	MW-4	5/25/94 ; 0315

LABORATORY CERTIFICATION NUMBERS:

NJDEP ID:12531	MADEQE ID: NJ302	VADGS ID: 00007
NYDOH :11104	RIDHHL ID: NJ12531	NHDES ID: 250492-A,B
PADER ID:68-368	CTDHS ID: PH-0649	MDDHMH ID: 186

QUALITY CONTROL COORDINATOR: Bakula Patel
Edith Inumerable
Fred Khalil

MANAGER OF LABORATORY SERVICES: Raymond A. Vanderhoof Jr.
Robert F. Hulit

COMMENTS:
NA = NOT AVAILABLE FROM CHAIN OF CUSTODY / NOT APPLICABLE

ANALab inc. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABLE OF CONTENTS

PROJECT NUMBER: 94-05-0394

S.S.# Merit Greenpoint

Engineer Ronald Bamer

CHAIN OF CUSTODY RECORD

ANALAB

Project Manager Alex Majewski 2

Case Manager Celeste Rufer

PROJECT NO.	PROJECT NAME
0158 0077	Merit Greenpoint

SAMPLERS: (Signature) Celeste R

NO.	DATE	TIME	COMP	GRAB	STATION AND LOCATION	BTEX (8021)	TPH-J (418.1)	REMARKS	PRESERVATION
1	5/25/94	9:30		X	MW-1 (5-7')	X	X	2 Jars 1-8oz, 1-4oz	ICE
2	"	10:35		"	MW-2	"	"	" " "	"
3	"	12:00		"	MW-3	"	"	" " "	"
4	"	3:15		"	MW-4	"	"	" " "	"

94-05-394

All Samples Received

Temp. 3.6 °C Cool (Yes) No

Samples Intact (Yes) No

Properly Preserved (Yes) No

RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED BY:
CM	5/25	6:00	L. Dailey	L. Dailey	5/26/94	14:20	L Reed
RELINQUISHED BY:	DATE	TIME	RECEIVED BY:	RELINQUISHED BY:	DATE	TIME	RECEIVED BY LABORATORY
				L Reed	5/26/94	3:00	L Masalin

REMARKS:

GES Groundwater & Environmental Services, Inc.
1340 Campus Parkway
P.O. Box 50 • Wall NJ 077

ANALab INC. 205 Campus Plaza 1, Raritan Center Edison, NJ 08837, Tel: (908) 225-4111, Fax (908) 225-4110

METHOD SUMMARIES

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

METHODOLOGY SUMMARY

PARAMETER	REFERENCES
Alumina Column Cleanup and Seperation of Petroleum Wastes	Test Methods for Evaluating Solid Wastes: Vol. IB, USEPA SW-846, 1986, Method 3611.
Volatile Organics (GC/MS)	Test Methods for Evaluating Solid Wastes: Vol. 1B, USEPA SW-846, 1986, Method 8240. Test Methods for Evaluating Solid Wastes Physical/Chemical Methods: 2nd USEPA SW-846, 1982, Methods 5020 and 5030. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 624", July 1, USEPA Contact Laboratory Program (CLP) Statement of Work for Organics Analysis, 9/88.
Semi-Volatile Organics (GC/MS)	Test Methods for Evaluating Solid Wastes Physical/Chemical Methods: 2nd d., USEPA SW-846, 1982, Method 8270. Test Methods for Evaluating Solid Wastes: Vol. 1B, USEPA SW-846, 1986, Method 3550. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 625", July 1, 1988. USEPA Contact Laboratory Program (CLP) Statement of Work for Organic Analysis, 9/88.
Volatile Aromatics (GC)	Methods for Organic Chemical Analysis of Municipal and Industrial Wastewater: USEPA 600/4-81-057, 1981, Method 503.1. Title 40 CFR Part 136 " Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act, Method 602", July 1, 1988.
TCLP (Toxicity Characteristics Leachate Procedure)	Title 40 CFR Part 261 "Hazardous Waste Management System; Identification and Listing of Hazardous Waste; Toxicity Characteristics Revisions; Final Rule", June 29, 1990.
Percent Solids	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 160.3. Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 92-94, Method 209A, (1985).

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

METHODOLOGY SUMMARY

PARAMETER	REFERENCES
Percent Solids/ Percent Moisture	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 160.3. Standard Methods for the Examination of Water and Wastewater, 16th ed., pp. 92-94, Method 209A, (1985).
Total Dissolved Solids (TDS)	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 160.1.
Total Suspended Solids (TSS)	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 160.2.
Total Petroleum Hydrocarbons (Spectrophotometric, Infrared)	Methods for Chemical Analysis of Water and Wastes: USEPA 600/4-79-200, 1983, Method 418.1. Standard Methods for the Examination of Water and Wastewater: 16th ed., pp. 501-502, Method 503E, (1985). Test Methods for Evaluating Solid Waste Physical/Chemical Methods: 2nd ed/, Vol. IC, USEPA SW-846, 1986, Method 3540.
Oil and Grease (Spectrophotometric, Infrared)	Methods for Chemical Analysis of Water and Wastes: IC, USEPA 600/4-79-200, 1983, Method 413.1. Standard for Methods for the Examination of Water and Wastewater: 16th ed., pp. 498-500, Method 503B and C, (1985). Test Methods for Evaluating Solid Waste Physical/Chemical Methods: 2nd ed., Vol. IC, USEPA SW-846, 1986, Method 3540.
Oil and Grease (Gravimetric)	Methods for Chemical Analysis of Water and Wastes: USEPA 600/4-79-200, 1983, Method 413.1. Standard Methods for the Examination of Water and Wastewater: 16th ed., pp.496-498, Method 503A and B, (1985).
Corrosivity by pH	Test Method for Evaluating Solid Wastes: Vol. IC, USEPA SW-846, 1986, Method 9040.
Paint Filter Liquids Test	Test Methods for Evaluating Solid Waste: Physical/Chemical Methods; 3rd ed., Vol IC, USEPA SW-846, 1986, Method 9095.
Specific Conductance	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 415.1.
Total Organic Carbon (TOC)	Methods for Chemical Analysis of Water and Wastes; USEPA 600/4-79-200, 1983, Method 415.1.

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel (908) 225-4111, Fax (908) 225-4110

LABORATORY CHRONICLE

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

LABORATORY CHRONICLE

CLIENT: GES, INC.

REPORT NO.: 94-05-0394

SAMPLING DATE: 5/25/94

DATE RECEIVED BY LABORATORY: 5/26/94

LAB SAMPLE ID	EXTRACTION DATE	CLIENT SAMPLE DESIGNATION	PARAMETER	DATE ANALYZED	ANALYST
94-05-0394-1	NA	MW#1 (5-7')	BTEX(8021)-GC	6/4/94	JJ
94-05-0394-2	"	MW#2	"	"	"
94-05-0394-3	"	MW#3	"	"	"
94-05-0394-4	"	MW#4	"	"	"
94-05-0394-1	5/27/94	MW#1 (5-7')	TPHC	6/1/94	JT
94-05-0394-2	"	MW#2	"	"	"
94-05-0394-3	"	MW#3	"	"	"
94-05-0394-4	"	MW#4	"	"	"
94-05-0394-1	NA	MW#1 (5-7')	TS	5/31/94	DM
94-05-0394-2	"	MW#2	"	"	"
94-05-0394-3	"	MW#3	"	"	"
94-05-0394-4	"	MW#4	"	"	"

FORM 99
RH/ms

ANALAB INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

SAMPLE MANAGEMENT LABORATORY CHRONICLE

CLIENT NAME: G.E.S

LAB PROJECT ID: 94-05-394

CLIENT PROJECT: MERET: GREENPOINT

SAMPLE TEMP ON RECEIPT: 3.6 'C

RAS # :

SAMPLE RECEIVE DATE: 5/26/94

SAMPLE DATE(S): 5/25/94

SAMPLE MATRIX: H2O, SOIL,

ANALAB COOLER ID #: n/a

CONDITION OF SAMPLES RECEIVED BY LAB:	NA	YES	NO	COMMENTS
Cooler Seal Intact	NA	(YES)	NO	
Samples Received Cool (2-6'C)	NA	(YES)	NO	
Samples Received Intact		(YES)	NO	
Sample Labels Match Chain of Custody.		(YES)	NO	
VOAs HCL Preserved as per Label or Custody	(NA)	YES	NO	
VOAs w/out Bubbles, Septa TFE Side Down	(NA)	YES	NO	
Samples Delivered via ANALAB PICK UP.	NA	(YES)	NO	
Samples Delivered via CLIENT DROP OFF	NA	YES	(NO)	
Airbill # Present, if by Common Carrier.	NA	YES	(NO)	
Traffic Reports Present,if applicable	NA	YES	(NO)	
Subcontract Analysis Required (Sub COC).		YES	(NO)	

PRESERVATION CHECKS PERFORMED FOR AQUEOUS SAMPLES NEEDING PH ADJUSTMENT

(N/A) = IF NOT APPLICABLE

LAB SAMPLE	FRACTION	PH MEASURED	OK	COMMENTS BY SM ON RECEIPT

Note: NA = Not Applicable or Not Available from Chain of Custody
Temprature taken on receipt from Temprature Surrogate Vial

J. Macali
Sample Custodian Signature

5/26/94
Date

A:\smlc rev. 1/94

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837 Tel (908) 225-4111, Fax: (908) 225-4110

CASE NARRATIVE / NONCONFORMANCE SUMMARY

ANALAB INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

GC ANALYSIS CONFORMANCE / NON-CONFORMANCE SUMMARY

PROJECT ID: 94-05-0374

		No	Yes
1.	GC Chromatograms Labeled with Compounds Identified (including Field and Laboratory QC Samples)	___	✓
2.	Initial and Continuing Calibration Summaries	___	✓
3.	Calibration - Initial Calibration performed within 30 days before sample analysis and continuing calibration performed within 24 hours of sample analysis.	___	✓
4.	Continuing Calibration Requirements Met	___	✓
5.	Retention Time Shift Meets Criteria (if applicable)	___	NA
6.	Blank Free of Contamination; If not, List Compounds and amounts present.	___	✓
	a. GC Voa Fraction NO TARGET COMPOUNDS.		
	b. GC Pesticide		
	c. GC PCB Fraction		
	d. GC Extractable		
	e. GC DAI Voa		
7.	Extraction Hold Time Met. Comments:	___	NA
8.	Analysis Hold Time Met. Comments:	___	✓
9.	Surrogate Recoveries Meet Criteria - (If not, list compounds & their recoveries outside of limits) If not met, calculations were checked, results are qualified.	___	✓
	a. GC Voa Fraction ✓		
	b. GC Pesticide		
	c. GC PCB Fraction		
	d. GC Extractable		
	e. GC DAI Voa		
10.	Matrix Spike / Matrix Spike Duplicate Recoveries and % RPD's meet Criteria. If not, list compounds and recoveries outside of QC limits.	___	✓
	a. GC Voa Fraction ✓		
	b. GC Pesticide		
	c. GC PCB Fraction		
	d. GC Extractable		
	e. GC DAI Voa		

Additional Comments: _____

Lab or QC Coordinator: Raymond A Vanderlan Date: 6/17/94

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

WET CHEMISTRY ANALYSIS CONFORMANCE / NON-CONFORMANCE SUMMARY

PROJECT ID: 94-05-394

		No	Yes
1.	All Results Reported and in the appropriate units	____	✓
2.	Initial and Continuing Calibration Summaries present for all TPHC (Total Petroleum Hydrocarbon) analysis. Including IR-Scans for standards and check standards.	____	✓
3.	Calibration - Initial Calibration performed within 90 days before sample analysis and continuing calibration performed on the day of analysis.	____	✓
4.	Continuing Calibration Requirements Met	____	✓
5.	Blank Free of Contamination; (eg. <MDL) If not then list compounds and the amounts present at or above the reported MDL. _____	____	✓
6.	Extraction Hold Time Met. Comments: _____	____	✓
7.	Analysis Hold Time Met. Comments: _____	____	✓
8.	Matrix Spike / Matrix Spike Duplicate Recoveries and % RPD's meet Criteria. If not, list compounds and recoveries outside of QC limits. _____	____	✓
9.	QC Check Sample (Blank Spike) Recovery within limits.	____	✓

Additional Comments: _____

Lab or QC Coordinator: Bakula Patel-QACC Date: 6/15/94

Q&A A:\QCFormWC

Rev. 5/94

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel (908) 225-4111, Fax (908) 225-4110

CASE NARRATIVE / NONCONFORMANCE SUMMARY

PROJECT: 94-05-394

There were no other nonconformances found.

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

GC VOLATILE ORGANICS

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel: (908) 225-4111, Fax. (908) 225-4110

ANALYTICAL REPORT FLAGS:

U Compound was analyzed but not detected. The number proceeding the analytical flag "U" is the minimum attainable detection limit for the sample.

J Compound was detected but below the Method Detected Limits (MDL). Quantitation is approximate.

B Compound was found to be present in the Method Blank.

E Compound concentration exceeded the calibration range of the GC/MS instrument. Secondary dilution was required.

D Compound was identified in the analysis at a secondary dilution factor.

BMDL Compound was detected but below the Method Detection Limit (MDL). Quantitation is approximate.

Compounds detected for Soil/Solid Analysis are reported on a dry weight basis.

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL REPORT
VOLATILE ORGANICS METHOD 8021
BY GAS CHROMATOGRAPHY

SAMPLE:94-05-0394-01 DATE AQUIRED 06/04/94
FILE ID:PH060317 REVIEWED BY:JJ

COMPOUND	RESULTS(UG/KG)	MDL(UG/UG)
Toluene	5.00 U	5.00
Benzene	5.00 U	5.00
Ethylbenzene	5.00 U	5.00
m+p-Xylenes	10.0 U	10.0
o-Xylene	5.00 U	5.00

Analytical Report Flags:

U = NOT DETECTED
J = BELOW MDL

MP/JJ

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL REPORT
VOLATILE ORGANICS METHOD 8021
BY GAS CHROMATOGRAPHY

SAMPLE:94-05-0394-02 DATE AQUIRED 06/04/94
FILE ID:PH060318 REVIEWED BY:JJ

COMPOUND	RESULTS(UG/KG)	MDL(UG/UG)
Toluene	5.00 U	5.00
Benzene	5.00 U	5.00
Ethylbenzene	5.00 U	5.00
m+p-Xylenes	10.0 U	10.0
o-Xylene	5.00 U	5.00

Analytical Report Flags:

U = NOT DETECTED
J = BELOW MDL

MP/JJ

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837. Tel. (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL REPORT
VOLATILE ORGANICS METHOD 8021
BY GAS CHROMATOGRAPHY

SAMPLE:94-05-0394-03 DATE AQUIRED 06/04/94
FILE ID:PH060315 REVIEWED BY:JJ

COMPOUND	RESULTS(UG/KG)	MDL(UG/UG)
Toluene	5.00 U	5.00
Benzene	2.50 J	5.00
Ethylbenzene	6.07	5.00
m+p-Xylenes	10.0 U	10.0
o-Xylene	10.0	5.00

Analytical Report Flags:

U = NOT DETECTED
J = BELOW MDL

MP/JJ

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL REPORT
VOLATILE ORGANICS METHOD 8021
BY GAS CHROMATOGRAPHY

SAMPLE:94-05-0394-04 DATE AQUIRED 06/04/94
FILE ID:PH060316 REVIEWED BY:JJ

COMPOUND	RESULTS(UG/KG)	MDL(UG/UG)
Toluene	5.00 U	5.00
Benzene	5.00 U	5.00
Ethylbenzene	5.00 U	5.00
m+p-Xylenes	10.0 U	10.0
o-Xylene	5.00 U	5.00

Analytical Report Flags:

U = NOT DETECTED
J = BELOW MDL

MP/JJ

ANALab INC. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

TABULATED ANALYTICAL RESULTS

WET CHEMISTRY

ANALab inc. 205 Campus Plaza 1, Raritan Center, Edison, NJ 08837, Tel: (908) 225-4111, Fax: (908) 225-4110

ANALYTICAL REPORT

TOTAL PETROLEUM HYDROCARBONS BY METHOD 418.1

LIENT: GROUNDWATER ENVIRONMENTAL SERI
LIENT PROJECT: MERIT GREENPOINT
REPORT DATE : JUNE 8 1994
ROJECT RECEIPT DATE : 05/26/94

PROJECT: 94-05-0394
ANALYST: JT

CLIENT ID	LAB ID	RESULTS(mg/kg)	MDL(mg/kg)	ANALYSIS DATE
MW-1 5-7	001	93.7	25.0	6/1/94
MW-2	002	188	25.0	6/1/94
-3	003	27.0	25.0	6/1/94
-4	004	<25.0	25.0	6/1/94

COMMENTS:
MDL = METHOD DETECTION LIMIT.
< = LESS THAN
RESULTS ARE REPORTED ON A DRY WEIGHT BASIS.

WC100B

ANA Lab INC. 205 Campus Plaza 1, Raritan Center, Edison NJ 08837, Tel (908) 225-4111, Fax (908) 225-4110

ANALYTICAL REPORT
PERCENT SOLIDS

CLIENT: GROUNDWATER ENVIRONMENTAL SERI
CLIENT PROJECT: MERIT GREENPOINT
REPORT DATE : JUNE 1 1994
PROJECT RECEIPT DATE : 05/26/94

PROJECT: 94-05-0394
ANALYZED BY: DM

CLIENT ID	LAB ID	PERCENT SOLIDS	ANALYSIS DATE
MW-1 5-7	001	91.3	5/31/94
MW-2	002	86.6	5/31/94
MW-3	003	79.9	5/31/94
MW-4	004	79.9	5/31/94

WC115

Address: 210 Greenpoint Avenue, Brooklyn
Spill #: 9303243
Consultant: GES

6/10-6/15/93 Removed 4x4K, 2x2K and 1x550 gal UST.
* A Phase I Envir. Assess. will be done to see if soluble-phase hydrocarbons have impacted the site.

Address: 210 Greenpoint Avenue, Brooklyn
Spill #: 9303243
Consultant: GES

6/10-6/15/93 Removed 4x4K, 2x2K and 1x550 gal UST.
* A Phase I Envir. Assess. will be done to see if soluble-phase hydrocarbons have impacted the site.