Pennsylvania Department of Environmental Protection

2 East Main Street
Norristown, PA 19401
October 1, 2008

Southeast Regional Office

Phone: 484-250-5960
Fax: 484-250-5961

Mr. Martin D. Liebhardt, P.G.
Sunoco Marketing
350 Eaglview Boulevard, Suite 300
Exton, PA 19341

Re: Storage Tank Program
Sunoco Station No. 0012-1491
Facility ID No. 46-20382
889 Dekalb Pike
Whitpain Township
Montgomery County

Dear Mr. Liebhardt:

The Department of Environmental Protection (Department) has reviewed the July 31, 2008, submission titled "Groundwater Sampling Summary Report" prepared by Mulry and Cresswell Environmental, Inc. The report contains information that indicates an off-site source is contributing to on-site groundwater contamination. Based on this information, the Department will not require additional corrective action at 889 Dekalb Pike at this time.

This letter does not waive any rights of the Commonwealth of Pennsylvania to take enforcement action under applicable law for the conditions discussed in this letter.

Sincerely,

Walter J. Payne, P.G.
Professional Geologist Manager
Environmental Cleanup

Lauren T. Mapleton
Geologic Specialist
Environmental Cleanup

cc: Ms. Warren, DEP
Mr. Droese, Mulry and Cresswell
Whitpain Township
Montgomery County Health Department
Re 30 (AR08ECP)274-21

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

31 July 2008

Ms. Lauren Mapleton
Geologic Specialist
PADEP – Southeast Regional Office, Environmental Cleanup Program
2 East Main Street
Norristown, PA 19401

Re: Groundwater Sampling Summary Report
Sunoco Station 0012-1491
889 Dekalb Pike, Center Square (Blue Bell)
Whitpain Township, Montgomery County, PA
PADEP Fac. ID. No.: 46-20382

Dear Ms. Mapleton:

At the request of Mr. Martin D. Liebhardt of Sunoco Inc. (R&M) (Sunoco), attached please find the Groundwater Sampling Summary Report generated by Mulry and Cresswell Environmental, Inc. (MCE) for the above referenced site.

As presented in the report, a No Further Action (NFA) status was granted by the PADEP for this site in 1998, subsequent to the removal of a used motor oil underground storage tank (UST) and groundwater sampling. In preparation for a potential real estate divestment, MCE on behalf of Sunoco conducted a groundwater sampling event in November 2007. A Liberty Gas station is located inferably upgradient of the Sunoco station with a recent documented release of unleaded gasoline and a site characterization in progress. In May 2008, a liquid level gauging and groundwater sampling event was conducted by MCE for Sunoco and by Centerpoint Tank Services, Inc. for the owner of the Liberty Gas station property. Liquid levels were gauged in groundwater monitoring wells on both properties, and groundwater samples were collected by both consultants from the Sunoco station wells. The resulting data indicate a hydraulic gradient from the Liberty Gas station onto the Sunoco station, and elevated concentrations of dissolved MTBE reported for groundwater samples from the Sunoco station wells appear to be the result of the off-site, upgradient source.

Based on the information and data presented in the attached report, MCE on behalf of Sunoco respectfully requests that no further action by Sunoco is required at this time to address residual concentrations of dissolved analytes at the Sunoco station property, consistent with the previously granted NFA.

Please do not hesitate to call me at (610) 942 9010 with any questions or comments you may have regarding this report or this project in general.

Best Regards,

Marco Droese, P.G.
Sr. Hydrogeologist

pc: Martin D. Liebhardt, P.G., Sunoco, Inc. (R&M)
MCE file

1691 Horseshoe Pike • Manor Professional Building • Suite 3 • Glenmoore, PA 19343 • Tel: (610) 942-9010 • Fax: (610) 942-9039
2 Kenley Court • Bear, DE 19701 • Tel: (302) 834-5310 • Fax: (302) 834-1616

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Groundwater Sampling Summary Report

Sunoco Station 0012-1491

889 Dekalb Pike, Center Square (Blue Bell)

Whitpain Township, Montgomery County, PA

PADEP FAC ID No.: 46-20382

31 July 2008

Prepared for:

Martin D. Liebhardt

Sr. Hydrogeologist

Sunoco Inc. (R&M)

Prepared by:

Marco Droese, P.G.

Reviewed by:

James H. Mulry, P.G.

Mulry and Cresswell Environmental, Inc.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MARCO DROESE
GEOLOGIST
3738-E

(By affixing my seal to this report, I am certifying that the information presented in this report is true and correct to the best of my knowledge. I further certify that I am licensed to practice in the Commonwealth of Pennsylvania and that it is within my professional expertise to verify the correctness of the information. Marco Droese (PG 003738-E), signed and sealed on 31 July 2008.)

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Introduction:

At the request of Mr. Martin D. Liebhardt of Sunoco Inc. (R&M) (Sunoco), on 9 November 2007 and 30 May 2008, Mulry and Cresswell Environmental, Inc. (MCE) conducted two groundwater sampling events on three existing groundwater observation wells (OWs 1-3) at the Sunoco Station located at 889 Dekalb Pike (Route 202), Center Square (Blue Bell), Whitpain Township, Montgomery County, Pennsylvania. The site is an operating retail gasoline facility. The site location is depicted on Figure I. Groundwater samples were analyzed by Lancaster Laboratories Inc. (LLI) for the Pennsylvania Department of Environmental Protection (PADEP) short list of regulated compounds for unleaded gasoline release sites in effect at the time of sample collection: Benzene, toluene, ethylbenzene, total xylenes (BTEX), methyl tert. butyl ether (MTBE), naphthalene and cumene.

Groundwater monitoring had been conducted at this location from 1994 until 1997, when the PADEP granted a "No Further Action" (NFA) status to the site in a 9 April 1998 letter to Mr. Bradford Fish of Sunoco. A copy of that correspondence is attached as Appendix A.

The November 2007 and May 2008 sampling events were conducted voluntarily by Sunoco without any indication that a release of gasoline had occurred at the subject site subsequent to the 1998 NFA, but in preparation for a potential real estate transaction. During the November 2007 sampling event it was noted that a Liberty Gas branded retail gasoline station is located southeast of the site, across Dekalb Pike (Route 202), and inferably upgradient of the site. The locations of both stations are depicted in Figure II, Surrounding Properties. Upon inquiry with the PADEP, MCE and Sunoco were informed that a documented release of unleaded gasoline had occurred at the Liberty Gas station and that a site characterization was in preparation for that site. Therefore, the 30 May 2008 sampling event was conducted in cooperation with a representative from Center Point Tank Services, Inc., the consultant for the Liberty Gas station owner. The results of that sampling event are presented within this report.

History:

On 1 December 1993, a 1,000-gallon steel used motor oil underground storage tank (UST) was removed from the site. A Tank Closure Report was submitted to PADEP on 6 January 1994, which contained analytical results for soil samples collected as part of the tank closure process. Soil was reported to contain BTEX at concentrations between below the method detection limit (BDL) and 22 µg/kg and total petroleum hydrocarbons (TPH) at concentrations between BDL and 2,500 mg/kg.

At the request of Sunoco, MCE conducted a Phase I Environmental Assessment (Phase I) at this location in July 1994. The Phase I consisted of installing and sampling soil and groundwater from three observation wells (OWS 1-3), gauging the depth to water in the wells and calculating relative groundwater elevations. The well locations are depicted on the site plot plans, such as Figure III A. Soil samples from the well installations were analyzed for BTEX and TPH. No BTEX concentrations above the method detection limits were reported for the soil samples from any of the three well borings. TPH was reported at concentrations below the then in force *Cleanup Standards for Contaminated Soil, December 1993*. No BTEX or TPH concentrations above the method detection limits were reported in groundwater samples from wells OWs 2 and 3. The groundwater sample from OW 1 was reported to contain 24 µg/l BTEX and BDL TPH. Historic groundwater analytical data are summarized in Table I.

Based on groundwater samples laboratory analytical data and as requested by the PADEP (15 December 1994 correspondence) MCE for Sunoco conducted quarterly groundwater monitoring at this site for a period of one year. At the conclusion of the one-year of monitoring, a request was made to PADEP that No Further Action (NFA) status be granted for the site. The

PADEP responded to this request by asking that a well search of the area surrounding the site be conducted and that one additional round of groundwater analyses, including analyses for diesel range total petroleum hydrocarbons (TPH-DRO), be completed. Results of both the well search and additional groundwater analyses were submitted to the PADEP in the 29 April 1997 *Quarterly Groundwater Monitoring Update Report,* prepared by MCE for Sunoco, with a request for NFA. In a 9 April 1998 letter from Ms. Pamela Reigh of PADEP to Mr. Bradford L. Fish of Sunoco, PADEP granted NFA status to this site. A copy of the letter is attached as Appendix A.

Historic Reports Generated/Submitted by MCE:

- Tank Closure Report, 6 January 1994;
- Phase I Environmental Assessment, 29 July 1994;
- Remedial Action Plan, 19 December 1994;
- Quarterly Groundwater Monitoring Update Reports, 1st –4th Quarters 1995 and 1st Quarter 1997;
- Groundwater Sampling Report, 14 January 2008

Work Completed For This Report:

On 9 November 2007, liquid levels were gauged by MCE personnel in all three onsite groundwater observation wells, OWs 1-3 to determine relative water table elevations for construction of a water table elevation plot. Subsequent to well gauging, at least three volumes of water were purged from each well and groundwater samples were collected from each well with a stainless steel bailer and poured into laboratory supplied 40 ml glass vials with HCl as a preservative. The samples were delivered to Lancaster Laboratories in Lancaster, PA for analyses for the PADEP short list of unleaded gasoline parameters effective at the time of sample collection, namely: benzene, toluene, ethylbenzene, xylenes, collectively referred to as BTEX, methyl tertiary butyl ether (MTBE), naphthalene and cumene (isopropylbenzene). Copies of the laboratory analytical reports are attached in Appendix B. The results of the November sampling event were first presented in the Groundwater Sampling Report dated 14 January 2008.

On 30 May 2008, liquid levels were gauged by MCE personnel in all three onsite groundwater observation wells, OWs 1-3, and by a representative from Center Point Tank Services, Inc.(CTS) in all Liberty gas station wells, MWs 1-7. In addition, the well casing elevations of all Sunoco and Liberty Gas wells were surveyed by CTS personnel to construct a combined water table elevation map. Subsequent to well gauging, at least three volumes of water were purged from Sunoco wells OWs 1-3 and groundwater samples were collected from each well as described above, but as split samples by both consultants, MCE and CTS, for laboratory analyses. The samples collected by MCE personnel were delivered to Lancaster Laboratories in Lancaster, PA for BTEX, MTBE, naphthalene and cumene (isopropylbenzene). The samples collected by CTS personnel were submitted for the same analyses to Test America of King of Prussia, PA.

Results:

As displayed in Table I, depth to water in the three observation wells ranged between 4.01 feet below top of casing (btoc) in OW1 and 7.11 feet btoc in OW 2 on 9 November 2007, and between 3.70 feet btoc in OW1 and 7.02 feet btoc in OW 2 on 30 May 2008. On 9 November 2007, and in relative agreement with historic observations, the water table gradient was to the west across the site, at a magnitude of approximately 2 feet per 45 feet (0.044, or 4.4%). The water table elevation contours for the 9 November 2007 gauging event are depicted on Figure III A. On

30 May 2008, and consistent with historic observations, the water table gradient was to the northwest across the site, at a magnitude of approximately 1 foot per 35 feet (0.029, or 2.9 %). The water table elevation contours for the 30 May 2008 gauging event are depicted on Figure III B.

On the basis of liquid level gauging data obtained from the Sunoco and the Liberty Gas station wells on 30 May 2008, a combined water table elevation contour map was prepared by CTS personnel. A copy of that map, as provided by CTS, is attached in Appendix C. On 30 May 2008, the inferred groundwater gradient was calculated from the Liberty Gas station towards and across the Sunoco station property, at a magnitude of approximately 6 feet per 250 feet (0.024, or 2.4 %). Based on these data, the Liberty Gas station is located hydraulically upgradient of the Sunoco station property.

Dissolved BTEX, MTBE, naphthalene and cumene concentrations reported for groundwater samples retrieved from OWs 1-3 on 9 November 2007 and 30 May 2008 are presented in Table I and graphically depicted on Figures IV A and IV B. Copies of the groundwater samples laboratory analytical reports are attached as Appendix B. As presented in Table I and Figures IV A and IV B, dissolved BTEX. MTBE, naphthalene and cumene were reported at below method detection/quantification limits and/or at concentrations below the PADEP Act 2 Statewide health standard (SHS) Medium Specific Concentrations (MSCs) for used aquifers in residential areas for all three wells and both sampling events, with the exception of the following compounds:

- For upgradient well OW 1: Dissolved benzene was reported at 7 µg/l for the groundwater sample retrieved on 30 May 2008 and dissolved MTBE was reported at 230 and 180 µg/l for the groundwater samples retrieved on 9 November 2007 and 30 May 2008;
- For downgradient well OW 2: Dissolved MTBE was reported at 110 and 51 µg/l for the groundwater samples retrieved on 9 November 2007 and 30 May 2008; and
- For downgradient well OW 3: Dissolved benzene was reported at 9 µg/l for the groundwater sample retrieved on 30 May 2008.

The dissolved BTEX, MTBE , naphthalene and cumene data reported by LLI for groundwater samples from the three onsite wells OWs 1-3 are in very good agreement with the data reported by Test America for the split samples retrieved from OWs 1-3 by CTS. These data are presented in Appendix C.

Conclusions:

Historically, between 1994 and 1997, slightly elevated benzene concentrations were reported for groundwater samples from OWs 1 and 3. At that time, benzene, toluene, ethylbenzene and total xylenes concentrations, plus naphthalene when sampled, were reported above method detection limits for groundwater samples from OW 3. These data indicated that some minor groundwater contamination, primarily in the area of the removed used motor oil UST, had occurred. Groundwater samples retrieved between 1994 and 1997 were not analyzed for MTBE and cumene, and dissolved MTBE and cumene concentrations reported for the November 2007 and May 2008 sampling events cannot be compared to historic data.

For the November 2007 and May 2008 sampling events, all BTEX compounds were reported at concentrations that are similar or lower than the BTEX concentrations reported at the time the NFA was granted in 1998. In particular benzene and ethylbenzene were reported at significantly lower concentrations for groundwater samples from OW 3 retrieved in 2007/08 than for groundwater samples from OW 3 retrieved between 1994 and 1997, at the time the NFA was

granted. Observation well OW 3 is located inferably downgradient of the currently active gasoline dispensers and USTs. Based on these data, a new release of gasoline has not occurred at the Sunoco station since the 1998 NFA was issued.

Dissolved naphthalene and cumene were reported below method detection/quantification limits an/or at concentrations well below the current Act 2 residential used aquifer SHS MSCs for the November 2007 and May 2008 sampling events.

Dissolved MTBE concentrations above the current Act 2 residential used aquifer SHS MSC were reported for groundwater samples from OWs 1 and 2 for the November 2007 and May 2008 sampling events. Dissolved MTBE concentrations were reported at higher concentrations for hydraulically upgradient Sunoco well OW 1 (230 and 180 µg/l) than for downgradient Sunoco well OW 2 (110 and 51 µg/l). Furthermore, as presented on the data reported for groundwater samples retrieved from the Liberty Gas station wells, as presented in Appendix C, in April 2008 significantly elevated MTBE concentrations of 1,800 and 1,700 µg/l and elevated benzene concentrations of 23 and 19 µg/l were reported for Liberty Gas station well MW 7, which is located near the Liberty Gas station dispensers and along the downgradient property boundary of the Liberty Gas station property and inferably up-gradient of Sunoco well OW 1 (refer to the CTS Figure, Appendix C). Based on these data, a release of unleaded gasoline that resulted in elevated concentrations of at least benzene and MTBE has occurred at the Liberty Gas station property. Based on the groundwater gradients and the spatial distribution and concentration gradients for dissolved benzene and MTBE, the elevated concentrations of benzene in groundwater samples from Sunoco station well OW 1 and the elevated MTBE concentrations in groundwater samples from Sunoco station wells OWs 1 and 2 may have been the result of the documented release at the Liberty Gas station and subsequent dissolved phase transport onto the Sunoco station property. The concentration gradient from Liberty Gas well MW 7 to Sunoco station well OW 1 and further to Sunoco station well OW 2 in the direction of the inferred groundwater gradient is particularly obvious for dissolved MTBE reported in 2007/2008 (see water table elevation maps and data summary tables attached in Appendix C).

Recommendations:

Based on the data presented in this report, there is no indication that a release of unleaded gasoline has occurred at the Sunoco station property since the NFA was granted in 1998 that would have resulted in higher concentrations of target analytes than were present at that time. It appears that elevated concentrations of dissolved MTBE, which was not part of the analytical suit in 1994-97, reported for groundwater samples from Sunoco wells OWs 1 and 2 in November 2007 and May 2008, may have been the result of a release of unleaded gasoline at the Liberty Gas station, which is located inferably upgradient of the Sunoco station, across Dekalb Pike (Route 202). Based on information obtained from CTS and PADEP, a site characterization is currently in progress at the Liberty Gas station.

On behalf of Sunoco, MCE respectfully requests that the PADEP concurs with the assessment that elevated MTBE concentrations reported for select wells at the Sunoco station in 2007/08 are the result of an off-site release reported for the Liberty Gas station, and that the concentrations of other dissolved target analytes that were historically analyzed at the Sunoco station (BTEX, naphthalene) are now present at the Sunoco station at levels that are similar to or below the levels that were reported at the time the NFA was granted in 1998. Therefore, MCE on behalf of Sunoco respectfully requests that no further action by Sunoco is required at this time to address residual concentrations of dissolved analytes at the Sunoco station property, consistent with the previously granted NFA.

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

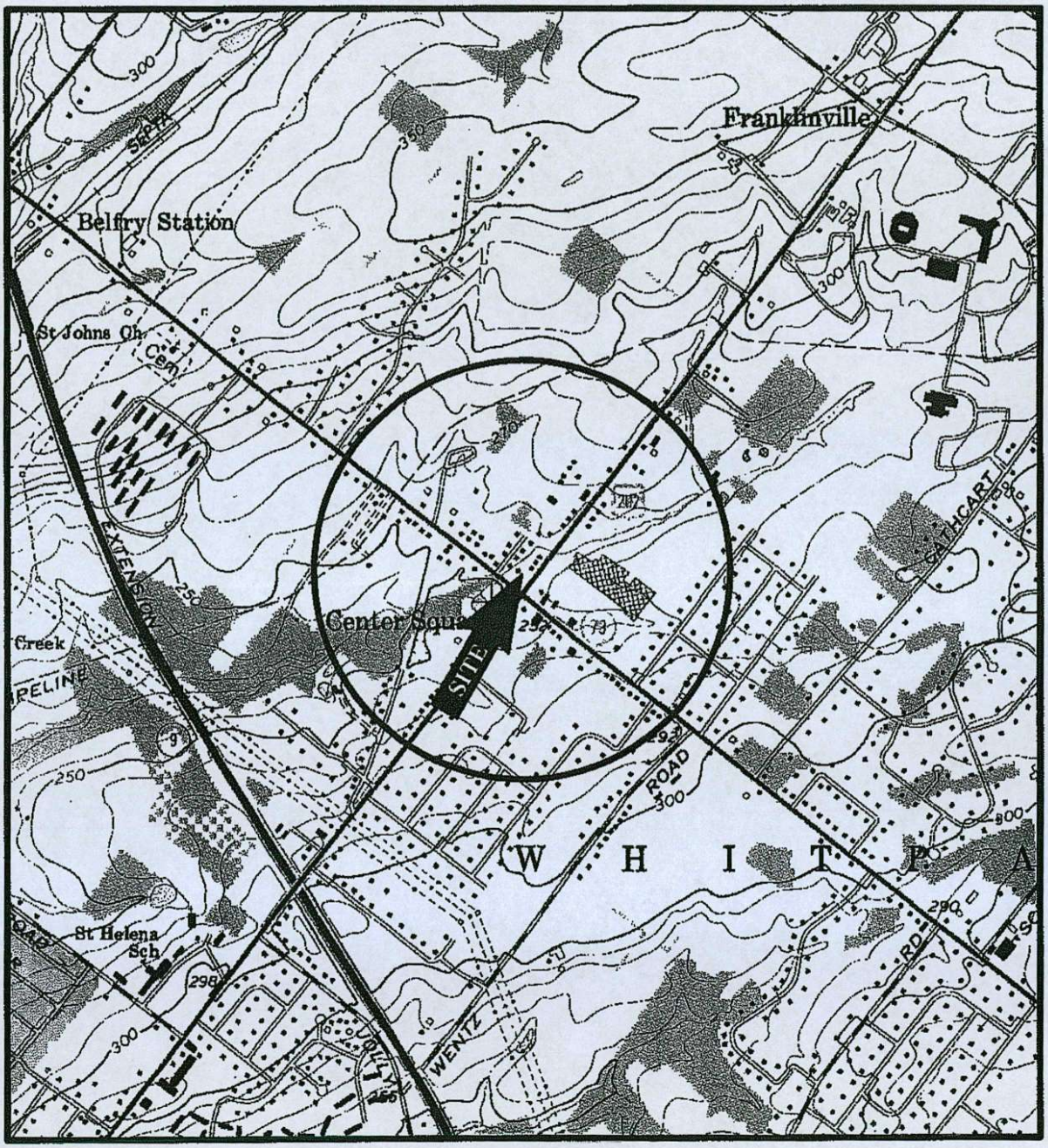

FIGURE I
SITE LOCATION
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

SCALE IN FEET
00 2000 4000

SOURCE: USGS. LANSDALE, PA
QUADRANGLE. 1966
PHOTOREVISED 1983

1/9/2017 4:18:30 PM

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

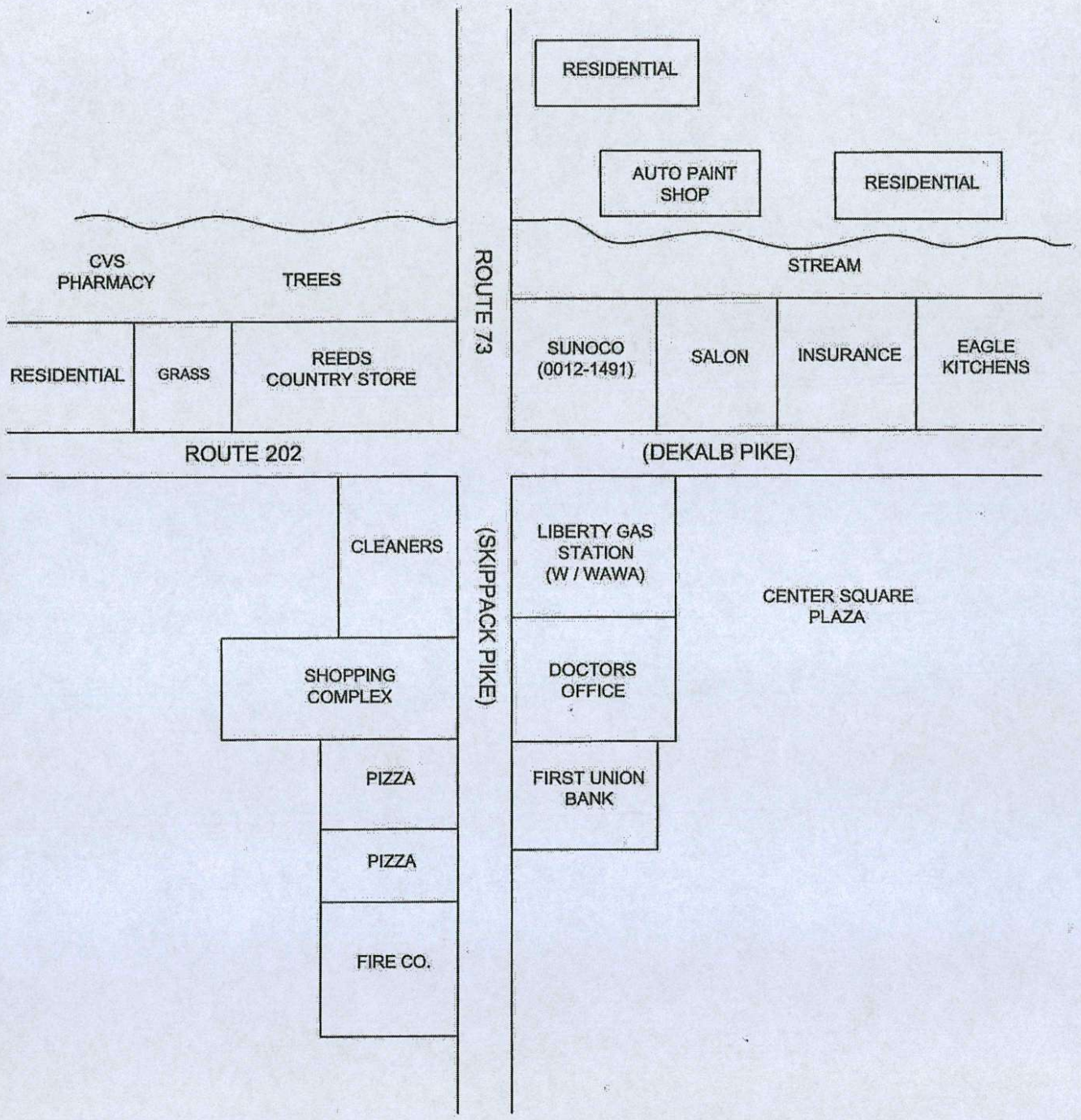

FIGURE II
SURROUNDING PROPERTIES
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

SURROUNDING PROPERTIES AS OF MARCH 1997

NOT TO SCALE

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Mulry and Cresswell
Environmental, Inc.

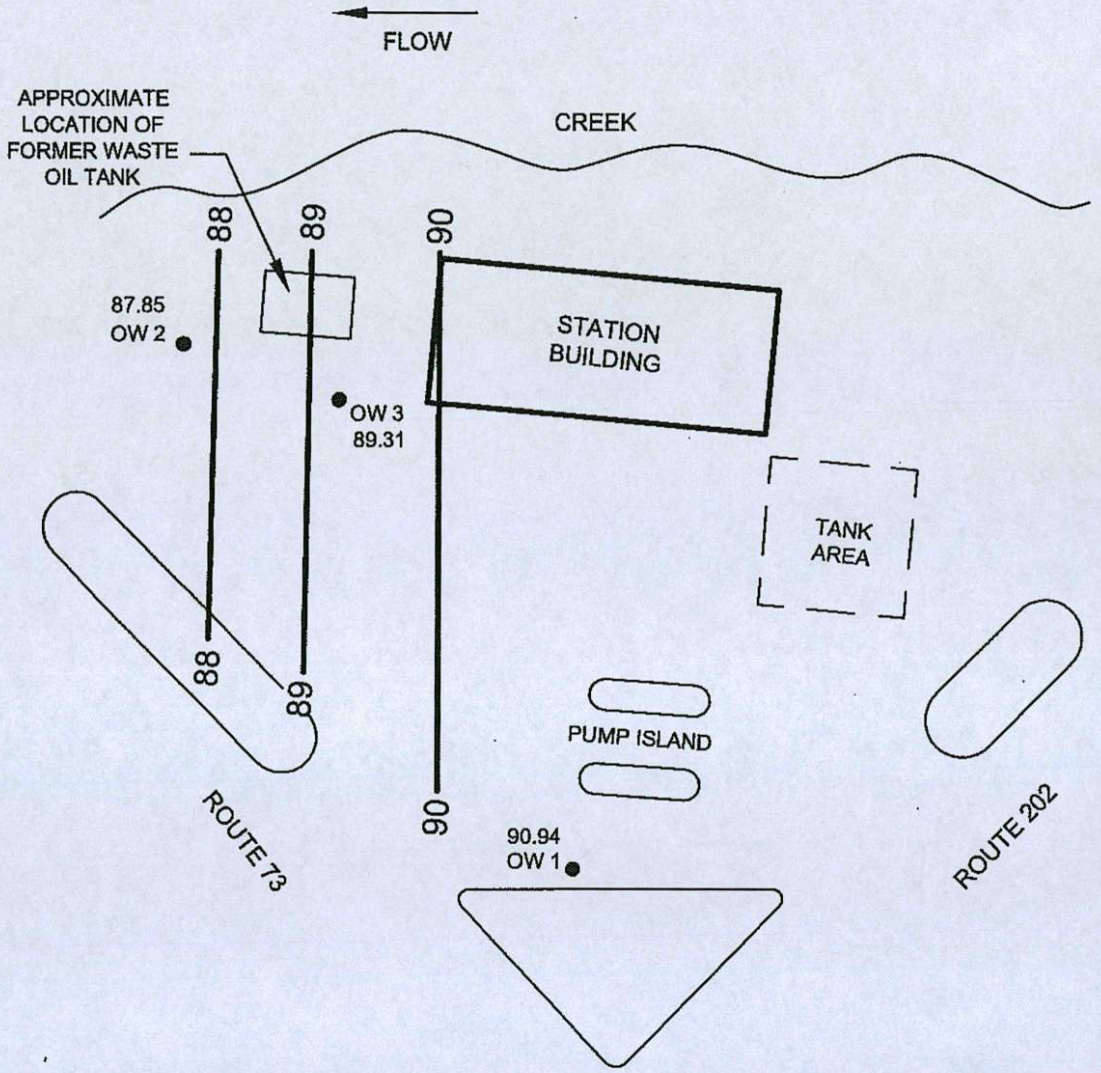

FIGURE III A
WATER TABLE ELEVATION (FEET)
9 NOVEMBER 2007
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

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Mulry and Cresswell
Environmental, Inc.

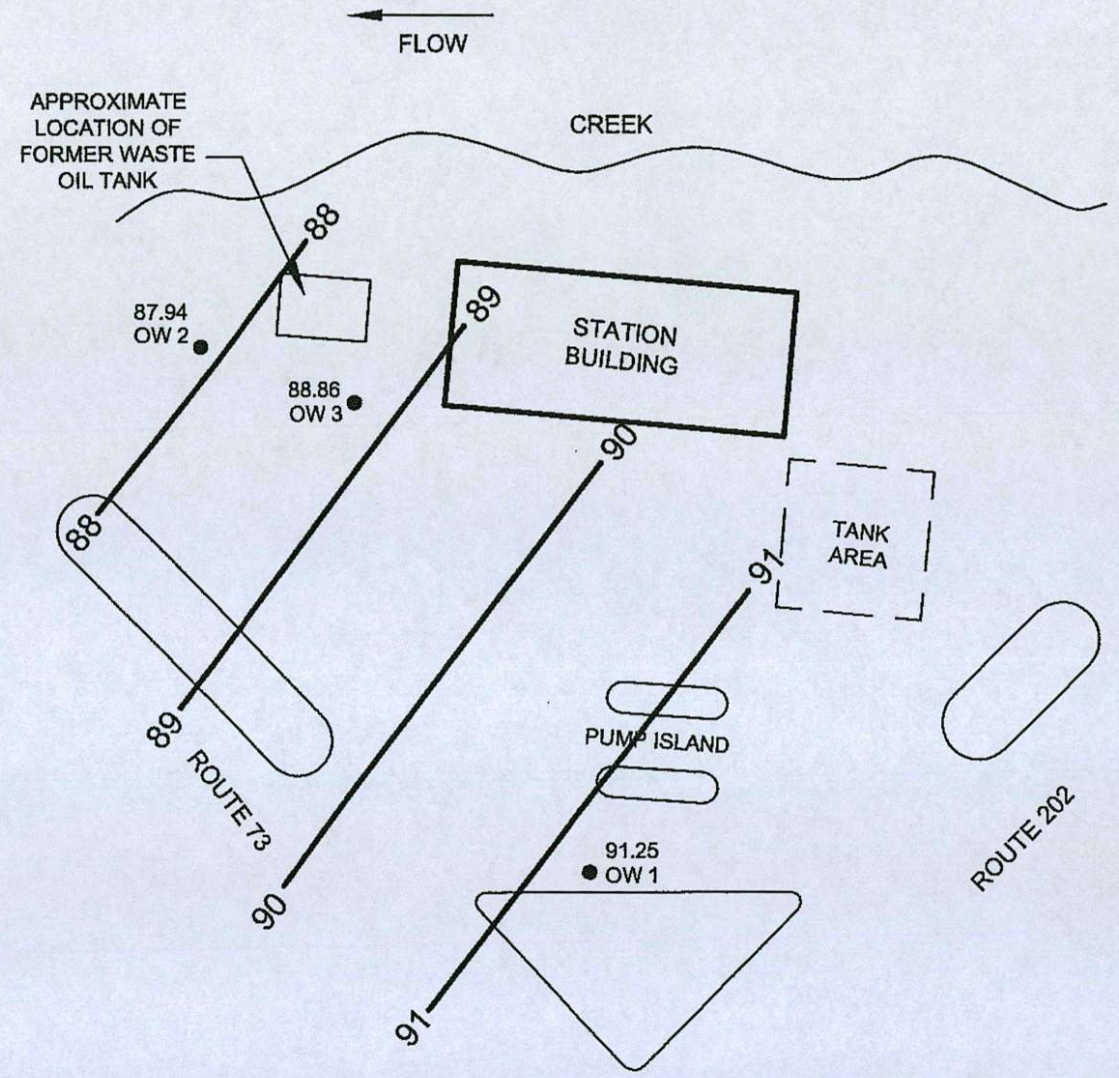

FIGURE III B
WATER TABLE ELEVATION (FEET)
30 MAY 2008
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

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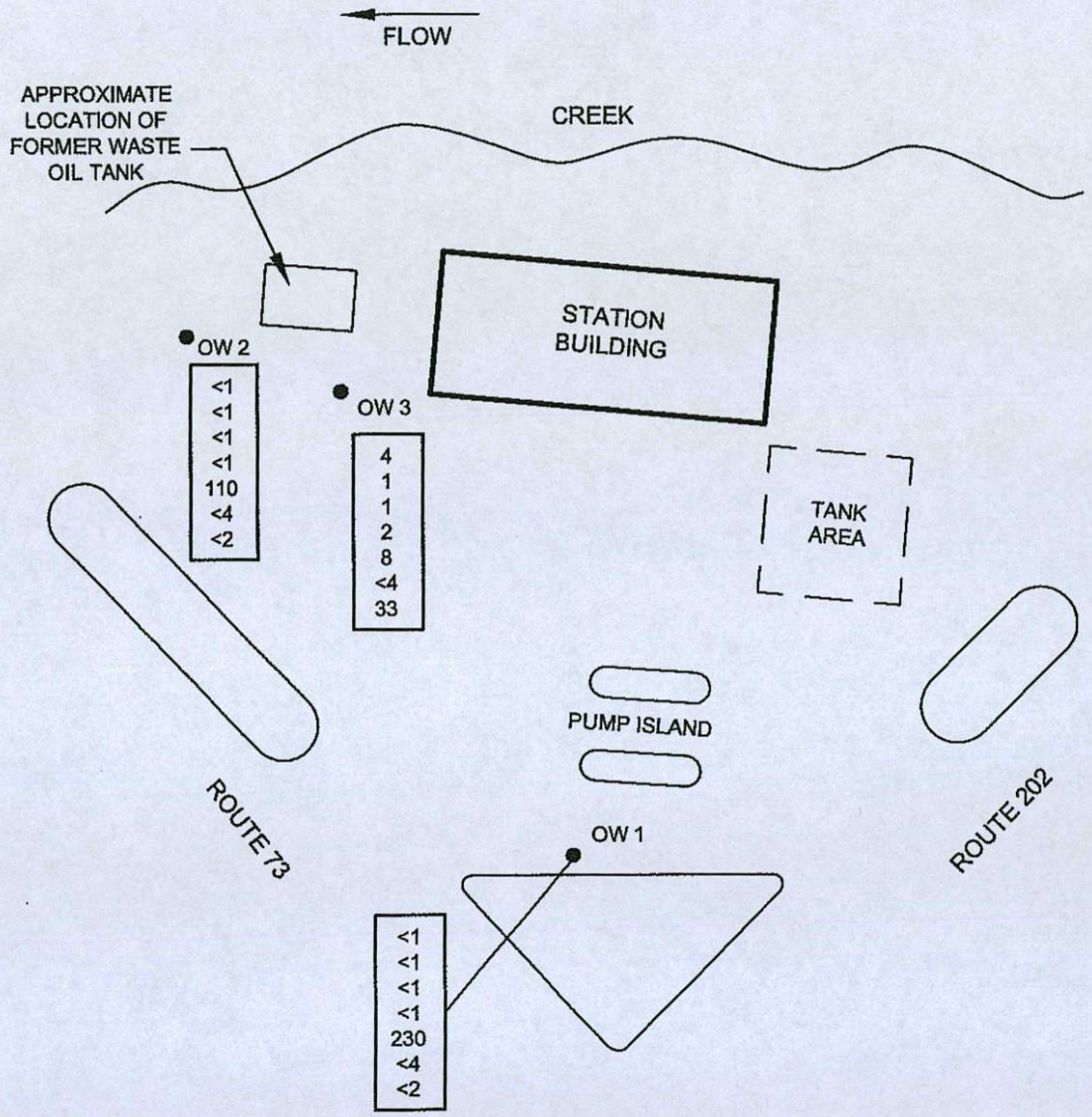
Mulry and Cresswell
Environmental, Inc.



● OBSERVATION WELL

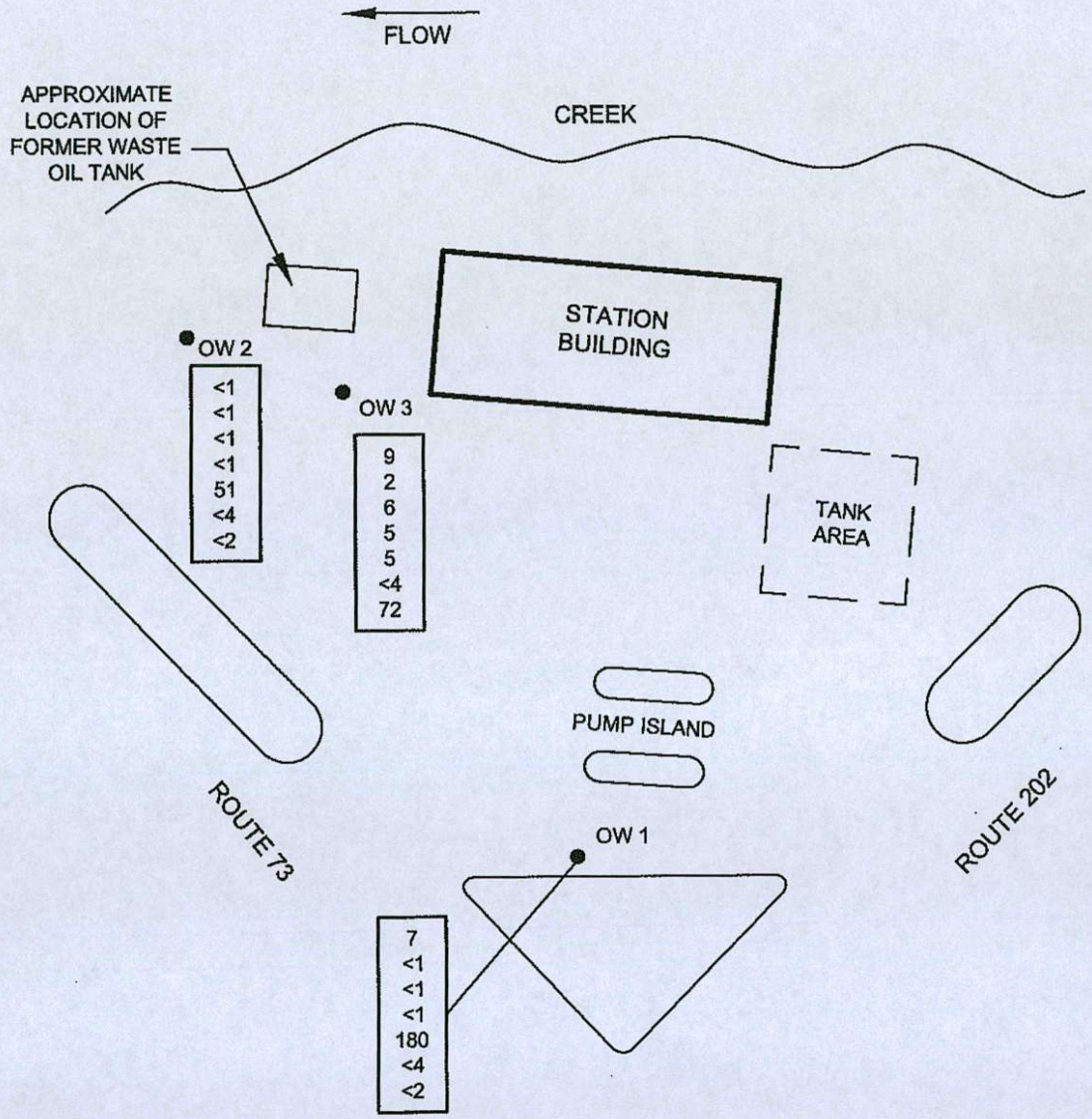
<1	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<1	= XYLENES (µg/l)
230	= MTBE (µg/l)
<4	= NAPHTHALENE (µg/l)
<2	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 40

FIGURE IV A
GROUNDWATER ANALYTICAL RESULTS
9 NOVEMBER 2007
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

Mulry and Cresswell
Environmental, Inc.



● OBSERVATION WELL

7	= BENZENE (µg/l)
<1	= TOLUENE (µg/l)
<1	= ETHYLBENZENE (µg/l)
<1	= XYLENES (µg/l)
180	= MTBE (µg/l)
<4	= NAPHTHALENE (µg/l)
<2	= CUMENE (µg/l)

APPROXIMATE SCALE IN FEET

0 40

FIGURE IV B
GROUNDWATER ANALYTICAL RESULTS
30 MAY 2008
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

1/9/2017 4:18:38 PM

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table I: Water Levels, Water Table Elevation and Groundwater Samples Analytical Results Summary
(all water level data are in feet, all concentration values are presented in ug/l)
Sunoco Station 0012-1491,889 Dekalb Pike (Route 202), Center Square (Blue Bell)
Whitpain Township, Montgomery County, PA

OW 1 **Casing Elevation : 94.95 Total Depth 31'**

Date	Depth to Water	Water Table Elevation	Chemicals of Concern (ug/l)						
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Cumene
16-Jun-94	4.45	90.50	8	< 1	<1	< 1	NA	NA	NA
17-Mar-95	3.53	91.42	12	BDL	< 1	< 3	NA	NA	NA
28-Jun-95	4.59	90.36	BDL	BDL	BDL	BDL	NA	NA	NA
9-Oct-95	4.17	90.78	< 1	BDL	BDL	BDL	NA	NA	NA
15-Dec-95	4.13	90.82	6	< 1	< 1	< 3	NA	NA	NA
26-Feb-97	3.64	91.31	< 1	< 1	BDL	< 3	NA	< 5	NA
9-Nov-07	4.01	90.94	< 1	< 1	< 1	< 1	230	< 4	< 2
30-May-08	3.70	91.25	7	< 1	< 1	< 1	180	< 4	< 2

OW 2 **Casing Elevation : 94.96 Total Depth 23'**

Date	Depth to Water	Water Table Elevation	Chemicals of Concern (ug/l)						
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Cumene
16-Jun-94	8.15	86.81	< 1	< 1	< 1	< 1	NA	NA	NA
17-Mar-95	6.66	88.30	BDL	BDL	BDL	< 3	NA	NA	NA
28-Jun-95	7.92	87.04	BDL	BDL	BDL	BDL	NA	NA	NA
9-Oct-95	7.54	87.42	BDL	BDL	BDL	BDL	NA	NA	NA
15-Dec-95	6.96	88.00	< 1	< 1	BDL	< 3	NA	NA	NA
26-Feb-97	6.55	88.41	BDL	< 1	BDL	< 3	NA	< 5	NA
9-Nov-07	7.11	87.85	< 1	< 1	< 1	< 1	110	< 4	< 2
30-May-08	7.02	87.94	< 1	< 1	< 1	< 1	51	< 4	< 2

OW 3 **Casing Elevation : 95.82 Total Depth 22'**

Date	Depth to Water	Water Table Elevation	Chemicals of Concern (ug/l)						
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Cumene
16-Jun-94	7.24	88.58	< 1	< 1	< 1	< 1	NA	NA	NA
17-Mar-95	6.63	89.19	43	4	80	30	NA	NA	NA
28-Jun-95	7.65	88.17	21	1	23	22	NA	NA	NA
9-Oct-95	6.87	88.95	18	1	35	3	NA	NA	NA
15-Dec-95	6.70	89.12	46	2	110	6	NA	NA	NA
26-Feb-97	6.53	89.29	44	4	76	8	NA	49	NA
9-Nov-07	6.51	89.31	4	1	1	2	8	< 4	33
30-May-08	6.10	88.86	9	2	6	5	5	< 4	72

Residential, used aquifer SHS MSCs	5	1,000	700	10,000	20	100	1,100

NA = not analyzed; BDL = below method detection limit; MTBE = Methyl tert. butyl ether
Liquid level data, water table elevations and casing elevations are in feet

Appendix A

PADEP NFA Letter, 9 April 1998

Pennsylvania Department of Environmental Protection

Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428
April 9, 1998

Southeast Regional Office

610-832-5949
Fax 610-832-6143

Mr. Bradford L. Fish, P.G.
Regional Environmental Engineer
Sun Company, Inc.
4041 Market Street
Aston, PA 19014

Re: Storage Tank Program
Sunoco No. 0012-1491
Routes 202 and 73
Facility ID No. 46-20382
Whitpain Township
Montgomery County

Dear Mr. Fish:

The Department has reviewed the 1997 Quarterly Groundwater Monitoring Update Report submitted by Mulry and Cresswell Environmental, Inc. dated April 29, 1997, concerning the groundwater contamination as a result of the removal of 1,000 gallon waste oil underground storage tank at the above referenced facility.

Based on our review of the information and conditions contained in the report, it appears that no further action is required regarding the closure of the tank listed above. We do not guarantee the accuracy or truthfulness of any closure report. If we subsequently obtain additional information which indicates the existence of contamination caused by the conditions on your premises, we reserve the right to require additional site characterization and/or remediation.

This letter does not waive the power of the Commonwealth of Pennsylvania to take enforcement action for violations of law which may result from the conditions discussed in this letter.

If you should have any questions regarding this matter, please feel free to contact me.

Sincerely,

Pamela S. Reigh

Pamela S. Reigh
Hydrogeologist
Environmental Cleanup

cc: Mr. Sinding
Mr. Droese
Whitpain Township
Montgomery County Health Department
Storage Tank Compliance and Monitoring
Re 30 (psr)

Appendix B

Copies of Groundwater Samples Laboratory Analytical Data (LLI Data)

OWs 1-3, 9 November 2007 and 30 May 2008

Lancaster Laboratories

2425 New Holland Pike. PO Box 12425 Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

ANALYTICAL RESULTS

Prepared for:

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

610-942-9010

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1065205. Samples arrived at the laboratory on Monday, November 12, 2007. The PO# for this group is CENTER SQUARE.

Client Description	Lancaster Labs Number
OW-3 Water	5210793
OW-2 Water	5210794
OW-1 Water	5210795

ELECTRONIC COPY TO	LLI	Attn: EDD Group
ELECTRONIC COPY TO	Mulry & Cresswell Env.	Attn: James Mulry

Lancaster Laboratories

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605 2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

Analysis Report

Questions? Contact your Client Services Representative
Lynn M Frederiksen at (717) 656-2300

Respectfully Submitted,

Christine Dulaney
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5210793

OW-3 Water
889 Dekalb Pike, Blue Bell, PA
DUNS# 00121491 COC: 0148905 OW-3

Collected:11/09/2007 14:05 by SBT

Account Number: 08474

Submitted: 11/12/2007 16:10
Reported: 11/19/2007 at 17:56
Discard: 01/19/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

CS--3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	8.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	4.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	33.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	2.	1.	0.5	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-00037
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	11/16/2007 23:51	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/16/2007 23:51	Florida A Cimino	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5210794

OW-2 Water
889 Dekalb Pike, Blue Bell, PA
DUNS# 00121491 COC: 0148905 OW-2

Collected:11/09/2007 14:15 by SBT

Account Number: 08474

Submitted: 11/12/2007 16:10
Reported: 11/19/2007 at 17:56
Discard: 01/19/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

CS--2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	110.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	< 1.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	< 1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	< 2.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.	1.	0.5	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-00037
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	11/17/2007 00:18	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/17/2007 00:18	Florida A Cimino	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5210795

OW-1 Water
889 Dekalb Pike, Blue Bell, PA
DUNS# 00121491 COC: 0148905 OW-1

Collected:11/09/2007 14:25 by SBT

Account Number: 08474

Submitted: 11/12/2007 16:10
Reported: 11/19/2007 at 17:56
Discard: 01/19/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

CS--1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	230.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	< 1.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	< 1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	< 2.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.	1.	0.5	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-00037
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	11/17/2007 04:45	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/17/2007 04:45	Florida A Cimino	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell
Reported: 11/19/07 at 05:56 PM

Group Number: 1065205

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P073204AA	Sample number(s): 5210793-5210795								
Methyl Tertiary Butyl Ether	< 1.	1.	0.5	ug/l	92	92	73-119	0	30
Benzene	< 1.	1.	0.5	ug/l	98	97	78-119	2	30
Toluene	< 1.	1.	0.5	ug/l	94	95	85-115	2	30
Ethylbenzene	< 1.	1.	0.5	ug/l	94	95	82-119	1	30
Isopropylbenzene	< 2.	2.	0.5	ug/l	95	95	80-113	0	30
Naphthalene	< 4.	4.	1.	ug/l	100	100	61-116	0	30
Xylene (Total)	< 1.	1.	0.5	ug/l	99	100	83-113	1	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: P073204AA	Sample number(s): 5210793-5210795 UNSPK: P210787								
Methyl Tertiary Butyl Ether	94		69-127						
Benzene	102		83-128						
Toluene	101		83-127						
Ethylbenzene	102		82-129						
Isopropylbenzene	103		81-130						
Naphthalene	96		57-125						
Xylene (Total)	106		82-130						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: UST-Unleaded Waters by 8260B
Batch number: P073204AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5210793	103	98	100	97
5210794	103	97	101	94
5210795	103	98	100	94
Blank	104	99	100	95
LCS	102	101	99	96
LCSD	102	100	99	97
MS	103	100	102	100

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell Group Number: 1065205
Reported: 11/19/07 at 05:56 PM

Surrogate Quality Control

Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 8474 Group# 106920 Sample # 5210793-5

COC # 0148905

Please print. Instructions on reverse side correspond with circled numbers.

(1) Client: Mulry & Cresswell Acct. #: 8474-SCN

Project Name/#: Center Square PWSID #:

Project Manager: J. Mulry P.O.#:

Sampler: J.B.T. Quote #:

Name of state where samples were collected: PA

(2) (3) (4) (5) Preservation Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

(6) Remarks

Sample Identification	Date	Time	Matrix	# of containers	Preservation Codes	Remarks
CW-3	11/9/07	1405	X	3	X	
CW-2		1415	X	3	X	
CW-1		1425	X	3	X	

1-0°C

Per Jim Mulry:
DUNS # 0012-1491
889 Dekalb Pike
Blue Bell, PA
(also known as Center Square)
LF 11/14/07

(7) **Turnaround Time Requested** (TAT) (please circle): Normal Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

(8) **Data Package Options** (please circle if required)
Type I (validation/NJ Reg)
Type II (Tier II)
Type III (Reduced NJ)
Type IV (CLP SOW)
Type VI (Raw Data Only)
TX TRRP-13
MA MCP CT RCP
SDG Complete? Yes No
Site-specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate volume.)
Internal COC Required? Yes / No

Relinquished by:	Date	Time	Received by:	Date	Time
	11/9/07	1640		11/9/07	2047
Relinquished by:	Date	Time	Received by:	Date	Time
	11/9/07	1616			
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time
				11/10/07	0840

(9)

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

2102.03

1/9/2017 4:18:59 PM

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

610-942-9010

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1093961. Samples arrived at the laboratory on Monday, June 02, 2008. The PO# for this group is BLUE BELL.

Client Description	Lancaster Labs Number
OW 1 Water	5376647
OW-2 Water	5376648
OW-3 Water	5376649

ELECTRONIC COPY TO	SUN: Mulry & Cresswell Env.	Attn: Marco Droese
ELECTRONIC COPY TO	LLI	Attn: EDD Group

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Lynn M Frederiksen at (717) 656-2300

Respectfully Submitted,

Marla S. Lord
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. 5376647 WW Group No. 1093961

OW 1 Water
889 Dekalb Pike-Blue Bell, PA
DUNS# 00121491 COC: 118866-2008 OW 1

Collected:05/30/2008 11:35 by ST

Account Number: 08474

Submitted: 06/02/2008 13:20
Reported: 06/09/2008 at 16:25
Discard: 08/09/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

BBOW1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	180.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	7.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	< 1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	< 2.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.	1.	0.5	ug/l	1

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/09
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	06/04/2008 16:33	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/04/2008 16:33	Daniel H Heller	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. 5376648 WW Group No. 1093961

OW-2 Water
889 Dekalb Pike-Blue Bell, PA
DUNS# 00121491 COC: 118866-2008 OW-2

Collected:05/30/2008 11:30 by ST

Account Number: 08474

Submitted: 06/02/2008 13:20
Reported: 06/09/2008 at 16:25
Discard: 08/09/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

BBOW2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	51.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	< 1.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	< 1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	< 2.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.	1.	0.5	ug/l	1

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/09
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	06/04/2008 17:00	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/04/2008 17:00	Daniel H Heller	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. 5376649 WW Group No. 1093961

OW-3 Water
889 Dekalb Pike-Blue Bell, PA
DUNS# 00121491 COC: 118866-2008 OW-3

Collected:05/30/2008 11:22 by ST

Account Number: 08474

Submitted: 06/02/2008 13:20
Reported: 06/09/2008 at 16:25
Discard: 08/09/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

BBOW3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	5.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	9.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	2.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	6.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	72.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	5.	1.	0.5	ug/l	1

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/09
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	06/04/2008 17:26	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	06/04/2008 17:26	Daniel H Heller	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell
Reported: 06/09/08 at 04:26 PM

Group Number: 1093961

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P081561AA	Sample number(s): 5376647-5376649								
Methyl Tertiary Butyl Ether	< 1.	1.	0.5	ug/l	103	105	73-119	2	30
Benzene	< 1.	1.	0.5	ug/l	103	104	78-119	1	30
Toluene	< 1.	1.	0.5	ug/l	101	99	85-115	1	30
Ethylbenzene	< 1.	1.	0.5	ug/l	100	100	82-119	0	30
Isopropylbenzene	< 2.	2.	0.5	ug/l	99	99	80-113	0	30
Naphthalene	< 4.	4.	1.	ug/l	84	85	61-116	2	30
Xylene (Total)	< 1.	1.	0.5	ug/l	101	102	83-113	1	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: P081561AA	Sample number(s): 5376647-5376649 UNSPK: P375358								
Methyl Tertiary Butyl Ether	107		69-127						
Benzene	111		83-128						
Toluene	110		83-127						
Ethylbenzene	106		82-129						
Isopropylbenzene	108		81-130						
Naphthalene	87		57-125						
Xylene (Total)	108		82-130						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: UST-Unleaded Waters by 8260B
Batch number: P081561AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5376647	98	95	95	91
5376648	97	95	95	92
5376649	98	93	94	98
Blank	99	95	94	91
LCS	97	94	95	93
LCSD	97	98	95	95
MS	98	98	95	94

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Lancaster Laboratories

Analysis Report

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Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell Group Number: 1093961
Reported: 06/09/08 at 04:26 PM

Surrogate Quality Control

Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

acct 8474 grp id 93961 # 5376647-49

Chain of Custody Record

SUNOCO

Sunoco DUNS #: 00121491
Region:
State or Lead Regulatory Agency:
Requested Due Date (mm/dd/yy):
COC Tracking Number: 118866-2008

On-site Time:		Temp 0.0
Off-site Time:		Temp 0.0
Sky Conditions:		
Meteorological Events:		
Wind Speed:	0.0	Direc

Lab Name:	LANCASTER LABORATORIES INC	Facility Address:	889 DEKALB PIKE	Consultant/Contractor:	MULRY & CRESSWELL ENVIRON
Address:		Facility City, State:	BLUE BELL PA	Address:	
		Site Lat/Long:	40.167238 -75.290081		
Lab PM:		Sunoco PM Contact:	Martin Liebhardt	Consultant/Contractor Project No.:	
Tele/Fax:		Address:		Consultant/Contractor PM:	Marco Droese
Report Type & QC Level:				Tele/Fax:	(610) 942-9010
E-mail EDD To:	SunocoENFOS@deltaenv.com	Tele/Fax:	610 450 5345	Invoice to:	

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Liquid	Matrix: Solid	Matrix: Gas	Laboratory No.	No. of Containers	Preservative	Requested Analysis: PA8260UG	Sample Point Lat/Long and Comments
1	OW 1	1135	5/30/08	WG				3		X	PADEP unleaded: BTEX, MTBE,
2			"	WG							Naphthalene, Cumene by 8260B
3			"	WG							
4	OW-2	1130	"	WG				3		X	
5			"	WG							
6			"	WG							
7	OW-3	1122	"	WG				3		X	
8				WG							
9				WG							
10											

Sampler's Name: ST Scott Thompson
Sampler's Company: Mulry & Cresswell
Shipment Date:
Shipment Method:
Shipment Tracking No:

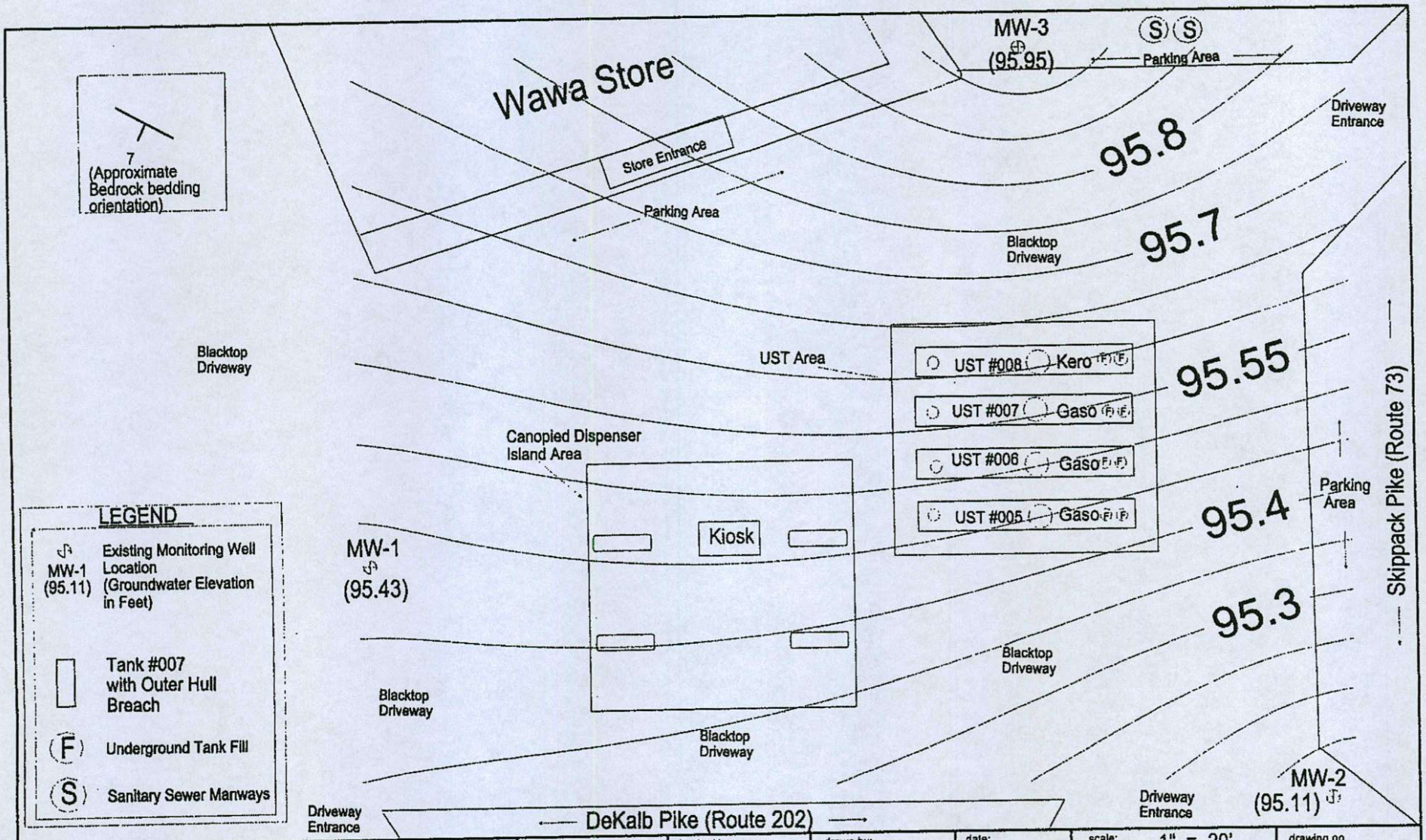
Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature]	5/30/08	1845	Emma Cullman LLI	6/2/08	12:20
Emma Cullman LLI	6/2/08	13:20			
			[signature] Moyer LLI	6/2/08	1320

Special Instructions:

Custody Seals In Place Yes (No) | Temp Blank (Yes) No | Cooler Temperature on Receipt 4.6 °F/(C) | Trip Blank Yes (No)

Appendix C

Tables, Figures and Laboratory Analytical Data Associated with the Liberty Gas Station Property



center point tank services, inc. 536 e. benjamin franklin highway douglassville, pennsylvania 19518	job no:	checked by: RST	drawn by: DLV	date: 3/7/08	scale: 1" = 20' (approx)	drawing no. 2.0

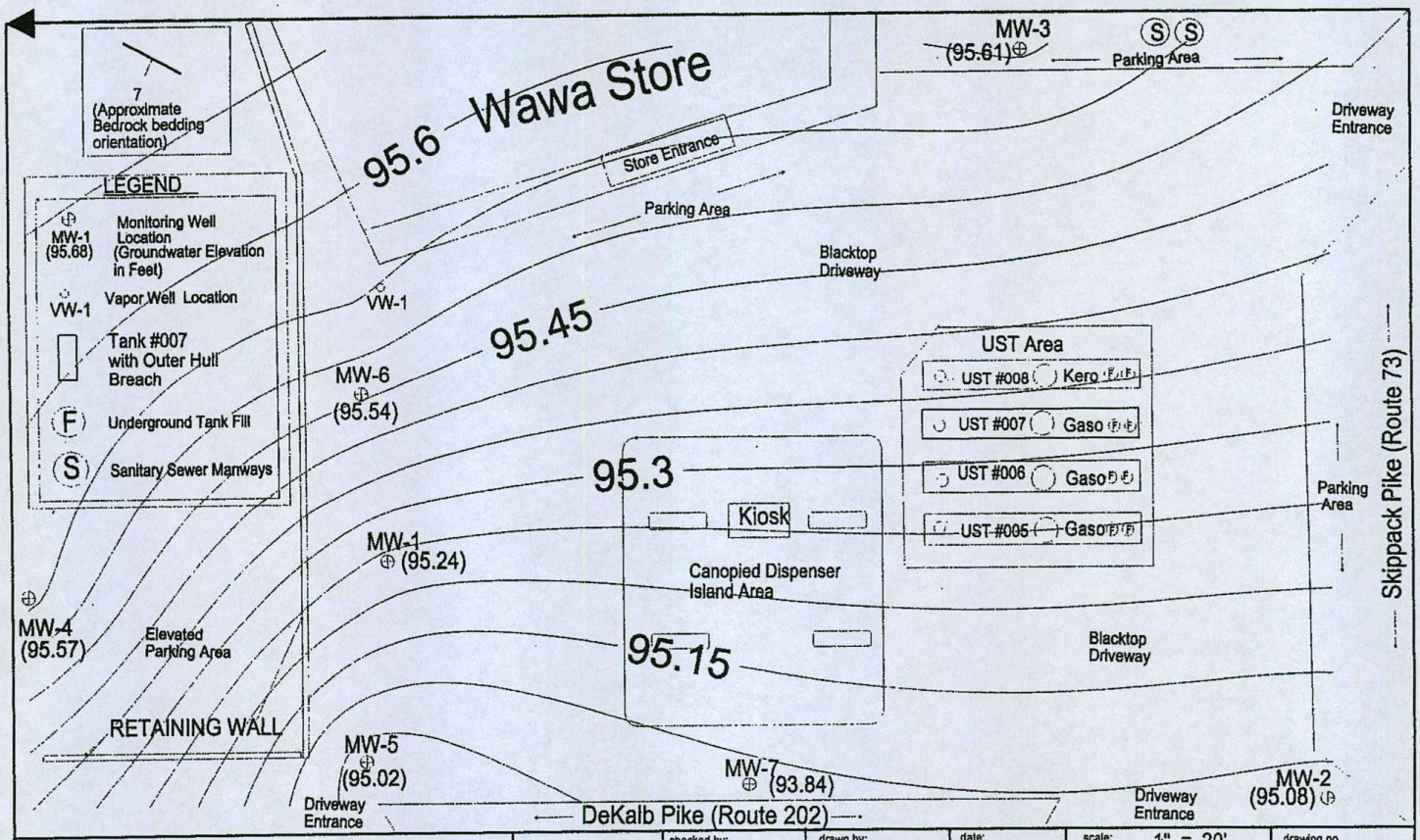
TITLE:

Groundwater Contour Map (3/6/08)

Center Square Liberty Station
Gasoline UST Release SIte
1399 Skippack Pike
Blue Bell, Pennsylvania 19422

Approximate North Direction

1/9/2017 4:19:16 PM



center point tank services, inc. 536 e. benjamin franklin highway douglassville, pennsylvania 19518	job no:	checked by: RST	drawn by: RST	date: 4/16/08	scale: 1" = 20' (approx)	drawing no. 2.0

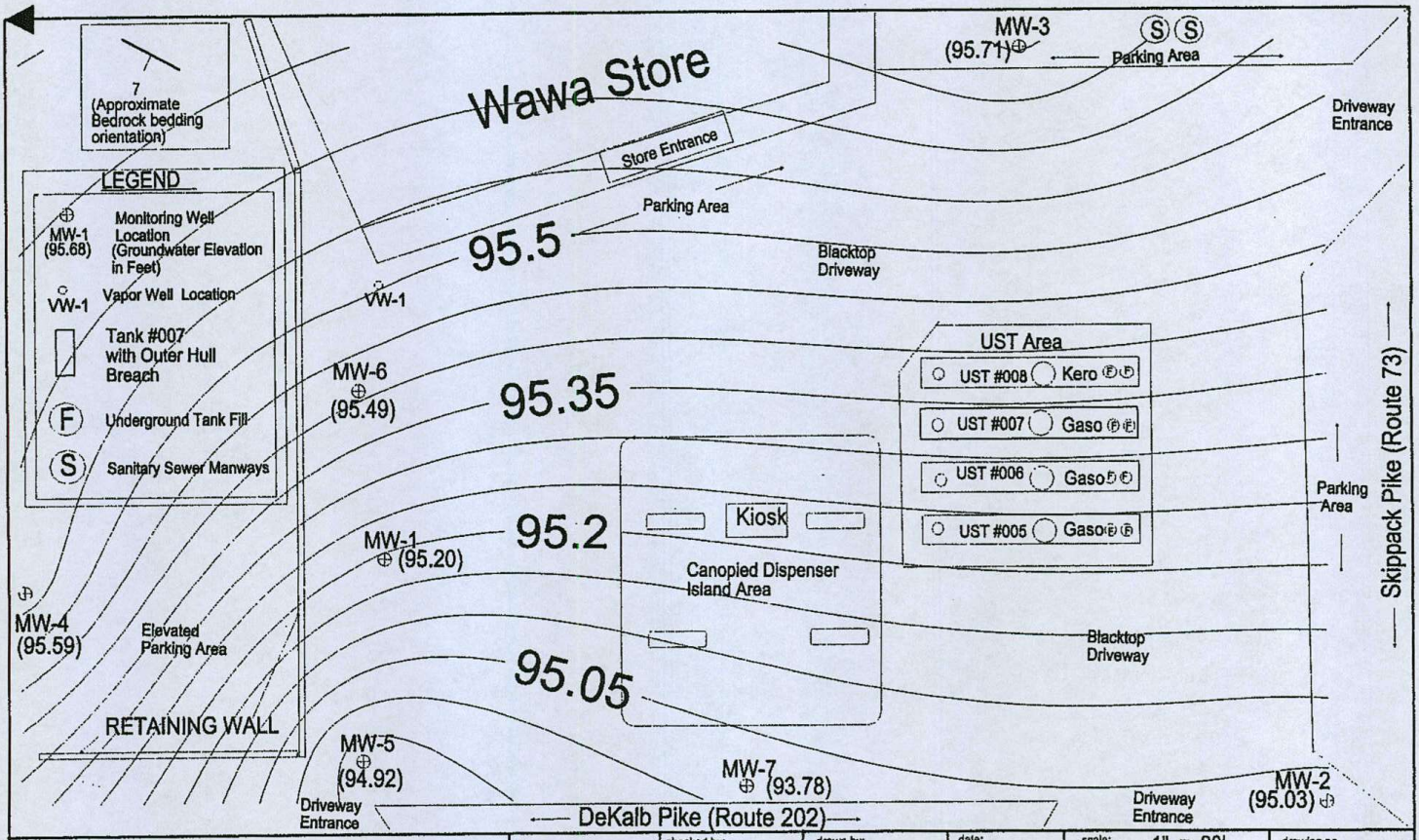
TITLE:

Groundwater Contour Map (4/15/08)

Center Square Liberty Station
Gasoline UST Release SIte
1399 Skippack Pike
Center Square, Pennsylvania 19422

Approximate North Direction

1/9/2017 4:19:18 PM



center point tank services, inc.
536 e. benjamin franklin highway
douglassville, pennsylvania 19518

job no:	checked by:	drawn by:	date:	scale:	drawing no.
	RST	DLV	5/2/08	1" = 20' (approx)	2.0

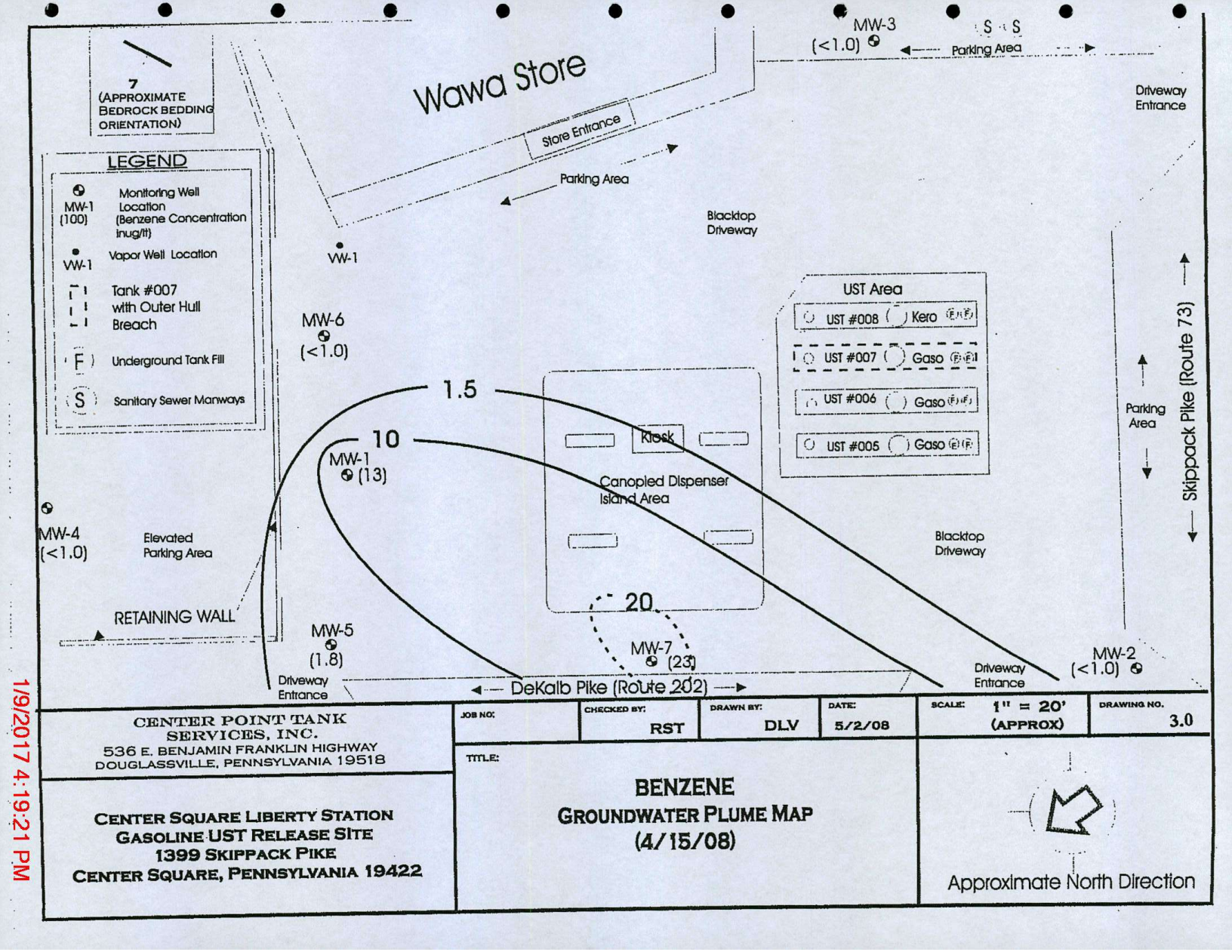
Center Square Liberty Station
Gasoline UST Release Site
1399 Skippack Pike
Center Square, Pennsylvania 19422

TITLE:

Groundwater Contour Map (4/30/08)

Approximate North Direction

1/9/2017 4:19:19 PM



CENTER POINT TANK SERVICES, INC.
536 E. BENJAMIN FRANKLIN HIGHWAY
DOUGLASSVILLE, PENNSYLVANIA 19518

JOB NO:	CHECKED BY:	DRAWN BY:	DATE:	SCALE:	DRAWING NO.
	RST	DLV	5/2/08	1" = 20' (APPROX)	3.0

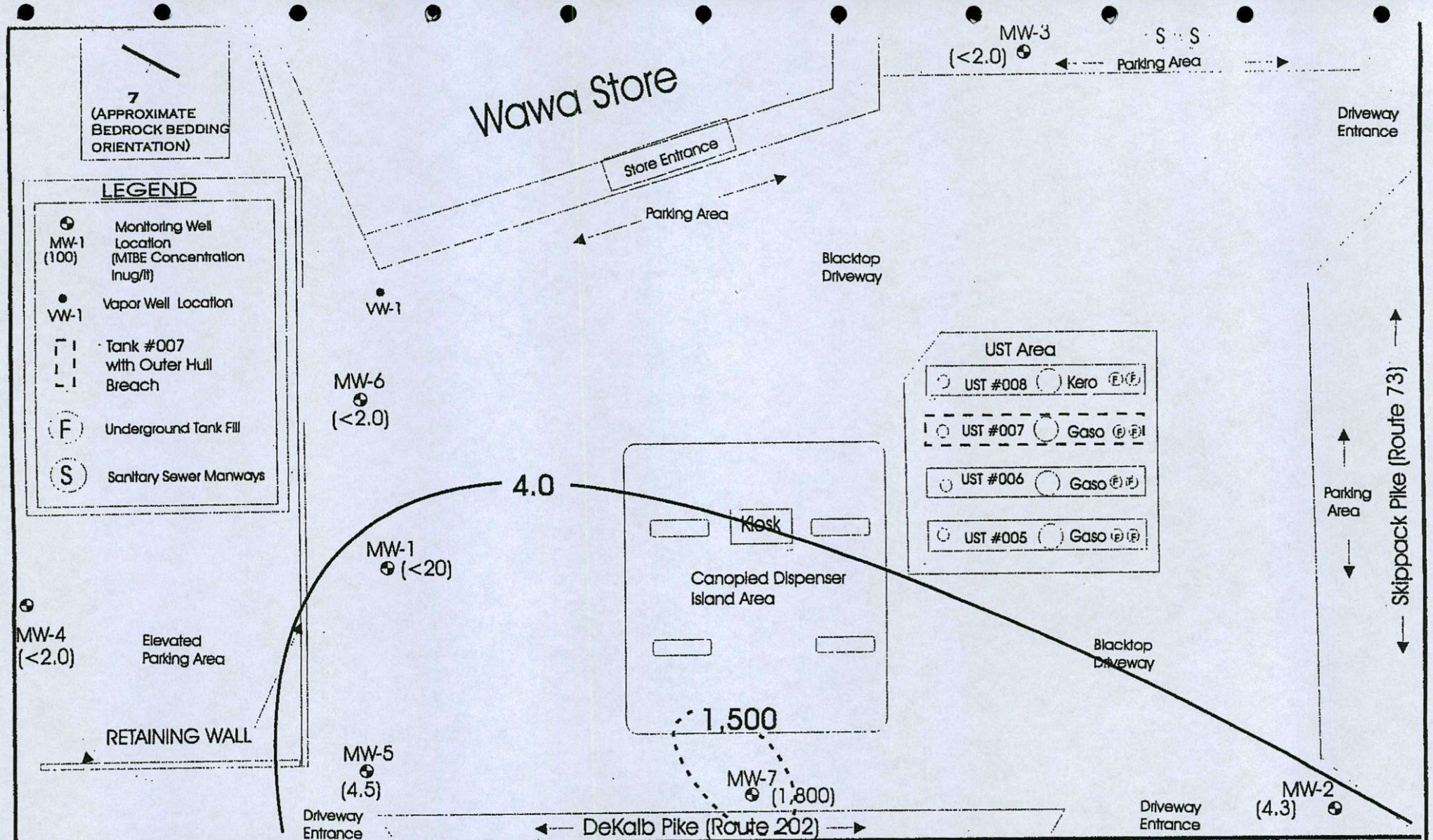
CENTER SQUARE LIBERTY STATION
GASOLINE UST RELEASE SITE
1399 SKIPPACK PIKE
CENTER SQUARE, PENNSYLVANIA 19422

TITLE:

BENZENE
GROUNDWATER PLUME MAP
(4/15/08)

Approximate North Direction

1/9/2017 4:19:21 PM



CENTER POINT TANK SERVICES, INC.
536 E. BENJAMIN FRANKLIN HIGHWAY
DOUGLASSVILLE, PENNSYLVANIA 19518

JOB NO:	CHECKED BY:	DRAWN BY:	DATE:	SCALE:	DRAWING NO.
	RST	DLV	5/2/08	1" = 20' (APPROX)	3.0

CENTER SQUARE LIBERTY STATION
GASOLINE UST RELEASE SITE
1399 SKIPPACK PIKE
CENTER SQUARE, PENNSYLVANIA 19422

TITLE:

MTBE
GROUNDWATER PLUME MAP
(4/15/08)

Approximate North Direction

1/9/2017 4:19:23 PM

TABLE 2.0

Summary of Groundwater Quality Sampling Results
For Events Conducted in 1996-2008

Most Recent Sampling Date: April 30, 2008

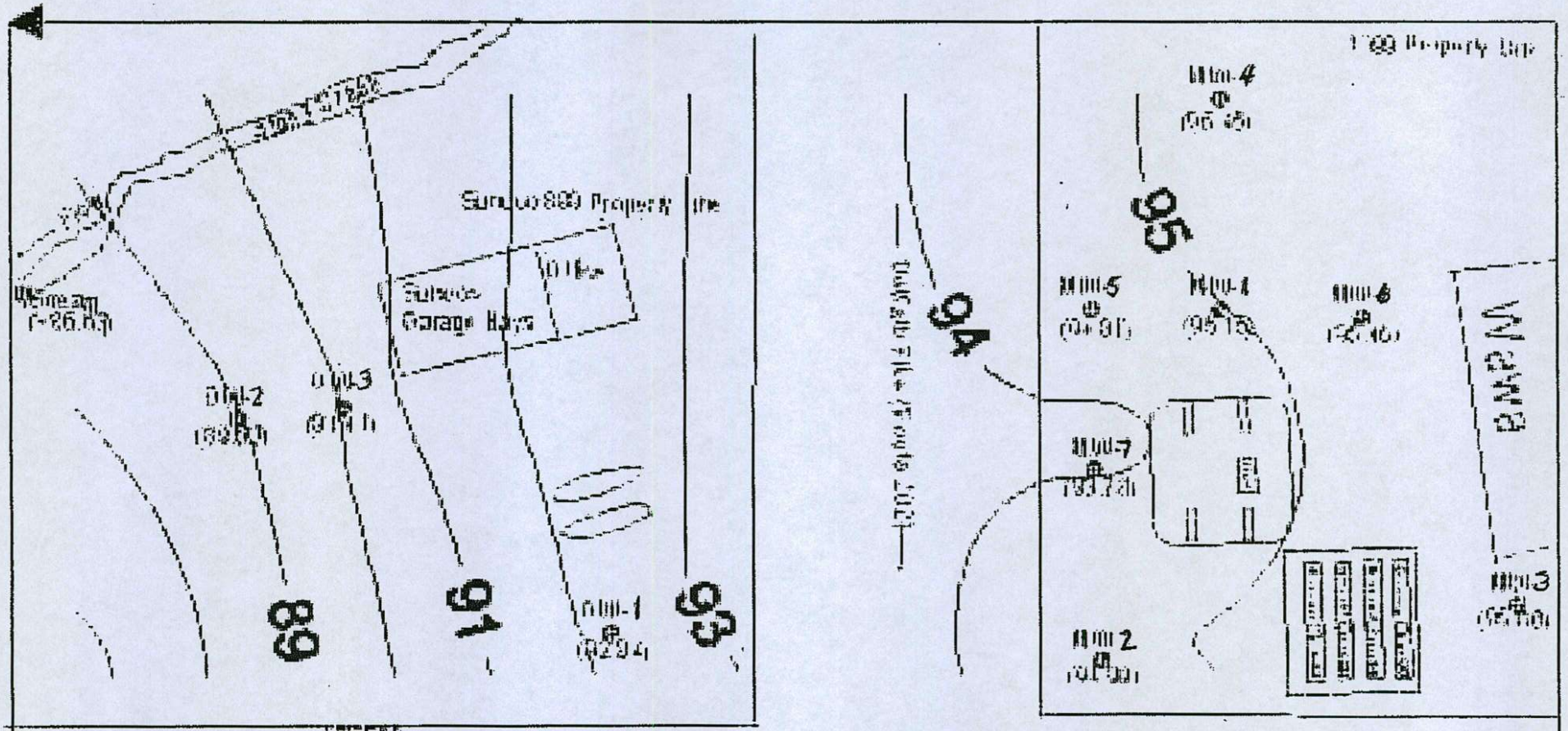
Owner: Petroleum Enterprises of PA, Inc.
Location: Center Square Liberty Station
Address: 1339 Skippack Pike
City/State: Center Square, PA 19422

Sample ID	Sample Date	Benzene	Toluene	Ethyl benzene	Xylenes	Isopropyl-benzene	Naphthalene	MTBE	Trimethyl benzene 1,2,4	Trimethyl benzene 1,3,5	Total BTEX	TPH/ GRO
MW-1	1/26/96	<0.5	<0.5	<0.5	<1.5						<3.0	<100
	11/11/99	<1.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0				
	6/23/00	<1.0	<2.0	<2.0	<6.0	<2.0	<4.0	<2.0				
	9/7/00	<1.0	<2.0	<2.0	<6.0	<2.0	<4.0	<2.0				
	11/9/00	<1.0	<5.0	<2.0	<6.0	<2.0	<4.0	<2.0				
	4/2/01	<1.0	<2.0	<2.0	<6.0	<2.0	<4.0	<2.0				
	3/6/08	19	2.2	65	140	16	36	4.3				
	4/15/08	13	<20	<20	<60	<20	<50	<20	92	<20		
	4/30/08	19	<2.0	11	25	9.9	<5.0	4.2	62	11		
MW-2	1/26/96	34	<5.0	35	149						218	1600
	11/11/99	130	<20	<20	25	<20	<20	950				
	6/23/00	<1.0	<2.0	<2.0	<6.0	<2.0	<4.0	<2.0				
	9/7/00	1.5	<2.0	4.3	<6.0	5.5	<4.0	13				
	11/9/00	67	12	<2.0	<6.0	<2.0	<4.0	2,500				
	4/2/01	1.4	<2.0	<2.0	<6.0	2.0	<4.0	110				
	3/6/08	3.6	<2.0	<2.0	<6.0	3.3	<5.0	16				
	4/15/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	4.3	<2.0	<2.0		
	4/30/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	3.3	<2.0	<2.0		
MW-3	1/26/96	<0.5	<0.5	<0.5	<1.5						<3.0	<100
	11/11/99	9.0	<2.0	12	3.6	8.3	21	140				
	6/23/00	<1.0	<2.0	<2.0	<6.0	<2.0	<4.0	55				
	9/7/00	<1.0	<2.0	<2.0	<6.0	<2.0	<4.0	<2.0				
	11/9/00	<1.0	<5.0	2.2	<6.0	3.6	<4.0	6.4				
	4/2/01	<1.0	<2.0	<2.0	<6.0	<2.0	<4.0	2.1				
	3/6/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	<2.0				
	4/15/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	<2.0	<2.0	<2.0		
	4/30/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	<2.0	<2.0	<2.0		
PADEP Standard		5	1,000	700	10,000	1,100	100	20	16	16		

Sample Results in ug/l. <1.0 indicates concentration less than a detection limit of 1.0 ug/l.
Bold value indicates concentration exceeds PADEP Statewide Health Standard.
The cited PADEP Standard is the Statewide Health Standard for groundwater under a residential, used aquifer scenario.

Sample ID	Sample Date	Benzene	Toluene	Ethyl benzene	Xylenes	Isopropyl-benzene	Naphthalene	MTBE	Trimethyl benzene 1,2,4	Trimethyl benzene 1,3,5
MW-4	4/15/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	<2.0	<2.0	<2.0
	4/30/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	<2.0	<2.0	<2.0
MW-5	4/15/08	1.8	<2.0	<2.0	<6.0	2.8	<5.0	4.5	<2.0	<2.0
	4/30/08	<1.0	<2.0	<2.0	<6.0	2.8	<5.0	2.8	<2.0	<2.0
MW-6	4/15/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	<2.0	<2.0	<2.0
	4/30/08	<1.0	<2.0	<2.0	<6.0	<2.0	<5.0	<2.0	<2.0	<2.0
MW-7	4/15/08	**23**	8.3	33	88	4.6	<5.0	**1,800**	**74**	**18**
	4/30/08	**19**	5.9	26	85	3.4	<5.0	**1,700**	**63**	**20**
PADEP Standard		5	1,000	700	10,000	1,100	100	20	16	16

Sample Results in ug/l. <1.0 indicates concentration less than a detection limit of 1.0 ug/l.
Bold value indicates concentration exceeds PADEP Statewide Health Standard.
The cited PADEP Standard is the Statewide Health Standard for groundwater under a residential, used aquifer scenario.



46-19056

	RST	RST		1" = 40'	

Center Square Liberty Station
Gasoline UST Release Site
1309 Skippack Pike
Blue Bell, Pennsylvania 19422

Site Groundwater Contour Map
(5/30/08)

Approximate North Direction

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1008 W. 9th Ave. - King of Prussia, PA 19606
(610) 337-9992 - FAX (610) 337-9939

10 June 2008

CENTERPOINT TANK SERVICES, INC

Danielle Varnes
536 Benjamin Franklin Highway
Douglassville, PA 19518

RE: Center Square Liberty Station

Laboratory ID #: KRE0715

Enclosed are the results of analyses for samples received by the laboratory on 05/30/08 12:28. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

O Burgos

Oswaldo Burgos

Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1008 W. 9th Ave. - King of Prussia, PA 19606
(610) 337-9992 - FAX (610) 337-9939

CENTERPOINT TANK SERVICES, INC	Project: Center Square Liberty Station	
536 Benjamin Franklin Highway	Project Number: NA	**Reported:**
Douglassville PA, 19518	Project Manager: Danielle Varnes	06/10/08 10:22

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
OW-1	KRE0715-01	Water	05/30/08 11:35	05/30/08 12:28
OW-2	KRE0715-02	Water	05/30/08 11:30	05/30/08 12:28
OW-3	KRE0715-03	Water	05/30/08 11:22	05/30/08 12:28

TestAmerica King Of Prussia

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Oswaldo Burgos, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1008 W. 9th Ave. - King of Prussia, PA 19606
(610) 337-9992 - FAX (610) 337-9939

CENTERPOINT TANK SERVICES, INC	Project: Center Square Liberty Station	
536 Benjamin Franklin Highway	Project Number: NA	Reported:
Douglassville PA, 19518	Project Manager: Danielle Varnes	06/10/08 10:22

Volatile Organic Compounds by EPA Method 8260B

TestAmerica King Of Prussia

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
OW-1 (KRE0715-01) Water Sampled: 05/30/08 11:35 Received: 05/30/08 12:28									
Benzene	**7.3**	1.0	ug/l	1	8060519	06/05/08	06/07/08	EPA 8260B	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	06/09/08	"	
Methyl tert-butyl ether	**200**	2.0	"	"	"	"	06/07/08	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	ND	6.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*104 %*	*89.1-111*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*117 %*	*70.8-124*		"	"	"	"	
Surrogate: Toluene-d8		*106 %*	*83.5-115*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*111 %*	*77.7-126*		"	"	"	"	
OW-2 (KRE0715-02) Water Sampled: 05/30/08 11:30 Received: 05/30/08 12:28									
Benzene	ND	1.0	ug/l	1	8060519	06/05/08	06/07/08	EPA 8260B	
Ethylbenzene	ND	2.0	"	"	"	"	"	"	
Isopropylbenzene	ND	2.0	"	"	"	"	06/09/08	"	
Methyl tert-butyl ether	**54**	2.0	"	"	"	"	06/07/08	"	
Naphthalene	ND	5.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	ND	6.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*103 %*	*89.1-111*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*114 %*	*70.8-124*		"	"	"	"	
Surrogate: Toluene-d8		*105 %*	*83.5-115*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*110 %*	*77.7-126*		"	"	"	"	

Oswaldo Burgos, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1008 W. 9th Ave. - King of Prussia, PA 19606
(610) 337-9992 - FAX (610) 337-9939

CENTERPOINT TANK SERVICES, INC	Project: Center Square Liberty Station	
536 Benjamin Franklin Highway	Project Number: NA	**Reported:**
Douglassville PA, 19518	Project Manager: Danielle Varnes	06/10/08 10:22

Volatile Organic Compounds by EPA Method 8260B

TestAmerica King Of Prussia

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
OW-3 (KRE0715-03) Water Sampled: 05/30/08 11:22 Received: 05/30/08 12:28									
Benzene	**9.4**	1.0	ug/l	1	8060519	06/05/08	06/07/08	EPA 8260B	
Ethylbenzene	**6.8**	2.0	"	"	"	"	"	"	
Isopropylbenzene	**81**	2.0	"	"	"	"	"	"	10
Methyl tert-butyl ether	**5.5**	2.0	"	"	"	"	"	"	
Naphthalene	**9.5**	5.0	"	"	"	"	"	"	
Toluene	ND	2.0	"	"	"	"	"	"	
Xylenes (total)	ND	6.0	"	"	"	"	"	"	
Surrogate: Dibromofluoromethane		*105 %*	*89.1-111*		"	"	"	"	
Surrogate: 1,2-Dichloroethane-d4		*118 %*	*70.8-124*		"	"	"	"	
Surrogate: Toluene-d8		*106 %*	*83.5-115*		"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*113 %*	*77.7-126*		"	"	"	"	

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Oswaldo Burgos, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

1008 W. 9th Ave. - King of Prussia, PA 19606

(610) 337-9992 - FAX (610) 337-9939

CENTERPOINT TANK SERVICES, INC	Project: Center Square Liberty Station	
536 Benjamin Franklin Highway	Project Number: NA	**Reported:**
Douglassville PA, 19518	Project Manager: Danielle Varnes	06/10/08 10:22

Notes and Definitions

10	This compound was below the method control limits in the Check Standard associated with this sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

Oswaldo Burgos, Project Manager

TestAmerica
ANALYTICAL TESTING CORPORATION

CHAIN OF CUSTODY REPORT

1008 W. Ninth Avenue
King of Prussia, PA 19406
(610) 337-9992
FAX (610) 337-9939

1090 King Georges Post Rd
Suite 803
Edison, NJ 08837
(732) 661-0777
FAX (732) 661-0305

Client: Center Point Tank Services
Address: 536 E. B.F. Whitehall
Douglassville PA 19518
Report to:
E-mail:
Phone #: (610) 385 4977
Fax #: (610) 385 4978

Bill To: SAME
Address:
State & Program: PADEP UST
Phone #: ( ) Same
Fax #: ( )

TAT: (STD.) 5 DAY 4 DAY 3 DAY 2 DAY 1 DAY <24 HRS.
Received: ☐ ice ☐ ambient
DATE RESULTS NEEDED:
Deliverable Package: ☐ NO ☐ YES
Temp. Upon Receipt: C
If Yes, please explain:

Project Name: Center Square Liberty Station
Project #/PO#:
Sampler: RS Terefenko

FIELD ID, LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	# of Bottles Preservative Used: MeOH	NaHSO4	HCl	HNO3	H2SO4	NaOH	NONE	TOTAL # OF BOTTLES	SAMPLES FIELD FILTERED ☐ YES ☐ NO	VL GASOLINE	ANALYSIS TYPE	SAMPLE CONTROL: CRACKED/BROKEN	IMPROPERLY SEALED	LABORATORY ID NUMBER
1 OW-1 PID:	5/30/08	1135	W			X					3		X				HRE0715-01
2 OW-2 PID:	↓	11:30	↓			↓					↓		↓				02
3 OW-3 PID:	↓	11:28	↓			↓					↓		↓				03
4 PID:																	
5 PID:																	
6 PID:																	
7 PID:																	
8 PID:																	
9 PID:																	
10 PID:																	

RELINQUISHED	DATE	RECEIVED	DATE	RELINQUISHED	DATE	RECEIVED	DATE
RS Terefenko	5/30/08 17:28		5/30/08 1728				
RELINQUISHED	DATE	RECEIVED	DATE	RELINQUISHED	DATE	RECEIVED	DATE

COMMENTS: Old parameters per Bob JE 5/30/08

PAGE OF

1/9/2017 4:19:38 PM

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

21 January 2008

Ms. Lauren Mapleton
PADEP
Southeast Regional Office
2 East Main Street
Norristown, PA 19401

ECP STORAGE TANK PROG

Re.: Sunoco Service Station (0012-1491)
889 Dekalb Pike (Route 202),
Center Square (Blue Bell) Facility ID # 46-20382
~~Wentz~~ Whitpain Twp
Montgomery County

RECEIVED
DEP-SERO
ENFORCEMENT
2008 FEB -4 PM 3:09

Dear Ms. Mapleton:

At the request of Mr. Martin Liebhardt of Sunoco, Inc. (R&M) (Sunoco) enclosed please find a copy of the Groundwater Sampling Report for the above referenced facility prepared by Mulry and Cresswell Environmental, Inc. (MCE) for a groundwater sampling event which was conducted on 9 November 2007.

As presented in the report, there are currently three groundwater observation wells on the site, which had been the subject of a groundwater sampling program in the mid-1990s. At that time a "No Further Action" letter was issued for very low concentrations of gasoline constituents (BTEX) in groundwater at the site. MTBE was not an analyte in the 1990s during the groundwater monitoring at this location. In consideration of a possible real estate transaction, Sunoco requested that Mulry and Cresswell Environmental, Inc. (MCE) conduct groundwater sampling of the wells at this location. As presented in the attached report, although the recently reported BTEX concentrations are less than those reported in the 1990s, MTBE was reported present in the groundwater samples at concentrations above the Statewide health standard medium specific concentration for used aquifers.

Please contact me at 610-942-9010 if you have any questions pertaining to this report.

Best regards,

James H. Mulry

Environmental Scientist

Enclosure

pc: Martin Liebhardt, Sunoco, Inc. (R&M)
MCE file

188 Genesee Street • The Carr Building • Suite 116 • Auburn, NY 13021 • Tel: (315) 294-5648 • Fax: (315) 294-5649
1691 Horseshoe Pike • Manor Professional Building • Suite 3 • Glenmoore, PA 19343 • Tel: (610) 942-9010 • Fax: (610) 942-9039

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Groundwater Sampling Report, Sunoco Station 0012-1491

889 Dekalb Pike, Center Square (Blue Bell)

Whitpain Township, Montgomery County, PA

14 January, 2008

Prepared for:

Martin D. Liebhardt

Sunoco Inc. (R&M)

Prepared by:

James H. Mulry, P.G.

Mulry and Cresswell Environmental, Inc.

1691 Horseshoe Pike • Manor Professional Building • Suite 3 • Glenmoore, PA 19343 • Tel: (610) 942-9010 • Fax: (610) 942-9039
2 Kenley Court • Bear, DE 19701 • Tel: (302) 834-5310 • Fax: (302) 834-1616

Groundwater Sampling Report, Sunoco Station 0012-1491
889 Dekalb Pike, Center Square (Blue Bell),
21 January 2008

Introduction:

At the request of Mr. Martin D. Liebhardt of Sunoco Inc. (R&M) (Sunoco), on 9 November 2007, Mulry and Cresswell Environmental, Inc. (MCE) conducted groundwater sampling of three groundwater observation wells (OWs) at the Sunoco Station located at 889 Dekalb Pike (Route 202), Center Square (Blue Bell), Whitpain Township, Montgomery County, Pennsylvania. See Figure I, Site Location. Groundwater monitoring had been conducted at this location from 1994 until 1997. The Pennsylvania Department of Environmental Protection (PADEP) granted "No Further Action" status to the site in a 9 April 1998 letter to Mr. Bradford Fish of Sunoco.

This report presents the results of laboratory analyses of groundwater samples collected from the three observation wells, which remain onsite on 9 November 2007.

History:

As depicted in Figure II, Surrounding Properties, the site is located in a mixed commercial and residential area. On 1 December 1993, a 1,000-gallon steel used motor oil underground storage tank (UST) was removed from the site. A Tank Closure Report was submitted to PADEP on 6 January 1994, which contained analytical results for soil samples collected as part of the tank closure process. Soil was reported to contain benzene, toluene, ethylbenzene and xylenes (BTEX at concentrations between below the method detection limit (BDL) and 22 µg/kg and total petroleum hydrocarbons (TPH) at concentrations between BDL and 2,500 mg/kg.

At the request of Mr. Bradford Fish of Sunoco, MCE conducted a Phase I Environmental Assessment (Phase I) at this location in July 1994. The Phase I consisted of installing and sampling soil and groundwater from three observation wells, gauging the depth to water in the wells and calculating relative groundwater elevations. Soil samples from the well installations were analyzed for BTEX and TPH. No BTEX concentrations above the method detection limits were reported for the soil samples from any of the three well borings. TPH was reported at concentrations below the then in force *Cleanup Standards for Contaminated Soil, December 1993.* No BTEX or TPH concentrations above the method detection limits were reported in groundwater samples from wells OWs 2 and 3. The groundwater sample from OW 1 was reported to contain 24 µg/l BTEX and BDL TPH. Historic groundwater analytical data is contained in Table I.

In response to the groundwater quality data contained in the Phase I report, in a 15 December 1994 letter from Ms. Pamela Reigh, PADEP requested that quarterly groundwater monitoring be conducted at this site for a period of one year. At the conclusion of the one-year of monitoring, a request was made to

PADEP that No Further Action (NFA) status be granted to the site. PADEP responded to this request by asking that a well search of the area surrounding the site be conducted and that one additional round of groundwater analyses, including analyses for diesel range total petroleum hydrocarbons (TPH-DRO). Results of both the well search and additional groundwater analyses were submitted to PADEP in the 29 April 1997 *Quarterly Groundwater Monitoring Update Report,* prepared by MCE for Sunoco.

In a 9 April 1998 letter from Ms. Pamela Reigh of PADEP to Mr. Bradford L. Fish of Sunoco, PADEP granted NFA status to this site.

No groundwater monitoring was conducted from 1998 until November 2008, when Mr. Martin Liebhardt of Sunoco re1quested that MCE conduct a groundwater sampling event at this site.

Historic Reports Generated/Submitted by MCE:

Tank Closure Report, 6 January 1994;

Phase I Environmental Assessment, 29 July 1994;

Remedial Action Plan, 19 December 1994;

Quarterly Groundwater Monitoring Update Reports, 1st –4th Quarters 1995 and 1st Quarter 1997.

Work Completed For This Report:

On 9 November 2007, liquid levels were gauged in all three onsite groundwater observation wells, OWs 1-3 to determine relative water table elevations for construction of a water table elevation plot. Subsequent to well gauging, at least three volumes of water were purged from each well and groundwater samples were collected from each well with a stainless steel bailer and poured into laboratory supplied 40 ml glass vials with HCl as a preservative. The samples were delivered to Lancaster Laboratories in Lancaster, PA for analyses for the PADEP short list of gasoline parameters, namely: benzene, toluene, ethylbenzene, xylenes, collectively referred to as BTEX, methyl tertiary butyl ether (MTBE), naphthalene and cumene (isopropylbenzene).

Results:

As displayed in Table I, depth to water in the three observation wells ranged between 4.01' below top of casing (btoc) in OW1 to 7.11' btoc in OW 2 on 9 November 2007. The water table gradient, as depicted on Figure III, *Water*

Table Elevation, 9 November 2007, was to the west with a magnitude of approximately 1'/24' or 0.042 (4.2%), which consistent with historical water table elevation plots.

Dissolve hydrocarbon concentrations reported for the three groundwater samples are presented in Table I and graphically depicted on Figure IV, *Groundwater Analytical Results, 9 November 2007.* As presented in the Table and Figure, all BTEX compounds, naphthalene and cumene were below the laboratory method detection limits for the samples collected from OWs 1 and 2 and below the PADEP cleanup standards (Act 2 Statewide health standard (SHS) Medium Specific Concentrations (MSCs) for used aquifers in residential areas) for the sample collected from OW 3. MTBE was reported at concentrations of: 8 µg/l in the sample from OW 3; 110 µg/l in the sample from OW 2 and 230 µg/l in the sample from OW 1.

Conclusions:

Historically, in 1995 and 1997, benzene had been reported in groundwater samples from OWs 1 and 3, additionally, the remaining BTEX compounds, toluene, ethylbenzene and xylenes, plus naphthalene had been reported in samples from OW 3, indicating that some minor groundwater contamination, most likely from gasoline had occurred. MTBE and cumene were not considered chemicals of concern in 1995 and 1997 and were not analyzed for during that time period. Because they were not historically analyzed for, cumene and MTBE concentrations reported for the November 2007 sampling event cannot be compared to historic analyses.

BTEX and naphthalene concentrations reported for the November 2007 sampling event are lower than historically reported concentrations indicating no new gasoline releases have occurred since that time.

Recommendations:

Fate and transport analyses should be conducted for dissolved MTBE to ensure that impact to the stream bordering the site to the north is not anticipated.

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

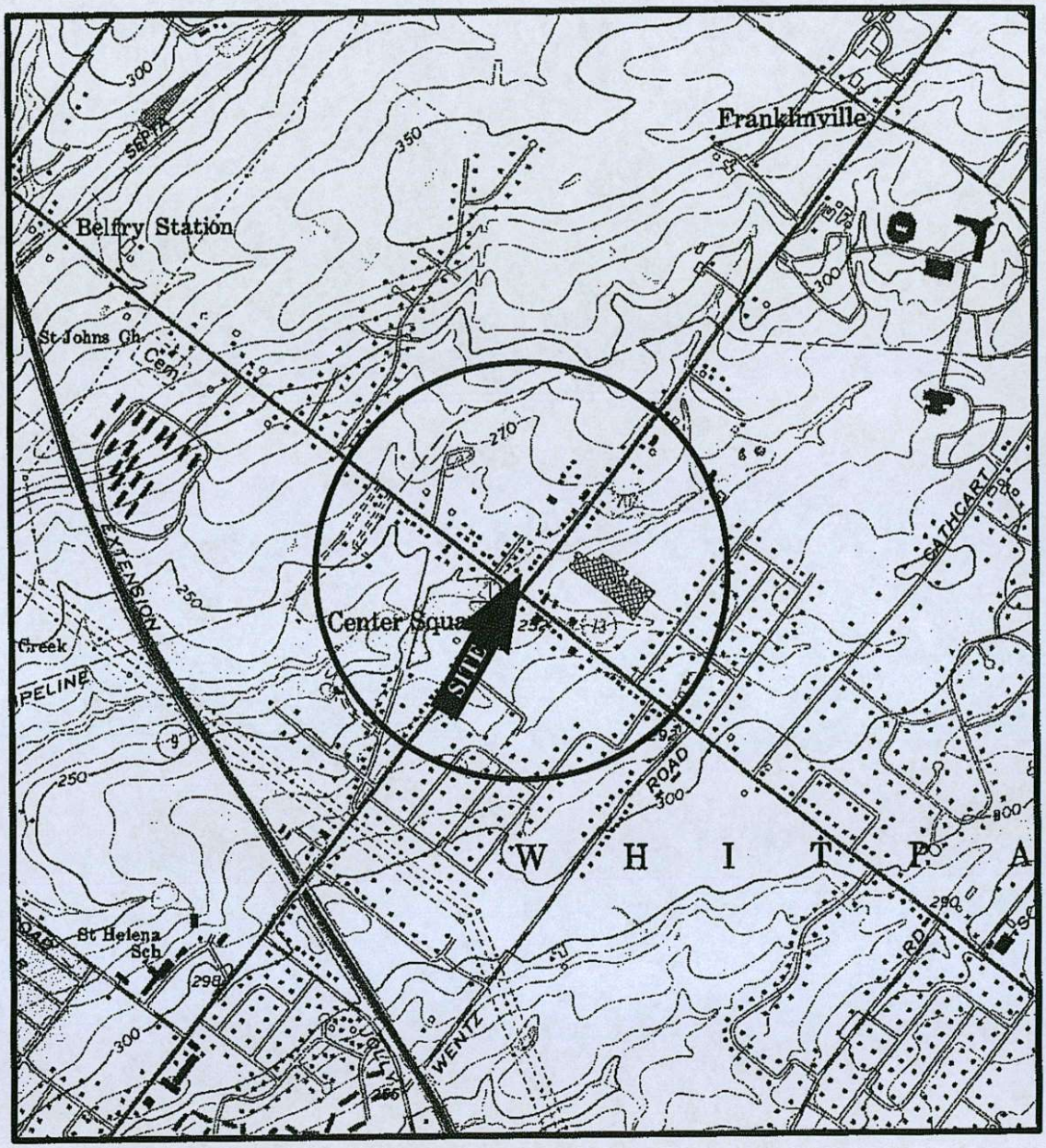


FIGURE I
SITE LOCATION
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

SCALE IN FEET
00 2000 4000

SOURCE: USGS. LANSDALE, PA
QUADRANGLE. 1966
PHOTOREVISED 1983

1/9/2017 4:19:48 PM

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

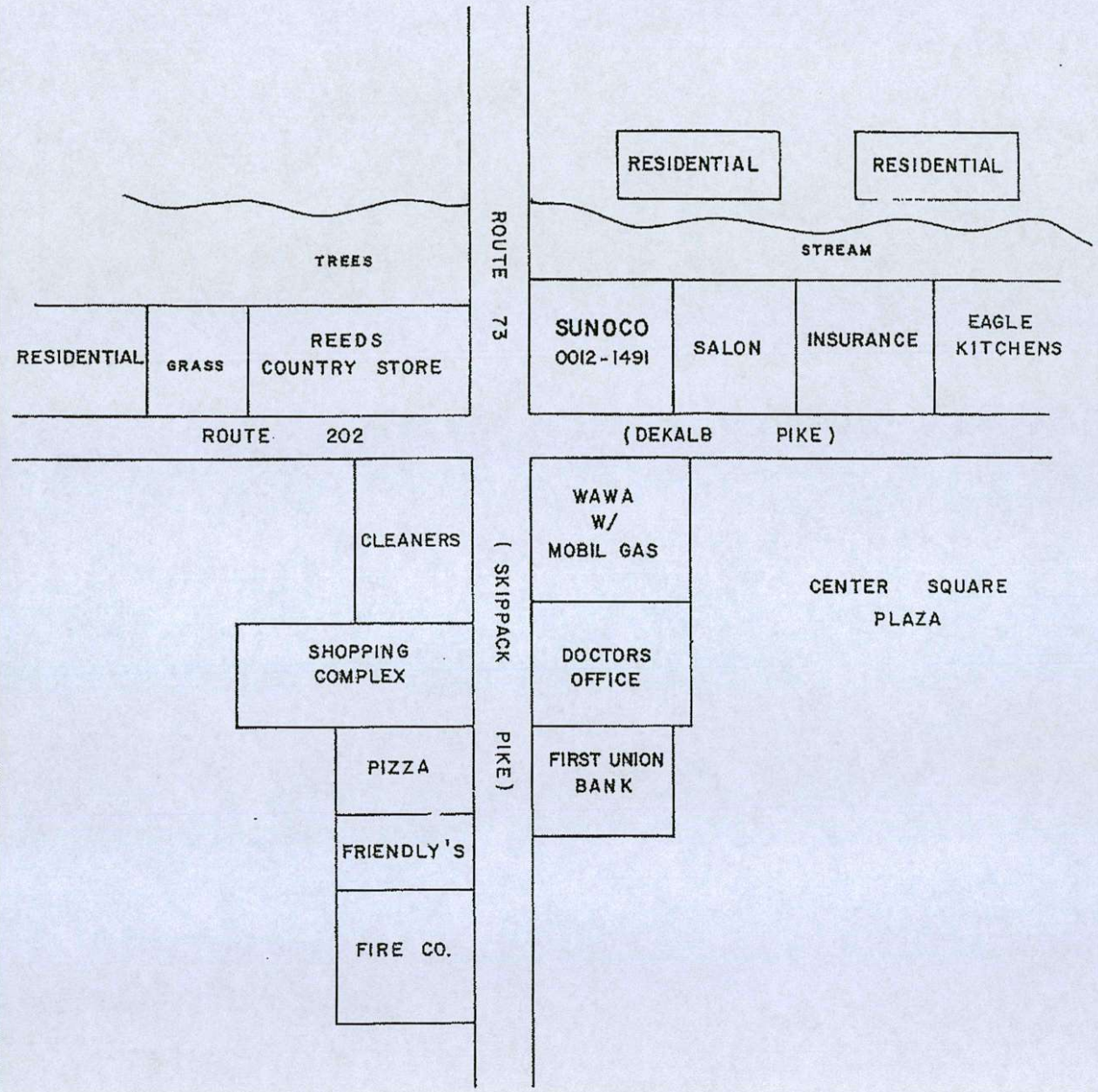


FIGURE II
SURROUNDING PROPERTIES
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

SURROUNDING PROPERTIES AS OF MARCH 1997

NOT TO SCALE

Mulry and Cresswell
Environmental, Inc.

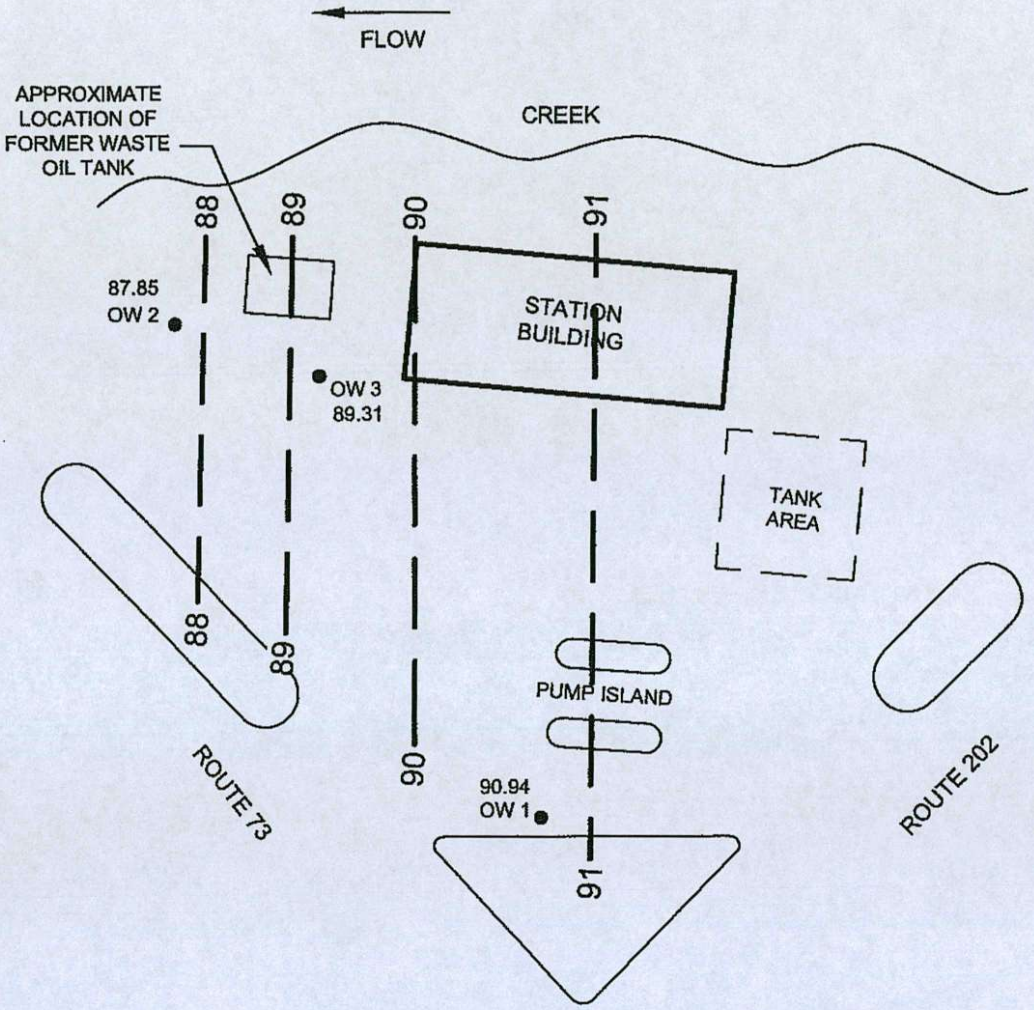


FIGURE III
WATER TABLE ELEVATION (FEET)
9 NOVEMBER 2007
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

Mulry and Cresswell
Environmental, Inc.

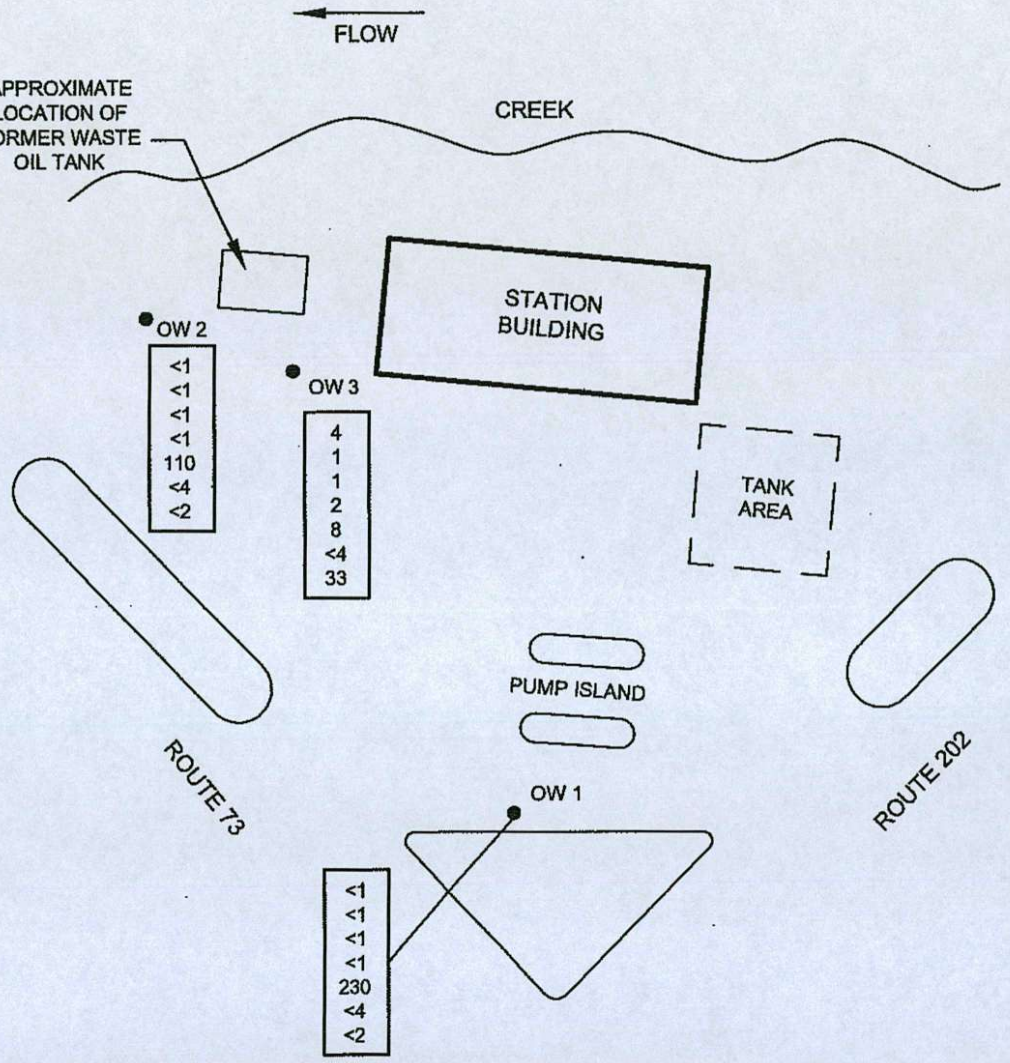


FIGURE IV
GROUNDWATER ANALYTICAL RESULTS
9 NOVEMBER 2007
SUNOCO SERVICE STATION
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PENNSYLVANIA

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

Table I: Water Levels, Water Table Elevation and Groundwater Analytical Results Summary

(all water level data are in feet, all concentration values are presented in ug/l)

Sunoco Station 0012-1491,889 Dekalb Pike (Route 202), Center Square (Blue Bell)

Whitpain Township, Montgomery County, PA

OW 1 **Casing Elevation : 94.95** **Total Depth 31'**

Date	Depth to Water	Water Elevation	Constituents of Concern (ug/l)						
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Cumene
16-Jun-94	4.45	90.5	8	< 1		< 1	NA	NA	NA
17-Mar-95	3.53	91.42	12	BDL	< 1	< 3	NA	NA	NA
28-Jun-95	4.59	90.36	BDL	BDL	BDL	BDL	NA	NA	NA
9-Oct-95	4.17	90.78	< 1	BDL	BDL	BDL	NA	NA	NA
15-Dec-95	4.13	90.82	6	< 1	< 1	< 3	NA	NA	NA
26-Feb-97	3.64	91.31	< 1	< 1	BDL	< 3	NA	< 5	NA
9-Nov-07	4.01	90.94	< 1	< 1	< 1	< 1	230	< 4	< 2

OW 2 **Casing Elevation : 94.96** **Total Depth 23'**

Date	Depth to Water	Water Elevation	Constituents of Concern (ug/l)						
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Cumene
16-Jun-94	8.15	86.81	< 1	< 1	< 1	< 1	NA	NA	NA
17-Mar-95	6.66	88.3	BDL	BDL	BDL	< 3	NA	NA	NA
28-Jun-95	7.92	87.04	BDL	BDL	BDL	BDL	NA	NA	NA
9-Oct-95	7.54	87.42	BDL	BDL	BDL	BDL	NA	NA	NA
15-Dec-95	6.96	88	< 1	< 1	BDL	< 3	NA	NA	NA
26-Feb-97	6.55	88.41	BDL	< 1	BDL	< 3	NA	< 5	NA
9-Nov-07	7.11	87.85	< 1	< 1	< 1	< 1	110	< 4	< 2

OW 3 **Casing Elevation : 95.82** **Total Depth 22'**

Date	Depth to Water	Water Elevation	Constituents of Concern (ug/l)						
			Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene	Cumene
16-Jun-94	7.24	88.58	< 1	< 1	< 1	< 1	NA	NA	NA
17-Mar-95	6.63	89.19	43	4	80	30	NA	NA	NA
28-Jun-95	7.65	88.17	21	1	23	22	NA	NA	NA
9-Oct-95	6.87	88.95	18	1	35	3	NA	NA	NA
15-Dec-95	6.70	89.12	46	2	110	6	NA	NA	NA
26-Feb-97	6.53	89.29	44	4	76	8	NA	49	NA
9-Nov-07	6.51	89.31	4	1	1	2	8	< 4	33
PA ACT II UA <2500 TDS NR			5	1,000	700	10,000	20	100	2,300

NA = not analyzed

BDL = below method detection limt

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

610-942-9010

Prepared by:

Lancaster Laboratories
2425 New Holland Pike
Lancaster, PA 17605-2425

SAMPLE GROUP

The sample group for this submittal is 1065205. Samples arrived at the laboratory on Monday, November 12, 2007. The PO# for this group is CENTER SQUARE.

Client Description	Lancaster Labs Number
OW-3 Water	5210793
OW-2 Water	5210794
OW-1 Water	5210795

ELECTRONIC COPY TO	LLI	Attn: EDD Group
ELECTRONIC COPY TO	Mulry & Cresswell Env.	Attn: James Mulry

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Analysis Report

Questions? Contact your Client Services Representative
Lynn M Frederiksen at (717) 656-2300

Respectfully Submitted,

Christine Dulaney
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5210793

OW-3 Water
889 Dekalb Pike, Blue Bell, PA
DUNS# 00121491 COC: 0148905 OW-3

Collected:11/09/2007 14:05 by SBT

Account Number: 08474

Submitted: 11/12/2007 16:10
Reported: 11/19/2007 at 17:56
Discard: 01/19/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

CS--3

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	8.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	4.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	33.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	2.	1.	0.5	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-00037
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	11/16/2007 23:51	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/16/2007 23:51	Florida A Cimino	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. WW 5210794

OW-2 Water
889 Dekalb Pike, Blue Bell, PA
DUNS# 00121491 COC: 0148905 OW-2

Collected:11/09/2007 14:15 by SBT

Account Number: 08474

Submitted: 11/12/2007 16:10
Reported: 11/19/2007 at 17:56
Discard: 01/19/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

CS--2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	110.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	< 1.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	< 1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	< 2.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.	1.	0.5	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-00037
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	11/17/2007 00:18	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/17/2007 00:18	Florida A Cimino	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Lancaster Laboratories Sample No. WW 5210795

OW-1 Water
889 Dekalb Pike, Blue Bell, PA
DUNS# 00121491 COC: 0148905 OW-1

Collected:11/09/2007 14:25 by SBT

Account Number: 08474

Submitted: 11/12/2007 16:10
Reported: 11/19/2007 at 17:56
Discard: 01/19/2008

Sunoco c/o Mulry & Cresswell
2 Kenley Court
Bear DE 19701

CS--1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Limit of Quantitation*	As Received Method Detection Limit	Units	Dilution Factor
02300	UST-Unleaded Waters by 8260B						
02010	Methyl Tertiary Butyl Ether	1634-04-4	230.	1.	0.5	ug/l	1
05401	Benzene	71-43-2	< 1.	1.	0.5	ug/l	1
05407	Toluene	108-88-3	< 1.	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	< 1.	1.	0.5	ug/l	1
05420	Isopropylbenzene	98-82-8	< 2.	2.	0.5	ug/l	1
05439	Naphthalene	91-20-3	< 4.	4.	1.	ug/l	1
06310	Xylene (Total)	1330-20-7	< 1.	1.	0.5	ug/l	1

Commonwealth of Pennsylvania Lab Certification No. 36-00037
Trip blank vials were not received by the laboratory for this sample group.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
02300	UST-Unleaded Waters by 8260B	SW-846 8260B	1	11/17/2007 04:45	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/17/2007 04:45	Florida A Cimino	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell
Reported: 11/19/07 at 05:56 PM

Group Number: 1065205

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank LOQ**	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P073204AA	Sample number(s): 5210793-5210795								
Methyl Tertiary Butyl Ether	< 1.	1.	0.5	ug/l	92	92	73-119	0	30
Benzene	< 1.	1.	0.5	ug/l	98	97	78-119	2	30
Toluene	< 1.	1.	0.5	ug/l	94	95	85-115	2	30
Ethylbenzene	< 1.	1.	0.5	ug/l	94	95	82-119	1	30
Isopropylbenzene	< 2.	2.	0.5	ug/l	95	95	80-113	0	30
Naphthalene	< 4.	4.	1.	ug/l	100	100	61-116	0	30
Xylene (Total)	< 1.	1.	0.5	ug/l	99	100	83-113	1	30

Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: P073204AA	Sample number(s): 5210793-5210795 UNSPK: P210787								
Methyl Tertiary Butyl Ether	94		69-127						
Benzene	102		83-128						
Toluene	101		83-127						
Ethylbenzene	102		82-129						
Isopropylbenzene	103		81-130						
Naphthalene	96		57-125						
Xylene (Total)	106		82-130						

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: UST-Unleaded Waters by 8260B
Batch number: P073204AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5210793	103	98	100	97
5210794	103	97	101	94
5210795	103	98	100	94
Blank	104	99	100	95
LCS	102	101	99	96
LCSD	102	100	99	97
MS	103	100	102	100

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

1/9/2017 4:20:03 PM

Quality Control Summary

Client Name: Sunoco c/o Mulry & Cresswell Group Number: 1065205
Reported: 11/19/07 at 05:56 PM

Surrogate Quality Control

Limits:	80-116	77-113	80-113	78-113

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Analysis Request/ Environmental Services Chain of Custody

Lancaster Laboratories

For Lancaster Laboratories use only

Acct. # 8474 Group# 1065205 Sample # 5210793-5

COC # 0148905

Please print. Instructions on reverse side correspond with circled numbers.

① Client: Mulry & Cresswell Acct. #: 8474-SCN

Project Name/#: Center Square PWSID #:

Project Manager: J. Mulry P.O.#:

Sampler: S.B.T. Quote #:

Name of state where samples were collected: PA

For Lab Use Only
FSC:
SCR#:

⑥ Preservation Codes
H=HCl T=Thiosulfate
$N=HNO_3$ B=NaOH
$S=H_2SO_4$ O=Other

⑤ Preservation Codes

② Sample ID	Date	Time	③				Total #	④ BTEX/MTBE Oxygenates / Ethanol by 8260B	Remarks
OW-3	11/9/07	1405	X			X	3	X	
OW-2	↓	1415	X			X	3	X	
OW-1		1425	X			X	3	X	1.0°C

Remarks: 1.0°C
Per Jim Mulry:
DUNS # 0012-1491
889 Dekalb Pike
Blue Bell, PA
(also known as Center Square)
LF 11/14/07

⑦ **Turnaround Time Requested** (TAT) (please circle): Normal (circled) Rush
(Rush TAT is subject to Lancaster Laboratories approval and surcharge.)
Date results are needed:
Rush results requested by (please circle): Phone Fax E-mail
Phone #: Fax #:
E-mail address:

⑧ **Data Package Options** (please circle if required)

Type I (validation/NJ Reg)	TX TRRP-13	SDG Complete? Yes No
Type II (Tier II)	MA MCP CT RCP	
Type III (Reduced NJ)	Site-specific QC (MS/MSD/Dup)? Yes No	
Type IV (CLP SOW)	(If yes, indicate QC sample and submit triplicate volume.)	
Type VI (Raw Data Only)	Internal COC Required? Yes / No	

⑨

Relinquished by:	Date	Time	Received by:	Date	Time
[signature]	11/9/07	1640	[signature]	11/12/07	0947
[signature]	11/12/07	1615			
			[signature]	11/12/07	1610

Lancaster Laboratories, Inc., 2425 New Holland Pike, Lancaster, PA 17601 (717) 656-2300 Fax: (717) 656-6766
Copies: White and yellow should accompany samples to Lancaster Laboratories. The pink copy should be retained by the client.

2102.03

1/9/2017 4:20:06 PM

Lancaster Laboratories
Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< less than – The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

ppm parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike amount not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

2570-FM-LRWM0501a Rev. 7/2005

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DEP-SERO
ECP/WASTE MGNT.
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COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF WASTE MANAGEMENT
STORAGE TANK DIVISION

UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

FOR DEP USE ONLY
Reviewer _____
Date _____
Entered by _____
Date _____

FACILITY INFORMATION
ID Number 46-20382
Name SUNOCO
Address 889 DeKALB PK
Blue Bell, PA. 19422

Representative Present During Inspection
Name Shailesh BHALALA
Phone 610-239-2445
☐ Owner ☐ Operator ☑ Employee

CERTIFIED INSPECTOR
Name DAVID STASAK
ID No. 3574

Date of First Site Visit (month/day/year) 4/12/06

OPERATOR (if different than owner)
Name _____
Address _____

Financial Responsibility Information
- Required of all UST owners except state agencies.
- Provided by USTIF. Owner must have deductibles available as provided in regulations.

A Fire Marshal or L & I permit must be displayed (nearly all flammable or combustible liquid tanks).

Suspected or confirmed contamination observed - notify proper region within 48 hours.

Improperly closed or unregistered tanks present Yes ☐ (If so, provide comment) No ☒

Amended registration form required for (check all that apply):
- ☐ Added tanks
- ☐ Closed tanks
- ☐ Change in tank size
- ☐ Change in substance stored
- ☐ Change of operational status (in or out of service)
- ☐ Change of owner

Inspection summary.
Indicate the compliance status of each item below using the following codes: N = Non-Compliant C = Compliant

	Tank No. 001	Tank No. 002	Tank No. 003	Tank No.	Tank No.
Tank Construction and Corrosion Protection	C	C	C		
Piping Construction and Corrosion Protection	C	C	C		
Spill Prevention	C	C	C		
Overfill Prevention	C	C	C		
Registration Certificate Display	C	C	C		
Tank Release Detection	C	C	C		
Piping Release Detection	C	C	C		

I, the DEP Certified Inspector (IUM), have inspected the entire above referenced facility including examining manways, sumps, monitoring wells and dispensers. Based on my personal observation of the facility and documentation provided by the owner, I certify under penalty of law as provided in 18 PA C.S.A. Section 4904 (relating to unsworn falsification to authorities), that the information provided by me is true, accurate, and complete to the best of my knowledge and belief.

DAVID STASAK — Certified Inspector's Signature
4/12/06 — Date

As the representative of the owner or operator, I have reviewed the completed inspection report. I certify under penalty of law as provided in 18 PA C.S.A. Section 4904 (relating to unsworn falsification to authorities), that the information provided by me is true, accurate, and complete to the best of my knowledge and belief.

Kathleen McCarey — Signature
Compliance Coordinator — Title
4-21-06 — Date

Original: Regional Office – Norristown, Wilkes Barre, Harrisburg, Williamsport, Pittsburgh, or Meadville
Copy: Owner
Copy: DEP, Division of Storage Tanks, P.O. Box 8763, Harrisburg, PA 17105-8763

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UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name SUNOCO Date 4/12/06 Facility ID 46-20382

I. TANK SYSTEM INFORMATION. For each tank, write in the Tank Number at the top of the column, its capacity, substance stored, installation date and manifold condition ("—" if not a drone tank) directly underneath. Fill in the remainder of the Tank System Information using the proper Tank System Component Code from the lists at the bottom of the page.

		Tank No. 001	Tank No. 002	Tank No. 003	Tank No.	Tank No.	DEP Use
1.	Tank Capacity (name plate gallons)	8,000	8,000	8,000			
2.	Substance Stored	GAS	GAS	GAS			
3.	Installation Date	10/83	10/83	10/83			
4.	This drone tank is manifolded to tank no.	002	N	N			
5.	Tank status	C	C	C			
6.	Total secondary containment on this tank system	N	N	N			(18)
7.	Tank construction and corrosion protection	E	E	E			(1)
8.	Main piping construction and corrosion protection	J	J	J			(2)
9.	Piping flexible joints/connectors construction (list all)	I	I	I			(PFLX)
10.	Pump (product dispensing) system	A	C	C			(4)
11.	Spill protection	Y	Y	Y			(6)
12.	Overfill type	S	S	S			(7)
13.	Current registration certificate display	Y	Y	Y			(8)
14.	Stage I vapor recovery	B	B	B			(19)
15.	Stage II vapor recovery	B	B	B			(20)
	Evaluate the tank system leak detection methods carefully before filling in the next 3 rows.						
16.	Tank release detection	E	E	E			(12)
17.	Piping small release detection (0.2 gph monthly or 0.1 gph annually)	I	B	B			(5)
18.	Pressure (C or D) piping line leak detector	H	A	A			(5)

Tank System Component Codes

5. Tank status
- C Currently in use
- T Temporarily out of use and empty
- I Product present, not being used (idle)

6. Total secondary containment
- Y Yes
- N No

7. Tank construction
- A Unprotected Steel (single wall)
- B Cathodically Protected Steel (Galvanic)
- C Cathodically Protected Steel (Impressed Current)
- D Unprotected Steel (double wall)
- E Fiberglass (Single Wall)
- F Fiberglass (Double Wall)
- G Steel w/ Plastic or Fiberglass Jacket (includes double wall Act 100)
- H Steel w/ FRP Coating (Act 100 or equivalent)
- I Steel w/ lined interior
- J Concrete
- N Unknown
- O Cathodically Protected Double Walled Steel
- P Cathodically protected steel with liner
- 99 Other (must provide written comment)

8. Main piping construction
- A Bare Steel (including only wrapped or coated)
- B Cathodically Protected, Metallic
- C Copper
- D Fiberglass or rigid non-metallic
- E Flexible Non-metallic
- F Unknown
- G No piping requiring corrosion protection (must provide written comment)
- I Double wall, metallic primary
- J Double wall rigid (FRP) primary
- K Double wall flexible primary
- 99 Other (must provide written comment)

9. Piping flexible joints/connectors
- A Unprotected metallic component(s) (including only wrapped or coated)
- B Cathodically Protected, Metallic
- C Flexible coupling with protected metallic ends
- F Unknown
- I Completely inside a containment sump, secondary pipe or liner
- M Completely jacketed with sealed boot
- N Not in contact with the ground
- 99 Other (must provide written comment)

10. Pump (delivery) system
- A Suction: check valve at pump or siphon
- B Suction: check valve at tank
- C Pressure
- D Gravity flow to dispenser
- E None or piping ALL aboveground

11. Spill protection
- Y Yes
- E Filled in less than 25 gallon increments
- N None

12. Overfill type
- S Drop tube shut off device
- A Overfill alarm
- B Ball float valve
- E Filled in less than 25 gallon increments
- N None

13. Current registration certificate display
- Y Properly displayed
- N Not Displayed

14. Stage I vapor recovery
- A Coaxial
- B 2 port
- N Not complete or none

15. Stage II vapor recovery
- A Complete balance system
- B Complete assist system
- C UG piping only
- N Not complete or none

16. Tank release detection
- A Inventory Control; requires code C or E
- C Tank Tightness Testing every 5 years
- D Statistical Inventory Reconciliation (SIR)
- E Automatic Tank Gauging (0.2 gph Leak Test)
- F Manual Tank Gauging (36 Hour)
- G Manual Tank Gauging (44 or 58 Hour)
- H Interstitial Monitoring (2 Walls)
- I Interstitial Monitoring (Liner)
- J Groundwater Monitoring
- K Vapor Monitoring
- N None
- O Exempt (must provide written comment)

17. Piping small release detection (0.2/0.1 gph)
- B Annual Line Tightness Test (pressure)
- C Line Tightness Test - 3 years (suction)
- D Interstitial Monitoring (monthly)
- E Groundwater Monitoring
- F Vapor Monitoring
- H None
- I Exempt (must provide written comment)
- J Statistical Inventory Reconciliation (SIR)
- K Electronic Line Leak Detector (0.2 gph test)

18. Piping line leak detector (3 gph within 1 hr.)
- A Automatic Line Leak Detector (incl. test)
- H None
- K Electronic Line Leak Detector (3 gph test)
- L Continuous interstitial monitoring with alarm or pump shut off.

UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name Sunoco Date 4/12/06 Facility ID 46-20382

II. Release Detection Reference

- Records may be located at the facility or a readily available alternate site.
- The records include all of the information listed below for chosen release detection methods.
- The inspector has actually seen the records.
- A test inconclusive result or failure is an indication of a possible product (suspected) release.

Tank System	Tank System	Tank System	Tank System	Tank System
001	002	003		

Instructions: ***Check the box to indicate that criteria has been met. Circle the box to indicate that criteria has not been met. Circle with "N/A" when criteria is not applicable.***

Inventory Control: (Tank only - code A)

☐	☐	☐	☐	☐	<10 years since installation or addition of corrosion protection to bare steel tank
☐	☐	☐	☐	☐	stick (or ATG) capable of measuring to 1/8th inch
☐	☐	☐	☐	☐	stick (or ATG) readings and dispenser readings each operating day
☐	☐	☐	☐	☐	1/8th inch accuracy in product (stick) readings
☐	☐	☐	☐	☐	before/after delivery stick readings reconciled with delivery receipts
☐	☐	☐	☐	☐	deliveries made through a drop tube
☐	☐	☐	☐	☐	dispenser meter calibrated
☐	☐	☐	☐	☐	monthly check for water (1/8th inch accuracy)
☐	☐	☐	☐	☐	monthly reconciliation (1% of volume pumped plus 130 gallons) performed

Precision Tightness Test: (Tank only - code C)

☐	☐	☐	☐	☐	complete documentation of tightness test available
☐	☐	☐	☐	☐	performed by UTT certified installer (after 9/28/96)
☐	☐	☐	☐	☐	manufacturer's certification of ability to detect 0.1 gph release is available

date of last test _____, result _____

method used (after 10/11/1994) _____

Statistical Inventory Reconciliation: (Tank code D, and/or piping code J)

☐	☐	☐	☐	☐	manufacturer's certification of ability to detect 0.2 gph release is available
☐	☐	☐	☐	☐	data is collected according to the test vendor's instructions
☐	☐	☐	☐	☐	analysis completed monthly and results supplied to owner/operator within 20 days
☐	☐	☐	☐	☐	suspected releases properly investigated

test vendor _____

Automatic Tank Gauging: (Tank only - code E)

Does the automatic tank gauge perform continuous in-tank release detection? ☑ Yes, ☐ No

☑	☑	☑	☐	☐	valid monthly leak test conducted and documented

ATG manufacturer VR ATG model TLS-350

☑	☑	☑	☐	☐	manufacturer's certification of ability to detect 0.2 gph release is available
☑	☑	☑	☐	☐	probes and gauge software certified for manifolded tank systems

- When not specifically certified, the siphon must be broken to properly test

date installed N/A

- Uncertified gauges installed before 12/22/1990 also require inventory control

☑	☑	☑	☐	☐	maintenance records including calibration, preventative, and repair for the last year
☑	☑	☑	☐	☐	equipment is operational

Manual Tank Gauging: (Tank only - code F (may require code C) or G)

☐	☐	☐	☐	☐	tank capacity is 2,000 gallons or less
☐	☐	☐	☐	☐	performed weekly
☐	☐	☐	☐	☐	1/8th inch accuracy stick readings
☐	☐	☐	☐	☐	average 2 stick readings before and after test
☐	☐	☐	☐	☐	test length appropriate for each tank

- 36 hours minimum
- 44 hours, 551-1000 gallons, 64" diameter, no tightness test
- 58 hours, 551-1000 gallons, 48" diameter, no tightness test

☐	☐	☐	☐	☐	variation is within standard (both weekly and monthly)

UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name Sunoco Date 4/12/06 Facility ID 46-20382

II. RELEASE DETECTION REFERENCE (continued)

Tank System 001	Tank System 002	Tank System 003	Tank System	Tank System

Instructions: ***Check the box to indicate that criteria has been met. Circle the box to indicate that criteria has not been met. Circle with "N/A" when criteria is not applicable.***

Interstitial Monitoring: (Tank code H or I)

- ☐ interstitial area monitored monthly
- ☐ interstitial probes properly placed (per manufacturer's instructions)
- ☐ monitoring wells (secondary barrier) or ports are clearly marked and secured
- ☐ maintenance records including calibration, preventative, and repair for the last year
- ☐ equipment manufacturer's performance claims are available
- ☐ secondary barrier is compatible with and impermeable to the stored substance

Groundwater Monitoring: (Tank code J, and/or piping code E)

- ☐ regulated substance stored is immiscible in water and has a specific gravity <1
- ☐ groundwater is within 20 feet of surface grade and soil hydraulic conductivity is ≥ 0.01 cm/sec
- ☐ casing is properly slotted and allows entry of product during high and low groundwater conditions
- ☐ wells are sealed from ground surface to the top of the filter pack
- ☐ site evaluation verifies the above information; wells are located according to site evaluation; attach evaluation cover page to inspection report.
- ☐ monitoring devices can detect 1/8 inch of product or less on water
- ☐ maintenance records including calibration, preventative, and repair for the last year
- ☐ equipment manufacturer's performance claims are available
- ☐ monitoring wells are marked and secured
- ☐ wells monitored and results recorded monthly in accordance with site evaluation

Vapor Monitoring: (Tank code K, and/or piping code F)

- ☐ stored substance is sufficiently volatile and backfill allows diffusion of vapors from releases
- ☐ the monitoring device is not rendered inoperative by groundwater, rainfall, or soil moisture
- ☐ background contamination will not interfere with vapor monitoring
- ☐ vapor monitors are designed and operated to detect increases in concentrations of stored substance
- ☐ site evaluation verifies above information; wells are located according to the site evaluation; attach evaluation cover page to inspection report.
- ☐ maintenance records including calibration, preventative, and repair for the last year
- ☐ equipment manufacturer's performance claims are available
- ☐ monitoring wells are marked and secured
- ☐ wells monitored and results recorded monthly in accordance with site evaluation

IUM Release Detection Record Review: (All release detection codes)

- An empty tank or one supplying an emergency generator only is not required to perform release detection. Indicate date emptied or that it is an emergency generator tank in Section V.
- New tank systems must begin performing release detection immediately after receiving product. Indicate date of first product receipt in Section V.

- ☑ ☑ ☑ ☐ ☐ Last 12 months of tank release detection records are available
- ☑ ☑ ☑ ☐ ☐ Tank release detection records are valid and passing

- ☐ (N/A) ☑ ☑ ☐ ☐ Last 12 months of pipe release detection records are available
- ☐ (N/A) ☑ ☑ ☐ ☐ Pipe release detection records are valid and passing

UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name SUNOCO Date 4/12/06 Facility ID 46-20382

II. RELEASE DETECTION REFERENCE (continued)

Pipe 001	Pipe 002	Pipe 003	Pipe	Pipe

Instructions: *Check the box to indicate that criteria has been met. Circle the box to indicate that criteria has not been met. Circle with "N/A" when criteria is not applicable.*

Check Valve at the Dispenser: (SUCTION piping only - code I)
NOTE: No further release detection required on piping meeting all these criteria.

001	002	003			
☑	☐	☐	☐	☐	the tank is lower than the dispenser
☑	☐	☐	☐	☐	the below grade piping slopes uniformly back to the tank
☑	☐	☐	☐	☐	there is no more than one check valve in the piping
☑	☐	☐	☐	☐	the check valve is located close to or inside the suction pump
☑	☐	☐	☐	☐	compliance with above specifications can be readily determined; describe in remarks

Interstitial Monitoring: (Piping code D and/or L)

☐	☐	☐	☐	☐	interstitial area monitored monthly (required)
☐	☐	☐	☐	☐	interstitial probes properly placed (per manufacturer's instructions)
☐	☐	☐	☐	☐	monitoring wells or ports (when used) are clearly marked and secured
☐	☐	☐	☐	☐	maintenance records including calibration, preventative, and repair for the last year
☐	☐	☐	☐	☐	equipment manufacturer's performance claims are available
☐	☐	☐	☐	☐	secondary barrier (pipe) is compatible with and impermeable to the stored substance
☐	☐	☐	☐	☐	(Code L) continuous monitoring with acceptable alarm used as line leak detector (gravity or pressurized piping) -- capable of detecting 3.0 gph release within 1 hour
☐	☐	☐	☐	☐	(Code L) system tested for operability within the last year

Piping Tightness (Line) Testing: (Piping only - code B or C)

☐	☑	☑	☐	☐	test conducted at proper frequency • conducted annually for pressurized piping without monthly monitoring • conducted every 3 years for suction piping not meeting Code I date of last test 1/19/06 method used Petro-tite
☐	☑	☑	☐	☐	manufacturer's certification of ability to detect 0.1 gph release at 1.5 X operating pressure is available
☐	(☐ N/A)	☐	☐		if test device permanently installed, maintenance records including calibration, preventative, and repair for the last year

Automatic (mechanical) Line Leak Detector: (PRESSURIZED piping only - code A)

☐	☑	☑	☐	☐	annual operational test of leak detector according to manufacturer's instructions date tested 1/19/06
☐	☑	☑	☐	☐	manufacturer's certification of ability to detect a release of 3 gph at 10 psig within 1 hour is available
☐	☑	☑	☐	☐	maintenance records including calibration, preventative and repair for last year (in addition to annual test)

Electronic Line Leak Detector: (Pressurized Piping only - code K)

☐	☐	☐	☐	☐	self checking or system tested for operability within the last year date tested
☐	☐	☐	☐	☐	manufacturer's certification of ability to detect a release of 3 gph at 10 psig within 1 hour is available
☐	☐	☐	☐	☐	maintenance records including calibration, preventative and repair for last year (in addition to annual test)
☐	☐	☐	☐	☐	shut off pump, audible alarm, visual alarm, or restrict product flow
☐	☐	☐	☐	☐	continuously monitors piping

Does the electronic leak detector also perform "monthly" monitoring function? ☐ Yes, ☐ No If yes:

☐	☐	☐	☐	☐	manufacturer's certification of ability to detect 0.2 gph release is available
☐	☐	☐	☐	☐	documentation of monthly test available for last year

UNDERGROUND STORAGE TANK FACILITY OPERATIONS INSPECTION

Facility Name SUNOCO **Date** 4/12/06 **Facility ID** 46-2382

Tank System	Tank System	Tank System	Tank System	Tank System
001	002	003		

Instructions: ***Check the box to indicate that criteria has been met. Circle the box to indicate that criteria has not been met. Circle with "N/A" when criteria is not applicable.***

III. CORROSION PROTECTION COMPLIANCE CRITERIA

Lined Tanks: (Tank only - code I)

☐ ☐ ☐ ☐ ☐ tank inspected and lined according to national standard
date lined _____

☐ ☐ ☐ ☐ ☐ tank initially inspected 10 years after lining and every 5 years after that (15, 20, 25, ... years after lining)
date(s) inspected _____

Galvanic Cathodic Protection: (Tank code B or O, and/or Piping (may include code B))

☐ ☐ ☐ ☐ ☐ structure to soil potential (include values in comments) greater than 0.85 volts, or
☐ ☐ ☐ ☐ ☐ meets other nationally recognized protection standard: specify _____
☐ ☐ ☐ ☐ ☐ documentation of last two monitoring results
date(s) measured _____
- monitoring conducted within six months of installation
- monitoring conducted every three years (single wall tank and piping)
- monitoring conducted within 6 months of repair or system disturbance

Impressed Current Cathodic Protection: (Tank code C or P, and/or Piping (may include code B))

☐ ☐ ☐ ☐ ☐ structure to soil potential (include values in comments) greater than 0.85 volts, or
☐ ☐ ☐ ☐ ☐ meets other nationally recognized protection standard: specify _____
☐ ☐ ☐ ☐ ☐ documentation of last two monitoring results
date(s) measured _____
- monitoring conducted within six months of installation
- monitoring conducted every three years
- monitoring conducted within 6 months of repair or system disturbance

☐ ☐ ☐ ☐ ☐ documentation of last three amp (plus volt and runtime when meters available) readings documented (include values in comments)
- readings recorded every 60 days

☐ ☐ ☐ ☐ ☐ system is turned on and functioning within design limits
☐ ☐ ☐ ☐ ☐ system designed by a corrosion expert

If Cathodic Protection is Added to Existing Tanks, One of the Following is Required:

☐ ☐ ☐ ☐ ☐ tank shell was internally inspected and found to be structurally sound and free of corrosion holes

☐ ☐ ☐ ☐ ☐ the tank was less than ten years old and now uses automatic tank gauging, soil vapor monitoring, groundwater monitoring, interstitial monitoring or statistical inventory reconciliation for release detection

☐ ☐ ☐ ☐ ☐ the tank was less than ten years old and was tested for tightness prior to installing the cathodic protection and between three and six months following the first operation of the cathodic protection

☐ ☐ ☐ ☐ ☐ the tank was assessed and found to be acceptable for upgrading under ASTM standard ES 40-94 or G158. Includes tightness test prior to, and "monthly" release detection after or tightness test between 3 and 6 months following the installation of the cathodic protection.
- cathodic protection installed within 6 months of assessment
  Date assessed _____ Date installed _____

IV. MANDATED TECHNICAL REQUIREMENTS

List the system technical upgrades necessary to continue operating after **12/22/1998:**

_____

_____

UNDERGROUND STORAGE TANK FACILITY
OPERATIONS INSPECTION

Facility Name Sunoco Date 7/12/06 Facility ID 46-20382

V. COMMENTS–Suspected contamination, improperly closed or unregistered tanks, "other" tank system attributes, tank system modifications (with date), estimated installation date when actual date is unknown, release detection exemptions, owner/operator actions needed for compliance, changes at site since initial inspection (with date), and other information that would be helpful to the owner, operator or DEP when reviewing the inspection. Include description of technical assistance given to the owner/operator.

Reference section and tank number for each comment

TR: ATG .2 GPH CSLD

PR: ANNUAL Line + LD. tests.

Overfill drop tubes IN tanks.

All containments dry + monitored.

FACILITY ID# 46-20382 OWNER ID# 3866

FACILITY NAME SUNOCO 0012 1491
SITE [redacted]
ADDRESS
CITY [redacted] STATE PA ZIP CODE 19422
PHONE (610)277-5593-
COUNTY 46 MONTGOMERY MUNIC 961 WHITPAIN TWP
FACILITY TYPE 19 MOTOR FUEL-FOR SALE SIGNATURE DATE 12-11-2000
LONGITUDE LATITUDE

NUMBER OF ABOVEGROUND TANKS	0
NUMBER OF UNDERGROUND TANKS	4
TOTAL NUMBER OF TANKS	4

Enter Facility Identification Number.
Count: *1 <Replace>
1(004,028) Printer: Ready

File: ECP - TANKS
CENTER SQUARE SUNOCO
FACID 46-20382
Rte 73 + 202
Whitpain Twp.
Montgomery County

Sunoco Marketing

Sun Company, Inc.
4041 Market Street
Aston PA 19014
215 499 5700
1 800 627 HEAT

19 December 1994

Ms. Pamela S. Reigh
Hydrogeologist
PADER - Environmental Cleanup Program
555 North Lane
Suite 6010, Lee Park
Conshohocken, PA 19428

Re: Remedial Action Plan
Sunoco No. 0012-1491
889 Dekalb Pike (Routes 73 &202)
Center Square, Montgomery County, Pa
Facility ID No. 46-20382

Dear Ms. Reigh,

Enclosed please find a copy of the Remedial Action Plan (RAP) generated for the above referenced facility.

In agreement with the request documented in your 15 December 1994 correspondence, Sun Company, Inc. will conduct quarterly groundwater sampling events on observation wells OWs 1-3 for the duration of one year, beginning with the first quarter of 1995. The groundwater samples will be analyzed for BTEX by EPA method 8020 and TPH by EPA method 418.1. Quarterly Project Status Update Reports will be forwarded regularly to PADER for review.

Please do not hesitate to call with any questions or comments pertaining to the RAP.

Respectfully submitted,

Bradford Fish

Bradford Fish
Environmental Engineer, P.G.

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
BRADFORD L. FISH
GEOLOGIST
NO. 000243

pc: Mr. Ed Shields, Sun Company, Inc.
Mr. Marco Droese, Mulry and Cresswell Environmental, Inc.
file

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

REMEDIAL ACTION PLAN

SUNOCO STATION (0012-1491)
889 DEKALB PIKE
CENTER SQUARE, PENNSYLVANIA

19 DECEMBER 1994

PREPARED FOR:

MR. BRADFORD FISH
ENVIRONMENTAL ENGINEER
SUN COMPANY, INC. (R&M)
4041 MARKET STREET
ASTON PA 19014

PREPARED BY:

MARCO DROESE

REVIEWED BY:

JAMES MULRY

2039 Lafayette Road • Coatesville, PA 19320 • Tel: (610) 384-8075 • Fax: (610) 384-7627
2 Kenley Court • Bear, DE 19701 • Tel: (302) 834-5310 • Fax: (302) 834-1616

1) Summary of Site Characterization:

Introduction:

At the request of Mr. Bradford Fish of Sun Company, Inc., Mulry and Cresswell Environmental, Inc. (MCE) conducted a Phase I Environmental Site Assessment at the Sunoco Service Station, 889 Dekalb Pike (Routes 73 & 202), Center Square, Pennsylvania, during the month of July 1994.

As depicted in Figure I (Appendix A), the site is located in Montgomery County, Whitpain Township, in a mixed residential and commercial area. An unnamed tributary to Stony Creek is flowing westward along the facility's northern border.

The Phase I Environmental Site Assessment consisted of installing three groundwater observation wells, sampling and analyzing soil and groundwater from these wells, gauging liquid levels and calculating relative groundwater elevations in the wells. The locations of the observation wells are depicted in Figure II in Appendix A.

The Geologic Map of Pennsylvania (1980, 1:250,000) shows the area to be underlain by sandstone, mudstone and shale of the Triassic Stockton Formation.

The subject location is a retail gasoline fueling and three bay motor vehicle servicing facility. The facility is operated under the ownership of Sun Company, Inc.

Analytical results:

On 12 July 1994, drill cuttings were field selected for laboratory analysis based on OVM readings and suspected depth to groundwater. Three soil samples, one from each observation well, were collected and analyzed for total petroleum hydrocarbons (TPH) by EPA method 418.1 IR (due to the proximity of the waste oil storage tank) and for benzene, toluene, ethylbenzene and m-, o-, p-xylenes (BTEX) by EPA method 8020.

The sample from OW 1 was reported as containing below method detection limit total BTEX and 64 µg/g total petroleum hydrocarbons. The sample from OW 2 was reported as containing below method detection limit total BTEX and 71 µg/g total petroleum hydrocarbons. The sample from OW 3 was reported as containing below method detection limit total BTEX and 26 µg/g total petroleum hydrocarbons. Drill cuttings analytical results are summarized in Table II, laboratory analysis reports are attached as Appendix A.

On 20 July 1994, depth to water ranged from a maximum of 8.15 feet below top of casing (BTOC) in OW 2 to a minimum of 4.45 feet BTOC in OW 1. Water levels and elevations are presented in Table I and Figure III, Appendix A. As depicted on the water table elevation plot (Figure III), the groundwater gradient is towards the west at an acute angle to the creek north of the site with a magnitude of approximately 1 foot per 25 feet, or 0.04 (4.0 %).

Groundwater samples were collected from all three wells and analyzed for the volatile organics benzene, toluene, ethylbenzene, and m-, o-, p- xylenes (BTEX) by method 602 and for total petroleum hydrocarbons (TPH) by method 418.1 IR. The laboratory analysis reports are summarized in Table III and attached in Appendix A. No separate phase hydrocarbons were measured in any well.

As presented in Table III, OW 1 was reported as containing 24 µg/l total dissolved BTEX and OWs 2 and 3 were reported as containing below method detection limit total dissolved BTEX.

All three observation wells (OWs1 -3) were reported as containing below method detection limit total petroleum hydrocarbons (TPH).

A distribution plot of dissolved BTEX and TPH concentrations is attached as Figure IV, Appendix A.

Conclusion:

Analytical results of soil samples indicated no BTEX contamination above method detection limit and TPH contamination below the Groundwater Protection Level I for Petroleum Hydrocarbons (TPH), with a maximum value of 71 mg/kg. The Groundwater Protection Level I of < 200 mg/kg was established for virgin fuel oil contamination in soil to establish a standard for the protection of human health and the environment, however, with no listed value for non-virgin fuel oil soil contamination available, this treshold value might be applied to this case as an approximation to the clean-up standard.

Analytical results of groundwater samples indicated no BTEX and TPH contamination in two of the three observation wells and minor BTEX contamination (8 µg/l benzene and 16 µg/l ethylbenzene) in one observation well.

2) Site Specific Health and Safety Plan / Waste Management Plan

A copy of the Site Specific Health and Safety Plan is attached as Appendix B.

Although no separate phase hydrocarbons have been measured in any well, nor are separate phase hydrocarbons anticipated in the future, any petroleum hydrocarbons recovered from the site will be stored in an appropriate double-wall container on-site until the quantity of the recovered product warrants the removal by a certified petroleum hydrocarbon removal contractor. The party responsible for implementing the remedial action plan described in this document will keep an exact inventory of any recovered petroleum hydrocarbons and will also obtain proper documentation of any product removal from the site.

3) List of required permits:

The proposed remedial action consists of semi-annual observation well sampling. Purged groundwater retrieved from the observation wells during the sampling events will be treated on-site by pumping the water through quasi portable (mounted on a vehicle and/or trailer) 55 gallons granular activated carbon (GAC) units before surface discharging the treated purge water. This procedure is in accordance with PADER guidelines established for surface discharge of purged groundwater retrieved from observation wells during groundwater sampling events.

No further permits are required.

4) Discussion of contaminant removal by proposed RAP:

Based on the analytical results for soil and groundwater samples obtained during the Phase I Environmental Site Assessment, groundwater monitoring at this location for the duration of one year is proposed as a means of monitoring contaminant concentrations. The extreme low levels of detected hydrocarbon contamination at this site warrant the application of naturally occuring biodegradation to restore groundwater quality. The proposal encompasses to conduct quarterly groundwater sample collection from the existing three observation wells and sample analyses for BTEX by method 8020 and for TPH by method 418.1.

5) Design, construction details and expected effectiveness of remediation system:

The remedial action proposed at this location encompasses quarterly observation well sampling and analysis for BTEX and TPH. The data obtained through this observation well sampling program will lead to an evaluation of the efficacy of natural occuring biodegradation of the reported low concentrations of groundwater contaminants at this site.

Should the groundwater sampling program verify the extreme low levels of contamination, or even indicate a decrease of contaminant levels, it is expected that groundwater quality be restored naturally without the necessity for an active remediation system.

6) Operation and maintenance details:

Groundwater samples will be retrieved quarterly and submitted for laboratory analyses for BTEX by method 8020 and for TPH by method 418.1. The sample collection is tentatively scheduled to begin during the first quarter 1995.

7) Site map:

The site location is illustrated in Figure I, Appendix A, and the observation well locations are depicted in Figure II, Appendix A.

8) Descripton of media and parameters to be sampled/monitored:

Groundwater samples will be retrieved from existing on-site observation wells and submitted for analyses to a certified laboratory. The parameters to be sampled for are characteristic for the detection of petroleum hydrocarbon related soil and groundwater contamination and encompass the constituents benzene, toluene, ethylbenzene, m-, o-, p- xylenes (BTEX) and total petroleum hydrocarbons (TPH).

9) Analytical methods:

The samples will be analyzed for benzene, toluene, ethylbenzene, m-, o- and p-xylenes (BTEX) by EPA method 8020 and for total petroleum hydrocarbons (TPH) by EPA method 418.1.

10) Verification of cleanup methods:

Quarterly groundwater observation well sampling events serve as a means to obtain a data base to evaluate the extent of in-situ contaminant degradation and groundwater restoration. Based on the analytical results, the effect of the cleanup method can be determined.

11) Necessary additional items:

Results of the quarterly observation well sampling events will be discussed in Quarterly Project Status Update Reports. A copy of each report will be forwarded to PADER for review.

APPENDIX A

PHASE I SITE ASSESSMENT ANALYTICAL DATA

Sunoco Station # 0012-1491
889 Dekalb Pike (Routes 73 & 202)
Center Square, PA

TABLE I

Groundwater Elevations (Feet)
16 June 1994

OW No.	Depth to Water	Casing Elevation	Total Depth	Water Elevation
1	4.45	94.95	31.00	90.50
2	8.15	94.96	23.00	86.81
3	7.24	95.82	22.00	88.58

TABLE II

Soil Analytical Results[1]

Parameter	OW 1 - 23'	OW 2 - 20'	OW 3 - 15'
OVM (ppm)	20	90	70
Benzene	< 1	< 1	< 1
Toluene	< 1	< 1	< 1
Ethylbenzene	< 1	< 1	< 1
m-Xylene	< 1	< 1	< 1
o-Xylene	< 1	< 1	< 1
p-Xylene	< 1	< 1	< 1
Total BTEX	BDL	BDL	BDL
TPH	64	71	26

1. BTEX reported in µg/kg; TPH reported in µg/g. All results reported on dry weight basis unless otherwise noted.

Sunoco Station # 0012-1491
889 Dekalb Pike (Routes 73 & 202)
Center Square, PA

TABLE III

Groundwater Analytical Results[1]

Parameter	OW 1	OW 2	OW 3
Benzene	8	<1	<1
Toluene	<1	<1	<1
Ethylbenzene	16	<1	<1
m-Xylene	<1	<1	<1
o-Xylene	<1	<1	<1
p-Xylene	<1	<1	<1
Total BTEX	24	BDL	BDL
TPH	<0.25	<0.25	<0.25

1. BTEX reported in µg/l; TPH reported in mg/l.

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

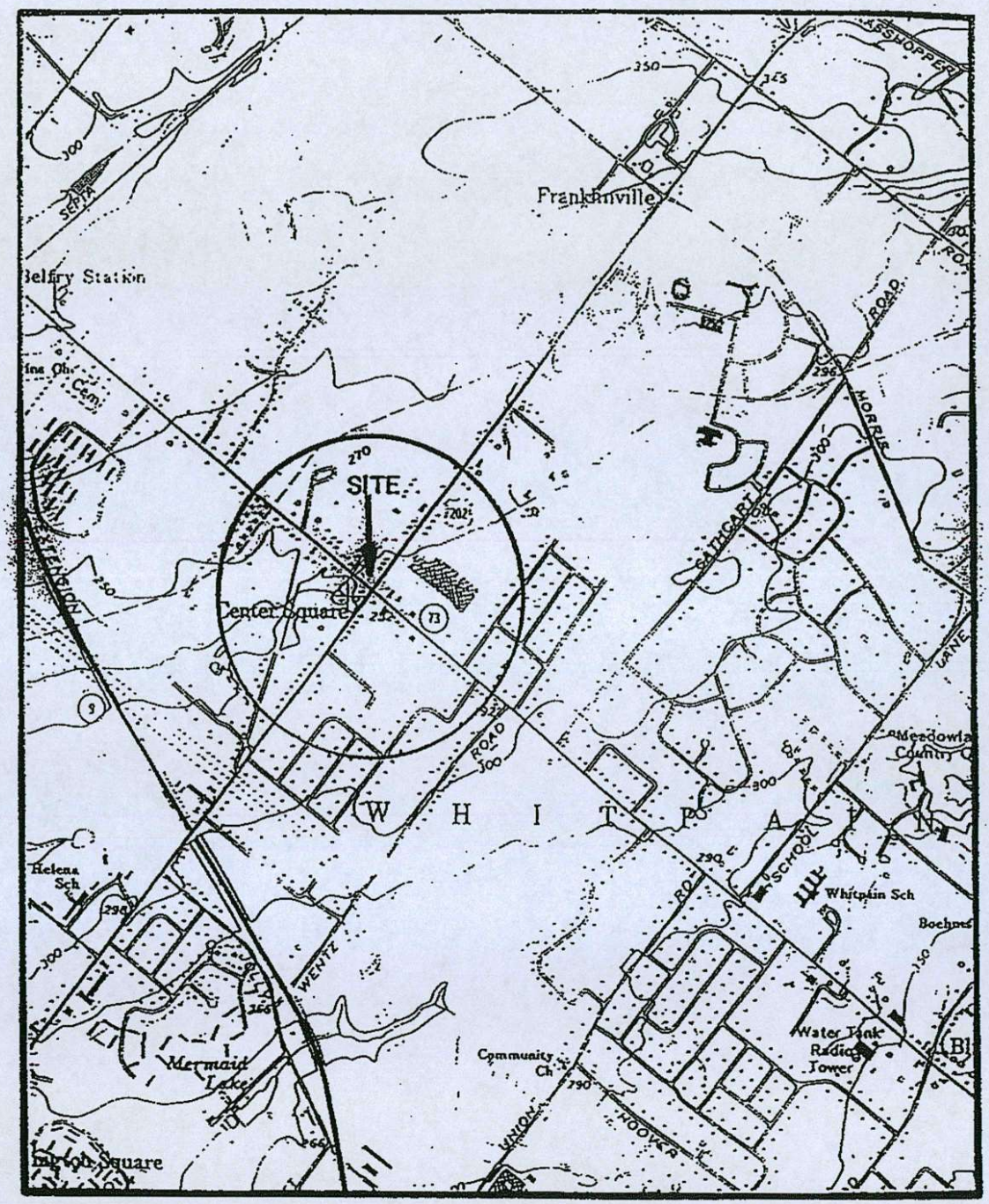

FIGURE I
SITE LOCATION
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

SOURCE: USGS. LANSDALE, PA QUADRANGLE. 1966. PHOTOREVISED 1983.

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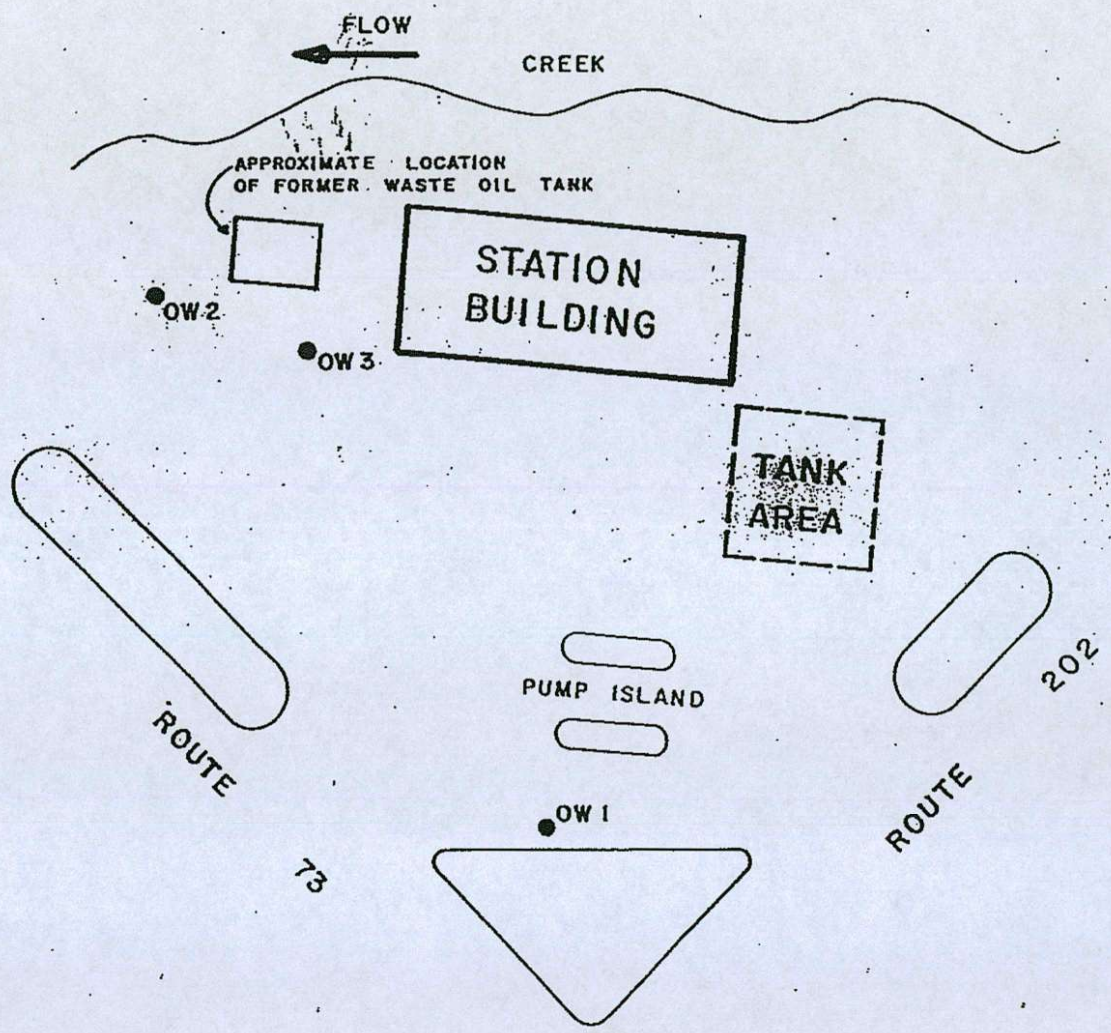

FIGURE II
OBSERVATION WELL LOCATION
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

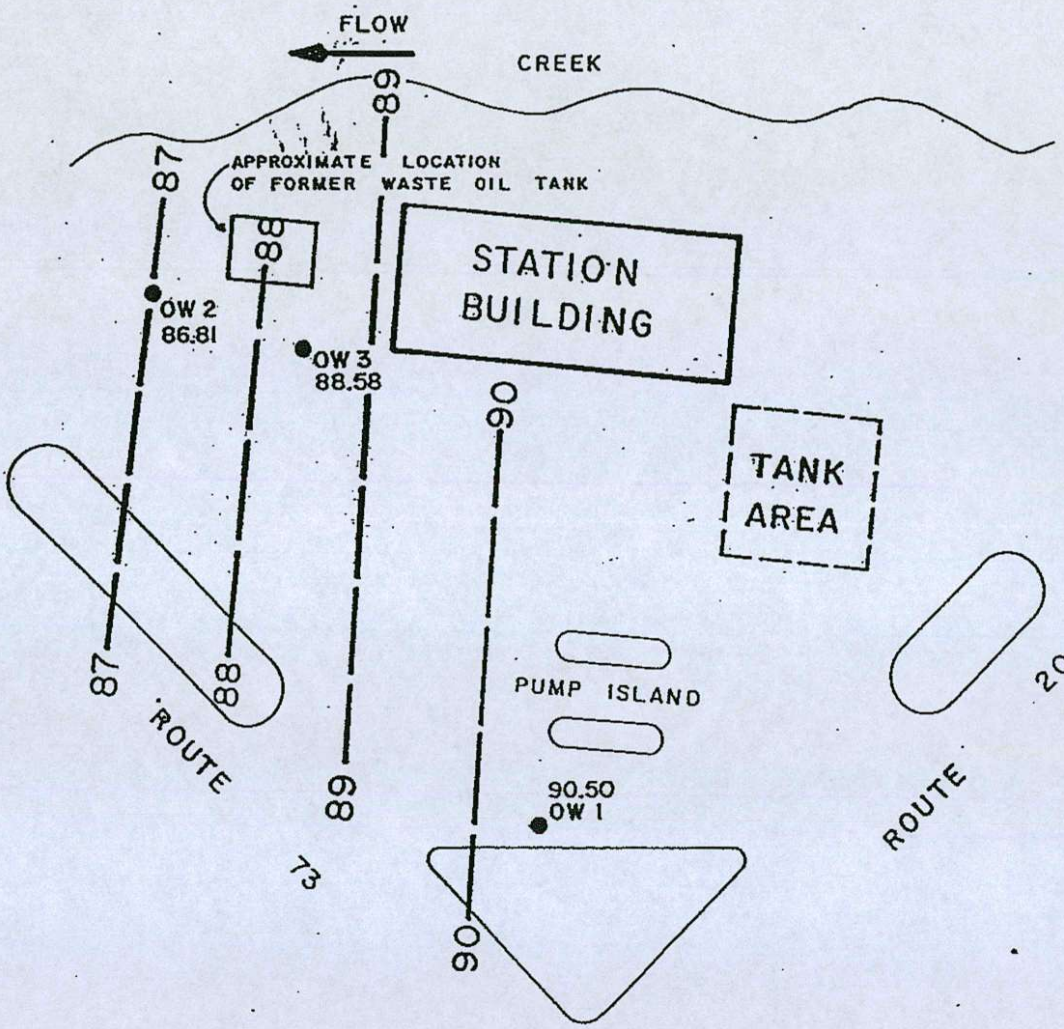

FIGURE III
WATER TABLE ELEVATION (FEET)
20 JULY 1994
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

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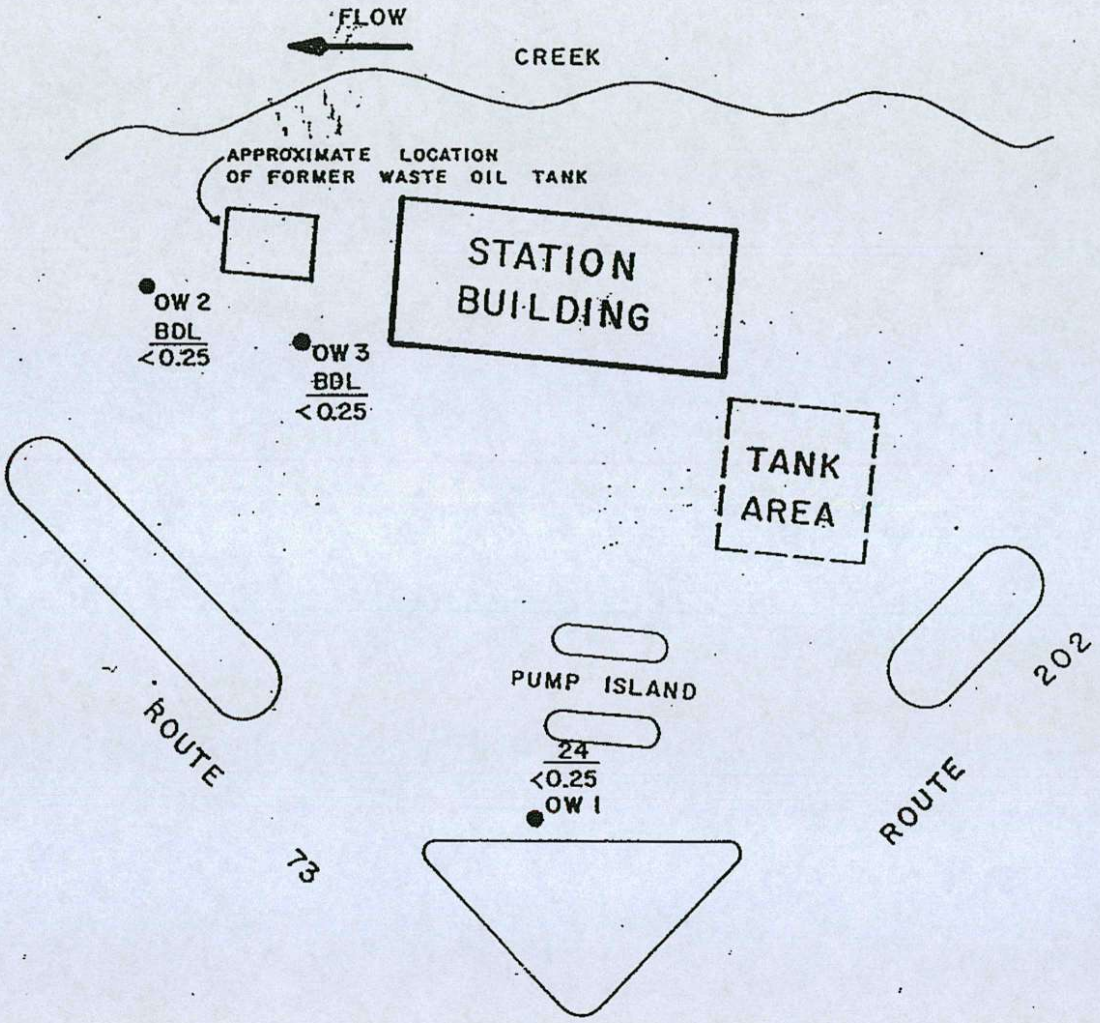

FIGURE IV
TOTAL DISSOLVED HYDROCARBONS
20 JULY 1994
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

● OBSERVATION WELL
BDL / <0.25 BTEX (ug/l) / TPH (mg/l)

N

APPROXIMATE SCALE IN FEET
0 40

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Sun Company, Inc.
ANALYTICAL RESULTS
Mulry & Cresswell - Center Square (0012-1491)

Rept: AN0463

Client Sample ID:	OW-1		OW-2		OW-3			
Lab Sample ID:	D4061601		D4061602		D4061603			
Sample Date:	07/12/94	SOIL	07/12/94		07/12/94			
nalyte	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
THOD 8020 - BTEX (UG/KG)	Analysis:07/18		Analysis:07/18		Analysis:07/18			
enzene	ND	1.0	ND	1.0	ND	1.0	NA	
thyl benzene	ND	1.0	ND	1.0	ND	1.0	NA	
oluene	ND	1.0	ND	1.0	ND	1.0	NA	
-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
SURROGATE(S)								
,a,a-Trifluorotoluene	79	75-125	78	75-125	78	75-125	NA	
T CHEMISTRY ANALYSIS								
ETHOD 418.1 - TRPH (UG/G)	64.0	12.5	71.0	12.5	26.0	12.5	NA	

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Indicates Result is Outside Sampling Plan / QAPP Limits
sults Reported on Dry Weight Basis

ND = Not Detected
NA = Not Applicable

Recra Environmental, Inc.

Sun Company, Inc.
ANALYTICAL RESULTS
Mulry & Cresswell - Center Square (0012-1491)

Client Sample ID:	METHOD BLANK							
Lab Sample ID:	D4061604							
Sample Date:	SOIL							
nalyte	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
THOD 8020 - BTEX (UG/KG)	Analysis:07/18							
enzene	ND	1.0	NA		NA		NA	
thyl benzene	ND	1.0	NA		NA		NA	
oluene	ND	1.0	NA		NA		NA	
-Xylene	ND	1.0	NA		NA		NA	
-Xylene	ND	1.0	NA		NA		NA	
-Xylene	ND	1.0	NA		NA		NA	
SURROGATE(S)								
,a,a-Trifluorotoluene	78	75-125	NA		NA		NA	
T CHEMISTRY ANALYSIS								
ETHOD 418.1 - TRPH (UG/G)	ND	12.5	NA		NA		NA	

Indicates Result is Outside Sampling Plan / QAPP Limits
sults Reported on Dry Weight Basis

ND = Not Detected
NA = Not Applicable

NV4A5735 01

SUN COMPANY

CHAIN OF CUSTODY RECORD

Original - Return w/Report Yellow - Lab Copy Pink - Sampler Copy

Consultant's Name: MULRY + CRESSWELL ENV		
Address: GLENMOORE PA		
Project: CENTER SQUARE, PA.	Consultant Proj #:	Sun Facility ID# 0012 - 1491
Project Contact: MARCO DROSSE	Phone: (610) 942-9010	
Alt. Contact:	Phone:	Site Location: CENTER SQUARE, PA.
Sun Contact: BRAD FISH	Phone (610) 859-5701	P.O.#
Sampled By (print): VINCE MULRY	Sampler's Signature: Vince Mulry	

SAMPLE I.D.	DATE	TIME	MATRIX WATER/ SOIL	SAMPLE LOCATION/ DESCRIPTION	ANALYSIS REQUIRED Number of Containers								Sample Condition as Received Chilled Yes No Sealed Yes No COMMENTS
					TPH 418.1	BTEX 8020							
OW-1	12JUL94	9:30	SOIL	OW-1 23'B.G.	1	1							
OW-2	12JUL94	11:00	SOIL	OW-2 20'B.G.	1	1							
OW-3	12JUL94	13:00	SOIL	OW-3 15'B.G.	1	1							

General Comments: Total # of Containers: WPO145.B

(1) Relinquished by Signature: Vince Mulry	Date: 13 JUL 94	(2) Relinquished by Signature:	Date:	(3) Relinquished by Signature:	Date:
Company: MCE	Time: 10:00	Company:	Time:	Company:	Time:
(1) Received by Signature	Date	(2) Received by Signature	Date: 7/15/94	(3) Received by Signature	Date
Company:	Time:	Company: ECA	Time: 0900	Company:	Time:

NV4A5735 01

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ime: 10:59:51

Sun Company, Inc.
ANALYTICAL RESULTS
Mulry & Cresswell - Center Square (0012-1491)

Rept: AN0463

Client Sample ID:	OW-1		OW-2		OW-3			
Lab Sample ID:	D4070303		D4070301		D4070302			
Sample Date:	07/20/94	WATER	07/20/94		07/20/94			
nalyte	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
THOD 602 - BTEX (UG/L)	Analysis:07/28		Analysis:07/28		Analysis:07/28			
enzene	8.0	1.0	ND	1.0	ND	1.0	NA	
thyl benzene	16	1.0	ND	1.0	ND	1.0	NA	
oluene	ND	1.0	ND	1.0	ND	1.0	NA	
-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
SURROGATE(S)								
,a,a-Trifluorotoluene	86	75-125	90	75-125	91	75-125	NA	
T CHEMISTRY ANALYSIS								
THOD 418.1 - TRPH (MG/L)	ND	0.25	ND	0.25	ND	0.25	NA	

ndicates Result is Outside Sampling Plan / QAPP Limits
ults Reported on Dry Weight Basis

ND = Not Detected
NA = Not Applicable

Recra Environmental, Inc.

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ime: 10:59:51

Sun Company, Inc.
ANALYTICAL RESULTS
Mulry & Cresswell - Center Square (0012-1491)

Rept: AN0463

Client Sample ID:	METHOD BLANK							
Lab Sample ID:	D4070304							
Sample Date:	WATER							
nalyte	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
THOD 602 - BTEX (UG/L)	Analysis:07/28							
enzene	ND	1.0	NA		NA		NA	
thyl benzene	ND	1.0	NA		NA		NA	
oluene	ND	1.0	NA		NA		NA	
-Xylene	ND	1.0	NA		NA		NA	
-Xylene	ND	1.0	NA		NA		NA	
-Xylene	ND	1.0	NA		NA		NA	
SURROGATE(S)								
.a,a-Trifluorotoluene	92	75-125	NA		NA		NA	
CHEMISTRY ANALYSIS								
THOD 418.1 - TRPH (MG/L)	ND	0.25	NA		NA		NA	

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dicates Result is Outside Sampling Plan / QAPP Limits
lts Reported on Dry Weight Basis

ND = Not Detected
NA = Not Applicable

Recra Environmental, Inc.

SUN COMPANY

CHAIN OF CUSTODY RECORD

Original - Return w/Report Yellow - Lab Copy Pink - Sampler Copy

Consultant's Name: Mulry + Cresswell Environmental Inc		
Address: RD 2 Box 190 C Horseshoe Pike Glenmoore PA 19343		
Project: Center Square PA	Consultant Proj #:	Sun Facility ID# 0012-1491
Project Contact: Marc Droese	Phone: 610 942-9010	
Alt. Contact:	Phone:	Site Location: Center Square, PA
Sun Contact: Bradford Gish	Phone 610 859-5701	P.O.#
Sampled By (print): Joseph Mulry	Sampler's Signature: Joseph Mulry	

SAMPLE I.D.	DATE	TIME	MATRIX WATER/ SOIL	SAMPLE LOCATION/ DESCRIPTION	ANALYSIS REQUIRED Number of Containers: BTEX	TPH (GC/FID)							Sample Condition as Received: Chilled Yes No; Sealed Yes No; COMMENTS
OW-2	20 Jul 94	15:00	H2O	OW-2	2	2							
OW-3	20 Jul 94	15:30	H2O	OW-3	2	2							
OW-1	20 Jul 94	16:00	H2O	OW-1	2	2							

General Comments: Total # of Containers: WPO145.B

(1) Relinquished by Signature: Joseph Mulry	Date: 7/21/94	(2) Relinquished by Signature	Date	(3) Relinquished by Signature	Date
Company: MCE	Time: 08:30	Company:	Time:	Company:	Time:
(1) Received by Signature	Date: 7/21	(2) Received by Signature	Date: 7/22/94	(3) Received by Signature	Date
Company:	Time:	Company: Keera WTI	Time: 1425	Company:	Time:

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APPENDIX B

SITE SPECIFIC HEALTH AND SAFETY PLAN

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

2 Kenley Court
Bear, DE 19701
Tel: (215) 384-8075
Fax: (302) 834-5310

SITE SPECIFIC HEALTH AND SAFETY PLAN

SITE: Sunoco Service Station
889 Dekalb Pike
Center Square, PA

EMERGENCY PHONE NUMBERS

RESCUE: 911

FIRE DEPT.: 911

POLICE: 911

CHEMTREC: 1-800-424-9300

LOCAL HOSPITAL

Suburban General
2701 Dekalb Pike
Norristown PA

TELEPHONE #: (610) 278 2000

CALL LOCAL RESCUE FOR TRANSPORTATION OF SERIOUSLY INJURED

PREPARED BY: Marco Droese DATE: 5 Dec 1994

REVIEWED BY: James Mulry DATE: 5 Dec 1994
(PROJECT MANAGER)

APPROVED BY: Rob Cresswell DATE: 5 Dec 1994
(COMPANY HEALTH & SAFETY OFFICER)

1. SITE DESCRIPTION

PROJECT NAME: Sunoco Service Station (# 0012-1491)

SITE ADDRESS: 889 Dekalb Pike (Routes 73 + 202)
Center Square

COUNTY: Montgomery Country, PA

TYPE OF FACILITY: Gasoline Retail

SURROUNDING LAND USES: Mixed Commercial / Residential

AREA/MEDIA AFFECTED: Groundwater

ADDITIONAL INFORMATION:

2. DESCRIPTION OF TASKS TO BE PERFORMED

TASK 1 - Purge and sample groundwater observation wells

TASK 2 -

TASK 3 -

TASK 4 -

TASK 5 -

3. EMPLOYEE TRAINING REQUIREMENTS

All personnel performing activities covered by this plan must be trained in accordance with the requirements of 29 CFR 1910.120(e). This includes initial 40-hour HAZWOPER plus three days supervised on-site training, refresher and manager training courses as appropriate. Subcontractors chosen to perform well drilling, excavation, materials disposal, utility installation in trenches, and any other site activities where the potential exists for contact with contaminants must provide written documentation of such, for each of his employees who will be involved in activities at this site, before the start of work.

4. MEDICAL MONITORING

All personnel performing activities covered by this plan must be active participants in an ongoing medical monitoring program in accordance with the requirements of 29 CFR 1910.120(f). Subcontractors chosen to perform selected site activities must provide written documentation of such, for each employee who will be involved in activities at this site, before the start of work.

5. FIRST AID

For field activities involving three or more MCE personnel, at least one employee shall be trained in the performance of Standard First Aid and Adult CPR.

6. SITE CONTROL MEASURES

A controlled work area should be established in the immediate vicinity of the site activities covered by this plan. Only those persons who can comply with the requirements of this plan should by allowed into this area during any work activities which may result in exposure to the hazards associated with the specific task being performed. The work site should by marked off with traffic cones, caution tape, warning placards, etc., as appropriate. For the purpose of this plan, the following definition of terms is provided:

Exclusion Zone - The immediate area (30 foot diameter) of the work activity to by performed or an area fully enclosing the hazards present, whichever is greatest.

Support Zone - The portion of the site area outside the Exclusion Zones

7. DECONTAMINATION PROCEDURES

At a minimum, the procedures outlined below shall be followed for decontamination:

* Remove gross contamination from tools, respirator, monitoring equipment, boots, etc., prior to leaving the work site, using water, paper towels, etc.

* Completely decontaminate soiled equipment at the work site using detergent and water and dispose of all cleaning materials as follows.

  1. Due to the small quantity of waste generated during decontamination, it is allowable in most states to dispose of lightly contaminated materials in the site dumpster. It is important, however, to ensure that there is no chance of vapor generation or fluid leaking from the dumpster. At no time are materials containing free product to be disposed of in this manner. In this case, arrangements must be made for use of labeled drums and proper disposal.

  2. All decontamination materials including protective sheeting, rags, sorbents, disposable personal protective equipment, and decontamination fluids should be carefully screened with an OVM prior to disposal to determine relative levels of contamination.

  3. Lightly contaminated decontamination fluids should either by treated via the site treatment system prior to discharge or disposed of via the sanitary sewer system. Highly contaminated decontamination fluids must be stored in labeled drums and proper disposal arrangements must be made.

  4. Prior to site entry, consult the appropriate local state environmental agency for confirmation of the applicability of these practices.

* Dispose of contaminated gloves, Tyvek suits, used cartridges, paper towels, etc., by placing in a plastic bag and discarding in accordance with applicable standards.

* Wash hands and face thoroughly with soap and water before lunch or coffee breaks, and as soon as practical after finishing work for the day.

* Shower as soon as possible.

8. EMERGENCY PROCEDURES

Personal Injury Within the Exclusion Zone

Site operations shall be temporarily halted and all site personnel shall assemble in the Decontamination Zone. The Site Safety Officer shall evaluate the nature of the injury and, if indicated by the hazards present on site, the injured person shall be decontaminated to the extent possible prior to movement to the Support Zone.

An individual certified in Standard First Aid and Adult CPR shall initiate the appropriate first aid. Contact shall be made for an ambulance and with the designated medical facility (if required). No persons shall reenter the Exclusion Zone until the cause of the injury or symptoms is determined and appropriate revisions are made to this plan.

Personal Injury Within the Support Zone

The Site Safety Officer will assess the nature of the injury and determine if the cause of injury or loss of the injured person will affect continuation of site operations. If the injury will not affect the safety or performance of other site workers, operations may continue, with the person certified in first aid initiating the appropriate first aid and necessary follow up, as stated above.

If the injury increases risk to other site workers, all site personnel shall move to the Decontamination Zone and site activities will stop until the risks can be assessed and either removed or minimized.

Fire/Explosion

Upon notification of a fire or explosion on site, the designated emergency signal, three whistle blows, shall be sounded and all site personnel assembled in the Decontamination Zone of the site. The fire department shall be alerted and all personnel moved to a safe distance from the involved area.

Personal Protective Equipment Failure

If any site worker experiences a failure or alteration of protective equipment that affects the protection factor, that person and his/her buddy, if applicable, shall immediately leave the Exclusion Zone. Reentry shall not be permitted until the equipment has been repaired or replaced.

Other Equipment Failure

If any other equipment on site fails to operate properly, the Site Safety Officer shall be notified and then determine the effect of this failure on continuing operations. If the failure affects the safety of personnel, all personnel shall leave the Exclusion Zone until the situation is evaluated and appropriate actions are taken.

In all situations, when an on site emergency results in evacuation of the Exclusion Zone, personnel shall not reenter until:

A) The conditions resulting in the emergency have been corrected;

B) The hazards have been reassessed;

C) The Site Safety Plan has been reviewed and modified as necessary;

D) Site personnel have been briefed on any changes in the Site Safety Plan.

9. SITE OPERATION GENERAL STANDARD OPERATING PROCEDURES

The following are the required general site operation procedures:

* The Occupational Safety & Health Administration (OSHA) has established permissible exposure limits (PEL) for gasoline. The OSHA recommended 8 hour time weighted average (TWA) and 15 minute short-term exposure limits (STEL) are 300 and 500 parts per million (ppm), respectively. MCE policy, however, will be to use a more stringent guideline based on the possible presence of benzene, as outlined in the General Hazard Evaluation section of this document.

* Before daily site operation begins, a pre-entry briefing will be held to review the site's health and safety plan concerns and emergency procedures. This meeting will be registered in this health and safety plan. Attendance will be documented.

* One site worker will be assigned to keep the daily log for all health and safety-specific site activities, unless otherwise specified.

* Hard hats and steel-toe/steel-shank safety boots will be worn as required. Any personnel working on anything above head height will wear hard hats.

* No alcohol or narcotics on the job site or consumption of same during hours of site operation.

* No food or beverages in the site's Exclusion or Decontamination Zones. Food and/or beverages will be permitted in the Support Zone if accompanied by proper decontamination.

* No smoking in the site's Exclusion or Decontamination Zones. Smoking will be permitted in the Support Zone.

* A change in level of protection will be based on air monitoring equipment readings taken in the breathing zone.

* Field personnel will use air monitoring equipment and not their nose to determine site contamination (i.e., sniffing sampled soils or water in jars, confined spaces, open bore holes or trenches, etc.). Odors detected during the course of standard operating procedures, however, should be noted in the daily log.

* Field personnel should not stand with their head directly over a well when it is being opened.

* Events surrounding accidents/injuries will be recorded in the daily log.

* Events surrounding near accidents/injuries will be recorded in the daily log.

* First aid kit(s) will be available in all company vehicles and on sites with permanent structures for a treatment system.

10. GENERAL HAZARD EVALUATION

Materials of Concern

Substance	Hazard
Gasoline	- Irritant to skin - If ingested, induces nausea and vomiting - Flammable - Combustible - Possible carcinogen
No. 2 Fuel Oil	- Same as above
Waste Oils	- Irritant to skin - Possible carcinogen if heavy metals are present

Airborne Hazards

Substance	PEL	STEL	IDLH
Benzene	1 ppm	5 ppm	carcinogen
Toluene	100 ppm	150 ppm	2000 ppm
Ethylbenzene	100 ppm	125 ppm	2000 ppm
Xylenes	100 ppm	150 ppm	1000 ppm

Operational Hazards

General types of hazards associated with heavy machinery such as drilling operations, including overhead rig hazards, falling objects, lifting and straining, slips, trips, falls, and noise.

11. GENERAL PERSONAL PROTECTION REQUIREMENTS

Respiratory Protection

LEVEL D: No respiratory protection is necessary during on-site activities. Monitoring of the work zone using an OVM will be performed during field activities where deemed necessary. The Site Safety Officer will be responsible for ensuring the proper use, maintenance, and calibration of monitoring equipment as well as monitoring frequency.

LEVEL C: If warranted by monitoring, use of half-face, negative pressure, air purifying respirator equipped with GMC-H combination cartridges. All site personnel must be fit tested prior to performing site work.

Action Levels

OVM Sustained (10 minutes) Breathing Zone Readings above background:

0 to 5 ppm	-	remain in Level D
5 to 25 ppm	-	upgrade to Level C respiratory protection
> 25 ppm	-	at consistent levels in breathing zone of greater than 25 ppm, discontinue work and notify Project Manager.

Protective Clothing Available for Level C and D Protection

Tyvek Coveralls
Safety Glasses with side shields or Goggles
Noise Protection
Work Gloves
Disposable Boots
Hard Hat
Steel Toe/Steel Shank Boots
Insulated Coveralls

Separate Health and Safety Plans will be developed for Level A/Level B investigations and for Emergency Responses, which may involve the use of Level A and/or Level B health and safety measures.

Any revisions to the final Site-Specific Health and Safety Plan must be approved by the Project Manager and Company Health and Safety Officer.

2 Kenley Court
Bear, DE 19701
Tel: (215) 384-8075
Fax: (302) 834-5310

12. EMERGENCY INFORMATION AND COMPANY CONTACTS

LOCAL HOSPITAL NAME AND ADDRESS: Suburban General
2701 Dekalb Pike
Norristown, PA

ROUTE FROM SITE: South on Dekalb Pike (Route 202 S) and Swede Road for approximately 2.5 miles. Turn left on Johnson Hwy (just before Logan Square Shop Center) and left again on Dekalb Pike, Route 202 North. The hospital is approximately 0.5 miles on the left.

NEAREST TELEPHONE: Station Building

MCE CONTACTS:

Jim Mulry Principal Hydrogeologist	pager	(215) 384-8075 (302) 575-3226
Rob Cresswell Company Health and Safety Officer		(302) 834-5310

CLIENT REPRESENTATIVE

Bradford Fish phone: (610) 859 5701

STATE AGENCY REPRESENTATIVE

PADER phone: (610) 832 6000

NATIONAL RESPONSE CENTER 1-800-424-8802

POISON CONTROL CENTER 1-800-682-9211

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13. TASK SPECIFIC INFORMATION

TASK: Observation well sampling

DATE OF SITE ENTRY: 1995

BRIEF DESCRIPTION OF SITE ENTRY OBJECTIVES

Gauge liquid levels in groundwater observation wells, purge and sample wells.

ON-SITE ORGANIZATION AND COORDINATION

The following persons have been designated to carry out the stated job functions on site during the performance of this task. Please note that one person may carry out more than one job function.

PROJECT MANAGER	James Mulry
SITE SAFETY OFFICER	"
SECURITY OFFICER	"
FIELD TEAM LEADER	"
FIELD TEAM MEMBER(S)	Vince Mulry, Joe Mulry, Rob Gresswell, Marco Droese

All personnel arriving/departing the site should log in/out utilizing the sign off sheet at the back of this document. All activities on-site must be cleared by the Field Team Leader. Site controls will be the responsibility of the Security Officer.

14. TASK SPECIFIC INFORMATION LOG1

NAME	DATE	TASK NUMBER(S)

15. **ALTERATIONS/ADDITIONS TO THE STANDARD GENERAL PROCEDURES OUTLINED IN THIS DOCUMENT** (Air monitoring, site control measures, general SOPs, decontamination, PPE, hazards anticipated, personal exposure sampling required, medical monitoring, etc.)

THE TASK SPECIFIC INFORMATION LOG MUST BE UPDATEDED FOR EACH SEPARATE TASK TO BE PERFORMED AND SITE ENTRY.

16. PRE-ENTRY MEETING NOTES/ATTENDANCE (Include date, names of personnel in attendance, comments and concerns, etc.)

17. SIGN OFF SHEET

All site personnel have read this Site-Specific Health and Safety Plan and are familiar with its provisions.

	NAME/TITLE	SIGNATURE	DATE
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
Lee Park, Suite 6010
555 North Lane
Conshohocken, PA 19428
December 15, 1994

Southeast Regional Office

(610) 832-5949
FAX: (610) 832-6259

Mr. Bradford Fish
Regional Environmental Engineer
Sun Company, Inc.
4041 Market Street
Aston, PA 19014

Re: ECP - Storage Tank Program
Sunoco Service Station 0012-1491
Facility ID No. 49-20382
Whitpain Township
Montgomery County

Dear Mr. Fish:

The Department has reviewed the Phase I Environmental Site Assessment Report submitted on August 24, 1994 by Mulry and Cresswell Environmental, Inc. for the above referenced facility. The Department requests that quarterly sampling be conducted on monitoring wells OW1, OW2, and OW3 for the period of one year. The ground water should be analyzed for BTEX (benzene, toluene, ethylbenzene, and xylenes) using EPA method 8020 and TPH (total petroleum hydrocarbons) using EPA method 418.1. Upon completion of each sampling event, please submit the results to the Department for review.

If you should have any questions regarding this matter, please feel free to call me at (610) 832-5929.

Sincerely,

Pamela S. Reigh

Pamela S. Reigh
Hydrogeologist
Environmental Cleanup Program

cc: Mr. Day-Lewis
Mrs. M. Goldberg
Mr. Droese
Whitpain Township
Re 30 (KAL)348.6

MULRY AND CRESSWELL ENVIRONMENTAL, INC.

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT

SUNOCO SERVICE STATION # 0012-1491
889 DEKALB PIKE (ROUTES 73 & 202)
CENTER SQUARE, PA

29 JULY 1994

PREPARED FOR

BRAD FISH
ENVIRONMENTAL ENGINEER
SUN COMPANY, INC.
TWIN OAKS TERMINAL
4041 MARKET STREET
ASTON, PA 19014

PREPARED BY
MARCO DROESE

REVIEWED BY
JAMES H. MULRY

2039 Lafayette Road • Coatesville, PA 19320 • Tel: (610) ~~384-8075~~ 942 9010 • Fax: (610) ~~384-7627~~ 942 9039
2 Kenley Court • Bear, DE 19701 • Tel: (302) 834-5310 • Fax: (302) 834-1616

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FIGURES

APPENDICES

I INTRODUCTION:

At the request of Mr. Brad Fish of Sun Company, Inc., Mulry and Cresswell Environmental, Inc. (MCE) conducted a Phase I Environmental Site Assessment at the Sunoco Service Station, 889 Dekalb Pike (Routes 73 & 202), Center Square, Pennsylvania, during the month of July 1994.

The Phase I Environmental Site Assessment consisted of installing three groundwater observation wells, sampling and analyzing soil and groundwater from these wells, gauging liquid levels and calculating relative groundwater elevations in the wells.

The site is located in Montgomery County, Whitpain Township, in a mixed residential and commercial area. An unnamed tributary to Stony Creek is flowing westward along the facility's northern border.

The Geologic Map of Pennsylvania (1980, 1:250,000) shows the area to be underlain by sandstone, mudstone and shale of the Triassic Stockton Formation.

The subject location is a retail gasoline fueling and three bay motor vehicle servicing facility. The facility is operated under the ownership of Sun Company, Inc.

This report is a summary and discussion of the methodology and results of the efforts outlined above.

II METHODOLOGY:

A. WELL INSTALLATION:

In consideration of potential contaminant source areas (pump islands underground storage tanks and associated plumbing, etc.), local topography and cultural features (utilities, structures, roadways, etc.), three locations were selected for observation well (OW) installation.

Prior to well installation, the Pennsylvania One Call System, Inc. was notified to locate and mark any subsurface utilities that may conflict with the proposed well locations.

On 12 July 1994, three wells were installed by air rotary drilling. The total depth of each boring was field determined to provide sufficient water table penetration to allow for groundwater sampling. The length of well screen (4" schedule 40 PVC 0.020" slot) and solid pipe used to construct each well was also field determined to provide well screen across and above the water table.

The annular space between the boring wall and well screen was sand packed with clean sand to a minimum of one foot above the well screen. A minimum one foot hydrated bentonite pellet seal was installed above the sand pack and the well head was finished with a steel manhole set in a two foot square by six inch thick concrete pad. Each well was closed with a watertight locked well cap.

B. SOIL SCREENING AND SAMPLING:

During the drilling operation, at approximately five foot intervals, drill cuttings were placed in a one gallon "zip-lock" plastic bag and the bag was sealed allowing the cuttings to equilibrate with the headspace for an approximate duration of two minutes. After equilibration, the "zip-lock" was opened just enough to allow insertion of the probe tip of a Thermo Environmental Instruments Inc., Model No. 580B, Organic Vapor Monitor (OVM). The maximum OVM response for each sample was recorded along with all pertinent information (lithology, etc.) for preparation of drilling logs.

During the course of drilling, the cuttings from the depth that exhibited the maximum OVM response were collected in two laboratory supplied glass jars with Teflon® lined screw on caps and submitted to RECRA Environmental, Inc. with the appropriate chain of custody form for analysis for TPH (500 ml jar) and BTEX (150 ml jar).

All drill cuttings generated during the drilling activities were stockpiled on site, placed on and covered by plastic to await disposal.

C. WELL ELEVATION SURVEY AND LIQUID LEVEL GAUGING:

To establish the relative elevations of the well casings, an arbitrary datum of one hundred feet above mean sea level was assumed as the transit instrument height. A small notch was cut in the north side of each well casing and the elevation at each notch, relative to the assumed datum, was determined by transit and rod survey.

The depth to liquid (water or product) was measured from the top of the casing adjacent to the notch in each well using an ART model IS-100-E electronic interface sensing probe. The interface sensing probe can distinguish hydrocarbon from water, is calibrated in 0.01' increments, and is intrinsically safe.

Prior to measuring depth to liquid and in between measurements in different wells, the sensor probe and several feet of the measuring tape were washed in a solution of tap water and detergent, rinsed in tap water and rinsed a second time with laboratory supplied deionized water.

D. WELL DEVELOPMENT AND PURGING:

The newly installed observation wells were developed by air-lifting.

E. WELL SAMPLING:

After purging, the wells were allowed to recover for approximately one to two hours. Subsequent to recovery, a clean stainless steel bailer was slowly lowered into each well and allowed to fill just below the water surface. The bailer was slowly raised from the well and laboratory supplied glassware was filled from the bailer so as to allow no headspace. Sample was collected in two forty ml vials for volatile organic analysis and two one liter amber jars for total petroleum hydrocarbon analysis. The vials were supplied with hydrochloric acid as a preservative. All sample containers were labeled prior to filling, and placed in a cooler with ice packs immediately after being filled. All samples were promptly delivered to RECRA Environmental, Inc., Amherst, NY, with appropriate chain of custody documentation for analysis.

A different clean stainless steel bailer was used to collect samples from each well. A new length of nylon string was fastened to each bailer prior to sampling. The sampler donned a new pair of latex gloves prior to sampling each well and these gloves were discarded after the samples were collected.

III RESULTS:

A. GEOLOGY:

All three borings encountered sandy silt and brown to red-brown shale below anthropogenic fill. Bedrock was encountered at five, eleven and thirteen feet below grade in OWs 1, 2 and 3 respectively. Drilling logs for these wells are attached as Appendix A.

B. HYDROGEOLOGY:

Depth to water was measured from the surveyed top of casing in each well on 20 July 1994 prior to purging the wells for sample collection. Depth to water ranged from a maximum of 8.15 feet below top of casing (BTOC) in OW 2 to a minimum of 4.45 feet BTOC in OW 1.

No separate phase hydrocarbons were measured in any well.

Water levels and elevations are presented in Table I and Figure III. The water table elevations are contoured in Figure III, the resultant gradient and suspected direction of groundwater flow represent measurements from the bedrock wells.

As depicted on the water table elevation plot (Figure III), the groundwater gradient is towards the west at an acute angle to the creek north of the site with a magnitude of approximately 1 foot per 25 feet, or 0.04 (4.0 %).

IV LABORATORY ANALYTICAL RESULTS:

A. DRILL CUTTINGS:

As previously mentioned, drill cuttings were field selected for laboratory analysis based on OVM readings and suspected depth to groundwater. Sampling depths and analytical results are presented in Table II. The laboratory analysis reports are attached in Appendix B.

The measured OVM response and depth of sample collection was 20 ppm at 23 feet below grade for OW 1, 90 ppm at twenty feet below grade for OW 2, and 70 ppm at fifteen feet below grade for OW 3.

The sample from 23 feet below grade from OW 1 was analyzed for total petroleum hydrocarbons (TPH) by EPA method 418.1 IR (due to the proximity of the waste oil storage tank) and for benzene, toluene, ethylbenzene and m-, o-, p-xylenes (BTEX) by EPA method 8020. This sample was reported as containing below method detection limit total BTEX and 64 µg/g total petroleum hydrocarbons.

The sample from 20 feet below grade from OW 2 was analyzed for total petroleum hydrocarbons (TPH) by EPA method 418.1 IR (due to the proximity of the waste oil storage tank) and for benzene, toluene, ethylbenzene and m-, o-, p-xylenes (BTEX) by EPA method 8020. This sample was reported as containing below method detection limit total BTEX and 71 µg/g total petroleum hydrocarbons.

The sample from 15 feet below grade from OW 3 was analyzed for total petroleum hydrocarbons (TPH) by EPA method 418.1 IR (due to the proximity of the waste oil storage tank) and for benzene, toluene, ethylbenzene and m-, o-, p-xylenes (BTEX) by EPA method 8020. This sample was reported as containing below method detection limit total BTEX and 26 µg/g total petroleum hydrocarbons.

Drill cuttings analytical results are summarized in Table II, laboratory analysis reports are attached as Appendix B.

B. GROUNDWATER:

Groundwater samples were collected, as previously described, from all three wells and analyzed for the volatile organics benzene, toluene, ethylbenzene, and m-, o-, p-xylenes (BTEX) and for total petroleum hydrocarbons (TPH). TPH analyzation was performed by method 418.1 IR for OWs 1, 2 and 3. The laboratory analysis reports are summarized in Table III and attached in Appendix B.

As presented in Table III, OW 1 was reported as containing 24 µg/l total dissolved BTEX and OWs 2 and 3 were reported as containing below method detection limit total dissolved BTEX.

All three observation wells (OWs1 -3) were reported as containing below method detection limit total petroleum hydrocarbons (TPH).

A distribution plot of dissolved BTEX and TPH concentrations is attached as Figure IV.

Sunoco Station # 0012-1491
889 Dekalb Pike (Routes 73 & 202)
Center Square, PA

TABLE I

Groundwater Elevations (Feet)
16 June 1994

OW No.	Depth to Water	Casing Elevation	Total Depth	Water Elevation
1	4.45	94.95	31.00	90.50
2	8.15	94.96	23.00	86.81
3	7.24	95.82	22.00	88.58

TABLE II

Soil Analytical Results[1]

Parameter	OW 1 - 23'	OW 2 - 20'	OW 3 - 15'
OVM (ppm)	20	90	70
Benzene	< 1	< 1	< 1
Toluene	< 1	< 1	< 1
Ethylbenzene	< 1	< 1	< 1
m-Xylene	< 1	< 1	< 1
o-Xylene	< 1	< 1	< 1
p-Xylene	< 1	< 1	< 1
Total BTEX	BDL	BDL	BDL
TPH	64	71	26

1. BTEX reported in µg/kg; TPH reported in µg/g. All results reported on dry weight basis unless otherwise noted.

Sunoco Station # 0012-1491
889 Dekalb Pike (Routes 73 & 202)
Center Square, PA

TABLE III

Groundwater Analytical Results[1]

Parameter	OW 1	OW 2	OW 3
Benzene	8	<1	<1
Toluene	<1	<1	<1
Ethylbenzene	16	<1	<1
m-Xylene	<1	<1	<1
o-Xylene	<1	<1	<1
p-Xylene	<1	<1	<1
Total BTEX	24	BDL	BDL
TPH	<0.25	<0.25	<0.25

1. BTEX reported in µg/l; TPH reported in mg/l.

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

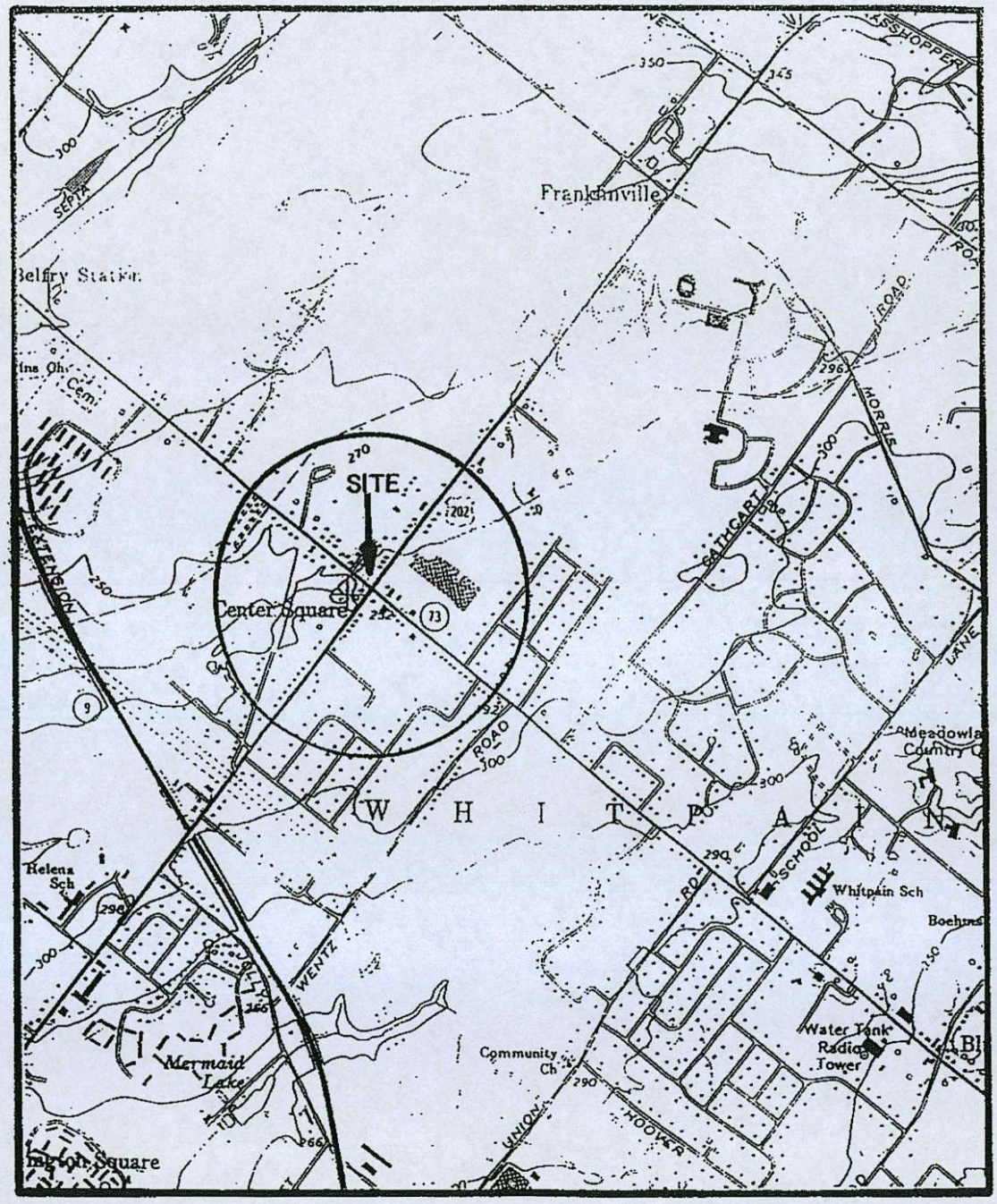

FIGURE I
SITE LOCATION
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

SOURCE: USGS. LANSDALE, PA QUADRANGLE. 1966. PHOTOREVISED 1983.

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MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

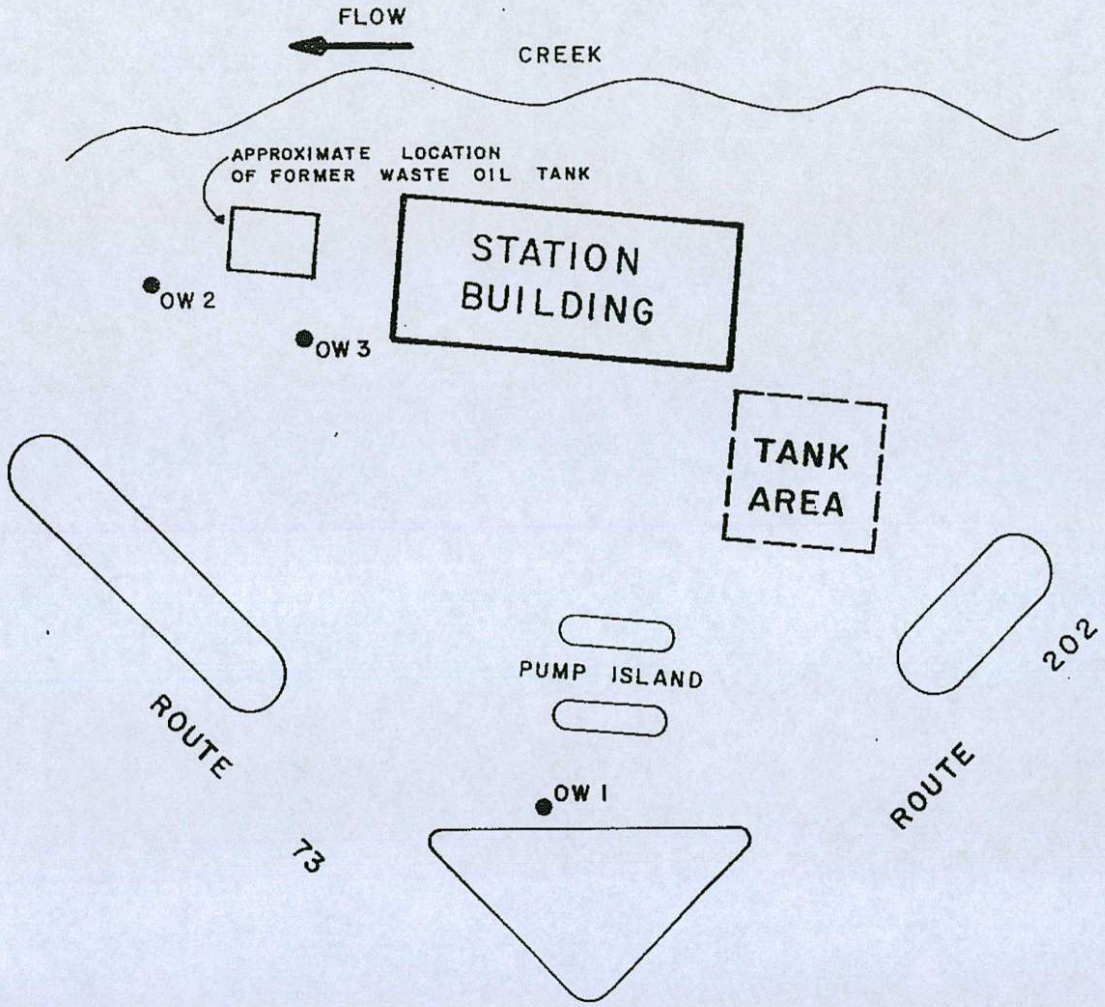

FIGURE II
OBSERVATION WELL LOCATION
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

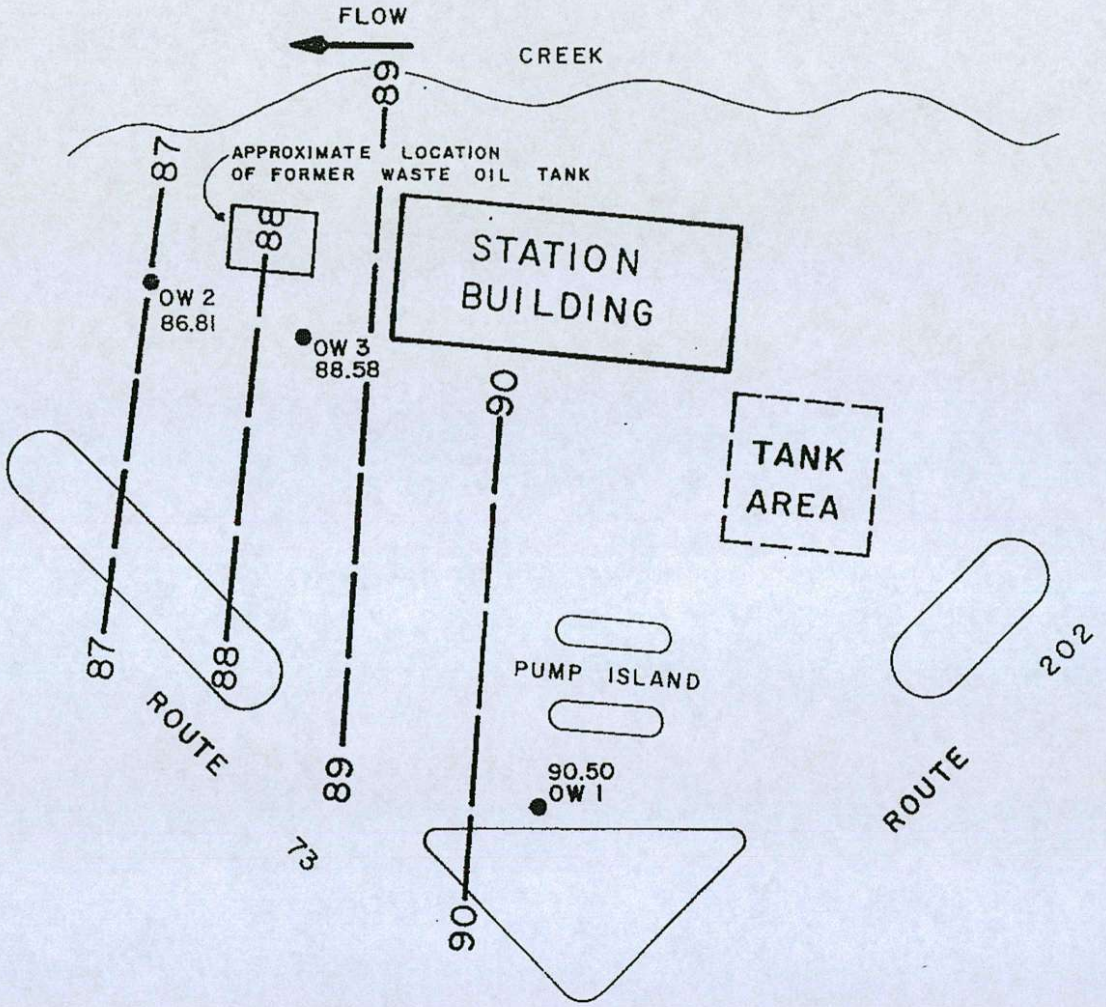

FIGURE III
WATER TABLE ELEVATION (FEET)
20 JULY 1994
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

● OBSERVATION WELL

N

APPROXIMATE
SCALE IN FEET
0 40

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MULRY AND CRESSWELL
ENVIRONMENTAL, INC.

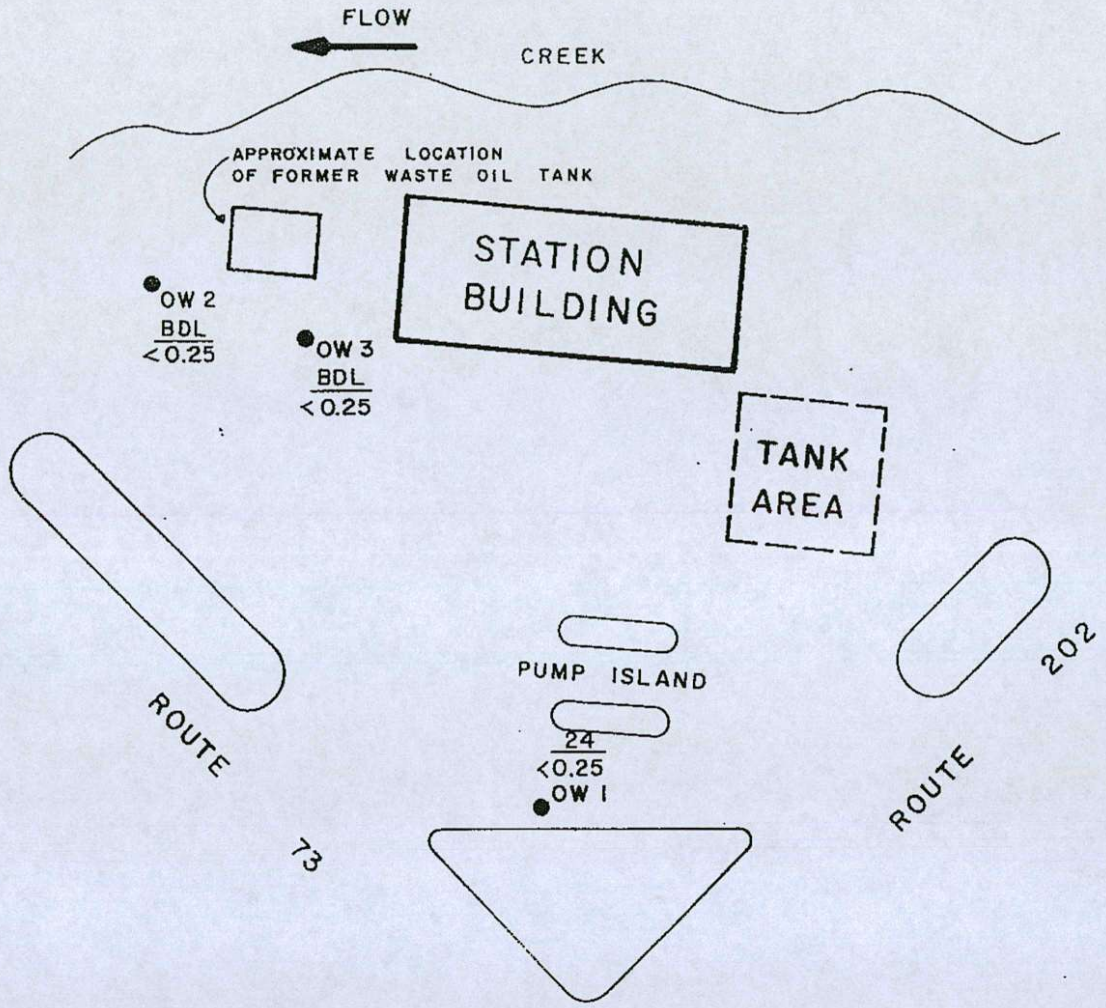

FIGURE IV
TOTAL DISSOLVED HYDROCARBONS
20 JULY 1994
SUNOCO SERVICE STATION
889 DEKALB PIKE
ROUTES 73 AND 202
CENTER SQUARE, PENNSYLVANIA

● OBSERVATION WELL
BDL / <0.25 BTEX (ug/l) / TPH (mg/l)

N

APPROXIMATE SCALE IN FEET
0 40

1/9/2017 4:23:12 PM

APPENDIX A

OBSERVATION WELL DRILLING LOGS

WELL DRILLING LOG

LOCATION: Sunoco Service Station # 0012-1491
889 Dekalb Pike (Routes 73 & 202)
Center Square, PA

DATE: 12 July 1994

GEOLOGIST: Vince Mulry

DRILLER: B. L. Myers Bros., Inc., Glenmoore, Pa

METHOD: Air Rotary; 6" Hammer

IDENTIFICATION: OW 3

CONSTRUCTION: 4" Schedule 40, PVC; 7' Blank Pipe; 15' 0.020" Slot Screen

TOTAL DEPTH: 22 feet

DEPTH	DESCRIPTION	COMMENTS	OVM (ppm)
0 - 6"	Asphalt and ballast		
6" - 13'	Brown-gray fill		8' - 70
13' - 15'	Red-gray shale		13' - 130
15' - 22'	Red shale		15' - 70 20' - 60

WELL DRILLING LOG

LOCATION: Sunoco Service Station # 0012-1491
889 Dekalb Pike (Routes 73 & 202)
Center Square, PA

DATE: 12 July 1994

GEOLOGIST: Vince Mulry

DRILLER: B. L. Myers Bros., Inc., Glenmoore, Pa.

METHOD: Air Rotary; 6" Hammer

IDENTIFICATION: OW 1

CONSTRUCTION: 4" Schedule 40 PVC; 11' Blank Pipe; 20' 0.020" Slot Screen

TOTAL DEPTH: 31 feet

DEPTH	DESCRIPTION	COMMENTS	OVM (ppm)
0 - 12"	Asphalt and ballast		
1' - 5'	Fill material, concrete and stone		5' - 20
5' - 12'	Silver-gray sandy silt, intermittend rock		7' - 30 12' - 30
12' - 31'	Red-brown to red shale	Moist at 23'	15' - 20 19' - 30 23' - 20 26' - 20

WELL DRILLING LOG

LOCATION: Sunoco Service Station # 0012-1491
889 Dekalb Pike (Routes 73 & 202)
Center Square, PA

DATE: 12 July 1994

GEOLOGIST: Vince Mulry

DRILLER: B. L. Myers Bros., Inc.

METHOD: Air Rotary; 6" Hammer

IDENTIFICATION: OW 2

CONSTRUCTION: 4" Schedule 40, PVC; 8' Blank Pipe; 15' 0.020" Slot Screen

TOTAL DEPTH: 23 feet

DEPTH	DESCRIPTION	COMMENTS	OVM (ppm)
0 - 6"	Asphalt and ballast		
6" - 11'	Silty fill material, with brick and coal fragments		6' - 150 11' - 110
11' - 23'	Red shale		15' - 110 20' - 90

APPENDIX B

LABORATORY ANALYSIS REPORTS

Date: 07/21/94
Time: 07:43:36

Sun Company, Inc.
ANALYTICAL RESULTS
Mulry & Cresswell - Center Square (0012-1491)

Rept: AN0463

Client Sample ID:	OW-1		OW-2		OW-3			
Lab Sample ID:	D4061601		D4061602		D4061603			
Sample Date:	07/12/94	SOIL	07/12/94		07/12/94			
Analyte	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
METHOD 8020 - BTEX (UG/KG)	Analysis:07/18		Analysis:07/18		Analysis:07/18			
Benzene	ND	1.0	ND	1.0	ND	1.0	NA	
Ethyl benzene	ND	1.0	ND	1.0	ND	1.0	NA	
Toluene	ND	1.0	ND	1.0	ND	1.0	NA	
m-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
o-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
p-Xylene	ND	1.0	ND	1.0	ND	1.0	NA	
SURROGATE(S)								
a,a,a-Trifluorotoluene	79	75-125	78	75-125	78	75-125	NA	
WET CHEMISTRY ANALYSIS								
METHOD 418.1 - TRPH (UG/G)	64.0	12.5	71.0	12.5	26.0	12.5	NA	

1/9/2017 4:23:21 PM

* Indicates Result is Outside Sampling Plan / QAPP Limits
Results Reported on Dry Weight Basis

ND = Not Detected
NA = Not Applicable

Recra Environmental, Inc.

Date: 07/21/94
Time: 07:43:36

Sun Company, Inc.
ANALYTICAL RESULTS
Mulry & Cresswell - Center Square (0012-1491)

Rept: AN0463

Client Sample ID:	METHOD BLANK							
Lab Sample ID:	D4061604							
Sample Date:	SOIL							
Analyte	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit	Sample Value	Reporting Limit
METHOD 8020 - BTEX (UG/KG)	Analysis:07/18							
Benzene	ND	1.0	NA		NA		NA	
Ethyl benzene	ND	1.0	NA		NA		NA	
Toluene	ND	1.0	NA		NA		NA	
m-Xylene	ND	1.0	NA		NA		NA	
o-Xylene	ND	1.0	NA		NA		NA	
p-Xylene	ND	1.0	NA		NA		NA	
SURROGATE(S)								
a,a,a-Trifluorotoluene	78	75-125	NA		NA		NA	
WET CHEMISTRY ANALYSIS								
METHOD 418.1 - TRPH (UG/G)	ND	12.5	NA		NA		NA	

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* Indicates Result is Outside Sampling Plan / QAPP Limits
Results Reported on Dry Weight Basis

ND = Not Detected
NA = Not Applicable

Recra Environmental, Inc.

MMONWEALTH OF PENNSYLVANIA
PARTMENT OF ENVIRONMENTAL RESOURCES

SOUTHEAST REGION
JAN 13 1994

1118

ER-SWQ-10:2/90
BUREAU OF WATER QUALITY MANAGEMENT

STORAGE TANK AND SPILL PREVENTION ACT NOTIFICATION OF CONTAMINATION REPORT

On August 5, 1989, the Storage Tank and Spill Prevention Act became effective in Pennsylvania. An important aspect of this Act concerns the creation of a certified installer and inspector requirement. Storage tanks must be installed, modified, removed and inspected by certified installers and/or inspectors.

Until the adoption of regulations, the Department is authorized to grant interim certification to installers and inspectors, as specified in Section 108 of the Act, to conduct these activities at regulated storage tank facilities.

Section 108(a)(7) of the Act requires that those receiving interim certification must report to the Department the extent of visible contamination from regulated substances at the site of the tank installation, on a form provided by the Department.

OFFICIAL USE ONLY

Case Number

Date Received

INSTRUCTIONS

I. **FACILITY INFORMATION** - Record the name, I.D. number and physical location (not P.O. Box) of the facility at which visible contamination has been identified. Include the name and phone number of a person to contact at the facility.

II. **OWNER INFORMATION** - Record the name, business address and phone number of the owner of the facility identified in Section I.

III. **REGULATED SUBSTANCE INFORMATION** - Indicate to the best of your knowledge the type of product or products responsible for the contamination at the facility.

IV. **EXTENT/DATE OF OBSERVATION OF CONTAMINATION** - Indicate to the best of your knowledge the extent of contamination resulting from the release and/or spill of the regulated substance. Record the date of observation of the contamination, e.g., "01/01/89". Mark the box if you are aware of any soil and/or ground water samples which have been collected.

V. **CERTIFIED INSTALLER/INSPECTOR INFORMATION** - Please print your name and provide your signature, I.D. number, date of signature and phone number. The installer, inspector, or both may discover the contamination.

PLEASE SEND COMPLETED ORIGINAL FORM TO: PA Department of Environmental Resources
Bureau of Water Quality Management
Notice of Contamination Report
(and the appropriate address below, depending on where the FACILITY is located)

375 New Hope Street ornstown, PA 19401	90 East Union Street - 2nd Floor Wilkes-Barre, PA 18701	One Ararat Blvd. Harrisburg, PA 17110	200 Pine Street Williamsport, PA 17701	Highland Bldg. - 6th Floor 121 South Highland Mall Pittsburgh, PA 15206	1012 Water Street Meadville, PA 16335
Counties erks, Bucks, Chester, Delaware, ehigh, Montgomery, Northampton, hiladelphia	**Counties** Carbon, Lackawanna, Luzerne, Monroe, Pike, Schuylkill, Susquehanna, Wayne, Wyoming	**Counties** Adams, Bedford, Blair, Cumberland, Dauphin, Franklin, Fulton, Huntingdon, Juniata, Lancaster, Lebanon, Mifflin, Perry, York	**Counties** Bradford, Cameron, Centre, Clinton, Clearfield, Columbia, Lycoming, Montour, Northumberland, Potter, Snyder, Sullivan, Tioga, Union	**Counties** Allegheny, Armstrong, Beaver, Cambria, Fayette, Greene, Indiana, Somerset, Washington, Westmoreland	**Counties** Butler, Clarion, Crawford, Elk, Erie, Forest, Jefferson, Lawrence, McKean, Mercer, Venango, Warren

I. FACILITY INFORMATION

46-20382

Facility Name: Center Square Sunoco (#0012-1491)
Facility I.D. Number: Unknown
Street Address (P.O. Box not acceptable): 73 And 202
City: Blue Bell
State: PA
Zip Code: 19422
County: Mont.
Municipality: Whitpain
Contact Person:
Phone Number: ( ) -

II. OWNER INFORMATION

Owner Name: Sun Oil Company
Address: 1801 Market ST
City: Phila
State: PA
Zip Code: 19103-1699
Phone Number: ( ) -

III. REGULATED SUBSTANCE INFORMATION

TYPE OF PRODUCT RELEASED/SPILLED
MARK ALL THAT APPLY [X]:

- [ ] aded Gasoline
- [ ] nleaded Gasoline
- [ ] lcohol Enriched Gasoline
- [ ] ght Diesel Fuel (No. 1-D)
- [ ] edium Diesel Fuel (No. 2-D)
- [ ] otor Oil
- [X] /aste Oil
- [ ] erosene (No. 1)
- [ ] ome Heating Oil (No. 2)
- [ ] eating Oil (No. 4)
- [ ] eavy Heating Oil (No. 6)
- [ ] viation Fuel
- [ ] ther (Specify) _____
- [ ] nknown

IV. EXTENT/DATE OF OBSERVATION OF CONTAMINATION

EXTENT (MARK ALL THAT APPLY [X]):

- Gross Soil Contamination [ ]
- Minor Soil Contamination [X]
- Free Product on Water Table [ ]
- Sheen on Surface Water [ ]
- Severe Odors [ ]
- Minor Odors [X]

DATE OF OBSERVATION: 12/1/94

Mark the Box if Samples Have Been Collected [X]

V. CERTIFIED INSTALLER/INSPECTOR INFORMATION

INSTALLER NAME: Ronald Miniscalco
INSTALLER SIGNATURE: Ronald Miniscalco
INSTALLER I.D. NO.: 138
DATE: 1/10/94
TELEPHONE: (215) 672-9824

INSPECTOR NAME: Vincent Mulry
INSPECTOR SIGNATURE:
INSPECTOR I.D. NO.: Unknown (Dean't know one now)
DATE: 12-1-94
TELEPHONE: (215) 384-8755

1/9/2017 4:23:37 PM

CLEAN EARTH OF NEW CASTLE, INC.

94 Eagles Lane
New Castle, DE 19720
(302) 427-6633

INCOMING LOAD TICKET

Date 1/10/94
Time 5:25 PM
Ticket # 10896
Approval # 1940021

Type of Material	Gross	Tare	Net Tons	# Drums
DIOXIN CONTAMINATION	59,720	27,960	15.88	

M ID # 101 PAUL LANE
l of Lading #
ifest # 001
Manifest #
ns. ID # 24
nsporter MONARCH TRANSPORT, INC.
s. Addr P.O. BOX 2422
1625 CAROLINE DRIVE
ASTON, PA 19014
er PIERSON Truck # 109
ator MONARCH TRANSPORT, INC.
rator SUN REFINING & MARKETING COMPANY
rator Site ROUTE 202 & 73
BLUE BELL, PA
ct 1 BOB SHRADER 215/459-2656
ct 2

Signature

DE-SW Permit # 074

THANK YOU

OCEAN ENVIRONMENTAL, INC
PO Box 12
Wallingford, Pa. 19086
NJDEPE Cert. No. 77886

Client ID: Monarch Transport
1625 Caroline Dr.
Aston, Pa. 19014

Date received: Dec. 20, 1993

Project ID: Sun
202 & 73
Blue Bell

Analysis comp: Dec. 28, 1993

OE Sample No.	Customer No.	Test Parameter		Results mg/kg	Detection Lim.mg/kg
4298	1	TCLP Metals	Arsenic	nd	0.005
			Barium	4.1	0.1
			Cadmium	nd	0.005
			Chromium	nd	0.01
			Lead	0.03	0.01
			Mercury	nd	0.0002
			Selenium	nd	0.005
			Silver	nd	0.01
			Cooper	nd	0.1
			Nickel	0.08	0.1
			Zinc	1.17	0.005
		Total Solids		87.9% w/w	

nd=none detected

Respectfuly submitted:

Robert A. White
Laboratory Director