

CHANGE ORDER

In-Scope

Out-of-Scope

Project: Benner Twp

Change Order No.: 3

Date: 9/2/21

Requisition No: GTAC7-4-106

Contractor: HDR Engineering

Regional PM: Cheryl Sinclair

Contractor PM: Matthew Blanchard

Description of Adjustment:

Increase project funding for several tasks as per the attached Work Plan/Cost Estimate to conduct a soil sampling investigation.

Reason / Justification for the Adjustment:

HDR submitted a draft Work Plan/Cost Estimate (WP/CE) to the PADEP on July 30, 2021 to conduct a soil investigation in Benner Township. The PADEP comments were addressed by HDR and are included in the revised WP/CE.

Schedule Impact:

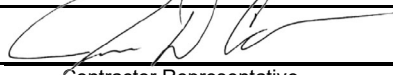

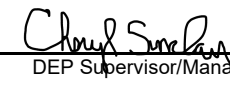
None.

Current Project Budget: \$41,954.22

Cost of Change Order: \$40,397.19

Task:	1010	\$1,941.98
	1040	\$2,300.81
	2070	\$10,702.00
	3000	\$3,357.84
	3011	\$20,415.70
	3080	\$1,678.86

New Project Budget: \$82,351.41

	<u>9/8/2021</u>
Contractor Representative	Date
	<u>09/08/2021</u>
DEP Project Manager	Date
	<u>9/8/2021</u>
DEP Supervisor/Manager	Date
_____	_____
DEP ECP Manager/Division Chief	Date
_____	_____
DEP Contract Manager	Date

- Estimate Attached
- Work Plan Addendum Attached
- Revised Schedule Attached

Task Summary: Change Order 03

Benner Township Site

Requisition Number GTAC7-4-106

September 2021

WBS	Current Task Authorization	Est. Remaining Funding (as of 9/1/21)	Change Order 3 Funding Request	New Total Authorization
Task 1000- Project Management	\$ 2,289.69	\$ 287.46	\$1,941.98	\$ 4,231.67
Task 1010- Project Planning	\$ 14,628.53	\$ 783.94	\$0.00	\$ 14,628.53
Task 1020-File/Document Review	\$ 12,916.94	\$ 1,022.26	\$0.00	\$ 12,916.94
Task 1040 - Procurement	\$ -	\$ -	\$2,300.81	\$ 2,300.81
Task 2070 - Report Prep	\$ 9,609.69	\$ 928.09	\$10,702.00	\$ 20,311.69
Task 2200 - Project Meetings	\$ 2,509.37	\$ 1,591.70	\$0.00	\$ 2,509.37
Task 3000 - Site Survey/Utility Markout	\$ -	\$ -	\$3,357.84	\$ 3,357.84
Task 3011 - Soil Sampling	\$ -	\$ -	\$20,415.70	\$ 20,415.70
Task 3080 - IDW Disposal	\$ -	\$ -	\$1,678.86	\$ 1,678.86
Totals	\$ 41,954.22	\$ 4,613.45	\$ 40,397.19	\$ 82,351.41



**BENNER TOWNSHIP PFAS INVESTIGATION
REQUISITION NUMBER GTAC7-4-106
Change Order 03
WORK PLAN/COST ESTIMATE**

September 2, 2021

The Pennsylvania Department of Environmental Protection (PADEP) has requested that HDR Engineering, Inc. (HDR) assist with determining the source and extent of per- and polyfluoroalkyl substances (PFASs) that were detected in potable wells at properties along High Tech Road in Benner Township during a groundwater investigation completed by the PADEP's Water Supply Program in 2019. The PADEP assigned the Scope of Work (SOW) and the Project Requisition to HDR on June 10 and July 21, 2020, respectively. This Work Plan presents the SOW and Cost Estimate for HDR to complete soil sampling that was recommended by HDR in its June 2021 Due Diligence Summary Report.

PROJECT DESCRIPTION

During the summer of 2019, the PADEP's Bureau of Safe Drinking Water completed a groundwater sampling event for a public supply well and potable wells located at properties along High Tech Road in Benner Township, Pennsylvania (Site). A public water supply well is located at the State of the Art, Inc. (SOTA) property; a potable well is located at the Matreya, LLC property; and, a potable well is located at the Handy Delivery, Inc., property. The SOTA supply well was sampled by the Water Supply Program and the Handy Delivery and Matreya wells were sampled by the PADEP's Environmental Cleanup and Brownfields Program staff. All the wells were sampled for PFAS. The analysis indicated that PFAS was present at a concentration of 114 parts per trillion (ppt) for combined perfluorooctanesulfonic acid (PFOS) and perfluorooctanoic acid (PFOA) in the SOTA well, 138.6 ppt in the Matreya, LLC (Matreya) potable well, and 112.1 ppt in the Handy Delivery well. All three of the samples exceeded the Environmental Protection Agency (EPA) Health Advisory Level (HAL) of 70 ppt for combined PFOS and PFOA. A new potable well located at the Nittany Express was installed in November 2019. The Nittany Express property owner has not responded to several PADEP requests to access the potable well for sampling. The SOTA and Matreya properties have formerly or currently conducted manufacturing activities. Possible manufacturing activities may have occurred or are occurring at other businesses located on High Tech Road.

The University Park Airport (UPA) is managed by two entities: Penn State University (PSU) and the Centre County Airport Authority (CCAA). PSU is the designated sponsor of UPA responsible for overseeing all airside facilities (runways, taxiways, and aprons). PSU is responsible for maintenance of all airfield surface pavements, snow removal, Aircraft Rescue Fire Fighting (ARFF) equipment, oversight of the fuel farm and fueling operations, as well as hanger and tenant leasing and rental negotiations. PSU reported use of aqueous film forming foam (AFFF) at UPA for firefighting testing as mandated by the Federal Aviation Administration (FAA). Upon request from PADEP, PSU initially sampled three monitoring wells in February and March 2020 that are identified as FedEx1 and APT-1, and Haller Farm South). The combined PFOS and PFOA results from all the wells were less than the EPA HAL. In February and March 2020, PSU also sampled

several potable wells that are located on PSU property to the north and east of the airport and High Tech Road. The wells exhibited combined PFOS and PFOA concentrations less than the HAL.

PROJECT BACKGROUND

HDR conducted a due diligence investigation based on the Work Plan submitted to the PADEP in October 2020. The due diligence was performed as an initial effort toward gaining a better understanding of the history and potential use of PFAS materials by properties in the vicinity of High Tech Road and Fox Hill Road in Benner Township, Centre County Pennsylvania. The due diligence included a desktop study, a regulatory database search, site reconnaissance visits, and questions and review of relevant information from regulatory agencies and property owners.

The regulatory database search conducted by Environmental Data Resources (EDR) included fire insurance maps, historical aerial photographs, historical topographic maps, city directory information, and the EDR Radius Report. None of the twenty-one listings within the EDR Radius Report were identified as potential environmental concerns for the Study Area based on factors such as nature of the listing, cleanup/closure status, and distances from the Study Area, hydraulic gradient, or geology.

A draft Due Diligence Summary Report was submitted to the PADEP on February 19, 2021. In March 2021, the PADEP provided HDR with comments to the draft report and a revised draft report was submitted on March 19, 2021. In early May 2021, HDR, the PADEP Project Officer and other representatives from the PADEP discussed their comments to the revised report. PADEP requested HDR to review former on-lot septic systems for several properties at the Site. HDR met with officials from Benner Township to review planning files and conducted a Site visit on May 26, 2021 to review properties along High Tech Road. The final Due Diligence Summary Report was submitted to the PADEP on June 15, 2021 and included recommendations to conduct a soil sampling investigation.

The soil investigation is proposed for the properties along Fox Hill Road, High Tech Road and at the UPA. Soil samples will be collected from soil borings installed by a Geoprobe® unit and submitted to a laboratory for analysis of PFAS. HDR and PADEP discussed the soil sampling investigation during a teleconference on July 15, 2021. During the meeting, PADEP discussed that soil samples proposed on the UPA property, will be collected by PSU and handed to HDR to submit for analysis. The PADEP may also designate a PADEP representative to be onsite to conduct split sample testing with PSU.

Currently, regulatory procedures for conducting a PFAS soil sampling program does not exist for the Commonwealth of Pennsylvania. The PADEP agreed that it was acceptable for HDR to use other resources. This soil sampling investigation was developed using the following guidance documents such as the "Site Characterization Considerations, Sampling Precautions, and Laboratory Analytical Methods for PFAS" (Interstate Technology Regulatory Council) and the "Sampling, Analysis, and Assessment of PFAS" (New York, Department of Environmental Conservation, January 2021). All the soil samples (except from the UPA property), will be collected by HDR and submitted to a Pennsylvania certified laboratory for analysis of perfluorooctanoic acid (PFOA), perfluorooctanesulfonic acid (PFOS), Perfluorobutane Sulfonate (PFBS), and perfluorohexanesulfonic acid (PFHxS) via EPA Method 537.

Additional environmental investigations (for example, surface water sampling, and groundwater sampling) may be required based on the results of the soil investigation.

PROPOSED SCOPE OF WORK

HDR has prepared the Work Plan based on the recommendations in the June 2021 Due Diligence Summary Report and the teleconference meeting in July 2021. The purpose of the soil sampling investigation is to characterize potential PFAS contamination originating from AFFF use areas and other potential sources of PFAS contamination within the project area through infiltration into bedrock and through stormwater runoff pathways to groundwater. The list of proposed work for the Work Plan is provided below:

- Procurement of vendors, suppliers, contractors as warranted;
- Preparation of Health and Safety Plan (HASP), Sampling Analysis Plan (SAP), and Quality Assurance Project Plan (QAPP);
- Site survey with HDR, PADEP personnel, and property owners to assess boring locations, place PA One Call mark outs, and review locations for storage of for IDW and PPE;
- Soil sampling effort including the characterization of soil cores installed by a Geoprobe® contractor and collection of soil samples for laboratory analysis; and,
- Preparation of Soil Investigation and Sampling Summary Report (Report).

The Work Plan is presented sequentially by the PADEP work breakdown structures (WBS) task numbers that will be utilized to complete the work.

WBS-1000-Project Management

Work for this task includes conducting miscellaneous project management duties such as invoice review, preparation of Daily Activity Reports (DARs), budgeting and general project management, PADEP project communications, small change order efforts, etc.

The current funding for this task is nearly expended. This Work Plan/Change Order requests additional funding to perform project management activities through the duration of the investigation and preparation of the Report.

WBS-1040-Procurement

HDR will procure bids and submit a Subcontract Approval Form (SAF) along with the appropriate back-up documentation to the PADEP for recommended contractors. New funding is being requested for this task for the following contractors:

- Drilling Services - The Geoprobe® contractor will need to demonstrate their equipment and materials are compliant with PFAS sampling guidance.
- Analytical Services - HDR will review the laboratory's analytical procedure and recommend a contract laboratory capable of accommodating the number of PFAS samples anticipated and analyzing for PFOA, PFOS, PFBS, and PFHxS via EPA Method 537.
- Waste Disposal Services - HDR will request bids from a licensed waste disposal contract and the disposal facility information for the removal of investigative derived waste (IDW) and personal protection equipment (PPE).

WBS-2070-Report Preparation

Work performed for this task will include the development of a HASP, SAP, and QAPP. The SAP and the QAPP will be submitted to the PADEP for review and approval prior to the soil sampling investigation. This task also includes the preparation and submittal of monthly Project Status Reports (PSR).

After the sampling investigation is completed, HDR will prepare and submit a Soil Sampling Investigation Report to the PADEP. The Report will include the scope of the investigation, the soil sampling methods, and soil sampling results. The Report will include an update to Conceptual Site Model that was included in the Due Diligence report, description of the soil conditions observed in each boring, and the detections or non-detections of PFAS constituents in the soil samples. Geographic information system (GIS) mapping will be used to update the site map to present the location of the soil borings and the soil chemistry results.

The current funding for this task is nearly expended. This Work Plan/Change Order requests additional funding to perform reporting activities through the duration of the investigation and preparation of the Report.

WBS-3000 Site Survey/Utility Markout

A site survey will be conducted by two HDR personnel to review the locations for the proposed borings and to determine options for the temporary storage for an IDW and PPE container(s). During the site survey, HDR will meet with PADEP personnel and coordinate with other property representatives on High Tech Road that will be accessed during the utility mark out and soil sampling effort. The required PA One Call design/utility mark out will be requested for each boring point except for the borings located on the UPA property since they will be installed by PSU.

WBS-3011 Soil Sampling

The work performed for this task includes costs associated with the installation of soil borings, and, collection and analysis of soil samples. HDR proposes to install a total of ten (10) soil borings which are described below. The proposed soil boring locations are presented in Attachments A and B. An HDR technician will oversee the installation of the borings with the Geoprobe® rig operator. The borings will be completed using Geoprobe® direct push technology to refusal or approximately 10' below ground surface (bgs), whichever is encountered first. Continuous soil cores will be extracted and a HDR technician will document the lithology, soil boring depth, photograph the boring, and record other observations in a field book. A hand-held GPS survey instrument will be used to record the coordinates of each boring. Geoprobe® rods will be rinsed with PFAS-free deionized (DI) water. Decontamination fluids and spent acetate soil liners will be containerized for IDW disposal. The soil cuttings will be placed back into their respective borehole.

HDR proposes to collect up to two (2) soil samples from each boring for PFAS analysis. A surface soil sample will be collected from the 0 to 2' bgs interval and a subsurface soil sample will be collected at refusal or approximately 10' bgs, whichever is encountered first. Quality assurance samples will include duplicate samples collected at a rate of 10% of the number of regular samples (one duplicate for every ten regular samples), and one trip blank.

PFAS Background Soil Samples

HDR proposes to install up two (2) soil borings and collect up to two (2) soil samples from a background site to compare to PFAS-impacted sites (areas where AFFF was used for firefighting training and other potential source areas related to manufacturing operations). There are three (3) proposed background sites located in Benner Township including a gravel parking lot at 1025 Rock Road (Location 1); an undeveloped area/gravel road near Fulton's Run Road (Location 2); and an undeveloped lot near Far Hills Avenue (Location 3). The proposed locations are presented in Attachment A. Permission to access this area will be needed prior to installing the soil boring and collecting the samples.

PFAS Soil Characterization Samples

HDR proposes to install nine (9) soil borings and collect up to two (2) soil samples per boring to characterize PFAS contamination from historical releases of AFFF or for other potential PFAS sources. The soil-boring locations are located on the following properties located on Fox Hill Road and High Tech Road. The proposed soil boring locations are presented in Attachment B and as follows:

- Six (6) borings at the State of the Art Property located at 2470 Fox Hill Road, State College, PA including:
 - One (1) boring at the former septic tank
 - One (1) boring at the former drain field
 - One (1) boring near the stormwater outflow
 - One (1) boring near the area of the repaired sinkhole
 - One (1) boring near stormwater runoff to the stormwater inlet
 - One (1) boring upgradient of the stormwater inlet
- One (1) boring at Matreya, LLC located at 2178 High Tech Road, State College, PA to characterize the former septic system.
- One (1) boring at Cannon Instruments, Inc. located at 2139 High Tech Road, State College, PA to characterize the former septic system.
- One (1) boring at Enterprise Rental Car located at 2175 High Tech Road, State College, PA to characterize the former septic system.

A total of six (6) soil boring locations are proposed on the UPA property and up to two (2) soil samples per boring. A surface soil sample will be collected from the 0 to 2' bgs interval and a subsurface soil sample will be collected at refusal or approximately 20' bgs, whichever is encountered first. According to the PADEP, PSU will install these borings and collect the soil samples. Three (3) borings are proposed in three (3) areas of known discharge of AFFF (presented in Attachment B) to the ground and described below:

- One (1) boring at ARFF Area 4 (AFFF discharged to pavement and a grass during the 2009 ARFF training event)
- One (1) boring at ARFF Area 3 (AFFF discharged to grass prior to 2006 during ARFF training events)
- One (1) boring at ARFF Area 1 (AFFF discharged to grass prior to 2006 during ARFF training events)

In addition, three (3) borings are proposed on UPA property for sampling to characterize soils impacted from stormwater runoff and potential releases of AFFF to the 50,000 gallon deicing tank and the former on-lot septic system that existed before the airport connected to the public sewer system. The location of three (3) borings is presented Attachment B and described below:

- One (1) boring near the 50,000 gallon deicing tank for the potential overflow of AFFF
- One (1) boring near the former septic drain field
- One (1) boring near the former septic tanks

WBS-3080 IDW Disposal

Work performed under this task shall include facilitating the removal and disposal of the drummed IDW and PPE generated during the soil boring investigation. IDW will include soil core liners generated from the Geoprobe® rig and PPE used during the soil sampling. HDR will seek qualified contractors for disposal of the containers, collect waste characterization samples as required, prepare and submit waste characterization documentation to the disposal contractor recommended by HDR, prepare shipping manifests for signature by a qualified PADEP representative and document the loading and removal of the IDW and PPE. HDR will notify the PADEP if the borings exhibit stained-soil(s), odors, or evidence of contamination to discuss the management of the material.

PROJECT STAFFING/MANAGEMENT

The project will be managed and staffed by HDR employees from the Mechanicsburg and Bethlehem, Pennsylvania offices. Key staff assigned to this project are listed below.

- **Project Oversight, Quality Assurance and Quality Control** - Tom McMonagle, P.G.
- **Project Manager** - Matthew Blanchard
- **Project Geologist** – Vincent Carbone, P. G.
- **Project GIS** – Ben York
- **Scientist/Technician** – Will vary depending on availability, but HDR representatives will be mobilized from HDR's Mechanicsburg or Bethlehem offices.

KEY UNDERSTANDINGS

- PADEP to coordinate Access Agreements for HDR to enter the properties in Benner Township.
- PADEP will coordinate with PSU for any applicable airport training or documentation needed by HDR to access PSU property.
- PADEP will sign as the generator for IDW and PPE.
- Up to two (2) samples are proposed at each soil boring location collected by HDR for a total of twenty (22) samples plus up to four (4) Quality Assurance/Quality Control samples.
- At the conclusion of the soil investigation event, the soil samples will be picked up at the Site by a laboratory courier service. If a courier service is not available, HDR will transport the samples to the laboratory.
- All the borings will be installed at unpaved surfaces.
- Soil borings and samples proposed on the UPA property will be collected by PSU.
- The potential for high concentrations of PFAS should be considered for samples collected where AFFF was discharged.
- The IDW and PPE will be managed as municipal solid waste (non-hazardous).
- Soil boring locations will be off-set approximately 5' from the original location a maximum of two times due to shallow (< 2' bgs) refusal, utilities, or other obstacles.

PROJECT REPORTING

Deliverables for this Work Plan will consist of the following:

- A Health and Safety Plan
- A Sampling Analysis Plan
- A Quality Assurance Project Plan

- Daily Field Activity Reports
- Soil Sampling Analytical Reports
- Soil Investigation and Sampling Summary Report with accompanying GIS figures
- Monthly Project Status Reports
- Meeting Minutes (as necessary)

HEALTH AND SAFETY PLAN

All fieldwork will be conducted in accordance with the Site-Specific HASP which will be prepared and provided upon approval of this Work Plan. Tailgate safety briefings will be performed daily, and all employees will have stop-work authority. PFAS guidance documents will be reviewed regarding clothing and materials that are permitted for the collection of the soil samples

SAMPLE ANALYSIS

All soil samples will be submitted to a subcontracted laboratory for analysis. HDR will ensure all samples are couriered under proper chain of custody to the selected laboratory. HDR will obtain the required sample containers for soil samples. HDR will coordinate with the laboratory so that the samples are processed within the standard holding times.

COST ESTIMATE

The cost for the work detailed within this Work Plan is presented in the attached summary table and is summarized by the PADEP WBS Tasks.

SCHEDULE

At this time, HDR estimates beginning the field work within two to three weeks of the Work Plan approval. However, the start of the soil investigation will be dependent upon Site access to the properties, coordination with PSU, and contractor availability. It is estimated that this Work Plan will take a total of 16 weeks to complete.

ATTACHMENTS

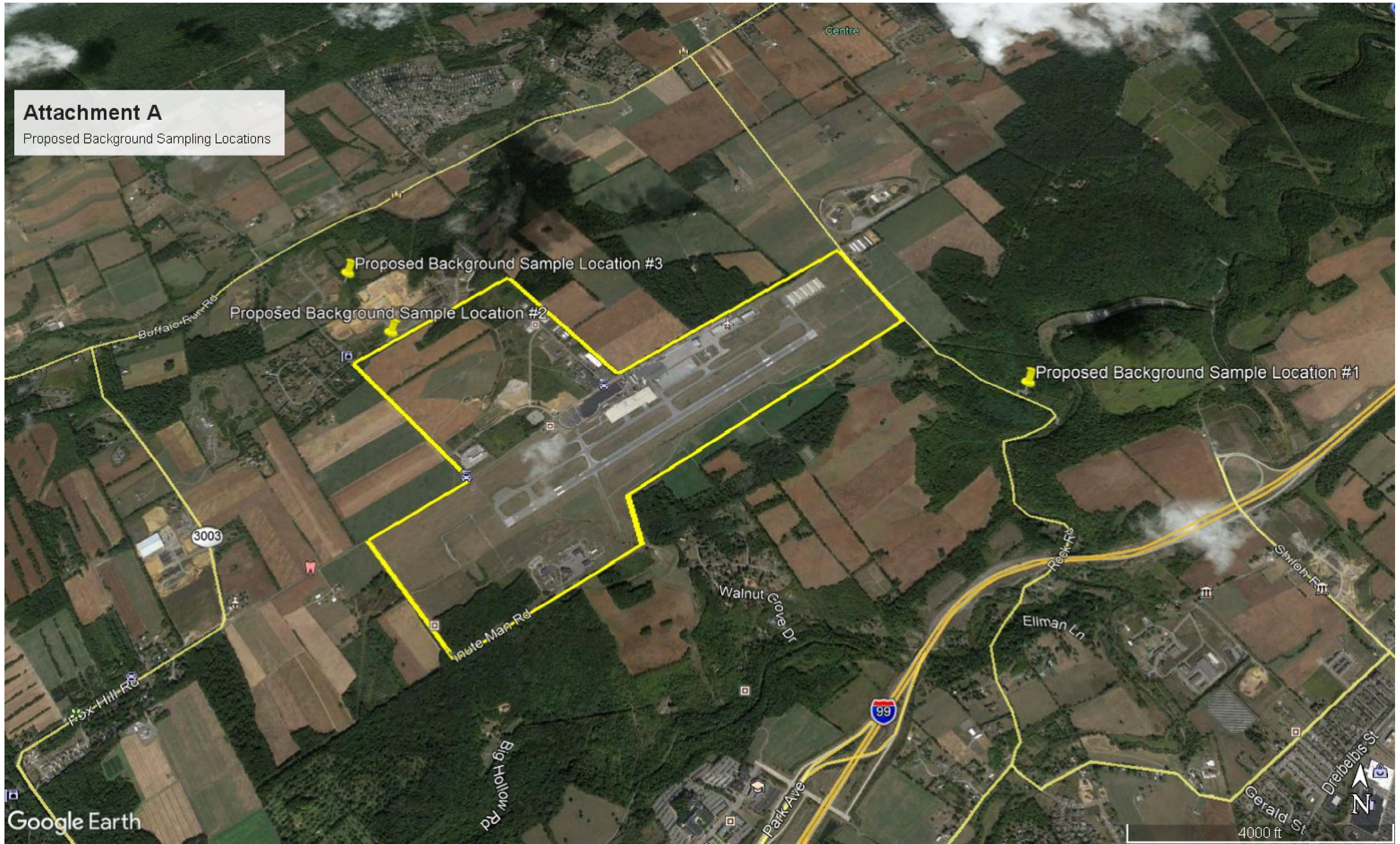
- A – Proposed Background PFAS Sample Locations
- B – Proposed Soil Boring Locations in the June 2021 Benner Township Due Diligence Summary Report

COST ESTIMATE

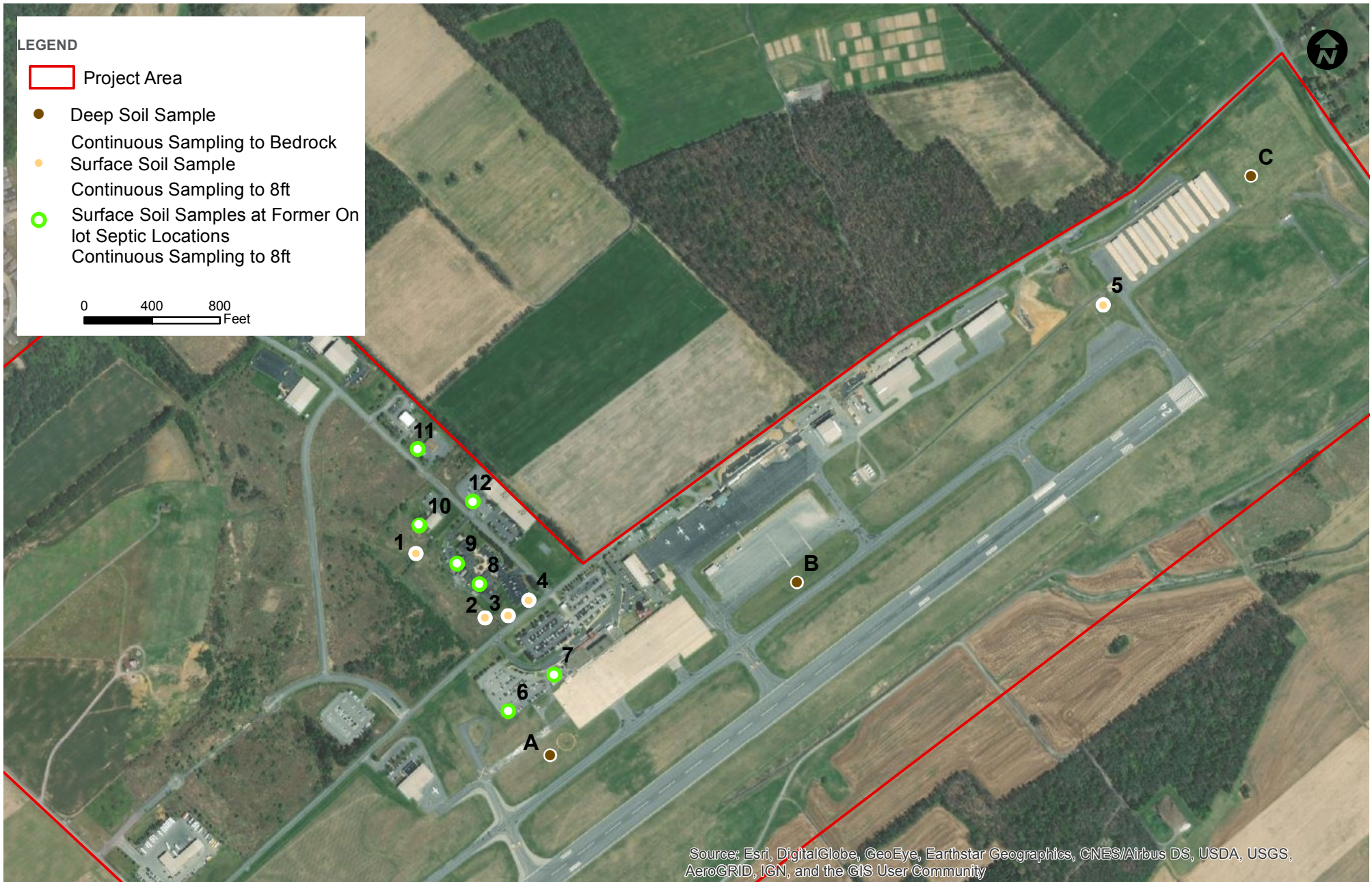
ATTACHMENT A

Attachment A

Proposed Background Sampling Locations



ATTACHMENT B



LEGEND

- Project Area
- Deep Soil Sample
- Continuous Sampling to Bedrock Surface Soil Sample
- Surface Soil Samples at Former On lot Septic Locations Continuous Sampling to 8ft

0 400 800
 ─────────── Feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

FIGURE 10
PROPOSED SOIL SAMPLE LOCATIONS
BENNER TWP PFAS SITE

