PHASE III ENVIRONMENTAL SITE ASSESSMENT
FIELD SAMPLING PLAN

I-80 RECONSTRUCTION PROJECT

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

Prepared For:

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BrightFields File: 2895.01.51

BrightFields, Inc.

INTERNAL QUALITY CONTROL SHEET

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

Prepared By:

James Thompson
Environmental Analyst

Reviewed By:

Victoria Bisbing
Project Manager

Reviewed and Approved By:

Ken Hannon, P.E.
Project Director

TABLE OF CONTENTS

FIGURES

ATTACHMENT

PHASE III ENVIRONMENTAL SITE ASSESSMENT FIELD SAMPLING PLAN

I-80 RECONSTRUCTION PROJECT
STROUD TOWNSHIP, STROUDSBURG, AND EAST STROUDSBURG
MONROE COUNTY, PENNSYLVANIA

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 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, nine properties were identified that will require Phase III ESAs. These nine 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 nine properties that have been identified within the Project area that will require Phase III ESAs are 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. The locations of these sites are depicted on Figure 2 and Figure 3.

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

1.2 Phase III ESA Sites

1.2.1 APS Recycling

The APS Recycling site is a scrap yard facility and has been in operation since at least 1961. Historic research performed for the Phase I ESA indicated that a NYS &WRR rail yard facility, including an engine repair shop, was previously located where the APS Recycling Site is located.

Construction activities anticipated on the site include widening of I-80, construction of mainline bridge over McMichael Creek, and construction of a stormwater basin on the site. The maximum depth for spreading 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 50 feet bgs. The maximum depth for the stormwater basin is anticipated to be 14 feet bgs.

1.2.2 Biobuffers Solutions, Inc./Pocono Foundry

The Biobuffer Solutions, Inc./Pocono Foundry site was previously used as an iron foundry from at least 1921 until at least 1961. The Map Findings section of the EDR DataMap™ Area Study report indicates that the Pocono Foundry was first listed as a RCRA Non-Generator in August 1980 and it is likely that the foundry operated until approximately 1980. More recently, Biobuffer Solutions, Inc. operated in the former Pocono Foundry facility. Internet research for Biobuffer Solutions, Inc. indicated that the company was a manufacturer of biological buffers and laboratory reagents intended for use in the biopharm and biotech markets.

Construction activities anticipated on the site include widening of I-80, demolition of an existing off ramp, construction of a retaining wall, and construction of a stormwater basin on the site. The maximum depth of disturbance for widening of I-80, off ramp demolition, and retaining wall construction is anticipated to be 10 feet bgs. The maximum depth for the stormwater basin is anticipated to be 16 feet bgs.

1.2.3 Former Gas Station

Historic maps for the years of 1950 and 1961 indicated that a gas station was previously present at the northeast corner of the intersection of Main Street and North 5th Street (440 Main Street). The property currently is a KFC Restaurant. Historic maps indicated four underground storage tanks (USTs) present on the property. The 440 Main Street property was not identified on any databases indicating that USTs were registered at the property or removed from the property. It is possible that USTs remain. Construction activities anticipated on the site include intersection

improvements and the maximum depth of disturbance associated with the intersection improvements is anticipated to be five feet bgs.

1.2.4 Former Research Laboratory/Chemical Plant

The Former Research Laboratory/Chemical Plant site was identified on a historic map for the year of 1950.

Construction activities anticipated on the site include widening of I-80, construction of a retaining wall, and construction of a stormwater basin on the site. The maximum depth of disturbance for widening of I-80 and retaining wall construction is anticipated to be five feet bgs. The maximum depth for the stormwater basin is anticipated to be 13 feet bgs.

1.2.5 Klingel Cleaners and West Main Street PCE Sites

A review of files obtained from the PADEP indicated that perchloroethylene (PCE) contamination has been identified in soil and groundwater at the Klingel Cleaners and West Main Street PCE sites.

Construction activities anticipated on the site include widening/realignment of West Main Street and construction of a stormwater basin on the site. The maximum depth of disturbance associated with the widening/realignment is anticipated to be 10 feet feet bgs. The maximum depth for the stormwater basin is anticipated to be 15 feet bgs.

1.2.6 Main Street Stop & Go

The Main Street Stop & Go site is an operating filling station. A review of files obtained from the PADEP indicated that PCE is present in groundwater at the Main Street Stop & Go site. Petroleum contaminants have also been documented at the site.

Construction activities anticipated on the site include widening/realignment of West Main Street, construction of a ramp, and construction of a stormwater basin. The maximum depth of disturbance for widening/realignment of West Main Street is anticipated to be 10 feet bgs. The maximum depth for the stormwater basin is anticipated to be 15 feet bgs.

1.2.7 Pocono Gas Station

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 spreading footing at the site is anticipated to be 10 feet bgs and the maximum depth for pile foundation is anticipated to be 45 feet bgs.

1.2.8 Rinehart EM, Inc.

Several debris piles and multiple vehicles and storage trailers were observed on the Rinehart EM Inc. site during the site visit performed for the Phase I ESA. Schlier's Towing Service, K&L Auto Repair, and Body Shop by Jim Schlier were the occupants of the site at the time of the site visit and the site was identified on the Archive UST database in the EDR DataMap™ Area Study report obtained for the Phase I ESA. Based on observations during the site visit and historical aerial photographs, the site appears to have been used as an automobile salvage yard.

Construction activities anticipated on the site include interchange reconstruction/reconfiguration, demolition of an on ramp, construction of two new ramps, widening/realignment of W. Main Street, construction of retaining walls, and construction of a stormwater basin. The maximum depth of disturbance for interchange reconstruction/reconfiguration, ramp demolition/construction, widening/realignment of W. Main Street, and retaining wall construction is anticipated to be 10 feet bgs for spreading footing and 45 feet bgs for pile foundation. The maximum depth for the stormwater basin is anticipated to be 15 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 nine sites that will require Phase III ESAs.

This Field Sampling Plan establishes the scope of work and the procedures that will be used to conduct the Phase III ESAs. 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 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. All sampling locations for the Phase III ESAs will be recorded using a hand-held Global Positioning System (GPS) unit. Locations identified in Figure 4 through Figure 11 subject to change based on utility mark-out and site conditions.

All 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), including PCE, trichloroethylene, cis-dichloroethene, vinyl chloride, and ethene 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. Samples analyzed for pH will be analyzed by EPA Method 9045D.

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

3.1 APS Recycling

Ten soil borings will be advanced at the site using a Geoprobe® drilling rig. The borings will be advanced to the maximum depth of a proposed stormwater basin (14 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 4.

If groundwater is encountered, groundwater samples will be collected from temporary well points installed in select soil borings at the site. Groundwater samples will be collected from a

maximum of five locations.

The soil and groundwater samples will be analyzed for PADEP short list parameters for leaded gasoline, unleaded gasoline, kerosene, diesel fuel, fuel oils, and lubricating oils, PAHs, pH, PPL metals, asbestos, target compound list (TCL) pesticides, and PCBs.

3.2 Biobuffers Solutions, Inc./Pocono Foundry

Four soil borings will be advanced at the site using a Geoprobe® drilling rig. The borings will be advanced to the maximum depth of a proposed stormwater basin (16 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 5.

If groundwater is encountered, groundwater samples will be collected from temporary well points installed in select soil borings at the site. Groundwater samples will be collected from a maximum of two locations.

The soil and groundwater samples will be analyzed for PADEP short list parameters for unleaded gasoline, kerosene, diesel fuel, fuel oils, and lubricating oils, PPL metals, PAHs, and PCBs.

3.3 Former Gas Station

Prior to conducting drilling activities on the site, a geophysical survey will be performed using ground penetrating radar (GPR) and electromagnetic (EM) instruments in an effort to determine if USTs remain. See Section 4.1 for additional details.

Four soil borings will be advanced at the site using a Geoprobe® drilling rig. The borings will be advanced to the maximum depth of proposed construction activities at the site (5 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 6. The soil boring locations may be modified based on the results of the geophysical survey. If groundwater is encountered, groundwater samples will be collected from temporary well points installed in select soil borings at the site. Groundwater samples will

be collected from a maximum of two locations.

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

3.4 Former Research Laboratory/Chemical Plant

Six soil borings will be advanced at the site using a Geoprobe® drilling rig. The borings will be advanced to the maximum depth of a proposed stormwater basin on the site (13 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 7.

If groundwater is encountered, groundwater samples will be collected from temporary well points installed in select soil borings at the site. Groundwater samples will be collected from a maximum of two locations.

The soil and groundwater samples will be analyzed for VOCs and SVOCs.

3.5 Klingel Cleaners and West Main Street PCE Sites

Two soil borings will be advanced to the south of the Klingel Cleaners site along Main Street and two soil borings will be advanced to the northeast of the Klingel Cleaners site in a proposed stormwater basin using a Geoprobe® drilling rig. The borings will be advanced to the maximum depth of a proposed stormwater basin on the site (15 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 8.

If groundwater is encountered, groundwater samples will be collected from temporary well points installed in all four borings advanced at the site.

The soil and groundwater samples will be analyzed for PCE, trichloroethylene, cis-dichloroethene, vinyl chloride, and ethene.

3.6 Main Street Stop & Go

Three soil borings will be advanced at the site using a Geoprobe® drilling rig. One boring will be advanced on the northern portion of the site where a portion of a stormwater basin is proposed, one boring will be advanced to the south of the site in the vicinity of the planned construction on West Main Street, and one boring will be advanced along the northeastern boundary of the site where widening of I-80 is proposed. The borings will be advanced to the maximum depth of a proposed stormwater basin on the site (15 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 9.

If groundwater is encountered, groundwater samples will be collected from three temporary well points installed in the borings advanced at the site.

The soil and groundwater samples will be analyzed for PADEP short list parameters for leaded gasoline, unleaded gasoline, diesel fuel, PCE, trichloroethylene, cis-dichloroethene, vinyl chloride, and ethene.

3.7 Pocono Gas Station

Two soil borings will be advanced at the site using a Geoprobe® drilling rig. The borings will be advanced to the maximum depth of the proposed construction activities on the site (10 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 10.

If groundwater is encountered, groundwater samples will be collected from two temporary well points installed in the borings advanced at the site.

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

3.8 Rinehart EM, Inc.

Eight soil borings will be advanced on the site using a Geoprobe® drilling rig. The borings will

be advanced to the maximum depth of a proposed stormwater basin on the site (15 feet bgs), or to the groundwater table, whichever is encountered first. Surface soil (0-2 feet bgs) and subsurface soil samples (greater than 2 feet bgs) will be collected 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 boring. The proposed soil boring locations are shown on Figure 11.

If groundwater is encountered, groundwater samples will be collected from temporary well points installed in select soil borings at the site. Groundwater samples will be collected from a maximum of four locations.

The samples will be analyzed for PADEP short list parameters for leaded and unleaded gasoline, PPL metals, pH, and PCBs.

4.0 SAMPLING STRATEGY/APPROACH

4.1 Geophysical Investigation

A geophysical investigation will be completed at the Former Gas Station site. The geophysical survey will utilize GPR and EM instruments in an effort to determine if USTs are present at the site. 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 Soil Sampling Methods

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 Quality Assurance/Quality Control (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

If groundwater is encountered, 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 (HNO_3). The sample bottles for the cyanide analysis will be laboratory-preserved with sodium hydroxide (NaOH). 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 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 Sample Handling and Transportation

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 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 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 Phase III ESAs 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 PHASE III ESA REPORTS

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

Analytical results obtained for the samples collected during the 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 Phase III ESA report.

The 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 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 Phase III ESAs 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 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 Phase III ESAs.

Role	Name	Affiliation	Phone
Project Director	Ken Hannon	BrightFields, Inc.	302-656-9600 (office) 302-377-2658 (cell)
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 Phase III ESA fieldwork will be conducted in late Summer 2017 or early Fall 2017, contingent upon access, and will take approximately six days to complete. BrightFields will notify AECOM when the Phase III ESA fieldwork is complete and BrightFields will submit a draft Phase III ESA report for review within six to eight weeks of fieldwork completion.

8.0 REFERENCES

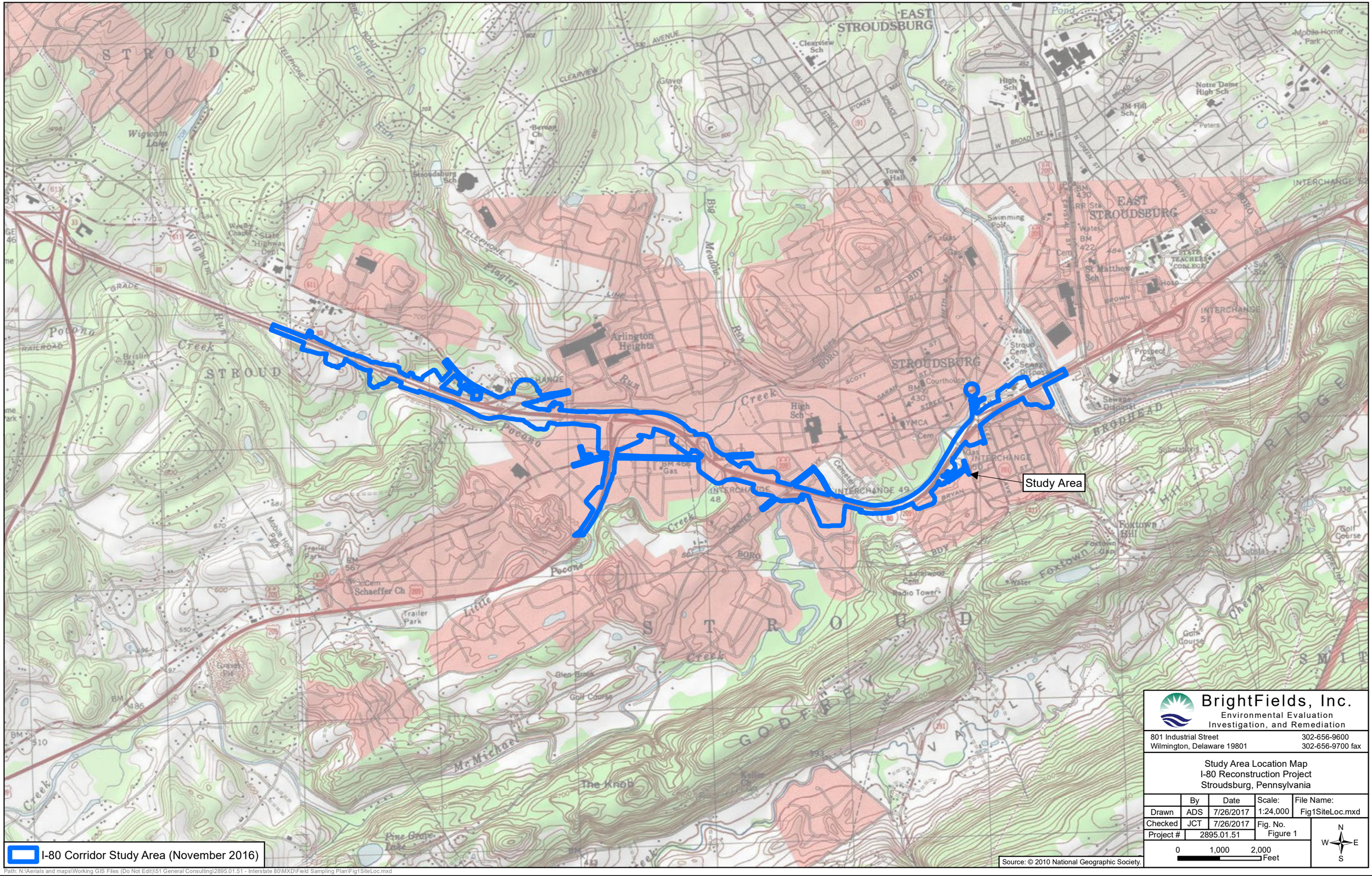
BrightFields, Inc. (BrightFields), 2017, Phase I Environmental Site Assessment for the I-80 Reconstruction Project, July 2017.

Pennsylvania Department of Environmental Protection (PADEP), 2011, Statewide Health Standards, January, 2011.

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

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

FIGURES



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Study Area Location Map
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

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Project #	2895.01.51			

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Gray Chevrolet
Shoppes at Stroud
611
Flagler
Fairview
Fritz
Park
Bridge
80
Linden
Palmer
Ginger
Jodi
Miller
Pocono Park
Tante
Rinehart EM, Inc
Cottman Transmission
KOST Tire & Muffler
Myrtle
Maple
Pearl
Pokona
Hazel
Ted's Used Cars
Klingel Cleaners
Main Street Stop & Go
Main
Mark Gray's Automotive
JPM Unlimited
Gray Chrysler-Dodge
WS Peeney
Alumitek/Beaufab Mills
Pocono Gas Station
Pump and Pantry #19
Shell Service Station
Perkins
Garden
Jane
Arlington
Honeysuckle
King David
Greene
Hemlock
Rosebriar
Hamilton
Howard
Evergreen
209
Green
Douglas
Sweetfern
Anna
Wade
Katz
165
Ridge
Remega Ridge

Sites of Potential Concern (Further Investigation Not Recommended)
Sites of Potential Concern (Further Investigation Recommended)
West Main Street PCE Site
I-80 Corridor Study Area (November 2016)
Potential Stormwater Basins (based on Alt 2B & 2D)

Source: Esri Aerial Imagery.

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Sites of Potential Concern - Part 1
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Stroudsburg, Pennsylvania

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Project #	2895.01.51			

0 200 400 Feet

N W E S

Sites of Potential Concern (Further Investigation Not Recommended)
Sites of Potential Concern (Further Investigation Recommended)
I-80 Corridor Study Area (November 2016)
Potential Stormwater Basins (based on Alt 2B & 2D)

Brodhead Creek NPL Site
Former Stroudsburg Dyeing and Finishing Site
Former Gas Station
Former Research Laboratory/Chemical Plant
Former Gas Station/ Oil Storage Facility
Former Total Auto Service
Sunoco Service Station
Pocono Record
Biobuffers Solutions, Inc./ Pocono Foundry
APS Recycling

Ramsey
5Th
Mcconnell
4Th
Kitson
Lincoln
Woodroe
Scott
9Th
611
Store
Thomas
Sarah
9Th
Monroe
Quaker
7Th
209
Hood
Storm
191
Veterans
10Th
Borough
8Th
7Th
Elm
Cherry
Ann
Colbert
Huston
Stokes
Collins
Elizabeth
Wayne
Hamilton
Main
Mill
Williams
9Th
Palmer
Lenox
Barry
Lee
Clermont
Robeson
Broad
Park
Bryant
Club
Foxtown Hill
611
Feltenman
Dreher
165
Snyder
Ed Christine
Waverly
Foundry
Erie
Village
Katz
80
Sunset
Woodcliff
Clermont
Village
Morningside
191
Godfrey Ridge
Sparrow
Turtle

Source: Esri Aerial Imagery.

BrightFields, Inc.
Environmental Evaluation Investigation, and Remediation

801 Industrial Street
Wilmington, Delaware 19801
302-656-9600
302-656-9700 fax

Sites of Potential Concern - Part 2
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	7/26/2017	1:5,400	Fig3PotConc.mxd
Checked	JCT	7/26/2017	Fig. No. Figure 3	
Project #	2895.01.51			

0 225 450 Feet

N W E S

Path: N:\Aerials and maps\Working GIS Files (Do Not Edit)\51 General Consulting\2895.01.51 - Interstate 80\MXD\Field Sampling Plan\Fig3PotConc.mxd

BrightFields, Inc.
Environmental Evaluation
Investigation, and Remediation
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Proposed Sample Locations -
APS Recycling
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	8/11/2017	1:1,440	Fig4APS_Recycle.mxd
Checked	JCT	8/11/2017	Fig. No. Figure 4	
Project #	2895.01.51			

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BrightFields, Inc.
Environmental Evaluation
Investigation, and Remediation
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Wilmington, Delaware 19801
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302-656-9700 fax

Proposed Sample Locations -
Biobuffer Solutions, Inc/Pocono Foundry
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	8/11/2017	1:1,440	Fig5BioBuffers.mxd
Checked	JCT	8/11/2017	Fig. No. Figure 5	
Project #	2895.01.51			

Path: N:\Aerials and maps\Working GIS Files (Do Not Edit)\51 General Consulting\2895.01.51 - Interstate 80\MXD\Field Sampling Plan\Fig5BioBuffers.mxd

Source: Esri Aerial Imagery.

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Environmental Evaluation
Investigation, and Remediation

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Wilmington, Delaware 19801

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Proposed Sample Locations -
Former Gas Station
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	8/11/2017	1:840	Fig6GasStation.mxd
Checked	JCT	8/11/2017	Fig. No. Figure 6	
Project #	2895.01.51			

0 35 70 Feet

N
W E
S

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Proposed Soil Boring Locations

I-80 Corridor Study Area (November 2016)

Source: Esri Aerial Imagery.

BrightFields, Inc.
Environmental Evaluation
Investigation, and Remediation

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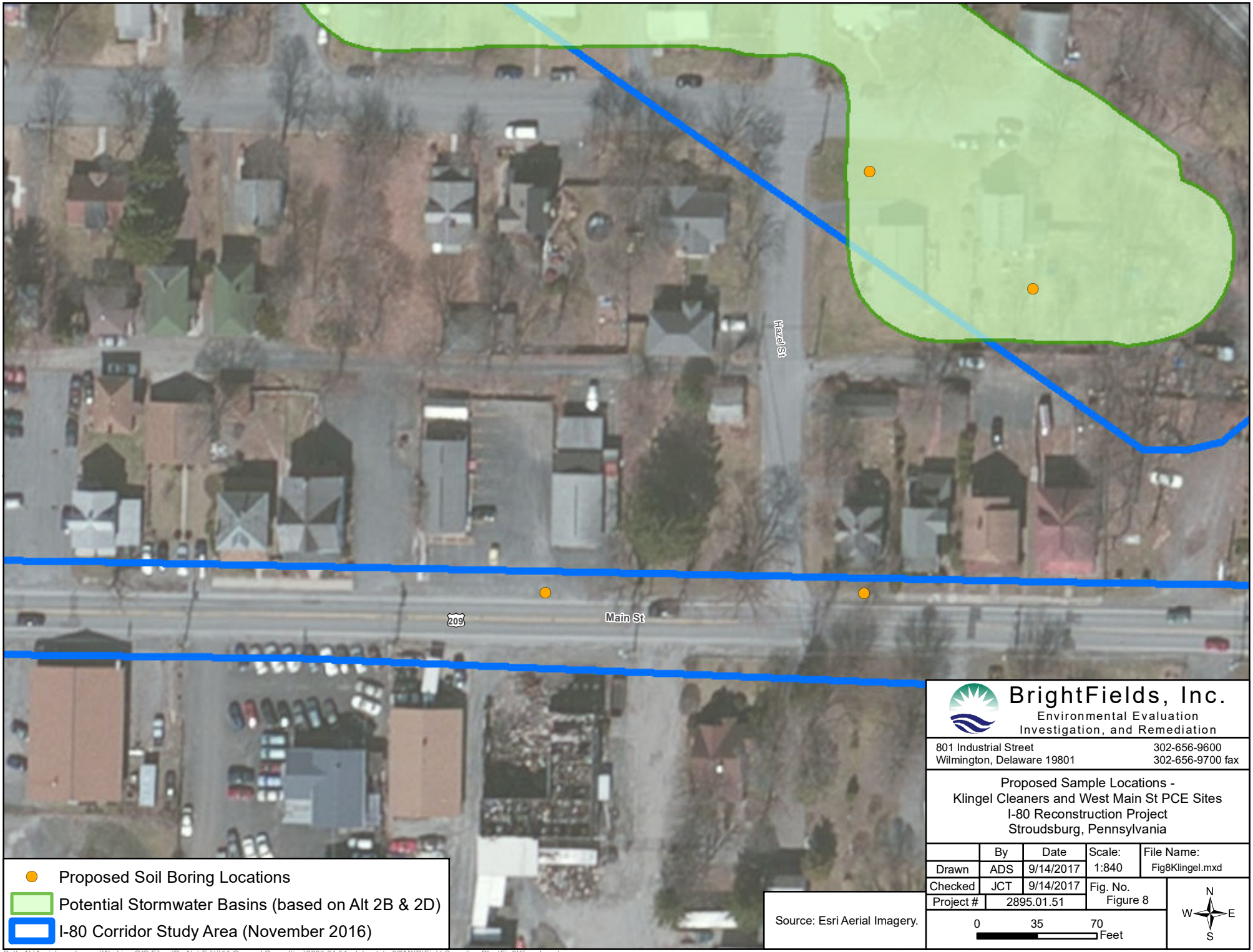
Proposed Sample Locations -
Former Research Laboratory/Chemical Plant
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	9/14/2017	1:600	Fig7ChemPlant.mxd
Checked	JCT	9/14/2017	Fig. No. Figure 7	
Project #	2895.01.51			

0 25 50 Feet

N W E S

Path: N:\Aerials and maps\Working GIS Files (Do Not Edit)\51 General Consulting\2895.01.51 - Interstate 80\MXD\Field Sampling Plan\Fig7ChemPlant.mxd



Proposed Soil Boring Locations

Potential Stormwater Basins (based on Alt 2B & 2D)

I-80 Corridor Study Area (November 2016)

Source: Esri Aerial Imagery.

BrightFields, Inc.
Environmental Evaluation
Investigation, and Remediation

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Proposed Sample Locations -
Klingel Cleaners and West Main St PCE Sites
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	9/14/2017	1:840	Fig8Klingel.mxd
Checked	JCT	9/14/2017	Fig. No. Figure 8	
Project #	2895.01.51			

0 35 70 Feet

N W E S

Path: N:\Aerials and maps\Working GIS Files (Do Not Edit)\51 General Consulting\2895.01.51 - Interstate 80\MXD\Field Sampling Plan\Fig8Klingel.mxd

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Proposed Sample Locations -
Main Street Stop & Go
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	8/11/2017	1:600	Fig9MainSt.mxd
Checked	JCT	8/11/2017	Fig. No. Figure 9	
Project #	2895.01.51			

Path: N:\Aerials and maps\Working GIS Files (Do Not Edit)\51 General Consulting\2895.01.51 - Interstate 80\MXD\Field Sampling Plan\Fig9MainSt.mxd

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Proposed Sample Locations -
Pocono Gas Station
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	8/11/2017	1:600	Fig10PoconoGas.mxd
Checked	JCT	8/11/2017	Fig. No. Figure 10	
Project #	2895.01.51			

Path: N:\Aerials and maps\Working GIS Files (Do Not Edit)\51 General Consulting\2895.01.51 - Interstate 80\MXD\Field Sampling Plan\Fig10PoconoGas.mxd

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Proposed Sample Locations -
Rinehart EM, Inc
I-80 Reconstruction Project
Stroudsburg, Pennsylvania

	By	Date	Scale:	File Name:
Drawn	ADS	8/11/2017	1:840	Fig11Rinehart.mxd
Checked	JCT	8/11/2017	Fig. No. Figure 11	
Project #	2895.01.51			

Path: N:\Aerials and maps\Working GIS Files (Do Not Edit)\51 General Consulting\2895.01.51 - Interstate 80\MXD\Field Sampling Plan\Fig11Rinehart.mxd

ATTACHMENT A

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-	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-	EPA Method 5030B/8021B, 5030B/8260B or 524.2
	Dibromoethane, 1,2-		Dibromoethane, 1,2-	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	EPA Method 5035/8021B or 5035/8260B	Benzene Naphthalene	EPA Method 5030B/8021B, 5030B/8260B or 524.2
	Fluorene Anthracene Phenanthrene Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Benzo(g,h,i)perylene	EPA Method 8270C or 8310	Phenanthrene Pyrene Chrysene	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 Toluene Ethyl Benzene Cumene (Isopropylbenzene) Naphthalene	EPA Method 5035/8021B or 5035/8260B	Benzene Toluene Ethyl Benzene Cumene (Isopropylbenzene) Naphthalene	EPA Method 5030B/8021B, 5030B/8260B or 524.2
	Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene	EPA Method 8270C or 8310	Pyrene Benzo(a)anthracene Chrysene Benzo(b)fluoranthene Benzo(a)pyrene Indeno(1,2,3-cd)pyrene Benzo(g,h,i)perylene	EPA Method 525.2
	Lead (total)	EPA Method 6010B or 7420	Lead (dissolved)	EPA Method 6020 or 7421
Mineral Insulating Oil	PCB-1016 (Aroclor) PCB-1221 (Aroclor) PCB-1232 (Aroclor) PCB-1242 (Aroclor) PCB-1248 (Aroclor) PCB-1254 (Aroclor) PCB-1260 (Aroclor)	EPA Method 8082	PCB-1016 (Aroclor) PCB-1221 (Aroclor) PCB-1232 (Aroclor) PCB-1242 (Aroclor) PCB-1248 (Aroclor) PCB-1254 (Aroclor) PCB-1260 (Aroclor)	EPA Method 8082
	Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5035/8021B or 5035/8260B	Trimethyl benzene, 1,2,4- (Trimethyl benzene, 1,3,4-) Trimethyl benzene, 1,3,5-	EPA Method 5030B/8021B, 5030B/8260B or 524.2