

May 28, 2013



Patriot
Environmental Management, LLC

Mr. John Moran
3062 Main Street
Green Lane, Pennsylvania 18054

PO Box 629
Douglassville, PA 19518
PH 610-323-4634
FX 610-323-4834
www.patriotenviro.com

RE: Storage Tank Closure
Moran Residence
3062 Main Street
Green Lane, Montgomery County, Pennsylvania

Dear Mr. Moran:

Patriot Environmental Management, LLC (Patriot) is pleased to provide you with the following correspondence summarizing the activities that were performed to document closure of an unused heating oil storage tank at the above-referenced property.

Background Information

The property is currently utilized as a single-family residence and antiques store. In 1998, the property converted from an oil furnace to a natural gas furnace to heat the building. Prior to 1998, a 275-gallon aboveground storage tank (AST) located at the rear of the building was utilized to store No. 2 fuel oil. This tank was removed after the property converted to natural gas heat. Prior to the use of this AST, a 500-gallon underground storage tank (UST), located beneath a concrete porch adjacent to the rear of the home, was used to supply the heating system with No. 2 fuel oil. It is Patriot's understanding that this tank has not been utilized since the 1950's.

The UST constitutes a non-regulated storage tank, as defined by Chapter 245 of the Pennsylvania Code, entitled Administration of the Storage Tank and Spill Prevention Program and as such, there are no reporting requirements to the Pennsylvania Department of Environmental Protection (PADEP).

Summary of Work Activities

On May 20, 2013, Patriot personnel completed the abandonment of the UST. Due to the location of the UST beneath the existing concrete porch, the tank could not be removed and was abandoned in-place. Soil was excavated alongside the concrete porch in order to expose the side of the tank. The excavated soil was screened with a photoionization detector (PID) to assess the presence or absence of volatile organic compounds indicative of No. 2 fuel oil. No PID readings were recorded.

Following the excavation of the soil, an access hole was cut into the side of the tank to allow for cleaning and a visual inspection of the integrity of the tank. Residual product and sludge were

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removed from the tank and transferred to a 55-gallon steel drum for disposal. The integrity of the tank was visually inspected for corrosion or other potential signs of a release. The tank was observed to be in good condition, with only minimal surficial corrosion inside the tank. Photodocumentation of these activities is presented as **Attachment 1**.

Patriot personnel attempted to drill a hole in the bottom of the tank in order to assess the soil beneath the tank. However, upon completion of the hole, groundwater began to enter the tank. Therefore, Patriot advanced a soil boring alongside the tank to a depth that coincided with the bottom of the tank utilizing a hand auger. The soil was screened with a PID and visual and olfactory observations were also made.

Patriot personnel collected a soil sample from just above the groundwater surface. This sample elicited a response of 5.5 parts per million on the PID. The sample was submitted to Eurofins Lancaster Laboratories of Lancaster, Pennsylvania for laboratory analysis of the target analytes included on the PADEP short list for No. 2 fuel oil constituents (Benzene, Toluene, Ethylbenzene, Isopropylbenzene, Methyl-Tertiary-Butyl-Ether, Naphthalene, 1,2,4-Trimethylbenzene, and 1,3,5-Trimethylbenzene).

The tank was subsequently filled with flowable fill, which is a mixture of water, sand, and cement. The fill pipe was filled with concrete and blended with the concrete porch. Lastly, the excavation was backfilled to the original grade with the previously removed material.

Conclusions

The results of the laboratory analysis indicated that all of the target analytes are below the SHS MSCs for both residential and non-residential sites in a used aquifer setting. The soil quality analytical data is summarized in **Table 1** and the laboratory analytical report is included as **Attachment 2**.

Based upon the results of these samples, impact resulting from the UST was not identified. Therefore, no additional action is warranted.

If you should have any questions regarding the information that is presented in this correspondence, please do not hesitate to contact me at 610-323-4634.

Sincerely,



Jeffrey E. Wynn
Senior Environmental Scientist

attachments



PO Box 629, Douglassville, Pennsylvania 19518
TEL (610) 323-4634 FAX (610) 323-4834

Tables



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PO Box 629
Douglassville, Pennsylvania 19517
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Fax (610) 323-4834
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Table 1
Laboratory Analytical Data (No. 2 Fuel Oil Target Analytes)
May 20, 2013

Moran Residence
3062 Main Street
Green Lane, Montgomery County, Pennsylvania

Analyte	SHS MSC**		SS-1 (µg/kg)*
	Soil/GW (µg/kg)	Direct Contact (µg/kg)	
Benzene	500	57,000	ND 66
Ethylbenzene	70,000	10,000,000	ND 66
Isopropylbenzene	600,000	7,700,000	ND 66
MTBE	2,000	620,000	ND 66
Naphthalene	25,000	4,400,000	ND 66
Toluene	100,000	10,000,000	ND 66
1,2,4-Trimethylbenzene	8,400	130,000	ND 66
1,3,5-Trimethylbenzene	2,300	110,000	ND 66

Notes:

*All soil results in micrograms per kilogram (µg/kg) dry weight

**Statewide Health Standards (SHS) Medium-Specific Concentration soil at a residential site in a used aquifer setting (MSC) for regulated organic substance.

MTBE = Methyl Tertiary Butyl Ether

ND 66 = Not detected above the laboratory reporting detection limit

BOLD = analyte detected above laboratory reporting detection limit

Attachment 1

Photodocumentation



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Site Photographs



Photograph 1: Area where the UST was located.



Photograph 2: View of the fill pipe of the former tank.



PO Box 629, Douglassville, Pennsylvania 19518
TEL (610) 385-9237 FAX (610) 385-9247

Site Photographs



Photograph 3: View of the side of the tank after excavating alongside the concrete porch.



Photograph 4: View of the access hole cut into the side of the tank.



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Site Photographs



Photograph 5: View of residual material in the bottom of the tank.



Photograph 6: View of water in the bottom of the tank after the hole was drilled through the tank.



PO Box 629, Douglassville, Pennsylvania 19518
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Attachment 2

Laboratory Report



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PO Box 629

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Tel (610) 323-4634

Fax (610) 323-4834

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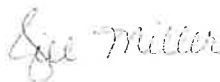
TestAmerica Laboratories, Inc.

TestAmerica Edison
777 New Durham Road
Edison, NJ 08817
Tel: (732)549-3900

TestAmerica Job ID: 460-56412-1
Client Project/Site: Patriot

For:
Patriot Environmental Management
PO Box 629
Douglassville, Pennsylvania 19518

Attn: Jeff Wynn



Authorized for release by:
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Jill Miller, Senior Project Manager
jill.miller@testamericainc.com

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