




**SITE INVESTIGATION REPORT**  
**Merit Ralph**  
**1885 Atlantic Avenue & Ralph Avenue**  
**Brooklyn, New York**  
**Spill #92-09626**

**21 April 1993**


Prepared For:

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

Prepared By:

  
Donald Lee Griffin Jr.  
Geologist

Reviewed By:

  
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Project Manager / Hydrogeologist

Groundwater & Environmental  
Services, Inc.  
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P.O. Box 1750  
Wall, New Jersey 17719  
(908)-919-0100

## SITE CHARACTERIZATION

**Site Name:** Merit Ralph  
**Spill #** 92-09626

**Site Location:** 1885 Atlantic Avenue  
Brooklyn, New York

**Introduction:** Merit Oil of New York, Inc., contracted Groundwater & Environmental Services, Inc., (GES) to perform a soil boring investigation at the above-referenced site. This investigation was initiated after a 4,000-gallon gasoline tank failed a pressure integrity test. Five soil borings were completed to a total depth of 25-feet. One soil sample was obtained from each boring.

**Soil Borings:** On March 23, 1993, five soil borings were advanced using the air rotary drilling method to a total depth of 25 feet below grade. Each boring was located within 15 feet of the tank field. Refer to site plan for soil boring location. Split spoon samples were collected and photoionization detector (PID) readings monitored in order to determine the depth interval where the highest level of impact was present. The sample was obtained from the 6-inch interval where the highest PID readings were monitored.

**Geology/Hydrogeology:** The site is underlain by fill material which grades into brown fine to medium sand with some silt, trace rounded and angular fine gravel at 10 feet below grade and is present to completion depths. Groundwater was not encountered to a depth of 25 feet below grade.

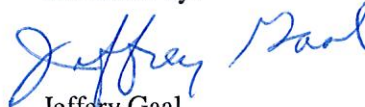
**Soil Sampling & Analytical Results:** The five soil samples were analyzed for total petroleum hydrocarbons (TPH) via U.S. EPA Method 418.1. The samples ranged in concentration from 35.8 ppm to 71.0 ppm. The laboratory analytical report is attached with this letter.

**Conclusion:** Based upon the results of this investigation, no further action is recommended and case closure should be pursued.


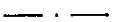

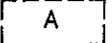
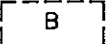
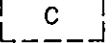
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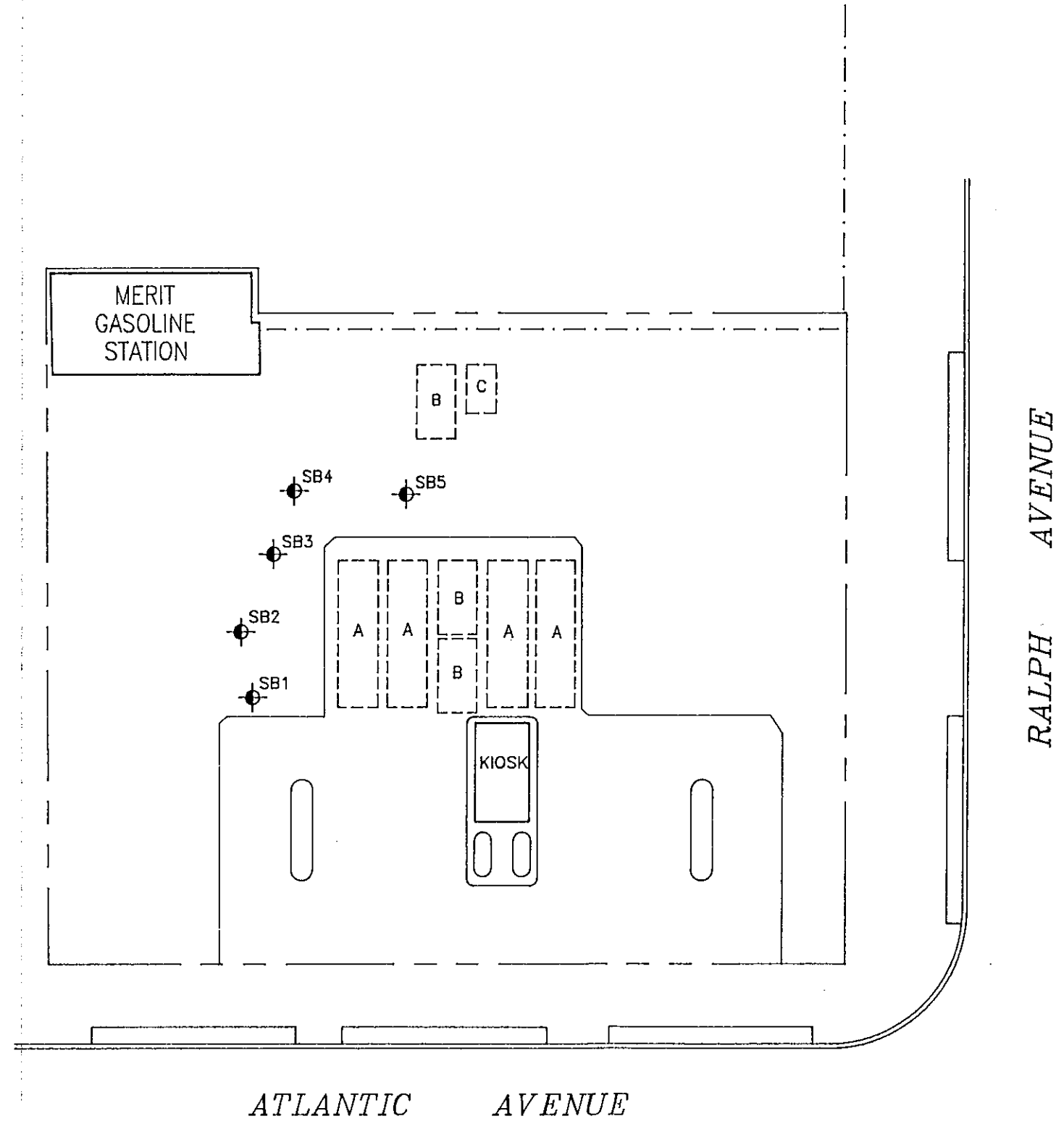
  
Donald Griffin  
Geologist

Reviewed by:

  
Jeffery Gaal  
Hydrogeologist, P.G.  
Project Manager

LEGEND

-  PUMP ISLAND
-  FENCE
-  SOIL BORING LOCATION
-  4,000 GAL UNDERGROUND STORAGE TANK
-  2,000 GAL UNDERGROUND STORAGE TANK
-  550 GAL UNDERGROUND STORAGE TANK




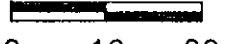
<b>SITE PLAN</b>			
SERVICE STATION # RALPH			
MERIT GASOLINE STATION 1885 ATLANTIC AVENUE BROOKLYN, NEW YORK			
NORTH 	SCALE IN FEET 	DATE 7-1-93	SOURCE B
		DWG # RS0011	FIGURE



TABLE 1  
SOIL BORING ANALYTICAL DATA  
MERIT SERVICE STATION RALPH  
1885 ATLANTIC AVENUE  
BROOKLYN, NEW YORK

(All results in parts per million)

23 March 1993

<u>Location</u>	<u>TPH</u>	<u>Depth Below Grade</u>
SB-1	71.0	14.5-15 feet
SB-2	53.6	16-16.5 feet
SB-3	48.6	15.5-16 feet
SB-4	47.8	15.5-16 feet
SB-5	114	11-11.5 feet

TPH = Total Petroleum Hydrocarbons

# Groundwater & Environmental Services, Inc.

Project: Merit Ralph                      Owner: Merit Oil of New York, Inc.

Boring: SB-1                                Total Depth: 25' Diameter: 6"

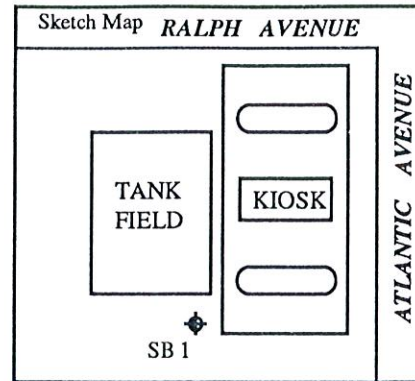
Location: 1885 Atlantic Avenue        Water Level Initial: N/A  
                  Brooklyn, NY

Drilling Method: Air Rotary              Sample Method: Split Spoon

Driller: Summit Drilling Co.

Log By: Donald Griffin                    Date: 3/23/93

## BORING LOG



Depth (feet)	PID (units)	Blow Count	Lithology
1	1.2		0-1' ASPHALT and STONE
2			1'-7' Light brown fine to medium SAND, with trace Silt, trace rounded and angular coarse gravel.
3			
4			
5			
6	1.5	7,13,13,17	5'-17' Light brown fine to medium SAND, with trace Silt, trace rounded and angular coarse gravel.
7			
8	2.5	14,19,23,24	
9			
10	58	19,21,50/4"	
11			
12	210	14,17,16,16	
13			
14	135	22,25,27,29	14.5'-15' SOIL SAMPLE OBTAINED AT THIS DEPTH
15			
16	45	27,24,32,23	
17			
18	25	13,19,23,23	17'-25' Brown fine to medium SAND with some Silt, trace angular gravel.
19			
20	15	21,21,23,22	
21			
22	15	24,27,26,26	
23			
24	10	26,26,17,21	
25			END BOREHOLE AT 25'
26			
27			
28			
29			



# Groundwater & Environmental Services, Inc.

## BORING LOG

Project: Merit Ralph

Owner: Merit Oil of New York, Inc.

Boring: SB-2

Total Depth: 25' Diameter: 6"

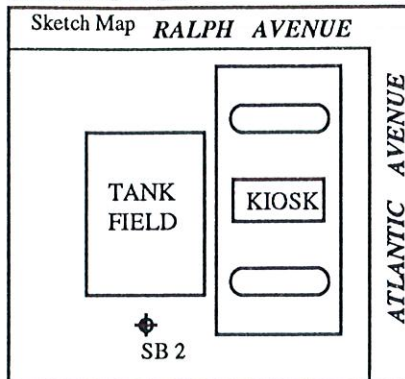
Location: 1885 Atlantic Avenue  
Brooklyn, NY

Water Level Initial: N/A

Drilling Method: Air Rotary

Sample Method: Split Spoon

Driller: Summit Drilling Co.



Log By: Donald Griffin

Date: 3/23/93

Depth (feet)	PID (units)	Blow Count	Lithology
0-1'			ASPHALT and STONE
1'-5'			Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
5'-25'	0	15,21,23,21	Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
10'-11'	0	10,32,27,21	
13'-14'	0	23,27,33,35	
15'-16'	0	22,22,24,24	
16'-16.5'	3	41,39,34,50/3"	SOIL SAMPLE OBTAINED AT THIS DEPTH
19'-20'	0	21,23,23,23	
21'-22'	0	19,21,27,34	
24'-25'	0	17,20,22,24	
			END BOREHOLE AT 25'



# Groundwater & Environmental Services, Inc.

Project: Merit Ralph

Owner: Merit Oil of New York, Inc.

Boring: SB-3

Total Depth: 25' Diameter: 6"

Location: 1885 Atlantic Avenue  
Brooklyn, NY

Water Level Initial: N/A

Drilling Method: Air Rotary

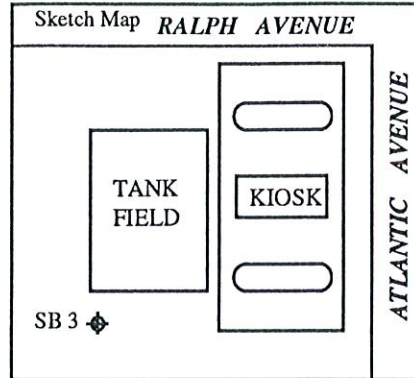
Sample Method: Split Spoon

Driller: Summit Drilling Co.

Log By: Donald Griffin

Date: 3/23/93

## BORING LOG



Depth (feet)	PID (units)	Blow Count	Lithology
0-1'			ASPHALT and STONE
1'-10'			Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
1			
2			
3			
4			
5			
6	0	19,17,24,28	
7			
8			
9			
10			
10'-25'			Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
11	0	14,19,23,21	
12			
13	0	16,22,19,24	
14			
15	0	24,29,27,28	
16			
15.5'-16'			SOIL SAMPLE OBTAINED AT THIS DEPTH
17	0	23,21,19,27	
18			
19	0	31,32,27,34	
20			
21	0	23,37,48,41	
22			
23			
24	0	30,33,29,36	
25			END BOREHOLE AT 25'
26			
27			
28			
29			



# Groundwater & Environmental Services, Inc.

## BORING LOG

Project: Merit Ralph

Owner: Merit Oil of New York, Inc.

Boring: SB-4

Total Depth: 25' Diameter: 6"

Location: 1885 Atlantic Avenue  
Brooklyn, NY

Water Level Initial: N/A

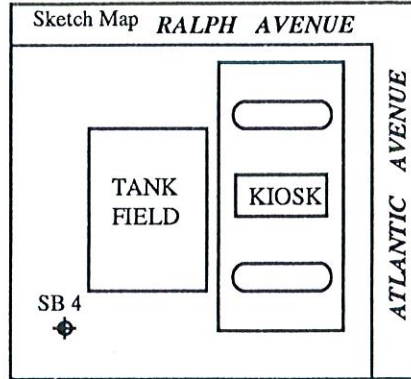
Drilling Method: Air Rotary

Sample Method: Split Spoon

Driller: Summit Drilling Co.

Log By: Donald Griffin

Date: 3/23/93



Depth (feet)	PID (units)	Blow Count	Lithology
1			0-1' ASPHALT and STONE
2			1'-5' Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
3			
4			
5			
6	0	27,31,50/1"	5'-25' Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
7			
8			
9			
10			
11	0	17,23,26,26	
12			
13	0	21,24,27,27	
14			
15	0	18,41,37,34	
16			
17	0	22,27,31,34	15.5'-16' SOIL SAMPLE OBTAINED AT THIS DEPTH
18			
19	0	23,27,31,32	
20			
21			
22			
23			
24	0	29,34,31,29	
25			END BOREHOLE AT 25'
26			
27			
28			
29			



# Groundwater & Environmental Services, Inc.

Project: Merit Ralph

Owner: Merit Oil of New York, Inc.

Boring: SB-5

Total Depth: 25' Diameter: 6"

Location: 1885 Atlantic Avenue  
Brooklyn, NY

Water Level Initial: N/A

Drilling Method: Air Rotary

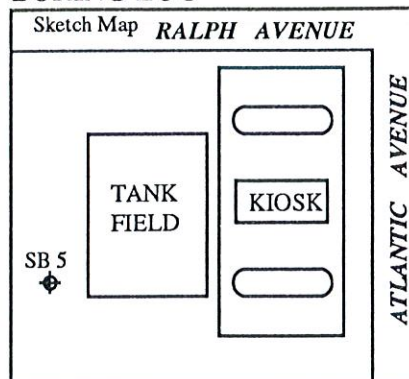
Sample Method: Split Spoon

Driller: Summit Drilling Co.

Log By: Donald Griffin

Date: 3/23/93

## BORING LOG



Depth (feet)	PID (units)	Blow Count	Lithology
0-1'			ASPHALT and STONE
1'-5'			Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
5'-25'	20	9,14,21,16	Brown fine to medium SAND, with some Silt, trace rounded and angular small gravel.
11'-11.5'	22	10,13,21,20	SOIL SAMPLE OBTAINED AT THIS DEPTH
		17,23,50/1"	
		19,23,50/3"	
	0	36,50/2"	
	0	27,24,50/1"	
	0	27,37,50/2"	
			END BOREHOLE AT 25'