SUPPLEMENTAL PHASE III ENVIRONMENTAL SITE ASSESSMENT FIELD SAMPLING PLAN

I-80 RECONSTRUCTION PROJECT

STROUD TOWNSHIP, STROUDSBURG, AND EAST STROUDSBURG MONROE COUNTY, PENNSYLVANIA

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August 2018

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BrightFields File: 2895.01.51



INTERNAL QUALITY CONTROL SHEET

This Supplemental Phase III Environmental Site Assessment Field Sampling Plan (Plan) has been prepared by BrightFields, Inc. (BrightFields) following the practices and policies outlined in Pennsylvania Department of Transportation (PennDOT) Publication 281, *The Transportation Project Development Process, Waste Site Evaluation Procedures Handbook* published in December 2012. This Plan represents BrightFields' knowledge of conditions within the I-80 Reconstruction Project area at the time of preparation.

This Supplemental Phase III Environmental Site Assessment Field Sampling Plan was prepared, reviewed, and approved by the following BrightFields personnel:

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Table IV-9 from PADEP Land Recycling Program Technical Guidance ATTACHMENT A Manual



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1.0 PROJECT BACKGROUND

BrightFields, Inc. (BrightFields) has been contracted by AECOM Technical Services, Inc. (AECOM) to provide environmental support services for the I-80 Reconstruction (Project). BrightFields completed a Phase I Environmental Site Assessment (ESA) of the project area in July 2017. The Phase I ESA was conducted in conformance with the scope and limitations of Pennsylvania Department of Transportation (PennDOT) Publication 281, *The Transportation Project Development Process, Waste Site Evaluation Procedures Handbook* in an effort to identify existing and potential hazardous substances on the properties, inquire into the previous ownership and uses of the properties, and identify other environmental concerns on the properties that could impact the Project. Based on the findings of the Phase I ESA and the proposed Project plans, eight properties were identified that required Phase III ESAs. BrightFields completed sampling activities associated with the the Phase III ESAs for the identified properties in November 2017. The Phase III ESA Report was submitted in May 2018. BrightFields will complete two additional Phase III ESAs as part of a supplemental investigation. These two properties are described further in Section 1.2.

1.1 **Project Area Description**

The Project area consists of approximately four miles of I-80 located between Exit 303 and Exit 307 in Stroud Township, Stroudsburg, and East Stroudsburg, Pennsylvania. The Project area also includes proposed stormwater basin areas along the interstate, portions of Pennsylvania Route 611 (PA 611), United States Route 209 (US 209), and portions of Stroud Township and Stroudsburg, Pennsylvania (Figure 1).

The initial eight properties identified within the Project area that required Phase III ESAs (completed in May 2018) were identified as APS Recycling, Biobuffer Solutions, Inc./Pocono Foundry, Former Gas Station, Former Research Laboratory/Chemical Plant, Klingel Cleaners/West Main Street PCE, Main Street Stop & Go, Pocono Gas Station, and Rinehart EM, Inc.

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The property that requires a supplemental Phase III ESA is the Pocono Gas Station site. An additional property, the Perfection Shoe Company, was identified as a potential property of concern by the archeological investigation and will require a Phase III ESA as well. The locations of these sites are depicted on Figure 2 and Figure 3.

The following sections provide summaries of known or suspected environmental conditions for each of the supplemental sites and brief descriptions of the current Project plans for each of the supplemental sites.

1.2 <u>Supplemental Phase III ESA Sites</u>

1.2.1 Pocono Gas Station

As stated in the July 2017 Phase I ESA Report for the I-80 Reconstruction Project (BrightFields, 2017), a review of files obtained from the PADEP indicated that a release was discovered at the Pocono Gas Station site in 2002 and that some petroleum compounds remain in soil at the site. Additionally, the site owner indicated that a release recently occurred from the kerosene dispenser at the site and that the release has not yet been characterized.

Construction activities anticipated on the site include widening of I-80, construction of a ramp, and construction of mainline bridge over West Main Street (pier construction). The maximum depth for spread footing at the site is anticipated to be 10 feet below ground surface (bgs) and the maximum depth for pile foundation is anticipated to be 45 feet bgs.

This supplemental investigation would expand the site characterization from only characterizing the portion affected by the proposed construction activities to characterizing the entire Pocono Gas Station site.

1.2.2 Perfection Shoe Company

Information from a historic archeological investigation identified the Perfection Shoe Company Site as a potential property of concern. It was not previously identified as a potential property of concern in the Phase I ESA (BrightFields, 2017) due to insufficient information on Sanborn maps to verify the facility location. The Perfection Shoe Machinery Company operated as a manufacturer and supplier of shoe making machines and parts of iron and other materials, before being converted to a textile factory. Because the Perfection Shoe Company operated prior to the Resource Conservation and Recovery Act (RCRA), there are no records regarding hazardous wastes generated at the facility (if there were any).



Construction activities anticipated on the Perfection Shoe Company site include widening/realignment of I-80 mainline and construction of new westbound exit ramps and parallel retaining walls. The maximum depth for disturbance is anticipated to be 10 feet bgs.



2.0 PURPOSE OF FIELD SAMPLING PLAN

As previously stated in this Field Sampling Plan (FSP), the Phase I ESA conducted for this Project identified eight sites that required Phase III ESAs. BrightFields will complete two additional Phase III ESAs as part of a supplemental investigation.

This FSP establishes the scope of work and the procedures that will be used to conduct the Supplemental Phase III ESA. The work will be performed in a manner consistent with:

- (PennDOT) Publication 281, The Transportation Project Development Process, Waste Site Evaluation Procedures Handbook;
- A site-specific Health and Safety Plan (HASP);



3.0 SCOPE OF WORK

The scope of work described in this section is designed to meet the requirements for Phase III ESAs described in the *Waste Site Evaluation Procedures Handbook*. The *Waste Site Evaluation Procedures Handbook* defines a Phase III ESA as a non-routine comprehensive probe intended to detail specific waste-related concerns, both hazardous and nonhazardous.

Prior to conducting the supplemental Phase III ESAs, BrightFields will notify the PA One-Call system. BrightFields will provide advanced notice to site owners by sending a notification letter and following up with a phone call. The sample locations for the Supplemental Phase III ESAs will be recorded using a hand-held Global Positioning System (GPS) unit. Locations identified in the attached figures are subject to change based on utility mark-out and site conditions.

Samples analyzed for PADEP short list parameters and polychlorinated biphenyls (PCBs) will be analyzed according to the methods detailed on Table IV-9 from PADEP Land Recycling Program Technical Guidance Manual, included as Attachment A.

Samples analyzed for volatile organic compounds (VOCs) will be analyzed by Environmental Protection Agency (EPA) Method 8260B. Samples analyzed for semi-volatile organic compounds (SVOCs), including polycyclic aromatic hydrocarbons (PAHs), will be analyzed by EPA Method 8270C. Samples analyzed for primary pollutant list (PPL) metals will be analyzed by EPA Method 6010B.

The following sections detail the proposed scope of work for the Supplemental Phase III ESAs of the sites.

3.1 Pocono Gas Station

The Supplemental Phase III ESA will consist of a geophysical survey, surface soil sampling, subsurface soil sampling, and groundwater sampling to assess subsurface conditions at the Pocono Gas Station. A geophysical survey will be performed in an effort to clear the sample locations of subsurface utilities. Six Geoprobe® borings will be advanced across the site to facilitate the soil and groundwater sampling. The surface soil samples will be collected from 0-2 feet below ground surface (bgs) from each boring. Subsurface soil samples will be collected from immediately above the soil to groundwater interface, where contamination is apparent, or from the maximum depth of the proposed borings. The groundwater samples will be collected from temporary well points installed in at least three of the six borings advanced at the site.



The soil and groundwater samples will be analyzed for PADEP short list parameters for leaded gasoline, unleaded gasoline, kerosene, and diesel fuel.

One duplicate sample, for each sample media, will be collected from the location which has the greatest observations of contamination. One equipment blank sample will be collected, for each sample media, to make sure that there is no cross contamination occurring. One matrix spike (MS) and matrix spike duplicate (MSD) sample will be collected. One trip blank sample will be collected for VOCs only. These quality assurance/quality control (QA/QC) samples will be analyzed for the parameters associated with the Pocono Gas Station. The proposed soil boring locations are shown on Figure 4.

3.2 Perfection Shoe Company

The Supplemental Phase III ESA will consist of a geophysical survey, surface soil sampling, subsurface soil sampling, and groundwater sampling to assess subsurface conditions at the Perfection Shoe Company site. A geophysical survey will be performed in an effort to clear the sample locations of subsurface utilities. Six Geoprobe® borings will be advanced across the site to facilitate the soil and groundwater sampling. The surface soil samples will be collected from 0-2 feet bgs from each boring. Subsurface soil samples will be collected from above the soil to groundwater interface in each boring. The groundwater samples will be collected from temporary well points installed in at least three of the six borings advanced at the site.

The soil and groundwater samples will be analyzed for VOCs, SVOCs, PPL metals, and PCBs.

One duplicate sample, for each sample media, will be collected from the location which has the greatest observations of contamination. One equipment blank sample will be collected, for each sample media, to make sure that there is no cross contamination occurring. One MS and MSD sample will be collected. One trip blank sample will be collected for VOCs only. These QA/QC samples will be analyzed for the parameters associated with the Perfection Shoe Company. The proposed soil boring locations are shown on Figure 5.



4.0 <u>SAMPLING STRATEGY/APPROACH</u>

4.1 Geophysical Investigation

A geophysical investigation will be completed at each site. The geophysical survey will utilize ground penetrating radar (GPR) and electromagnetic (EM) instruments in an effort to determine if underground storage tanks (USTs) are present at the sites. It is possible that the USTs were previously removed from the site. If the geophysical survey indicates subsurface conditions indicative of previous UST locations, soil borings locations will be selected to target near those areas.

4.2 <u>Soil Sampling Methods</u>

Soil samples will be obtained using a Geoprobe® drilling rig. The Geoprobe® will collect soil using direct push technology. A dedicated 2-inch diameter acetate sleeve is inserted into a stainless steel core barrel and the core barrel is pushed into the ground; thereby, collecting the soil in the acetate sleeve. The cores are then retrieved, cut open, logged, and samples are collected, if necessary.

Soil obtained from the Geoprobe® borings will be examined by BrightFields' on-site scientist and screened for the presence of VOCs at approximately one-foot intervals using a photoionization detector (PID) with a 10.6 electron volt (eV) lamp. Written logs, describing the soil, noting any evidence of contamination, and identifying the depth to groundwater (if encountered), will be maintained for each boring by BrightFields' on-site scientist.

Soil samples for VOCs analysis will be discrete grab samples collected as quickly as possible using En Core® samplers. The remaining soil samples for laboratory analysis will be composited in a dedicated aluminum pan, mixed using a dedicated plastic scoop, and then transferred to laboratory-cleaned sample containers. Clean, disposable nitrile gloves will be worn during all sample collection activities. Samples will be tightly sealed, clearly labeled, and documented under chain-of-custody procedures. All labels will include the following information:

- Sample identification number
- Client/project name
- Project location
- Date of sample collection
- Time of sample collection
- Sampler's initials



Field QA/QC soil samples will be collected during the Phase III ESAs. The following soil QA/QC samples will be collected at each site:

- One (1) duplicate sample for every 20 samples collected.
- One Matrix Spike (MS) and Matrix Spike Duplicate (MSD) sample.
- One trip blank VOCs only.

4.3 Groundwater Sampling Methods

Grab groundwater samples will be collected from select Geoprobe® borings advanced on the sites.

Groundwater sampling will be conducted using the following methodology:

- Depth to water within the Geoprobe® boring will be measured to the nearest 0.01 foot using an electronic interface probe, which will be decontaminated prior to use and between each measurement.
- A temporary well point will be installed in the soil boring using a Geoprobe® drilling rig to collect the groundwater sample. If a non-dedicated temporary well point device is used (e.g. if a Geoprobe® screen point sampling device is used), the device will be decontaminated prior to use and between use at each boring and a field blank sample will be collected for QA/QC purposes.
- Groundwater will be purged from each well by placing polyethylene tubing into the well screen and purging the well with a peristaltic pump until the purged groundwater is as free of suspended sediments as possible.
- All groundwater samples collected from dedicated polyethylene tubing will be filtered in the field through a dedicated Quick Filter® (0.45μm pore), except for VOCs, to remove suspended material. Following filtration, the groundwater will be transferred directly from the Quick Filter® to the laboratory-cleaned sample containers. The sample vials for the VOC analysis will be laboratory-preserved with hydrochloric acid (HCl). The samples for dissolved metals analysis will be preserved with nitric acid (HNO₃). When preservatives are in the sample containers, steps will be taken to ensure that the preservatives are not spilled during sample collection.

The samples will be transported to the selected laboratory as soon as possible after the sampling

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event for analysis.

QA/QC for the groundwater analytical program will be maintained by analyzing the following samples for each site:

- One (1) duplicate sample for every 20 samples collected.
- One MS and MSD sample.
- One trip blank VOCs only.

4.4 <u>Sample Handling and Transportation</u>

After a sample is collected, it will be placed immediately in an insulated cooler with ice to maintain a temperature of approximately 4 degrees Celsius. Each sample will be entered on a chain-of-custody form that will be maintained with the samples and transported to the laboratory.

4.5 **Equipment Decontamination**

Decontamination of non-dedicated sampling equipment, drilling equipment and hand tools will be performed prior to sample collection and between borings according to the following procedure:

- Scrub with a nylon brush and phosphate-free detergent and tap water solution.
- Rinse with tap water.
- Rinse with 0.1 N nitric acid (If inorganic analysis is included, otherwise skip this step).
- Rinse with distilled or deionized water.
- Rinse with pesticide-grade isopropanol into a bucket.
- Rinse twice with distilled or deionized water.
- Air dry.

4.6 Investigation-Derived Wastes

During the Supplemental Phase III ESA activities, any disposable materials (gloves, paper towels, plastic trowels, and Geoprobe® plastic sleeves) will be disposed as trash. Soil from the borings will be returned to each borehole in the order that it was drilled. If soil from borings have PID readings above 25 ppm and/or has visual and/or olfactory evidence of contamination, the soil will be containerized in 55-gallon steel drums and determination of its disposition will be made upon review of the analytical results. The open boreholes will be plugged with bentonite.



Purged groundwater containing PID readings above 5 ppm or displaying a visible sheen will be containerized and a determination of its disposition will be made upon review of the analytical results. If the groundwater does not exhibit these observations, the water will be discharged to the ground. Waste decontamination water and solutions will be drummed on site for storage until disposal is arranged at a later date. All drums generated during the supplemental Phase III Investigation will be temporarily staged on the respective site that the waste is generated on within the project area.



5.0 ANALYTICAL REQUIREMENTS

Soil and groundwater samples collected during the Supplemental Phase III ESA will be submitted to a Pennsylvania Department of Environmental Protection (PADEP) accredited laboratory for analysis, in accordance with the PA Environmental Laboratory Accreditation Act of 2002 (Act 90), Part 2. Standard turn-around time will be requested for the sample analyses reporting timeframe.



6.0 SUPPLEMENTAL PHASE III ESA REPORTS

BrightFields will gather all information obtained for each site and incorporate the information into a supplemental Phase III ESA report for the Project.

Analytical results obtained for the samples collected during the Supplemental Phase III ESAs will be summarized on tables comparing the results to the PADEP Act 2 Statewide Health Standard MSC Values, the Clean Fill Limit Values listed in the PADEP Management of Fill Policy, PADEP Closure Requirements for Underground Storage Tank Systems, and the Regulated Fill Limit Values listed in the PADEP General Permit for Beneficial Use of Regulated Fill. Additionally, figures displaying the sample locations for each site will be included in the Supplemental Phase III ESA report.

The Supplemental Phase III ESA report will include all relevant information obtained for each site to generate a professional assessment of each site and offer specific recommendations for each site. The specific recommendations will adequately address the following for each site:

- The type, extent, and anticipated migration path of identified contamination (if any) at the site relative to the highway project. This will include a description of the topographical setting of the site, underlying geology at the site, surface water flow at the site, structure and utility characteristics, and any other relevant site conditions.
- The impact, if any, that the identified contamination and site conditions may have upon environmental and human receptors, highway construction, and waste management. For regulated UST releases, this impact assessment will include identification of all water supply wells within 2,500 feet of the release, as required by the Corrective Action Process (CAP) regulations of Act 32.
- The potential health risks faced by personnel having contact with the identified contamination through normal activities related to highway construction.
- Regulatory requirements for remediation and/or additional characterization of the site.
- The need for additional Phase III investigations in order to further evaluate the likely cost of acquiring the site.

The Supplemental Phase III ESA report will follow the recommended report format outlined in Section 6.0 of the *Waste Site Evaluation Procedures Handbook* (PennDOT Publication 281, December 2012).



7.0 PROJECT TEAM AND SCHEDULE

The Supplemental Phase III ESA will be performed under the direction of Ken Hannon, P.E., Project Director at BrightFields. Mr. Hannon will be responsible for communications with AECOM, PADEP, and other interested parties. Victoria Bisbing will manage day-to-day project activities, assist with client and regulatory agency communications, and manage subcontractors during the field investigation. It is also anticipated that James Thompson will serve as BrightFields' on-site scientist during the Supplemental Phase III ESA fieldwork. Stephen A. Johnson, PhD, P.G., will be the Quality Assurance and Quality Control Officer and will provide the technical oversight for the Supplemental Phase III ESAs.

Role	Name	Affiliation	Phone
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Technical Director	Steve Johnson	BrightFields, Inc.	302-656-9600 (office) 302-420-1707 (cell)
Project Manager	Victoria Bisbing	BrightFields, Inc.	302-656-9600 (office) 302-420-8853 (cell)
Field Work Coordinator/Inspector	James Thompson	BrightFields, Inc	302-656-9600 (office) 302-218-9399 (cell)

7.1 **Project Schedule**

Field data collection activities and data evaluation will be led and performed by BrightFields' technical staff and specialized subcontracted personnel who will be identified prior to the initiation of work. BrightFields'employees and their subcontractors will follow the site specific Health and Safety Plan for field data collection activities. BrightFields anticipates that the Supplemental Phase III ESA fieldwork will be conducted in late Summer 2018 or early Fall 2018, contingent upon access, and will take approximately four days to complete. BrightFields will notify AECOM when the Supplemental Phase III ESA fieldwork is complete and BrightFields will submit a draft Supplemental Phase III ESA report for review within six to eight weeks of receipt of the laboratory data.



8.0 REFERENCES

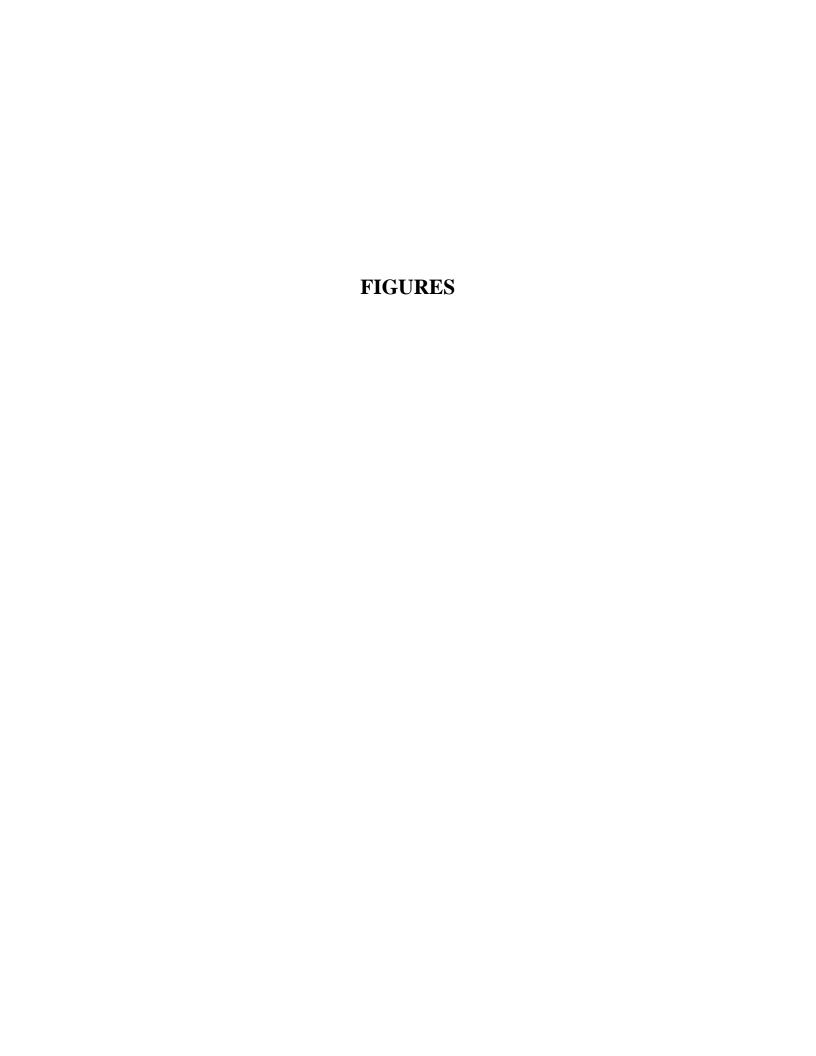
BrightFields, Inc. (BrightFields), 2018, <u>Phase III Environmental Site Assessment for the I-80 Reconstruction Project</u>, May 2018.

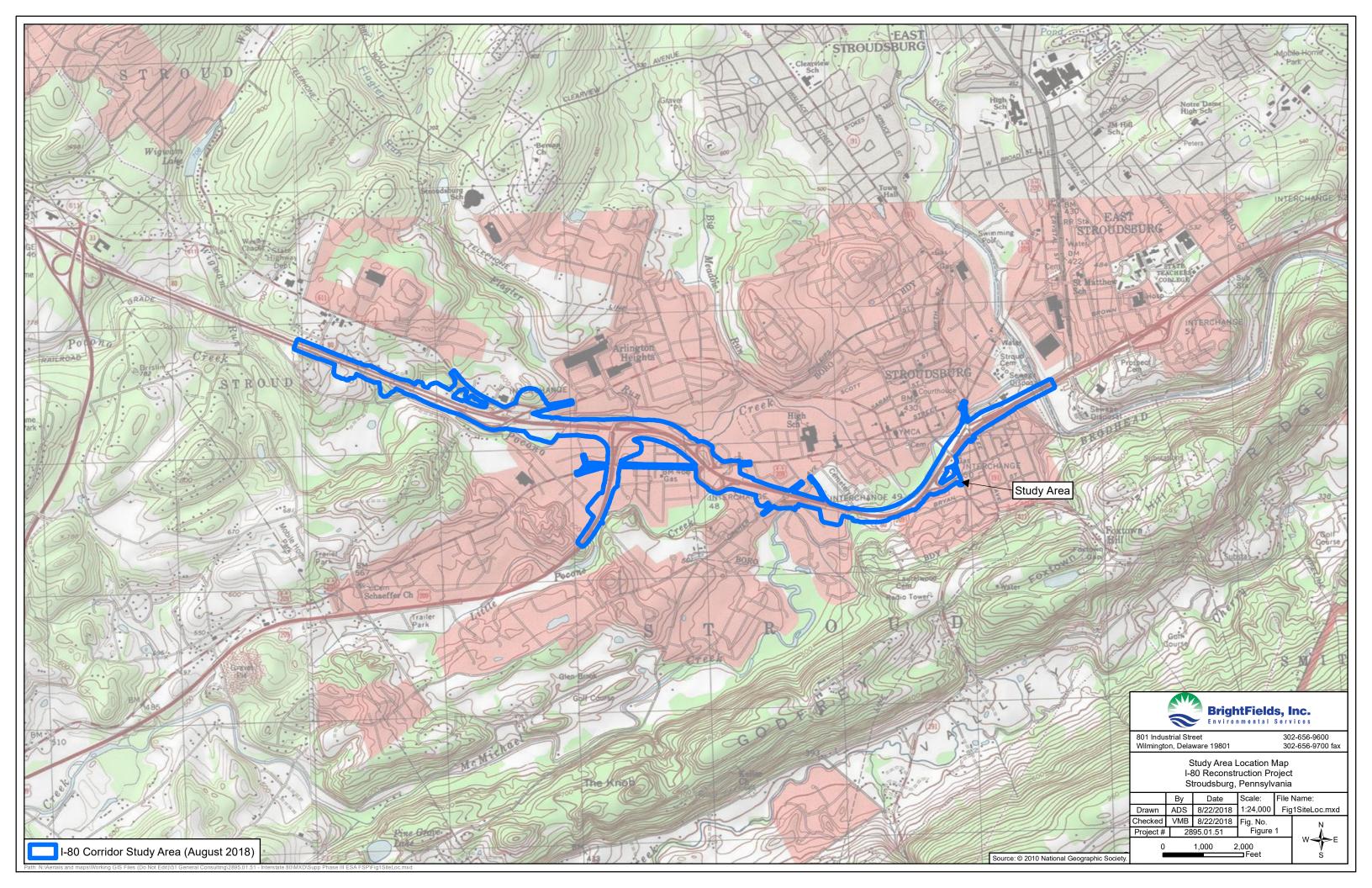
BrightFields, 2017, <u>Phase I Environmental Site Assessment for the I-80 Reconstruction Project</u>, July 2017.

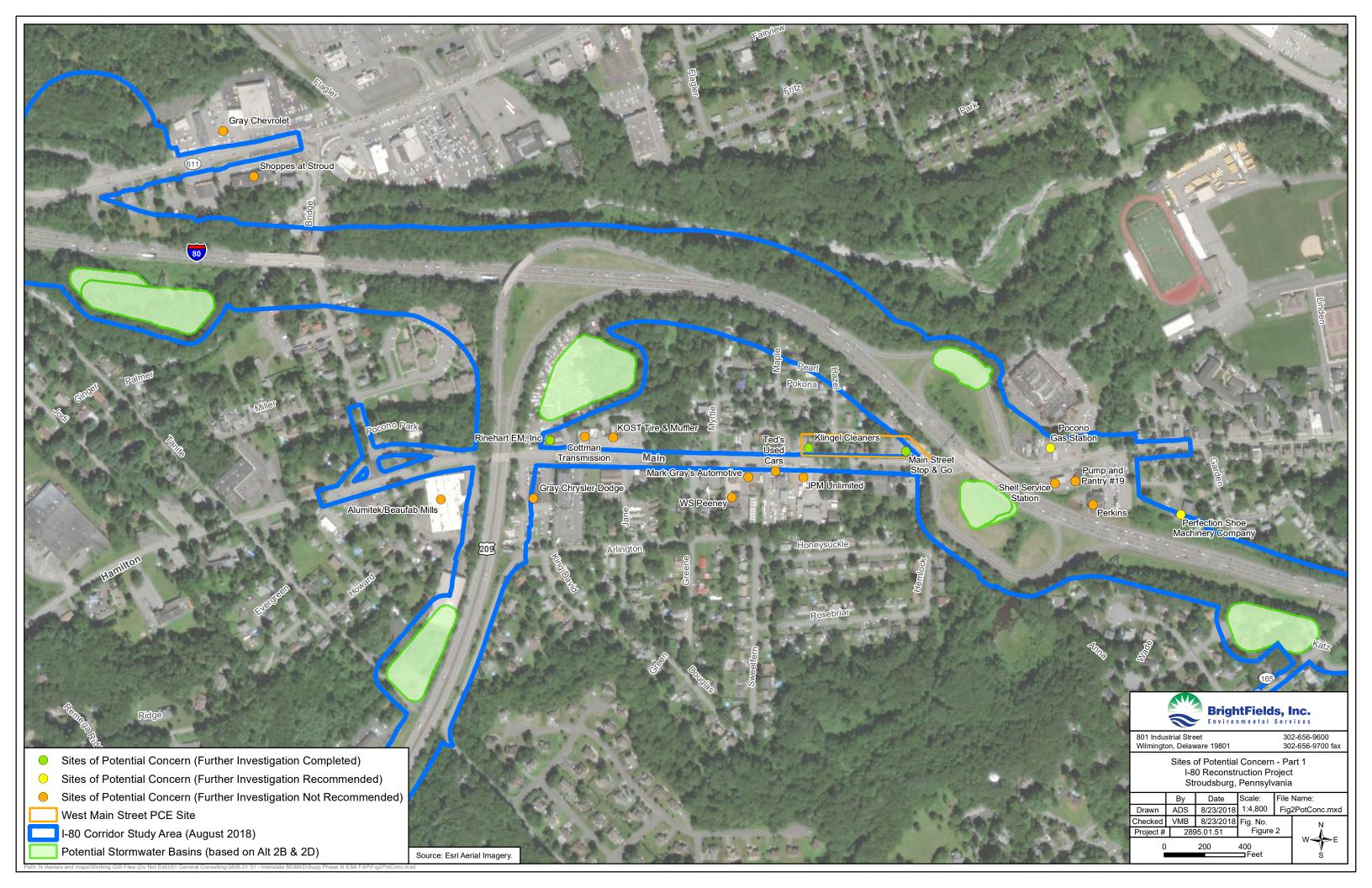
Pennsylvania Department of Environmental Protection (PADEP), 2011, <u>Statewide Health Standards</u>, January, 2011.

PADEP, 1989, Storage Tank and Spill Prevention Act, August 1989.

Pennsylvania Department of Transportation (PennDOT), 2012, <u>The Transportation Project Development Process</u>, Waste Site Evaluation Procedures Handbook, <u>Publication No. 281</u>, December, 2012.

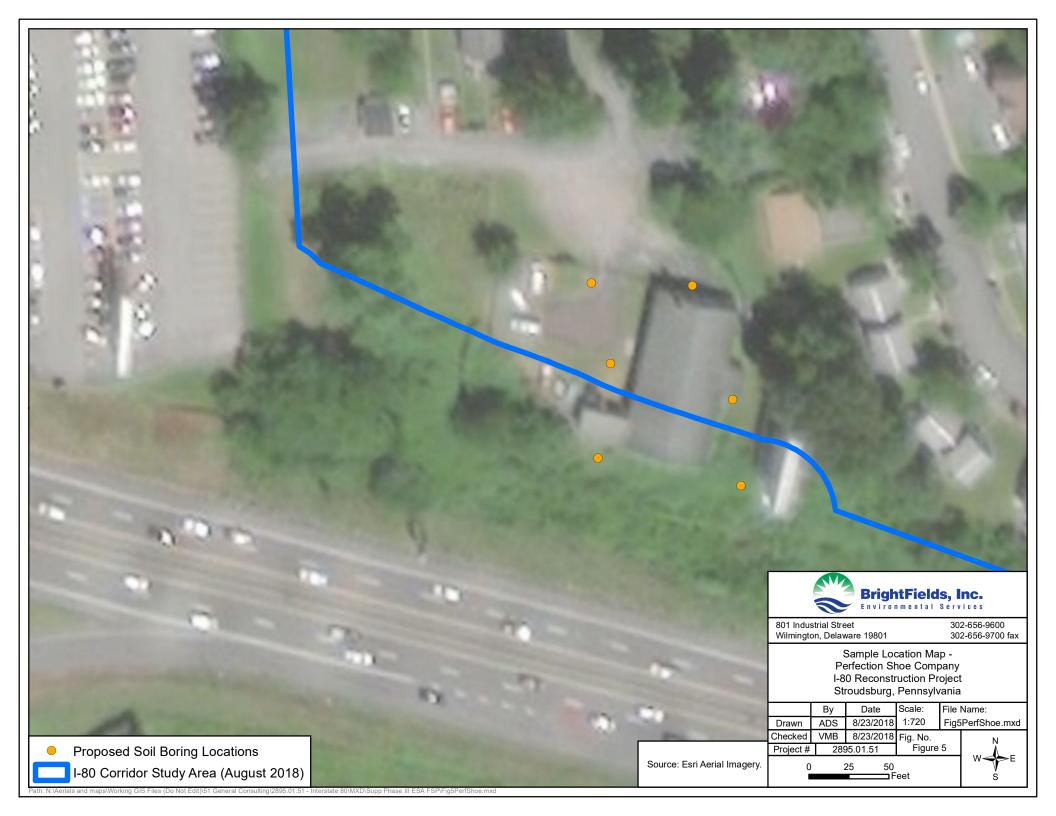












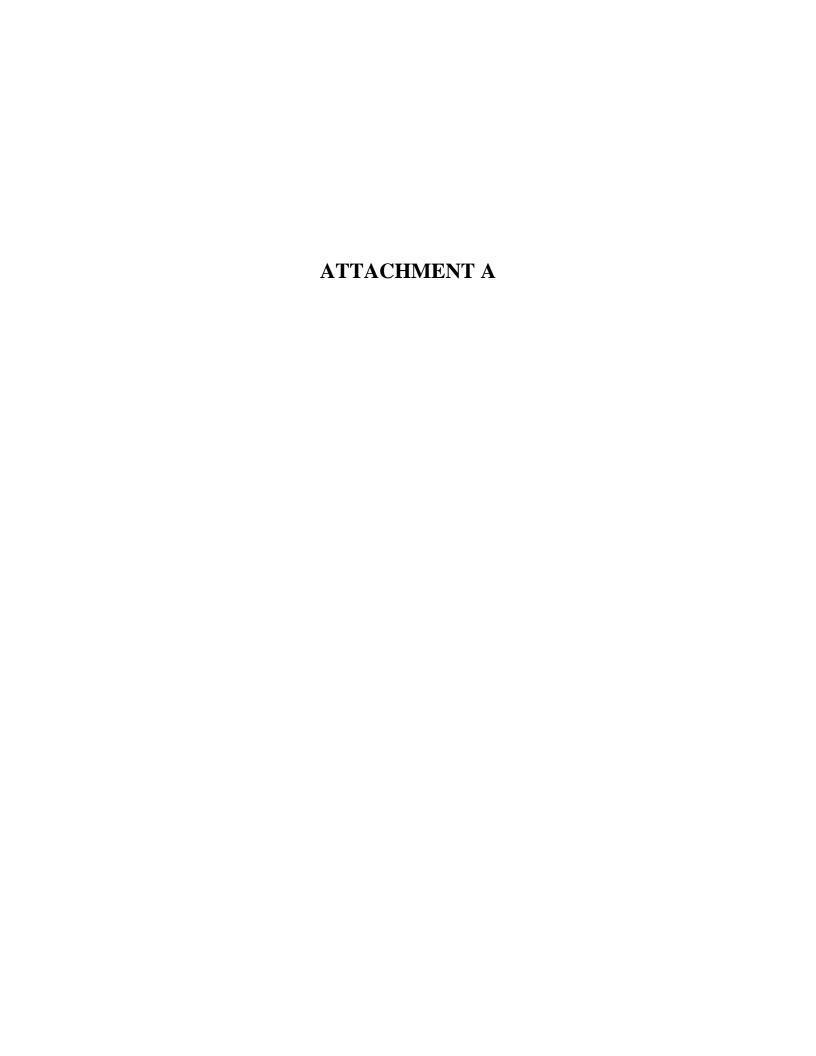


Table IV-9
Short List of Petroleum Products

PRODUCT STORED	PARAMETERS TO BE TESTED IN SOIL	ANALYTICAL METHOD (reported on a dry weight basis)	PARAMETERS TO BE TESTED IN WATER	ANALYTICAL METHOD
Leaded Gasoline, Aviation Gasoline, and Jet Fuel	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5- Dichloroethane, 1,2- Dibromoethane, 1,2-	EPA Method 5035/8021B or 5035/8260B	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5- Dichloroethane, 1,2- Dibromoethane, 1,2-	EPA Method 5030B/8021B, 5030B/8260B or 524.2 EPA Method 8011 or 504.1
	Lead (total)	EPA Method 6010B or 7420	Lead (dissolved)	EPA Method 6020 or 7421
Unleaded Gasoline	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8260B	Benzene Toluene Ethyl Benzene Xylenes (total) Cumene (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8260B or 524.2
Kerosene, Fuel Oil No. 1	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8260B	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8260B or 524.2
Diesel Fuel, Fuel Oil No. 2	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8260B	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) Methyl tert-Butyl Ether Naphthalene Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8260B or 524.2
Fuel Oil Nos. 4, 5 and 6, and Lubricating Oils and Fluids	Benzene Naphthalene Fluorene Anthracene Phenanthrene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Benzo(g,h,i)perylene	EPA Method 5035/8021B or 5035/8260B EPA Method 8270C or 8310	Benzene Naphthalene Phenanthrene Pyrene Chrysene	EPA Method 5030B/8021B, 5030B/8260B or 524.2 EPA Method 8270C, 8310 or 525.2

Table IV-9 Short List of Petroleum Products (cont'd)

PRODUCT STORED	PARAMETERS TO BE TESTED IN SOIL	ANALYTICAL METHOD (REPORTED ON A DRY WEIGHT BASIS)	PARAMETERS TO BE TESTED IN WATER	ANALYTICAL METHOD
Used Motor Oil	Benzene	EPA Method 5035/8021B or	Benzene	EPA Method 5030B/8021B,
	Toluene	5035/8260B	Toluene	5030B/8260B or 524.2
	Ethyl Benzene		Ethyl Benzene	
	Cumene (Isopropylbenzene)		Cumene (Isopropylbenzene)	
	Naphthalene		Naphthalene	
	Pyrene	EPA Method 8270C or 8310	Pyrene	EPA Method 525.2
	Benzo(a)anthracene		Benzo(a)anthracene	
	Chrysene		Chrysene	
	Benzo(b)fluoranthene		Benzo(b)fluoranthene	
	Benzo(a)pyrene		Benzo(a)pyrene	
	Indeno(1,2,3-cd)pyrene		Indeno(1,2,3-cd)pyrene	
	Benzo(g,h,i)perylene		Benzo(g,h,i)perylene	
	Lead (total)	EPA Method 6010B or 7420	Lead (dissolved)	EPA Method 6020 or 7421

Mineral Insulating	PCB-1016 (Aroclor)	EPA Method 8082	PCB-1016 (Aroclor)	EPA Method 8082
Oil	PCB-1221 (Aroclor)		PCB-1221 (Aroclor)	
	PCB-1232 (Aroclor)		PCB-1232 (Aroclor)	
	PCB-1242 (Aroclor)		PCB-1242 (Aroclor)	
	PCB-1248 (Aroclor)		PCB-1248 (Aroclor)	
	PCB-1254 (Aroclor)		PCB-1254 (Aroclor)	
	PCB-1260 (Aroclor)		PCB-1260 (Aroclor)	
	Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-)	EPA Method 5035/8021B or 5035/8260B	Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-)	EPA Method 5030B/8021B, 5030B/8260B or 524.2
	Trimethyl benzene, 1,3,5-		Trimethyl benzene, 1,3,5-	