

Remedial Investigation Workplan Westchester County Airport White Plains, New York

July 2022

**Prepared for: Westchester County
240 Airport Road
White Plains, New York 10601**

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CERTIFICATION STATEMENT

I, Bernard T. Delaney, Ph.D., P.E., BCEE, certify that I am currently a NYS Registered Professional Engineer as defined in 6 NYCRR Part 375 and that this Characterization Workplan was prepared in accordance with all applicable statutes and regulations and in substantial conformance with the DER Technical Guidance for Site Investigation and Remediation (DER-10).



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Date: July 15, 2022

Introduction

First Environment, Inc. (First Environment) has been retained by the Westchester County Department of Public Works and Transportation (WCDPWT) to prepare the following Remedial Investigation Workplan (RIWP) to address per- and polyfluoroalkyl substances (PFAS) previously identified during initial Site Characterization activities at the Westchester County Airport (the “Airport” or the “Site”).

The New York State Department of Environmental Conservation (NYSDEC) performed a review of our Site Characterization Report dated April 2021 and provided comment to that report. Based on the comments received and the results of the site investigation, further investigation is warranted to fill data gaps and determine the nature and extent of PFAS impacts to the environment. Accordingly, First Environment has prepared the following RIWP to address the NYSDEC comments. The Site is now in the Brownfield Cleanup Program (BCP) and has been assigned Site No. C360174. As such, the RIWP will be conducted in accordance with the Brownfield Cleanup Agreement (BCA) executed on August 10, 2021.

The Site Characterization activities previously conducted at the Airport were performed to investigate PFAS as well as potential sources of other Target Analyte List/Target Compound List (TAL/TCL) contaminants including volatile and semi-volatile compounds, pesticides, polychlorinated biphenyls (PCBs), and metals. Except for PFAS, First Environment did not identify contaminants of concern warranting additional sampling and analysis as part of the remedial investigation proposed herein.

As stated, one of the primary goals of the proposed remedial investigation is to fill data gaps and define the nature and extent of PFAS in the shallow and deep groundwater located on and off the Airport property. The NYSDEC, in its December 30, 2021 letter, also requested additional PFAS investigation to evaluate the distribution and extent of PFAS on the Airport property at Hanger E as well as the current Fire Training Area. Therefore, First Environment will complete additional investigation activities at these areas as well. It should be noted, however, that both areas have lower PFAS

concentrations and unique PFAS chemistry indicative of a more recent Aqueous Film Forming Foam (AFFF) formulation than the PFAS identified at the former New York Air National Guard (NYANG) former Burn Pit. During a recent teleconference in May 2022, the NYSDEC also indicated additional investigation is required near outfall OF-10 where elevated PFAS concentrations in groundwater and surface water have been identified.

As a result of subsequent investigation activities conducted both on and off the Airport property, the RIWP includes the installation of additional on-site and off-site shallow and bedrock monitoring wells to better understand the groundwater flow conditions and extent of PFAS at and off the Airport property. This investigation will also include an assessment of PFAS in soil and sediment to further address the NYSDEC comments. The information will be used to further develop the site conceptual model (CSM) and provide additional information to evaluate the necessity for remedial action. It should be noted that a surface water baseline has been established in the Site Characterization and therefore additional surface water samples have not been proposed as part of the RIWP. However, surface water performance monitoring is being conducted monthly as part of the OF-7 replacement assessment. Starting in the fall of 2022, performance monitoring at OF-7 will occur quarterly for one year to evaluate the effectiveness of the new OF-7 outfall.

As part of the remedial investigation, First Environment proposes the installation of 17 shallow monitoring wells and 8 bedrock monitoring wells (assumes off-site access is granted). These wells will be sampled during the next semi-annual sampling event conducted by WSP. First Environment also proposes the collection of 48 soil and 5 sediment samples for PFAS laboratory analysis using the EPA modified method 537.1 or 1633. If the sampling occurs after November 2022, then EPA method 1633 will be utilized, as required by the NYSDEC. A detailed description of the proposed remedial investigation activities is provided in the scope-of-work section of this report.

Background

The Site was previously classified as a “P-site” in the NYSDEC database due to concerns related to perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) identified in groundwater. When a site is classified with the P-site designation it indicates, based on preliminary information, that the site is of “potential” risk to human health and environment and site investigation is required. PFAS are a group of man-made chemicals that include PFOA, PFOS, as well as many other chemicals.

PFAS are reported to be persistent in the environment and have the potential to bio-accumulate in the human body. On August 10, 2021, the Site entered into the NYSDEC Brownfields Cleanup Program (BCP) and assigned Site designation No. C360174. A Maximum Contaminant Level (MCL) for drinking water has been established for PFOS and PFOA. MCLs are contaminant levels that public water suppliers in New York State cannot exceed with respect to their supply to customers. Additionally, public water suppliers have been required to begin regularly sampling for PFOA and PFOS in New York State as well as notify health departments and the public of the results. The NYSDEC views PFAS (more specifically PFOS and PFOA) as chemicals of concern that require characterization and the implementation of interim remedial measures (IRM) for surface water and groundwater at the Site. The NYSDEC’s position regarding PFAS and other non-PFAS chemicals at the Site was memorialized in its letter to the County dated March 20, 2019.

On August 26, 2020, the New York State Department of Health (NYSDOH) established a MCL of 10 parts per trillion (ppt) for PFOS and PFOA in drinking water. In addition, the NYSDEC in October 2020 published PFOA and PFOS soil guidance values in parts per billion (ppb) depending upon the anticipated site use. These values are presented in the table below. The Department has indicated that these guidance values are to be used when evaluating whether or not PFOA and PFOS are contaminants of concern at a given site and assessing remedial action objectives and clean-up requirements, where appropriate. It is our understanding that Soil Cleanup Objectives (SCOs) for PFOA and

PFOS will be proposed in an upcoming revision to 6 NYCRR Part 375-6. Until such SCOs are promulgated, the following are to be used as guidance values.

Guidance Values for Anticipated Site Use	PFOA (ppb)	PFOS (ppb)
Unrestricted	0.66	0.88
Residential	6.6	8.8
Restricted Residential	33	44
Commercial	500	440
Industrial	600	440
Protection of Groundwater	1.1	3.7

Table 1. PFOA & PFOS Guidance Values, October 2020 NYSDEC Sampling, Analysis, and Assessment of PFAS Under NYSDEC's Part 375 Remedial Programs

Based on the initial environmental findings at the Site in 2018 through 2019 which identified PFAS, Site Characterization activities were initiated in February 2020 and continued until a Site Characterization Report was completed and submitted to the NYSDEC in April 2021. The NYSDEC responded with comments to the Site Characterization Report in a letter dated December 30, 2021. Particular focus of the characterization was placed on the Rye Lake Drainage Area which contributes surface water and groundwater to Rye Lake. Rye Lake is part of the Kensico Reservoir that provides two percent of the drinking water to the New York City Area. Following the submission of Site Characterization Report March 2021, the NYSDEC requested First Environment to perform a supplemental investigation at the Airport's northern parcel along New King Street. The investigation was conducted during two sampling events in July and August 2021. First Environment was requested to include the north parcel sample data and address the NYSDEC December 2021 comments in a revised Site Characterization Report which was submitted to the NYSDEC in April 2022. At the request of the NYSDEC, one additional sampling event was conducted the week of April 18, 2022. Surface water, sediment, soil, and groundwater were collected off-site north of the Airport parcel in the New King Street area and the New York City Department Environmental Protection (NYCDEP) flow measurement station E-10. The off-site sample results were not available for inclusion in the revised Site Characterization Report, but a summary of those results is included herein to support the proposed remedial investigation activities to the north and northwest of the Airport.

Physical Setting

Site Description/Land Use

The Site is located at 240 Airport Road, White Plains, Westchester County, New York (Figure 1) in a mixed-use area of commercial and residential parcels. To the north of the Site is residential housing located across Airport road. To the east and south of the Airport, across Airport Road are residences and commercial properties including a golf course. To the west of the Airport is Interstate 684 and Rye Lake, a part of the Kensico Reservoir. A site plan depicting attributes of the Site and pertinent site features is provided as Figure 2.

About one third of the Airport lies within the Rye Lake watershed while the remainder lies within the Blind Brook watershed. As used in this report, the “Site” refers to the area within the boundaries of the Airport. The Harrison Subresidency Site is outside of the Project Area (off-site) but is included in the discussion since PFAS’s were identified there in surface water and groundwater downgradient from the Airport by TRC in 2018.

In the northern portion, the Site generally slopes to the west toward Rye Lake from the central part of the Site, whereas the southern part of the Site slopes to Blind Brook. The Site is largely covered with earthen fill and vegetation with some concrete, runways, asphalt, and/or gravel. The main structures at the Site consist of Airport and tenant buildings using slab-on-grade construction with the exception of Building 1, which has a subsurface crawlspace under a portion of the building. The buildings house offices, maintenance, Airport operations and management, lease holders of airlines, and private aircraft.

Site Topography & Drainage

Topography - The Airport is located on approximately 700 acres of land, about a third of which lies within the New York City water supply watershed draining to Rye Lake (Figure 3). The topography at the Airport is generally flat and slopes gently to the south. The Airport elevation is approximately 425 feet above mean sea level (msl) at the northern edge of the Project Area and generally slopes to 375 feet above msl at the southern extent of the Airport property. The area to the west of the Airport, between the Airport and Rye Lake, is included in the site characterization to assess PFAS in surface water. The topography in this area generally slopes from the Airport at 430 feet above msl to Rye Lake at 354 msl. This area is comprised primarily of woodlands and includes Route 120 and Interstate 684.

Surface/Stormwater Drainage – The Airport's surface/stormwater collection system was engineered to reduce the amount of water running off into Rye Lake by redirecting its flow to other parts of the Airport. Currently, stormwater from surfaces (runways, taxiways) associated with the Airport's aviation operations flows into several catch basins from specific areas of the Airport (see Figure 4) which discharge to Army Corp Wetland Mitigation Basins A and B, or directly to Blind Brook. Each basin is located along the southern boundary of the Airport. Non-aviation operations in the area of the former ANG discharge water to Rye Lake and Blind Brook through additional stormwater management system discharge outfall locations. All outflows from the Airport drainage system subject to the New York State Pollutant Discharge Elimination System (SPDES) Permit are strictly monitored for compliance, as stated in the order of consent between the NYSDEC and Westchester County.

Geology & Hydrogeology

The geology at the Site consists of shallow overburden soil overlying bedrock. Based on regional maps, the on-site overburden consists of glacial till, although isolated areas of glacial outwash are identified in the vicinity.

Based on Site observations during the Site Characterization and reports prepared by others for the Site, the unconsolidated overburden consists of topsoil, fill, glacial till, and glacial outwash deposits. The fill consists primarily of reworked native soils consisting of glacial till and outwash. The glacial deposits consist mainly of yellow-brown micaceous sand and cobbles, although lenses of clay and silt are interbedded. First Environment, through soil borings and well installations conducted in the northern portion of the Airport, identified a discontinuous six-inch layer of organic silt between 5.0 and 11.5 feet below ground surface (bgs) that may have been the former ground surface.

According to a review of the USGS geologic map for the State of New York, the bedrock underlying the Site consists of Manhattan Schist. The Manhattan Schist is thought to belong to the middle Ordovician Tippecanoe or Taconic Sequence. The Inwood Marble, which is more resistant to weathering than the younger Manhattan Schist, underlies the Manhattan Schist which terminates near the west end of the Site near Rye Lake. The Inwood Marble formation belongs to the Cambro-Ordovician Sauk Sequence. Near the contact between the Manhattan Schist and the Inwood Marble, the schistose rocks are reported to include layers of calcite marble.

Groundwater will tend to flow more freely through the sand-rich layers and cobblestones, whereas its movement will be retarded and perched in the clay and silt layers. Bedrock, located below the overburden, is described as Manhattan schist and Hartland formation schist. Based on a review of prior investigations conducted at the Airport, the depth-to-bedrock varies across the Project Area, ranging from approximately 1.5 to 35.0 feet below grade. First Environment identified weathered schist bedrock at the recently installed bedrock monitoring wells at various depths,

ranging from 15.0 to 35.0 feet bgs, representing the transition zone between the overburden and the competent bedrock.

Based on the 2020 Site Characterization findings performed by First Environment, the soil around the NYANG Burn Pit consists of approximately 9.0 to 18.5 feet of unconsolidated sand, gravel, and silt overlying schist bedrock. The area also contains up to seven feet of fill that includes fragments of asphalt, concrete, and angular gravel.

Site Hydrogeology

The Site Characterization identified groundwater underlying the Site as two units, an unconfined water-bearing zone consisting of unconsolidated soils and the uppermost weathered bedrock, and the confined aquifer that is comprised of schist bedrock.¹ In January 2021, First Environment prepared groundwater flow maps for both the shallow unconsolidated water-bearing zone and the bedrock groundwater. These flow maps are provided as Figures 5 and 6. First Environment, during the recent Site Characterization activities, installed 10 additional shallow and 9 additional bedrock wells to better understand the flow conditions and groundwater quality where data gaps were identified.

As described in past reports, there is a mound in the upper water-bearing zone that divides groundwater flow at the Site. Groundwater in the northern and southwestern portions of the Project Area flows in a westerly direction toward Rye Lake, generally reflecting the Rye Lake Drainage Basin and some of the Basin A Drainage, as shown in Figure 4. Groundwater in the upper water-bearing zone for the rest of the Project Area flows toward the east and southeast away from Rye Lake. The shallow groundwater flow patterns/contours are illustrated on Figure 5.

Within the Project Area, the water table was encountered in the overburden water-bearing zone at depths ranging from 2.0 to 30.0 feet below grade, although some borings did not encounter groundwater. Based on Site observations made during field

¹ Ref. Fisher, Donald, Y.W. Isachsen and L.V. Richard, 1970, "Geologic Map of New York, Lower Hudson Street," New York State Museum and Science Service Map and Chart Series No. 15.

activities, groundwater in the shallow zone occurs under unconfined (water table) conditions.

Groundwater within the Manhattan Schist is expected to occur within planar surfaces including fractures, joints, and faults within the bedrock. The orientation of these planar surfaces, along with the hydraulic gradient and hydraulic conductivity, will dictate groundwater flow direction and velocity within the bedrock, as described below.

Locally perched groundwater, possibly a recharge zone to bedrock, may exist causing a mounding effect in the north-central portion of the Airport. The mound appears to be created by higher elevation of saprolite rock in this area, causing water to perch at a higher elevation. The groundwater in this area is only a few feet below ground surface at MW-61 and MW-62, including former FMW-10 and BRMW-1 and BRMW-2.

Weathered saprolite bedrock was also identified at DB-02 at 7.0 feet bgs in the area where the depth-to-groundwater is shallowest. The weathered bedrock slopes deeper into the subsurface along the northern portion of soil boring transect DG-02 to DG-07. This also results in the groundwater table occurring at a deeper depth. At the northern limit of this transect, the depth-to-groundwater is approximately 35.0 feet bgs at DB-07. The presence of shallow weathered rock best explains the mound effect and radial groundwater flow in the north central portion of the Airport. Further south, groundwater begins to shift and divide causing a large portion of the groundwater to flow south, away from Rye Lake. Although the groundwater elevations are subject to seasonal variations that may cause slight shifts in the groundwater mound and that divide the groundwater flow direction, the general groundwater flow pattern in shallow overburden is not expected to vary significantly from that shown on Figure 6. The installation of additional on-site and off-site monitoring wells as part of the Remedial Investigation Workplan will further define the groundwater flow conditions on and off the Airport property.

It should be noted that water levels measured in monitoring wells on May 19, 2009, by SAIC are similar to those measured by WSP in 56 monitoring wells in August 2018 and March 2019, as well as the 19 newly installed monitoring wells installed by First Environment in 2020. As noted, the addition of the recently installed wells, particularly

those installed in bedrock, filled data gaps along the north and northwestern boundary at the Airport, which now allow for a more accurate characterization of the groundwater flow direction in the bedrock groundwater zone. Depth-to-water measurements in bedrock generally ranged from 0.25 to 25 feet. The hydraulic gradient (a measure of the slope of the water table surface) is a primary factor affecting groundwater flow direction and one of several factors affecting the groundwater flow rate. In 2000, the hydraulic gradients measured by First Environment within the overburden water-bearing zone west of the mound of groundwater (flowing towards Rye Lake) was approximately 0.03 ft/ft. Based on water levels collected in 2000, the hydraulic gradients within the overburden southeast of the mound where groundwater flows towards Blind Brook, ranged from 0.02 ft/ft to 0.04 ft/ft. These gradients are similar to those measured by SAIC in 2009 and more recently by WSP in 2019. Therefore, the flow and gradient at these locations is consistent over time.

In 2000, three monitoring well couplets were installed on-site, each consisting of a shallow (overburden) and a deeper (bedrock) monitoring well. The monitoring well couplets are FMW-6/FMW-23, FMW-12/FMW-36, and FMW-34/FMW-35. Based on the groundwater elevation measurements collected from these monitoring well couplets, there was an upward hydraulic gradient of 0.05 ft/ft at FMW-6/FMW-23, but a slight downward gradient of 0.012 ft/ft at FMW-34/FMW-35. Based on the hydraulic gradient between the shallow (overburden) and deep (bedrock) hydrologic units, groundwater on site will tend to flow from the shallow water-bearing zone to the deeper bedrock aquifer at FMW-34/FMW-35, but upward at FMW-6/FMW-23. As part of this report, additional rounds of groundwater elevation measurements were collected to verify the initial findings discussed above.

Site Characterization - PFAS Summary

Field investigation activities were conducted over the course of approximately one year, beginning on February 25, 2020 and ending on August 17, 2021. In total, 18 temporary and 19 permanent monitoring wells were installed; 67 soil borings were advanced; 9 sediment locations were chosen for sediment sampling over three separate events; 9 locations were selected for monthly sampling of surface water over a six-month period; and 8 locations were selected for surficial sampling. In total, 301 samples were collected including 99 groundwater, 121 soil, 18 sediment (24 samples total including those collected in 2019) samples, 62 surface water samples, and one iron floc sample, not including field blanks, sample duplicates, or other quality assurance related samples. These were submitted to a certified laboratory for analysis. The analysis varied from full baseline TAL/TCL, PCBs, pesticides, 1,4 dioxane, and PFAS to only PFAS. Although, other contaminants were detected at low concentrations in environmental media, the lack of elevated levels or persistence of these contaminants warrants no further investigation. The Remedial Investigation will, however, focus on filling data gaps and defining the nature and extent of PFAS in the environment on and off the Airport property. The purpose of the groundwater, sediment, soil, and surface water summary below is to highlight the distribution and concentration of PFAS in those environmental media. PFOS was identified as the dominant PFAS contaminant at the majority of the Site's sample locations. It is therefore considered the contaminant of most concern. This recap of the Site Characterization is being provided to support the next steps described in the Remedial Investigation Scope-of-Work.

Groundwater PFAS Results

During the Spring of 2020, a comprehensive baseline groundwater sampling event was conducted which included the 18 newly installed shallow and deep groundwater wells as well as the monitoring wells included in the semi-annual groundwater sampling. This event was considered the first baseline event using all the monitoring wells. In shallow groundwater the PFOS ranged from ND to 11,400 ppt and PFOA ranged from 2 ppt to 30,100 ppt. In deeper groundwater monitored in bedrock, PFOS ranged from ND to 593 ppt and PFOA ranged from 3 ppt to 131 ppt. Although, the elevated level at MW-63 for PFOA is highest when compared to PFOS. PFOS makes up a much higher level of PFAS mass when compared to PFOA in all environmental media across the Airport. To illustrate the distribution and concentration of PFOA and PFOS in groundwater, iso-concentration contours maps were prepared for the shallow and deep groundwater and are illustrated in Figures 7A, 7B, and 8A, 8B, respectively. It should be noted, subsequent semi-annual monitoring of groundwater for PFAS, as well as other contaminants of concern, is conducted voluntarily by WSP. Based on First Environment's review of WSP semi-annual monitoring, no substantive changes in PFAS concentrations in groundwater have been identified resulting in the installation of the new monitoring wells with the exception of MW-63 where PFOA was identified extremely elevated concentrations of 30,100 ppt and PFOS and PFOA were identified in groundwater at the current fire training area (MW-58D).

Surface Water PFAS Results

In 2019 and 2020, First Environment collected surface water samples leaving the Airport at nine locations over seven synoptic events. At the beginning of each month from June to November, WSP, under the direction of First Environment, mobilized to the Site to collect the surface water samples. As stated above, nine sample locations were selected. The locations include five outfalls (OF-1, OF-3, OF-4, OF-7, and OF-10) as well as four other surface water tributary locations (SW-1, SW-2, SW-3, and Weir 2). In total, 57 surface water samples were collected (inclusive of field duplicates but exclusive of blanks) and submitted for PFAS analysis. PFOS was detected in all samples across the Site ranging in concentration from 2 ppb to 4,280 ppt. The highest PFOS value was consistently identified at OF-7, which drains groundwater from the former NYANG Burn Pit area. Additionally, elevated results were also obtained at OF-10, which drains the area to the east of the NYANG Burn Pit but outside of the Rye Lake Drainage Basin. Figure 9 identifies the sample location as well as the PFOS and PFOA concentrations detected during those seven sampling events.

To establish a surface water baseline, an average PFOS and PFOA concentration was calculated over the seven sample events. Those results are also provided in Figure 9. The most significant average value is PFOS of 2,664 ppt at OF-7. The PFOS in surface water leaving OF-7 migrates approximately 1,500 feet downgradient to the NYCDEP E-10 sample location, which is about 1,000 feet upgradient from Rye Lake. The average PFOS concentration at E-10 was 868 ppt. A significant amount of mixing of clean surface and groundwater water is diluting PFOS and PFOA before entering Rye Lake. It is estimated that the reservoir contains 30.6 billion gallons of water, which explains the absence of detectable PFAS in the reservoir (the laboratory detection limit is 2 ppt). In addition to OF-7, five tributaries (two ephemeral and three perennial) leaving the Airport connect to form one tributary downgradient of the Airport at E-11. The PFOS concentrations on average range from 9 ppt to 180 ppt leaving the Airport at the five tributaries that connect to E-11. The contribution of varying tributary flow and PFOS concentration at the five locations leaving the Airport, with the addition of dilution, resulted in an average PFOS concentration of 22 ppt at E-11. PFOA was also detected

at levels above the PFOA MCL, but at consistently lower concentrations than PFOS with the exception of one sample location at OF-4. It is possible the PFAS impacts at OF-4 are derived from a PFAS source at or near Hanger E since PFAS chemistry appears similar to that identified in groundwater at Hanger E.

Sediment PFAS Results

In total three sediment sampling events were performed in April 2019, June 2020, and November 2020. PFOS was detected in 23 of 24 samples and PFOA in 5 of 24 in sediment samples (including field duplicates) across the Site ranging from 0.7 ppb to 32.4 ppb. The highest values of PFOS were found at Outfalls 7 and 10, which drain the former NYANG Burn Pit area. Additionally, elevated results were obtained in the November event at SW-1 (19.4 ppb) and SW-3 (12.7 ppb). SW-1 is downgradient of the downgradient of the former NYANG Burn Pit area, whereas SW-2 or SW-3 are not immediately downgradient of any known source. With respect to SW-2 and SW-3, groundwater and surface water may be transporting sediment from upgradient and infiltrating part of the storm drain system depositing fine grained sediment in both areas resulting in the elevated concentrations at this location.

PFOA was detected in five sediment samples across the Site ranging from 0.8 ppb to 7.7 ppb. No one location had more than a single detection of PFOA with the exception of SW-1 and SW-2. The complete PFAS sediment results are illustrated on Figure 10.

Sitewide Soil PFAS Results

Overall, PFOS was identified at much higher concentrations than PFOA in the former NYANG Burn Pit area as well as sampling locations across most of the Airport, with the exception of Hangar E. The average PFOA concentration in the surface soil was 4.7 ppb compared to 53.4 ppb for PFOS. Because PFOS is the dominant PFAS contaminant, it is considered the contaminant of most concern. As a result, First Environment prepared site-wide surface soil concentration maps as well as shallow PFOS soil isoconcentration maps.

Site-wide investigation shows PFOS's detected at concentrations ranging from 0.5 ppb to 24.9 ppb, with one non-detection at location SB-14 (1-1.5 ft bgs). The lower values were generally found on the western side of the Site, away from the former NYANG Burn Pit. PFOA detected in soil across the Site away from the former NYANG burn pit ranged in concentration from 0.5 ppb to 3.0 ppb, with two non-detections at location SB-14 (1-1.5 ft bgs) and SB-15 (0.5-1 ft bgs). The results were generally below 1 ppb. The highest value was found in SB-13 (1-1.5 ft at 3.0 ppb), adjacent to the current fire equipment testing area. The lower values were generally found all across the Site, with the second highest value being found on the north end of the Site at SB-02 (0-0.5 ft bgs at 1 ppb). Figure 11 illustrates the site-wide horizontal distribution of PFOS in the surface soil. The results presented clearly demonstrate the highest PFOS concentrations are located in the area of the former Burn Pit area, as would be expected.

Surface and shallow soil samples were also collected at 23 discrete locations from the former NYANG burn pit and analyzed for PFAS. PFOS concentrations in soil ranged from 0.8 ppb to 256 ppb. In the shallow soil below surface soil, PFOS concentrations ranged from non-detect to 360 ppb. The average PFOS concentration in the deeper soil above the water table was 34 percent lower than the PFOS concentration in the surface soil. As would be expected, and shown in Figure 12, the highest PFOS values are identified closest to the former NYANG Burn Pit source area where AFFF was regularly sprayed.

First Environment identified two other areas exhibiting elevated levels of PFAS in soil. The first is located near the former Hangar B area where elevated PFOS concentrations were identified at SB-06 (0-0.5 ft bgs) at 5.6 ppb, away from the former NYANG Burn Pit. The other location is at SB-13 where current equipment testing and fire training occurs at the Airport. It should be noted that all fires are limited to a concrete containment area, fueled by propane, and extinguished using water and not AFFF. Soil boring SB-13 identified PFOS in soil at a concentration 24.9 ppb. The elevated levels identified at this location may be the result of equipment testing of AFFF at this location. It should be noted that SB-13 (1.0-1.5 ft bgs), which is adjacent to the current fire training equipment testing area, has a different PFAS chemistry than the soil analyzed at the former NYANG Burn Pit. As of 2018, PFOS and PFOA are not formulated in the Airport AFFF. One major constituent at SB-13 is 1H, 1H, 2H, 2H-perfluorodecanesulfonic acid, commonly known as 8:2 FTS. The other major constituent at SB-13 is 1H, 1H, 2H, 2H-perfluorooctanesulfonic acid, or 6:2 FTS. This difference in chemistry is believed to be the result of a different release; likely from a different AFFF than that used in the NYANG Burn Pit. 8:2FTS and 6:2FTS were only found in quantity at one other location, SB-06, in the vicinity of former Hangar B area. FTS 6:2 is a fluorotelomer sulfonate used in more recent AFFF fire-fighting foam; in addition to its presence in consumer products like fast-food wrappers. It is a short-chain fluorinated carbon chemical, which manufacturers like DuPont described as “safe for workers, consumers and the environment” as the longer-chain carbon PFOS and PFOA gained attention for adverse health effects and environmental contamination.

Reliability of Data Overview

All soil, ground, and surface water samples obtained by First Environment through WSP will be collected in accordance with the Technical Guidance for Site Investigation and Remediation (NYSDEC DER-10 dated May 2010). After collection, sampling containers will be placed into shipping coolers provided by the laboratory and chilled to 4°C. Each cooler will be accompanied by a completed chain-of-custody record. The samples will be stored and shipped within 24 hours to York Analytical Laboratories (a State Department of Health (DOH) ELAP-certified laboratory). Laboratory analyses are performed using accepted and current United States Environmental Protection Agency (US EPA) analytical methods. Samples collected for PFAS analysis will be analyzed via EPA modified method 537 or method 1633 (depending on date of workplan approval) with Category B deliverables. Samples collected for VOCs method 8260 analysis were analyzed via SW-846 methods with Category B deliverables. The data will be provided in an electronic data deliverable (EDD) format under the NYSDEC EQUIS Environmental Data Management System.

Samples will be handled and analyzed in compliance with sample holding times, method detection limits, and precision and accuracy criteria for the analytical method.

Health & Safety

Prior to initiating any on-site intrusive activities, First Environment, or its subcontractors, will complete the required public utility mark-out and notifications. In addition, First Environment will prepare a site-specific health and safety plan (HASP) in accordance with NYSDEC guidance (DER-10) incorporating the tasks to be completed as outlined. The HASP is a requirement of the federal Occupational Safety and Health Administration (OSHA) and is not subject to the approval of NYSDEC (Appendix A).

Community Air Monitoring Plan

A Community Air Monitoring Plan (CAMP) has been developed to measure, evaluate, and control, as necessary, potential fugitive particulates and, if observed, volatile organic compounds (VOC) generated during both ground intrusive and non-intrusive activities. The CAMP was developed using the New York State Department of Health Generic Community Air Monitoring Plan in combination with site-specific information and proposed activities.

Depending on the type of activity, levels of airborne particulates and/or VOCs will be monitored and recorded in real-time at both the upwind and downwind perimeters of the immediate work area. The purpose of the CAMP is to protect the downwind community from potential release of contaminants to the air generated during the activities. The action levels developed by the NYSDOH will be followed as part of the CAMP.

If the recorded levels approach the pre-established action level or if airborne particulates are visually observed migrating off-site or towards sensitive receptors, suppression measures will be implemented immediately. Suppression measures may include misting the particulate source with water, use of particulate suppression materials, wetting the work area prior to initiating the activities, or stopping work activities until recorded levels fall below the action level.

Although the measures described above will be undertaken, it is First Environment's belief, based on previous investigations, that air borne contaminants are not anticipated resulting from site investigation. However, as a best practice to safe guard and protect workers and the community, air monitoring will be performed during site activities. A copy of the CAMP is provided in Appendix B

Quality Assurance Project Plan (QAPP)

Pursuant to NYSDEC guidance, the scope-of-work includes quality assurance procedures to be followed for sampling and analysis. QA/QC procedures required by NYSDEC are to be documented in the QAPP. The minimum requirements for the QAPP for this project include details of:

- i. The project scope and project goals as well as how the project relates to the overall site investigation or remediation strategy.
- ii. Project organization, including the designation of a project manager, QAO, and field analyst (if field analysis is planned). Resumes of these individuals may be included.
- iii. Sampling procedures, data quality usability objectives, and equipment decontamination procedures.
- iv. Site map showing sample locations.
- v. An "Analytical Methods/Quality Assurance Summary Table"² which must include the following information for all environmental, performance evaluation, and quality control samples:
 - (1) matrix type;
 - (2) number or frequency of samples to be collected per matrix;
 - (3) number of field and trip blanks per matrix;
 - (4) analytical parameters to be measured per matrix;
 - (5) analytical methods to be used per matrix with minimum reporting requirements; and
 - (6) number and type of matrix spike and matrix spike duplicate samples to be collected.

The Quality Assurance/Quality Control (QA/QC) procedures were conducted as described in the Quality Assurance Project Plan (QAPP) provided as Appendix C.

Data Validation

The analytical data package from the laboratory will be reviewed by a third-party inspector to determine compliance with the NYSDEC requirements. The review of the analytical data will be submitted separately upon its completion.

² Currently, there are no standard EPA methods for analyzing PFAS in surface water, non-potable groundwater, wastewater, or solids. For non-drinking water samples, some U.S. laboratories are using modified methods based on EPA Modified Method 537. These modified methods have no consistent sample collection guidelines and have not been validated or systematically assessed for data quality. EPA expects to have a draft method for non-potable groundwater soon. (See EPA/600/F-17/022d, Updated September 2018).

Citizen Participation Plan

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Westchester County and First Environment.

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions. Involving citizens affected and interest in site investigation and cleanup programs is important for many reasons. These include: 1) Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment. 2) Improving public access to, and understanding of, issues and information related to a particular site and that site's investigation and cleanup process. 3) Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process. 4) Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community. 5) Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making. A copy of the CP Plan (CPP) is provided in Appendix D.

North Parcel & Off-site Supplemental Investigation

Following the submission of Site Characterization Report in March 2021, the NYSDEC requested First Environment perform supplemental investigation activities downgradient of OF-7. These activities were requested to address the elevated concentrations of PFOS identified at outfall OF-7 and the fact groundwater from the Airport flows toward New King Street and water supply wells along New King Steet have identified PFOS and PFOA. In June 2017, the NYSDOH sampled raw water intakes and finished water

outlets corresponding to four water supply wells that service a number of commercial buildings located on New King Street in North Castle, New York. The results of the sampling identified PFOS-PFOA at an average concentration of 4.92 to 81.95 ppt. Based on the results, some of the identified concentrations exceed the PFOS and PFOA drinking water Maximum Contaminant Level (MCL) of 10 ppt³. It should also be noted these concentrations are believed to represent the contaminant level in bedrock groundwater at each location. The results of the sampling and distribution of PFOS/PFOA are presented on Figure 13. As a result, a supplemental investigation was conducted which included the collection of surface water, soil, sediment, and groundwater samples at the Airport's northern parcel as well as off-site north of the Airport along New King Street as well as the New York City Department Environmental Protection (NYCDEP) sampling location E-10. The samples were submitted to a laboratory for analysis for PFAS. The supplemental investigation was performed in July and August 2021, as well as in April 2022. The sample locations for surface water, sediment, soil, and groundwater are shown in Figure 14.

In total, 19 soil and 7 sediment samples were collected and analyzed for PFAS downgradient of OF-7. PFOS concentrations ranged from ND to 21.1 ppb and PFOA ranged from ND to 1.4 ppb. In sediment, PFOS concentrations ranged from ND to 16.2 ppb and PFOA ranged from ND to 9.2 ppb. PFAS was generally identified at lower concentrations at sample locations farther from the Airport. It is believed elevated levels of PFOS and PFOA in soil and sediment likely correspond to higher levels of organic matter and clay minerals that have a tendency to preferentially adsorb and accumulate PFAS. The distribution of PFOS and PFOA in sediment is illustrated on Figure 15.

Five surface water and five groundwater samples were collected and analyzed for PFAS at downgradient locations from OF-7. In surface water, PFOS ranged from 3.2ppt to 83740 ppt and PFOA from 8.4 to 100 ppt. In groundwater, PFOS ranged from 6.1 ppt to 1,340 ppt and PFOA from 8.2 to 135 ppt. As shown in Figure 16, PFOS and PFOA concentrations in surface water and groundwater generally demonstrate a

³ As a result of the elevated PFOS and PFOA levels in groundwater, Westchester County is preparing bid documents to contractors for the installation of a new 12-inch water main extending from the airport's potable water supply to and down New King Street in order to supply potable water to New King Street structures.

decreasing trend at sample locations farther away from the Airport. This decrease in concentration is attributed to dilution with freshwater.

OF-7 Storm Sewer Replacement

From April to November 2019, First Environment mapped drains using ground-penetrating radar (GPR) and collected drain water samples for PFAS analysis to gain an understanding of the surface water drainage routes at the Airport. The mapping indicated that several drains discharge surface water to OF-7 toward Rye Lake. Drain water samples were collected near the former NYANG Burn Pit. PFAS concentrations in drain water leading from OF-7A, OF-7B, and OF-10 exhibited concentrations of PFOS/PFOA up to 3150/518 ppt, 3140/514 ppt, and 2040/109 ppt, respectively. It should be noted that the PFAS concentrations in drain water at OF-7 and OF-10 are 10 times higher than those concentrations identified at other OF locations.

In 2021, the County began implementing a storm sewer replacement plan. The goal was to eliminate, to the extent practical, the existing leaky storm sewer pathway that allows PFAS impacted groundwater to infiltrate the storm line and then migrate through OF-7 to Rye Lake. The new/replacement system was designed using non-PFAS containing materials and construction methods that make it watertight/resistant to groundwater inflow.

Starting in mid-May 2021, approximately 5,400 linear feet of storm sewer of various diameters was replaced in the vicinity of the former NYANG Burn Pit and Building 10 with impermeable poly piping. Inlets, headwalls, and manholes were replaced with precast structures that were coated inside and out with waterproof materials. Included in this work was replacing the headwall at inlet 7015.1, which had been providing a means for groundwater to enter the storm sewer system and drain through Outfall 7 to Rye Lake. By December 2021, more than 95 percent of the work was completed.

During the fall and winter of 2021-22, above average precipitation led to higher-than-normal groundwater levels. The groundwater that had previously been entering the sewer line and discharging through Outfall 7 was now saturating the soil in the southwest corner of the overflow lot, near the former burn pit at inlets 7015.1, 7014.1, and 7014.2 as shown in Figure 17. This manifested itself as continual surficial flow

(daylighting) during above freezing temperatures, and extensive icing during subfreezing conditions. Engineering studies were undertaken to evaluate whether or not raising the level of the storm sewer inlets to eliminate this daylighting of groundwater to newly constructed surface inlets was feasible. Similar conditions were noted throughout the spring of 2022. In May of 2022, the construction of the replacement storm sewer was completed with the installation of the emergency shut-off valve and retaining vault downstream of manhole 7006 as well as the removal of CB-1 and replacement with inlet 7007.1.

Work remaining to be completed in the balance of 2022 includes cleaning the new storm sewer by removing all the sediment and gravel that inadvertently entered the system due to rainfall events occurring during construction, as well as rechecking the storm system for any leaks that may have developed during the final phase of construction. This may include work to reconfigure the headwall at 2021.1 and raising the surface elevation to prevent groundwater from daylighting into the headwall and near the former burn pit at inlets 7015.1, 7014.1, 7014.2, and 7024.1. Although, it is early in the performance monitoring stage at OF-7, the initial results show a reduced flow of PFAS impacted water leaving the Airport at OF-7 and lower PFOS and PFOA concentration identified at NYCDEP E-10 measurement station. Figure 17 illustrates the storm sewer inlet location, zones noted where sediment clean out remains necessary, and the area of concern where groundwater is daylighting into surface inlets. First Environment is working with the County and their engineering contractor to evaluate corrective actions to eliminate daylighting of groundwater into surface inlets.

Proposed Remedial Investigation Activities

First Environment has developed the following proposed remedial investigation activities to fill data gaps and further define PFAS impacts in sediment, soil, and groundwater downgradient of the former NYANG Burn Pit and off the Airport along the boundary near Rye Lake. Furthermore, the scope for this investigation includes an evaluation of other potential PFAS sources, as well as the fate and transport of PFAS at the Airport to assess whether PFAS compounds are impacting Rye Lake and other potential receptors. Understanding the nature and extent of the source of PFAS chemicals and their environmental fate and transport mechanisms is critical since Rye Lake is a drinking water reservoir owned and operated by the City of New York as part of its Kensico Reservoir System. About a third of the Airport lies within the Rye Lake watershed. The remainder of the property lies within the Blind Brook watershed.

The new information will be used to further refine the CSM using the data generated during the remedial investigation⁴. The CSM will be used to evaluate the environmental fate and transport of PFAS compounds emanating from the former NYANG Burn Pit and determine the potential for downgradient migration toward Rye Lake. Further, and if necessary, this information will be used to evaluate potential future remedial action alternatives to address PFAS at the source area as well as downgradient of the NYANG Burn Pit.

The proposed remedial investigation includes an assessment of the following Site areas:

- West Side of the Site Area -Rye Lake – Six shallow overburden and six bedrock monitoring well couplets will be installed at this location. The investigation will also include the collection of soil and groundwater samples for PFAS laboratory analysis.

⁴ A conceptual site model is a written and/or illustrative representation of the environmental processes that control the transport, migration, and actual/potential impacts of contamination (in soil, air, groundwater, surface water, and/or sediments) to human and/or ecological receptors. Environmental factors may include physical, chemical, and biological stressors. Development and refinement of the CSM will help identify investigative data gaps in the characterization process and can ultimately support remedial decision making.

- West Side Site Area at OF-4 – Five sediment samples will be collected off the Airport at each of five tributaries that converge at the NYCDEP monitoring location E-11.
- Hanger E – Four shallow overburden and one deep monitoring well will be installed at this location. Groundwater and soil samples will be collected at each location and submitted for PFAS laboratory analysis.
- Southwestern Corner of Airport – Three shallow monitoring wells will be installed to better define the groundwater flow and assess this as a PFAS source area. Groundwater will be collected at each location and submitted for PFAS laboratory analysis.
- Southern End of Airport (Fire Training Area) - Three deep overburden wells and one bedrock monitoring well will be installed at this location. Groundwater and soil samples will be collected at each location and submitted for PFAS laboratory analysis.
- Northeastern Airport OF-10 - One overburden monitoring well will be installed at this location. A groundwater sample will be collected and analyzed for PFAS. In addition, nine soil borings be installed with soil samples collected at each location and submitted for PFAS laboratory analysis.

A summary of the proposed investigation is provided on Table 1 and includes the sample description of the media type, location number, and analyses. The proposed sample locations are illustrated on Figure 18⁵.

Soil Investigation

The proposed remedial investigation includes the collection of soil samples for PFAS laboratory analysis. The soil samples will be collected from a total of 17 on-site and 6 off-site sample locations. Soil samples will be collected from the following locations: off-site along the West Side near Rye Lake, Hanger E, Southern End of the Airport at the Fire Training Area, and at the Northwestern portion of the Airport near OF-10. At each location, soil samples will be collected from the 0- to 6-inch interval as well as the 24- to 30-inch interval. The deeper soil samples (24- to 30-inch interval) will be analyzed on a contingent basis. If surface soil samples exceed the NYSDEC soil guidance for

⁵ The County also recognizes proposed locations described above address NYSDEC requests for additional sampling stated in the DEC's December 30, 2021 letter.

- Western Side of Airport – "Delineation towards the lake is not complete." Item 16 on page 5.
- Hanger E Investigation – "PFOA and PFOS concentrations documented in this area require further delineation." – Item 17 on page 5.
- Southwestern Corner of Airport – "Groundwater contours are mostly extrapolated in this area." page 8.
- Southern End of Airport – Discussion with NYSDEC in May 2022 . The NYSDEC requested delineation of PFAS in soil and groundwater in this area resulting from post-1983 fire training exercises performed as referenced in First Environment's Site Characterization Report item 3, page 39.

protection of groundwater values for PFOS at 3.7 ppb and PFOA at 1.1 ppb in the shallow samples, then the deeper contingent soil samples will be analyzed for PFOS and PFOA to assess potential impact to groundwater. All samples will be submitted to York Laboratories and follow the procedures outlined in the QAPP. The sample locations are shown in Figure 18.

Sediment Investigation

In the area downgradient of OF-4, First Environment will collect sediment samples at each of the five tributaries that converge to NYCDEP E-11 flow measurement station. The samples will be submitted for analysis for PFAS. Additionally, the investigation will continue to evaluate the characteristics of the water bodies including flow direction and volume, depth, and sediment quality, recharge, and drainage patterns. This information will be logged into a field book and will include photo documentation.

Groundwater Investigation

The groundwater investigation will include the installation of 17 overburden and 8 bedrock monitoring wells. Once installed, the top-of-casing elevations for the newly installed monitoring wells will be surveyed by a licensed surveyor for horizontal and vertical control. The approximate locations of the proposed shallow and bedrock wells are illustrated on Figure 18. The installation of shallow and bedrock monitoring wells is being proposed to fill data gaps to further evaluate groundwater conditions in the shallow and bedrock water-bearing zones at each specific location.

First Environment will retain a drilling subcontractor to install the monitoring wells using a track-mounted roto-sonic drill rig. The installation of 25 monitoring wells will be completed over an estimated four-week period. The benefits of the sonic drill rig allow for continuous soil core collection and provide a more efficient manner to install the steel outer casings for completion of the bedrock monitoring wells. The soil will be classified by a First Environment geologist using the Unified Soil Classification System (USCS) and screened using a Photoionization Detector (PID).

The shallow monitoring wells will be constructed using two-inch PVC riser (schedule 40) together with 10 feet of two-inch 0.010 slotted PVC screen. The shallow wells will be

installed in such a manner that the screened interval will bridge the water table with approximately three feet of screening above and seven feet below the average water table.

The proposed bedrock monitoring wells will require eight-inch steel casing to be grouted 10 feet into competent rock to seal off the upper shallow groundwater system from the deeper bedrock groundwater system. This will eliminate any potential for cross contamination. The steel casing is estimated to be installed and sealed into rock at approximately 55.0 feet bgs. Once the steel casing has been installed and the grout has cured, the well will be drilled until water-bearing fractures are encountered and will be completed as an open hole. Monitoring wells installed off-site will be finished using four feet of steel protective casing whereas the monitoring wells installed inside Aircraft Operation Area perimeter will be completed at surface grade using flush-mount road boxes. The purpose of the steel protective casing at the off-site locations is to facilitate the ability to locate the monitoring wells once installed; and the on-site flush mount finished wells are considered more appropriate around areas of potential vehicular traffic at the interior of the Airport.

Upon completion of the well installation, each well will be developed until a sediment-free discharge is achieved. As indicated, the newly installed monitoring wells will be surveyed by a licensed surveyor for horizontal and vertical control such that groundwater elevations (flow direction) can be determined.

Investigation derived waste from wells will be stockpiled at a central location either in drums or on top of protective sheeting and properly covered until the remedial investigation is completed. Once obtained from the laboratory, waste characterization results will be provided to the NYSDEC project manager along with a completed request for an importation form for approval of on-site reuse. First Environment will containerize, stage, and characterize purge and well development water from monitoring wells. First Environment is evaluating alternatives with the County for managing and disposing or treating collected water containing PFAS.

Groundwater Sampling

Upon completion of the monitoring well installation activities, the new and existing wells will be incorporated into the next semi-annual groundwater sampling event by WSP under the direction of First Environment, as described in the QAPP. After receiving and evaluating the laboratory analytical results, First Environment and WSP will determine which, if any, of the newly installed wells should be incorporated into further semi-annual sampling events. Analysis of groundwater for newly installed monitoring wells will consist of PFAS. Once the sample results received by WSP meet the quality assurance objectives defined in the QAPP, the results will be incorporated into First Environment's data evaluation and final report.

Aquifer Characterization (Slug Tests)

To further evaluate the aquifer characteristics, slug testing will be conducted as part of this investigation. Accordingly, slug tests will be performed within each of the newly installed overburden wells in accordance with the requirements outlined in DER-10. The primary objective of the slug testing is to provide data necessary for estimating the hydraulic conductivity of the aquifer. As indicated, First Environment will conduct rising head, in-situ hydraulic conductivity tests (slug tests) at each newly installed overburden monitoring well. Falling head aquifer tests will not be conducted as this is not an appropriate test for wells where the screened interval spans the water table in unconfined aquifer conditions such as those present on-site.

All downhole equipment (pressure transducer and slug) will be thoroughly decontaminated to prevent potential cross-contamination issues. The static water level within each well will be measured and recorded. A pressure transducer will then be placed into the well to a depth immediately above the base of the well. The transducer will be allowed to thermally equilibrate and be connected to an in-situ Hermit data logger for data logging purposes. A solid PVC slug will be used to displace water to conduct the test. Following removal of the slug, the resulting water level rise will be continuously logged via the pressure transducer and data logger. The water level will be allowed to recover to a minimum of 90 percent of the pre-slug removal water level condition.

Upon recovery of the water level, the test/data logging will be stopped and the in-situ portion of the testing will be deemed complete. The data collected during the aquifer testing will be analyzed using Aqtesolv for Windows Version 3.0 using the Bouwer and Rice Method to calculate the resulting hydraulic conductivity (permeability). The results of the hydraulic conductivity testing will be provided in the Final Report to the NYSDEC.

Remedial Investigation Report

Upon completion of the Remedial Investigation, First Environment will prepare a Remedial Investigation Report (RIR) describing the work performed and findings of the remedial investigation activities. Based on the findings of the RI, First Environment will collaborate with the County and NYSDEC to evaluate what, if any, further investigation is warranted to characterize the Site. In addition, First Environment will evaluate what, if any, remedial actions may be necessary to address the PFAS at the Site.

Schedule

Subsequent to the Department's review and approval of the Remedial Investigation Workplan, First Environment will immediately initiate the RIWP activities. The estimated completion schedule for the remedial investigation activities is provided on Table 1. Table 2 identifies the sample area, sample media, sample location, and laboratory analysis to be performed during the RI. All samples will be submitted to a New York State Department of Health Certified Laboratory for analyses. First Environment will continue to submit monthly status reports to the NYSDEC and County before the 10th of each month. Each report will provide monthly work activities and findings, as well as the anticipated work activities for the upcoming month. Subsequent to the Department's review and approval of the Workplan, First Environment will immediately initiate the remedial investigation activities by coordinating with drilling and other subcontractors. Furthermore, if deemed necessary, fully executed site access agreements for sampling off-site locations will be procured prior to the implementation. Copies of the executed site access agreements will be provided to the County and NYSDEC.

Upon NYSDEC approval, First Environment estimates completion of the Remedial Investigation Workplan, as described herein, will take one to two months. Upon completion of the RI and receipt of the laboratory analytical results, First Environment will prepare a Remedial Investigation Report for submission to the NYSDEC.

TABLES

TABLE 1
Remedial Investigation
2022 Work Activity Schedule

Task Milestone	Estimated Duration Days	Estimated Completion Date
Remedial Investigation Workplan Submittal*	30	July 17, 2022
Offsite Access Agreements	60	October 3, 2022
Utility mark-out	5	October 10, 2022
Monitoring Well Installation Offsite (West Side near Rye Lake) & soil sampling	20	November 11, 2022
Monitoring Well Installation Offsite (Onsite)	6	November 21, 2022
Aquifer Slug Tests	4	November 30, 2022
Soil & Sediment Sampling	5	December 8, 2022
Survey Sample Locations	3	December 8, 2022
Data Evaluation	60	February 1, 2023
Report Preparation & Submittal	60	April 1, 2023

*The NYSDEC Workplan Approval date may allow the schedule to be moved up if approval can occur within 30 days of workplan submittal.

Estimated task durations and completions are tentative and are subject to modification based onsite work, progress, weather delays and other considerations such contractor availability as Airport access.

Monthly progress reports will provide task initiation date for next month activity.

TBD – To Be Determined

TABLE 2
Summary Table
Sample Location, Media and Laboratory Analyses

Sample Area	Location Number	Soil	Sediment	Ground Water	Surface Water	Laboratory Analysis	Sample Description	Comments
West Side near Rye Lake (off-site)	6	12				PFAS	Sample locations are distributed off-site at proposed wells installation. Surface soil samples from 0 to 6 inches will be collected for laboratory analysis. Contingent samples will be collected from 24 to 30 inches.	If surface soil samples exceed the NYSDEC soil guidance for protection of groundwater values for PFOS at 3.7 ppb and PFOA at 1.1 ppb contingent soil samples will be analyzed for PFOS and PFOA to assess potential impact to groundwater. Proposed sample locations are shown in Figure 18
West Side near Rye Lake (off-site shallow)	6			12		PFAS	Shallow & Deep monitoring well couplet installation and groundwater sample collection.	Assess the presence and concentration of PFAS as well as the vertical flow hydraulic gradient. Proposed sample locations are illustrated in Figure 18.
West Side OF-4 (off-site)	5		5			PFAS	Sediment samples will be collected for PFAS analysis at each tributary that converge to NYCDEP E-11 flow measurement station.	Assess levels of PFAS relative NYSDEC guidance for soil clean up objectives. Proposed sample locations are illustrated in Figure 18.
Hanger E (on-site)	4	8		5		PFAS	Surface soil samples from 0 to 6 inches will be collected for laboratory analysis. Contingent samples will be collected from 24 to 30 inches. Four monitoring wells and one bedrock installation for groundwater sampling.	If surface soil samples exceed the NYSDEC soil guidance for protection of groundwater values for PFOS at 3.7 ppb and PFOA at 1.1 ppb contingent soil samples will be analyzed for PFOS and PFOA to assess potential impact to groundwater. Proposed sample locations are shown in Figure 18

TABLE 2
Summary Table
Sample Location, Media and Laboratory Analyses

Sample Area	Location Number	Soil	Sediment	Ground Water	Surface Water	Laboratory Analysis	Sample Description	Comments
Southwestern Corner of Airport (on-site)	3			3		PFAS	Three monitoring well installations used for groundwater sampling.	The monitoring wells will be installed to better define groundwater flow and potential offsite PFAS source. Proposed sample locations are illustrated in Figure 18.
Southern End of Airport – Fire Training Area	4	8		4		PFAS	Surface soil samples from 0 to 6 inches will be collected for laboratory analysis. Contingent samples will be collected from 24 to 30 inches. Three overburden monitoring wells (40 to 50 feet bgs deep water table) and one bedrock well installation used for groundwater sampling.	If surface soil samples exceed the NYSDEC soil guidance for protection of groundwater values for PFOS at 3.7 ppb and PFOA at 1.1 ppb contingent soil samples will be analyzed for PFOS and PFOA to assess potential impact to groundwater. Proposed sample locations are shown in Figure 18.
Northwestern Airport OF-10 (on-site)	9	18		1		PFAS	Surface soil samples from 0 to 6 inches will be collected for laboratory analysis. Contingent samples will be collected from 24 to 30 inches. One shallow monitoring well will be installed used for groundwater sampling..	If soil samples exceed the NYSDEC soil guidance for protection of groundwater values for PFOS at 3.7 ppb and PFOA at 1.1 ppb contingent soil samples will be analyzed for PFOS and PFOA to assess potential impact to groundwater. To further define groundwater impacts in this area to assess this area as a potential separate source area one groundwater will collected. Proposed sample locations are shown in Figure 18.

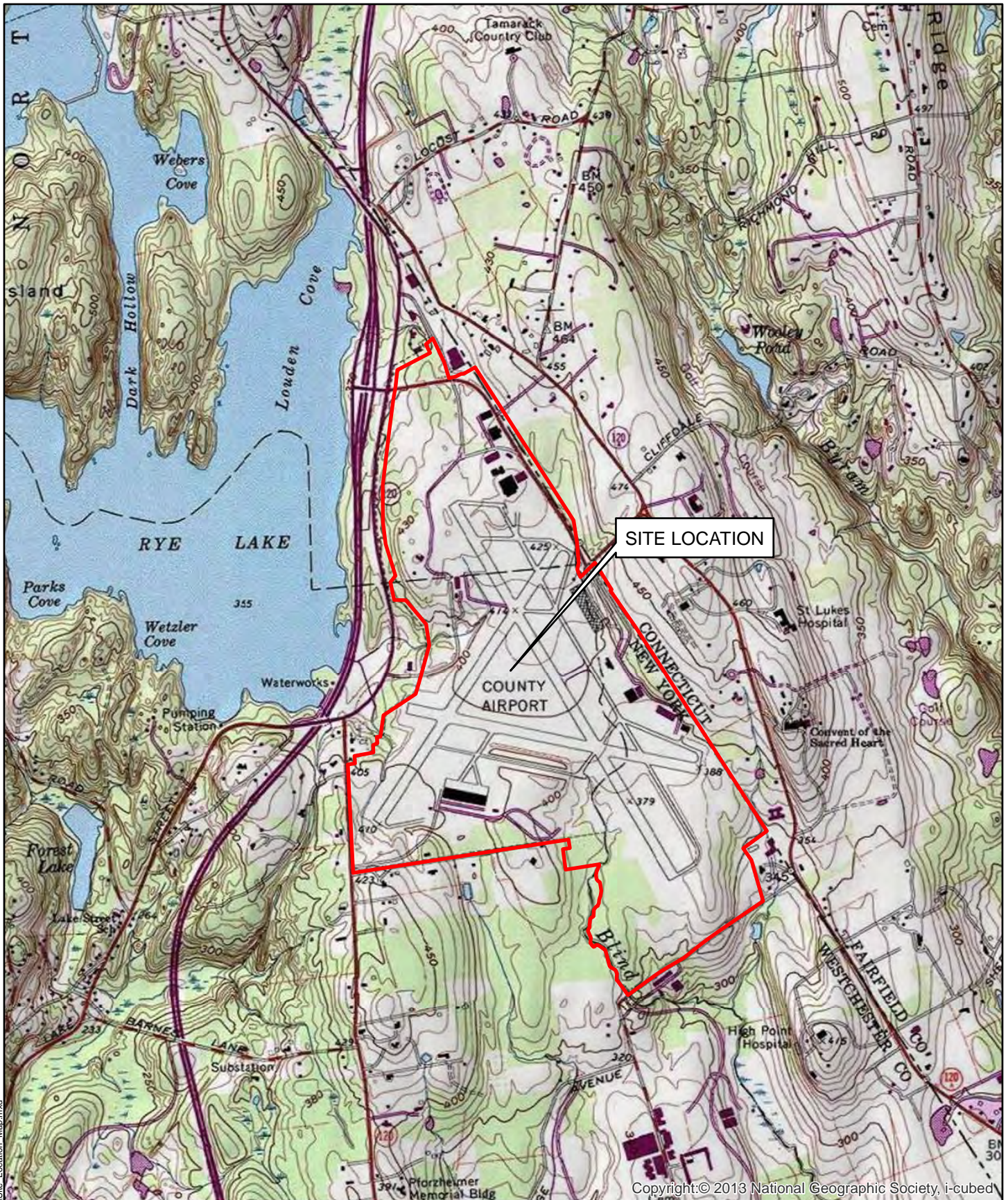
TABLE 2
Summary Table
Sample Location, Media and Laboratory Analyses

The exact number and location of samples for laboratory analysis maybe subject to change based on field conditions and sampling equipment operation.

Final sample locations maybe be determined in the field in consultation with the NYSDEC representative.

Soil borings will be advanced continuously to the bedrock or refusal and examined in the field for visual, olfactory, or PID field screening evidence of potential contamination.

FIGURES



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0 500 1,000 2,000 Feet

1 inch = 2,000 feet



**FIRST
ENVIRONMENT**

10 Park Place, Bldg 1A, Suite 504
Butler, NJ 07405

NYSDEC SITE NO. 360174
WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York
FIGURE 1
SITE TOPOGRAPHIC LOCATION MAP

Revised	Drawn	Checked	Approved	Date
	LS	DDL	SG	2/19/2021



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

Legend

Stream	Detention Basin	Active Fire Training & Testing Area
Ephemeral Stream	Subsurface Catch Basin	Former AFFF Burn Pit
Outfall Location	Open Catch Area	Property Boundary

SPDES - State Pollutant Discharge Elimination System

0 175 350 700 Feet
1 inch = 700 feet

 10 Park Place, Bldg 1A, Suite 504 Butler, NJ 07405	NYSDEC SITE NO. 360174 WESTCHESTER COUNTY AIRPORT White Plains, Westchester County, New York				
	FIGURE 2 SITE MAP				
Revised	Drawn LS	Checked DL	Approved SG	Date 2/11/2022	



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

Legend
● Outfall Location
SPDES - State Pollutant Discharge Elimination System

Subsurface Catch Basin

Open Catch Area

Detention Basin

Active Fire Training & Testing Area

Former AFFF Burn Pit

Property Boundary

Stream

Ephemeral Stream

Source: TRC Engineers, Inc. Existing (2019) Conditions Drainage Area Map. Nov. 2010.

0 175 350 700 Feet

1 inch = 700 feet

FIRST ENVIRONMENT

10 Park Place, Bldg 1A, Suite 504
Butler, NJ 07405

NYSDEC SITE NO. 360174
WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York

**FIGURE 3
SURFACE WATER DRAINAGE MAP**

Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	2/11/2022

\\WESTCHESTER\AIRPORT\Site Characterization\Figure 4 Surface Water Drainage Map.mxd



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

\\WESTCHESTER\AIRPORT\Site Characterization\Figure3 Storm Sewer Distribution Overlay.mxd

Legend

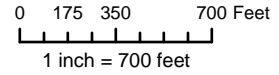
- Outfall Location
- SPDES - State Pollutant Discharge Elimination System

- Subsurface Catch Basin
- Open Catch Area

- Active Fire Training & Testing Area
- Former AFFF Burn Pit

- Detention Basin
- Property Boundary

- Stream
- Ephemeral Stream



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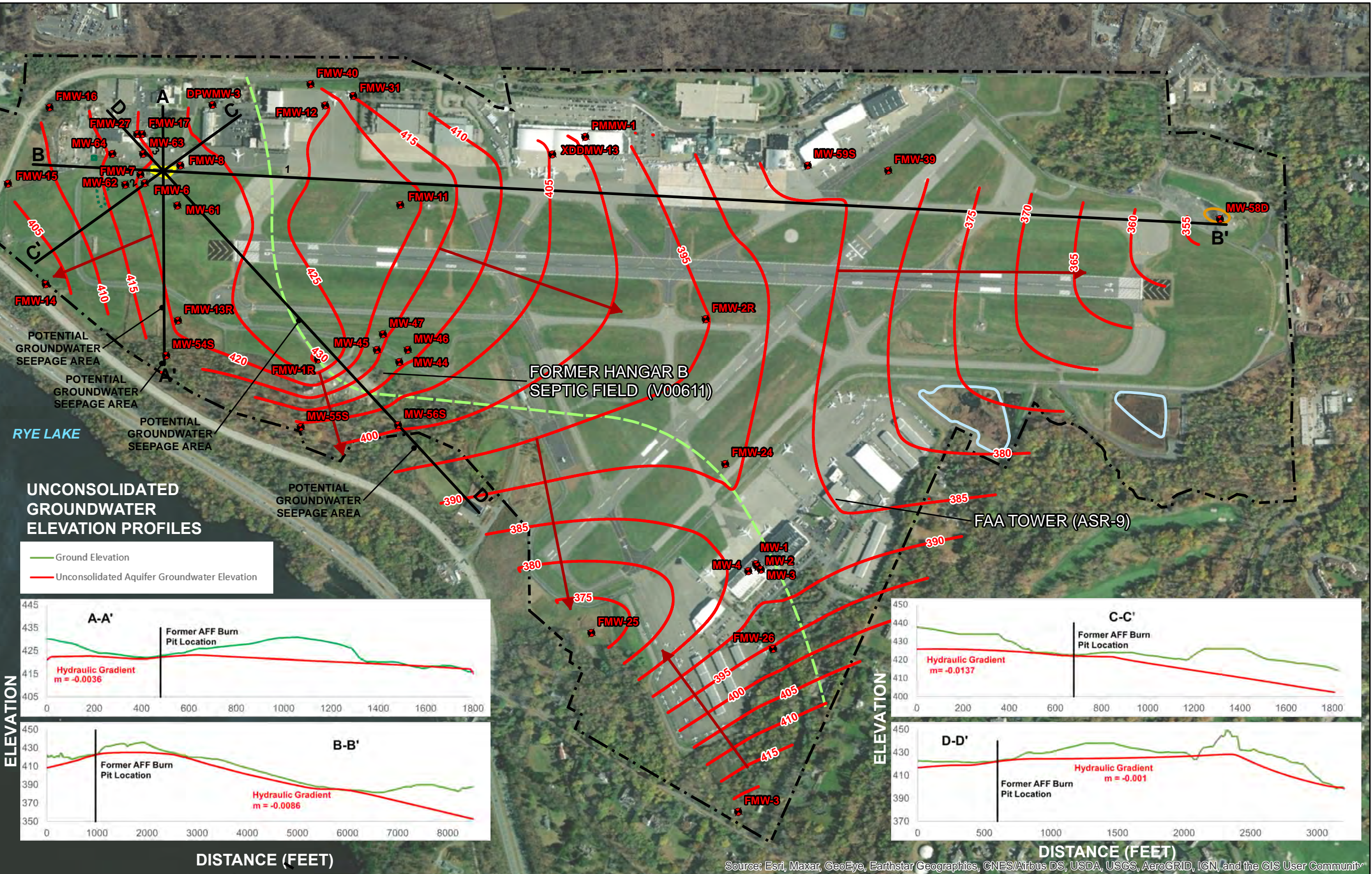
NYSDEC SITE NO. 360174
WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York

FIGURE 4
STORM SEWER DISTRIBUTION
& SURFACE WATER FLOW

Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	2/11/2022

WESTCHESTER AIRPORT Site Characterization Figure 6: GW Elevations 1-2021 Shallow All Wells.mxd

UNCONSOLIDATED WATER-BEARING ZONE	
1/28/21 GROUNDWATER ELEVATION	
MW-1	385.81
MW-2	386.11
MW-3	386.27
MW-4	386.11
DEP-3	NM
DEP-MW-1	NM
DPW-2	NA
DPW-MW-3	427.39
FMW-11	423.39
FMW-12	425.82
FMW-13R	420.96
FMW-14	401.38
FMW-15	405.8
FMW-16	411.05
FMW-17	421.06
FMW-1R	431.22
FMW-24	391.51
FMW-25	369.96
FMW-26	395.35
FMW-27	419.77
FMW-2R	395.37
FMW-3	423.03
FMW-31	414.78
FMW-37	NM
FMW-39	383.93
FMW-40	420.97
FMW-5	NM
FMW-6	421.59
FMW-7	420.27
FMW-8	423.33
LMW-2	NM
MW-16	NA
MW-18	NA
MW-202	NM
MW-26	NM
MW-44	411.33
MW-45	415.81
MW-46	411.99
MW-47	415.61
MW-54S	417.41
MW-55S	403.14
MW-56S	400.58
MW-58S	NM
MW-58D	351.9
MW-59S	381.15
MW-61	424.63
MW-62	418.26
MW-63	418.25
MW-64	415.27
PAR-1	NA
PAR-2	NA
PAR-3	NA
PC-1	NM
PC-2	NM
PC-3	NM
PMMW-1	398.41
UW-1	NA
XDDMW-13	404.67
XDDMW-3	NM
XDDMW-5	NA
MW-10S	398.68
MW-15S	NA



Legend

- Monitoring Well Location (Unconsolidated Aquifer)

Groundwater Elevation Contours (1/28/21)

Groundwater Flow Direction

Watershed Divide

Former AFFF Burn Pit

Active Fire Training & Testing Area

Detention Basin

Subsurface Catch Basin

Open Catch Area

Property Boundary

NM: Not Measured

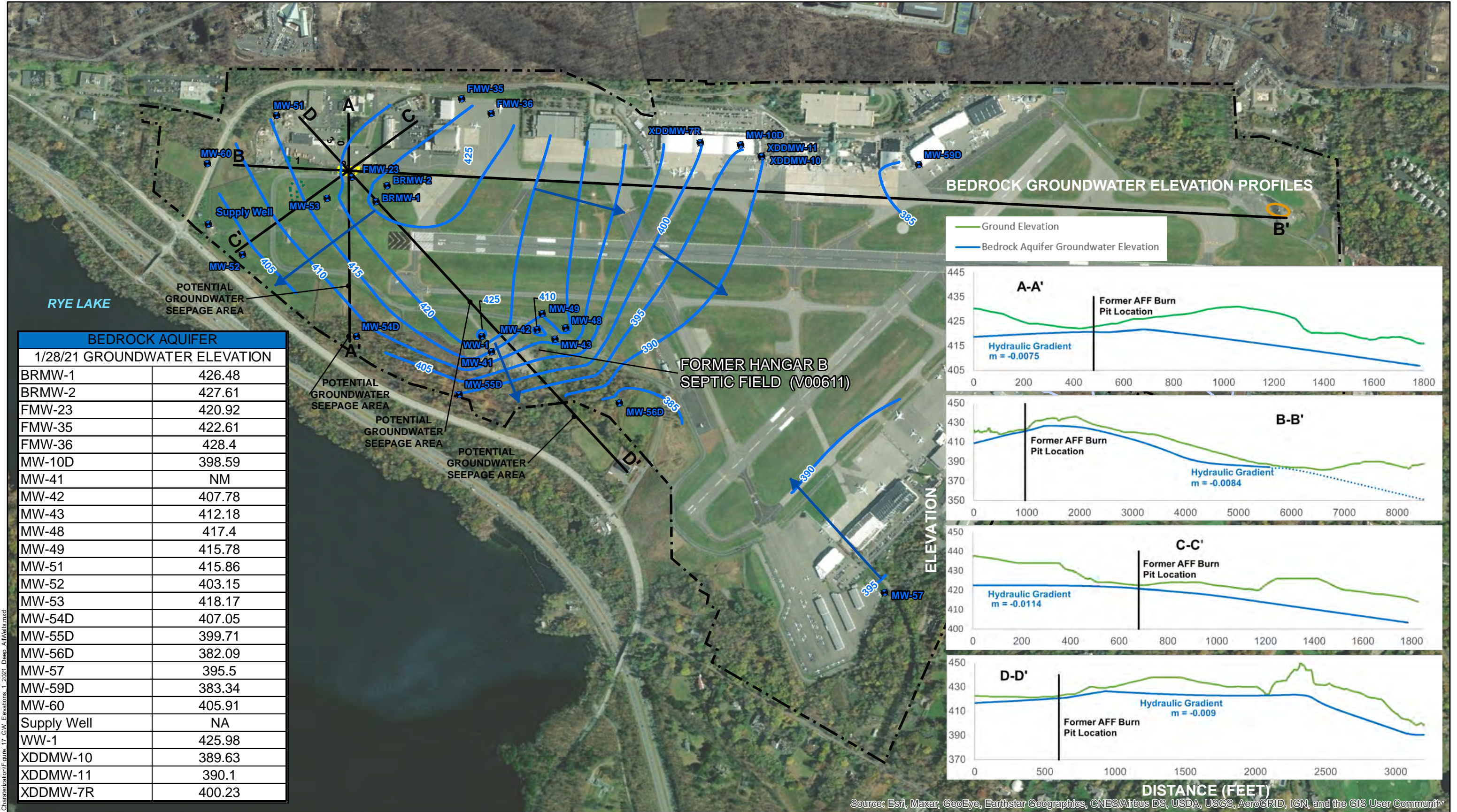
NA: TOC Elevation not Available

0 175 350 700 Feet
1 inch = 700 feet

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NYSDEC SITE NO. 360174 WESTCHESTER COUNTY AIRPORT White Plains, Westchester County, New York FIGURE 5 UNCONSOLIDATED GROUNDWATER ELEVATION CONTOURS: JANUARY 28, 2021				
Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	3/8/2022

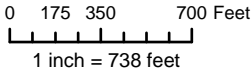


\\WESTCHESTER\AIRPORT\Site Characterization\Figure 17 GW Elevations 1 2021 Deep AllWells.mxd

Legend

- Monitoring Well Location (Bedrock Aquifer)
- Groundwater Elevation Contours (1/28/21)
- Groundwater Flow Direction
- Former AFF Burn Pit
- Active Fire Training & Testing Area
- Detention Basin
- Subsurface Catch Basin
- Open Catch Area
- Property Boundary

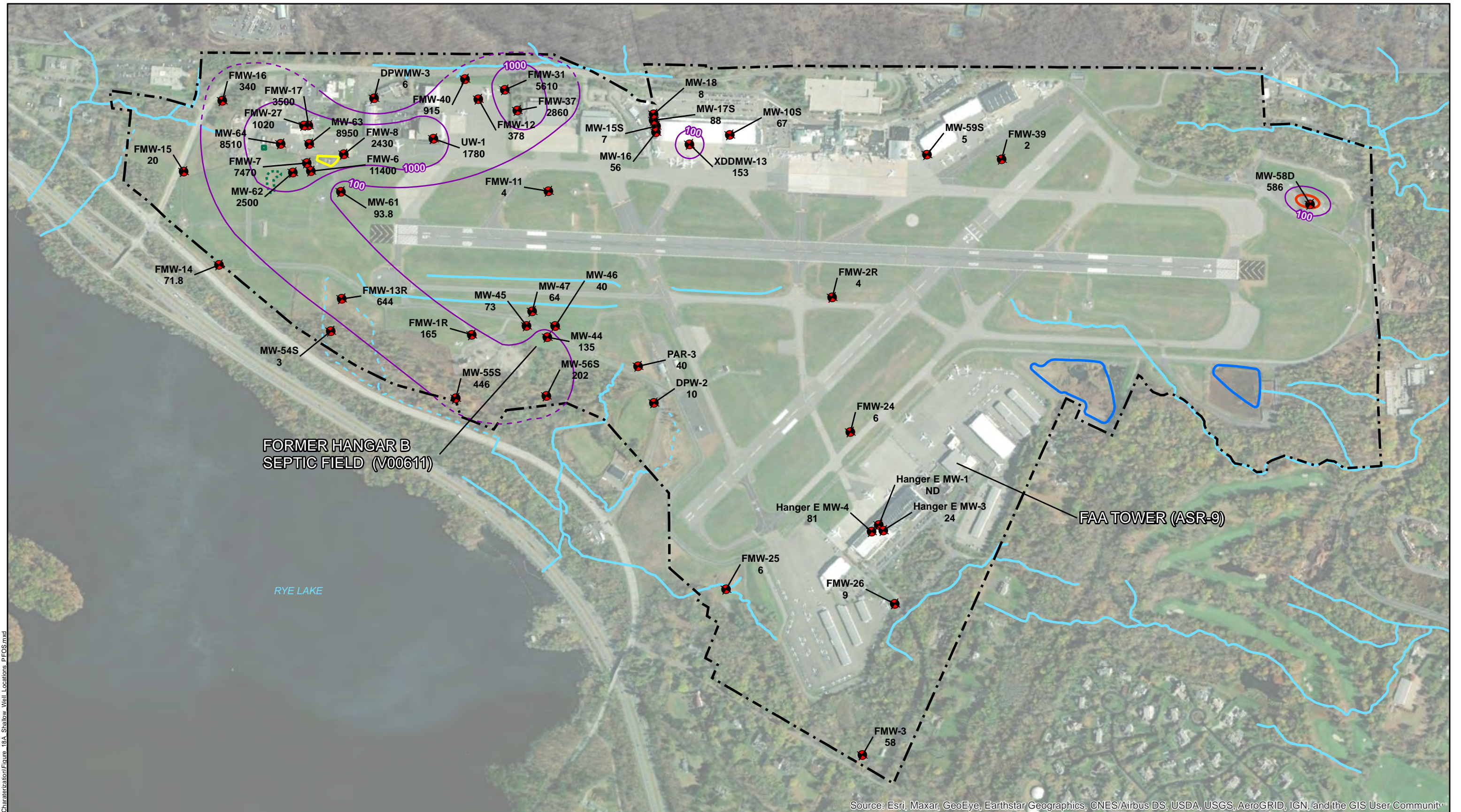
NM: Not Measured
NA: TOC Elevation not Available














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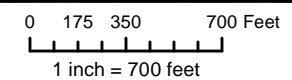
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WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York
FIGURE 6
BEDROCK GROUNDWATER CONTOUR MAP
JANUARY 28, 2021

Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	2/11/2022



Legend

- | | | | | | | | |
|---|--------------------------------------|---|-------------------------------------|---|------------------------|---|------------------|
|  | Overburden Monitoring Well Locations |  | Active Fire Training & Testing Area |  | Subsurface Catch Basin |  | Stream |
|  | May 2020 PFOS Isopleth |  | Former AFFF Burn Pit |  | Open Catch Area |  | Ephemeral Stream |
|  | Inferred May 2020 PFOS Isopleth |  | Detention Basin |  | Property Boundary | | |
- PFOS from Spring 2020 (ppt)
ND: Not Detected

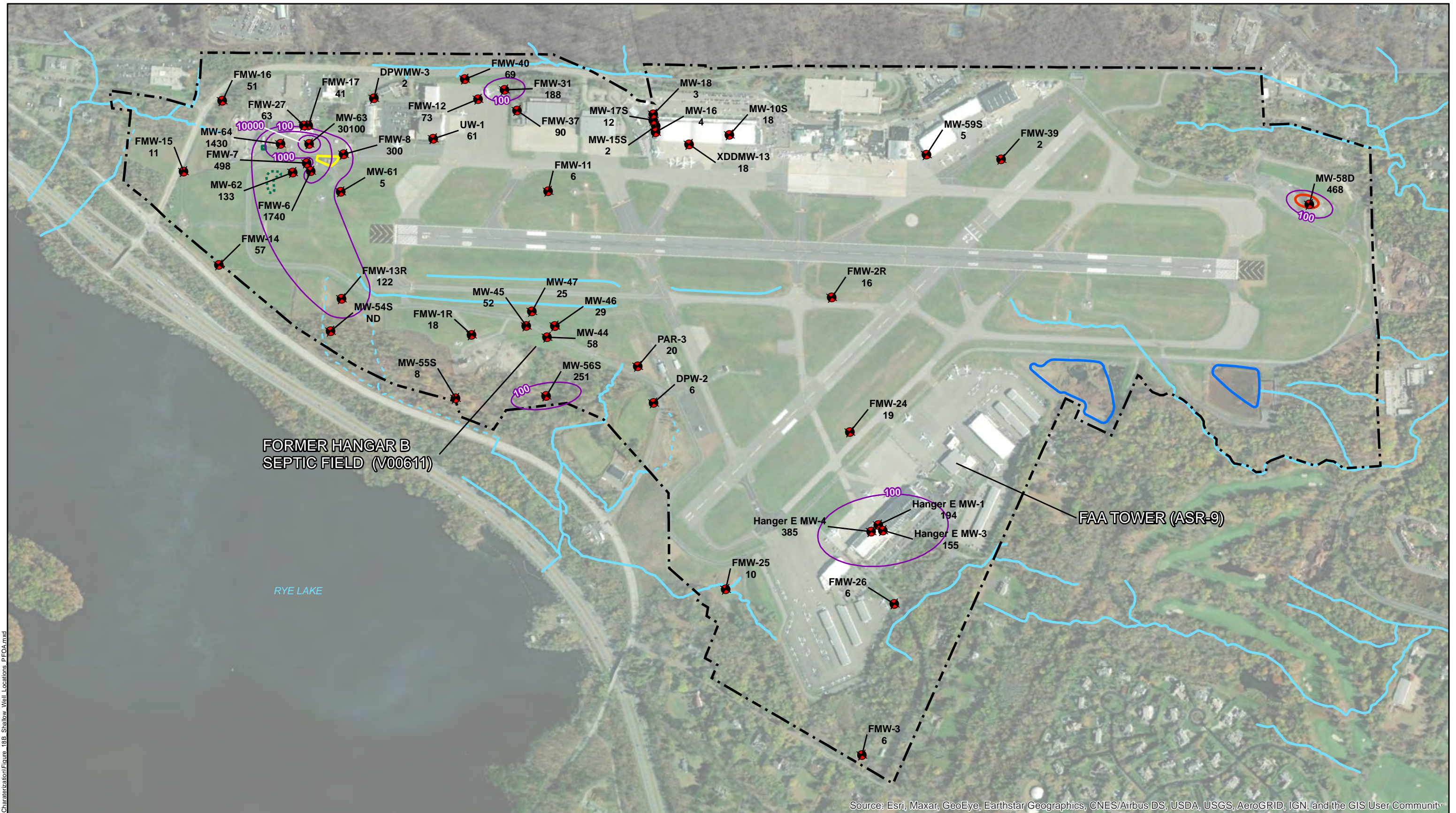
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White Plains, Westchester County, New York
FIGURE 7A
Shallow GW PFOS Contour

Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	3/15/2022

\\WESTCHESTER\AIRPORT\Site Characterization\Figure 18B Shallow Well Locations PFOA.mxd



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

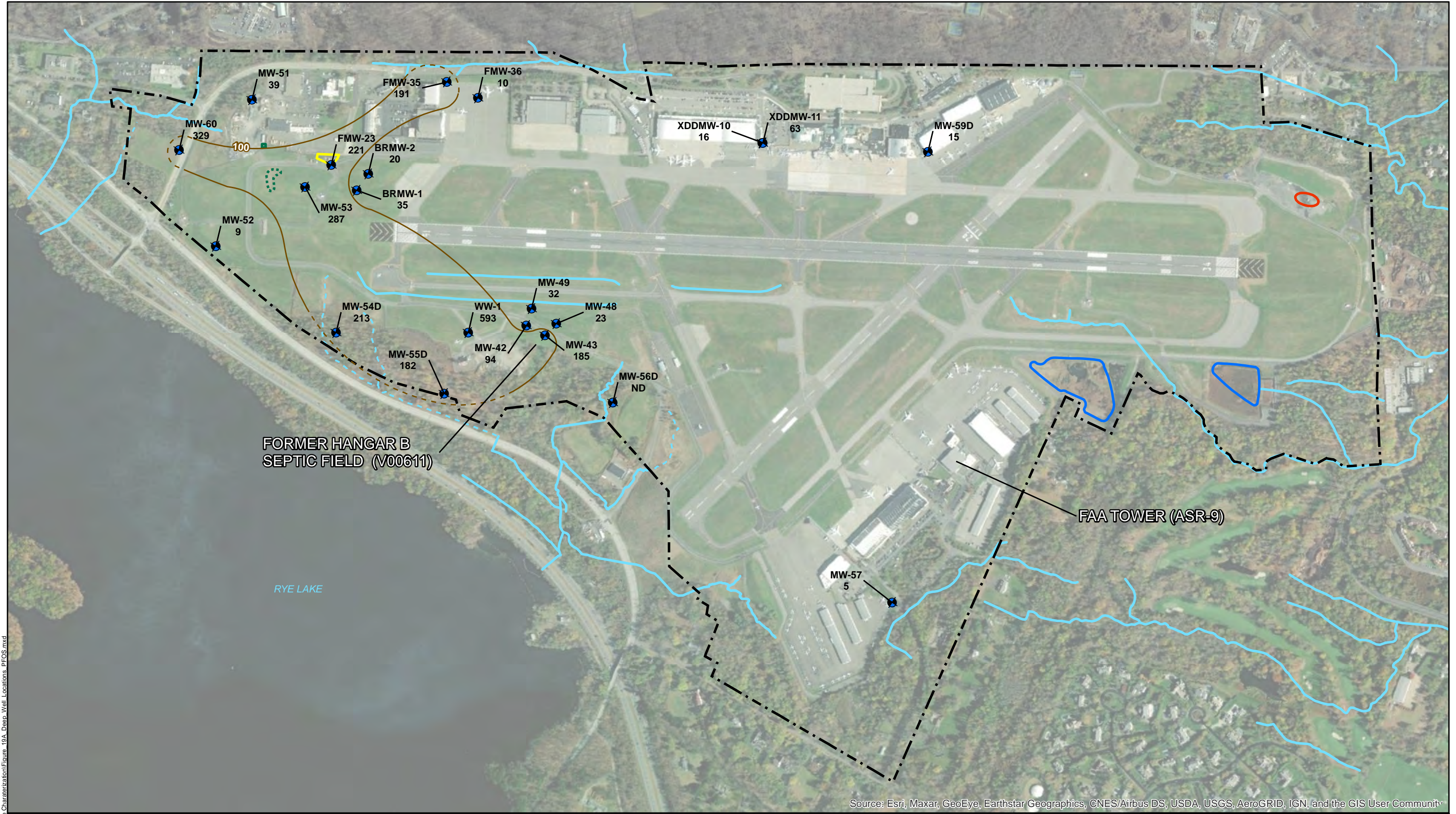
Legend

- Overburden Monitoring Well Locations
- May 2020 PFOA Isopleth
- PFOA from Spring 2020 (ppt)
- ND: Not Detected
- Active Fire Training & Testing Area
- Former AFFF Burn Pit
- Detention Basin
- Subsurface Catch Basin
- Open Catch Area
- Property Boundary
- Stream
- Ephemeral Stream

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Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	3/15/2022

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FIGURE 7B
Shallow GW PFOA Contour Map



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

Legend

Bedrock Monitoring Well Locations

May 2020 PFOS Isopleth

Inferred May 2020 PFOS Isopleth (ppt)

Active Fire Training & Testing Area

Former AFFF Burn Pit

Detention Basin

Subsurface Catch Basin

Open Catch Area

Property Boundary

Stream

Ephemeral Stream

ND: Not Detected

0 175 350 700 Feet

1 inch = 700 feet

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FIGURE 8A
Bedrock GW PFOS Contour Map

Revised

Drawn

Checked

Approved

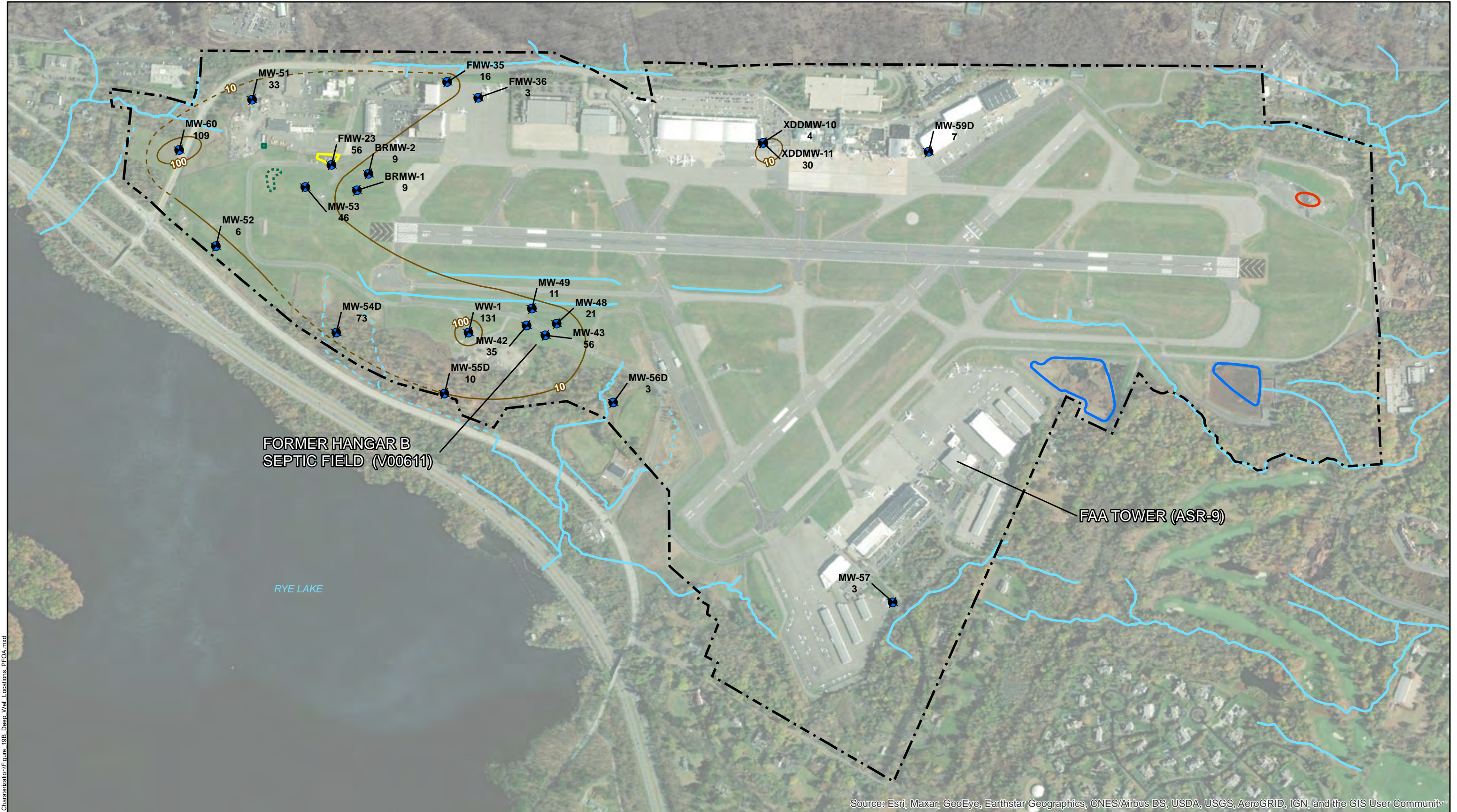
Date

LS

DL

SG

3/15/2022



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

J:\WESTCHESTER\AIRPORT\Site Characterization\Figure 19B Deep Well Locations PFOA.mxd

Legend

- Bedrock Monitoring Well Locations
- May 2020 PFOA Isopleth
- Inferred May 2020 PFOA Isopleth PFOA from Spring 2020 (ppt)
- ND: Not Detected

- Active Fire Training & Testing Area
- Former AFFF Burn Pit
- Detention Basin

- Subsurface Catch Basin
- Open Catch Area
- Property Boundary

- Stream
- Ephemeral Stream

0175350700 Feet

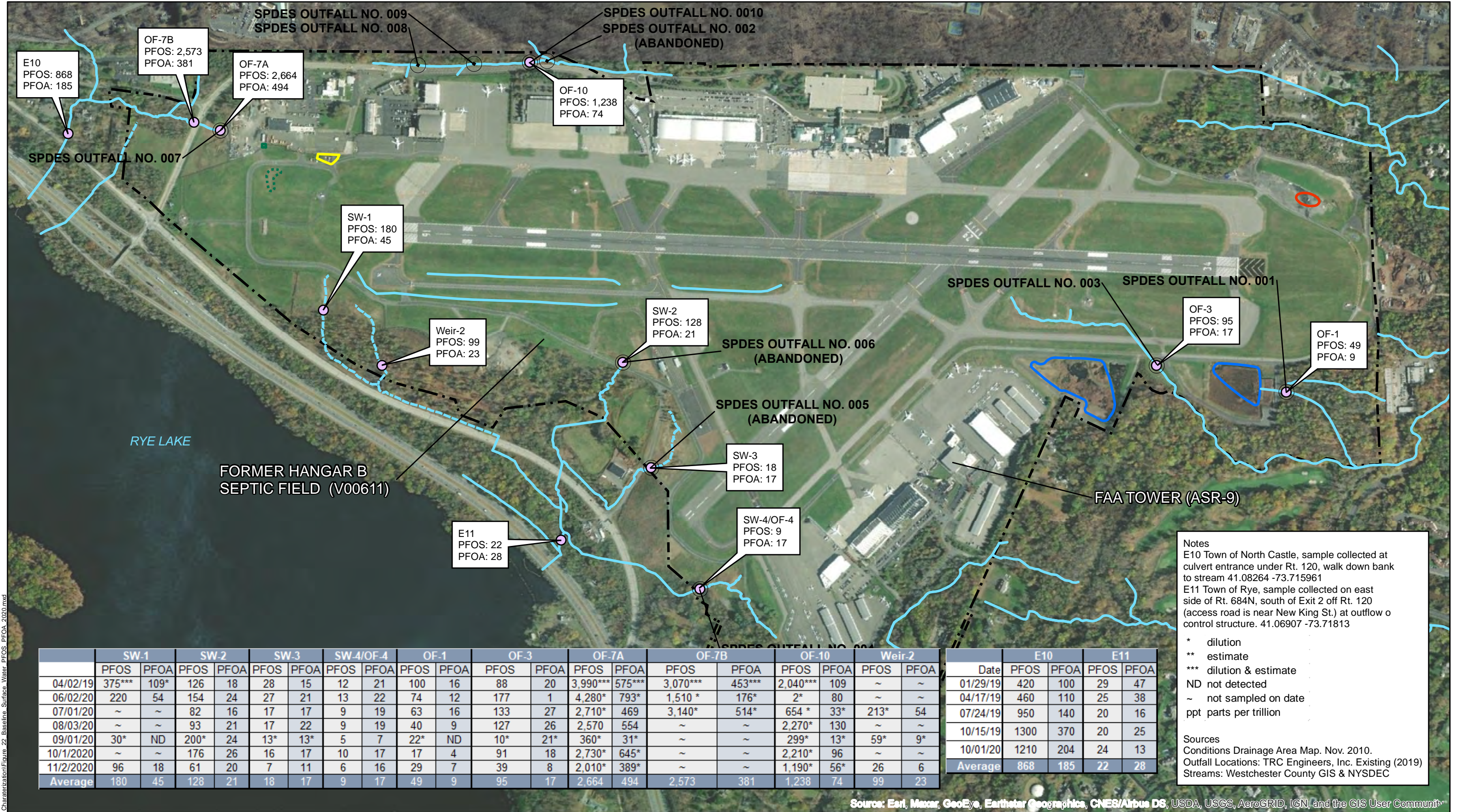
1 inch = 700 feet

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WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York
FIGURE 8B
Bedrock GW PFOA Contour Map

Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	3/15/2022



\\WESTCHESTER\AIRPORT\Site Characterization\Figure 22 - Baseline Surface Water PFOS PFOA 2020.mxd

Notes
E10 Town of North Castle, sample collected at culvert entrance under Rt. 120, walk down bank to stream 41.08264 -73.715961
E11 Town of Rye, sample collected on east side of Rt. 684N, south of Exit 2 off Rt. 120 (access road is near New King St.) at outflow o control structure. 41.06907 -73.71813

* dilution
** estimate
*** dilution & estimate
ND not detected
~ not sampled on date
ppt parts per trillion

Sources
Conditions Drainage Area Map. Nov. 2010.
Outfall Locations: TRC Engineers, Inc. Existing (2019)
Streams: Westchester County GIS & NYSDEC

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

Legend

Surface Water Sample Location

SW-4

Sample ID

PFOS

Average of Results (ppt)

PFOA

Average of Results (ppt)

SPDES - State Pollutant Discharge Elimination System

Outfall Location

Stream

Ephemeral Stream

Subsurface Catch Basin

Open Catch Area

Detention Basin

Active Fire Training & Testing Area

Former AFFF Burn Pit

Property Boundary

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Date

2/15/2022

NYSDEC SITE NO. 360174

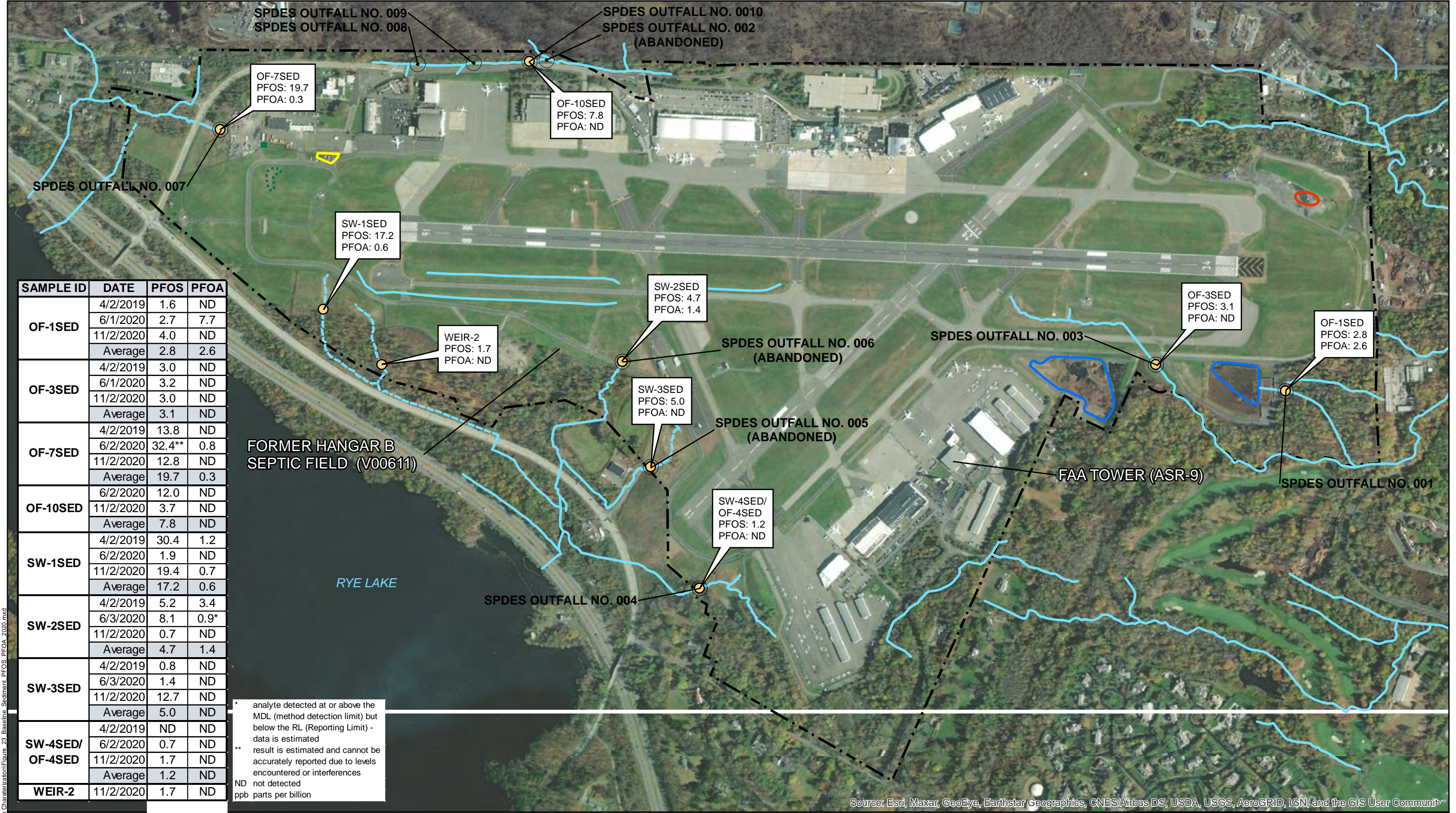
WESTCHESTER COUNTY AIRPORT

White Plains, Westchester County, New York

FIGURE 9

SURFACE WATER PFOS/PFOA CONCENTRATIONS

\\WESTCHESTER\AIRPORT\Site Characterization\Figure 23 Baseline Sediment PFOS PFOA 2020.mxd



SAMPLE ID	DATE	PFOS	PFOA
OF-1SED	4/2/2019	1.6	ND
	6/1/2020	2.7	7.7
	11/2/2020	4.0	ND
	Average	2.8	2.6
OF-3SED	4/2/2019	3.0	ND
	6/1/2020	3.2	ND
	11/2/2020	3.0	ND
	Average	3.1	ND
OF-7SED	4/2/2019	13.8	ND
	6/2/2020	32.4**	0.8
	11/2/2020	12.8	ND
	Average	19.7	0.3
OF-10SED	6/2/2020	12.0	ND
	11/2/2020	3.7	ND
	Average	7.8	ND
SW-1SED	4/2/2019	30.4	1.2
	6/2/2020	1.9	ND
	11/2/2020	19.4	0.7
	Average	17.2	0.6
SW-2SED	4/2/2019	5.2	3.4
	6/3/2020	8.1	0.9*
	11/2/2020	0.7	ND
	Average	4.7	1.4
SW-3SED	4/2/2019	0.8	ND
	6/3/2020	1.4	ND
	11/2/2020	12.7	ND
	Average	5.0	ND
SW-4SED/ OF-4SED	4/2/2019	ND	ND
	6/2/2020	0.7	ND
	11/2/2020	1.7	ND
	Average	1.2	ND
WEIR-2	11/2/2020	1.7	ND

* analyte detected at or above the MDL (method detection limit) but below the RL (Reporting Limit) - data is estimated
** result is estimated and cannot be accurately reported due to levels encountered or interferences
ND not detected
ppb parts per billion

Legend

- Sediment Sample

SW-4SED Sample ID

PFOS Average of Results (ppb)

PFOA Average of Results (ppb)
- SPDES - State Pollutant Discharge Elimination System Outfall Location

—

 Stream

 Ephemeral Stream
- ▭

 Subsurface Catch Basin

▭

 Open Catch Area

▭

 Detention Basin
- ▭

 Active Fire Training & Testing Area

▭

 Former AFFF Burn Pit

 Property Boundary

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

Sources
Conditions Drainage Area Map. Nov. 2010.
Streams: USGS National Hydrography Dataset...
Outfall Locations: TRC Engineers, Inc. Existing (2019)

0 175 350 700 Feet
1 inch = 700 feet

➤

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FIGURE 10
SEDIMENT
PFOS/PFOA CONCENTRATIONS

Revised	Drawn	Checked	Approved	Date
	LS	SG	SG	2/15/2022

\\WESTCHESTER\AIRPORT\Site Characterization\Figure 25E BurnPit Soil Surface and SB PFOS.mxd

Sample	Depth (ft.)	Date	PFOS (ppt)
BP-01	0.5	8/25/2020	0.8
BP-02	0.5	8/25/2020	3
BP-03	0.5	8/25/2020	8.8
BP-04	0.5	8/25/2020	27.5
BP-05	0.5	8/25/2020	27.7
BP-06	0.5	8/25/2020	101.0 D
BP-07	0.5	8/26/2020	7.0
BP-08	0.5	8/26/2020	7.1
BP-09	0.5	8/26/2020	18.2 E
BP-10	0.5	8/26/2020	69.0 DE
BP-11	0.5	8/25/2020	47.9 DE
BP-12	0.5	8/25/2020	62.1 DE
BP-13	1	8/26/2020	8.6
BP-14	0.5	8/26/2020	8.8
BP-15	0.5	8/27/2020	39.8 D
BP-16	0.5	8/27/2020	98.1
BP-17	1	8/27/2020	256.0 D
BP-18	0.5	8/27/2020	7.0 D
BP-19	0.5	8/27/2020	99.5 D
BP-20	1	8/27/2020	50.4 D
BP-21	0.5	8/27/2020	99.5 D
BP-22	0.5	8/27/2020	129.0 D
BP-23	0.5	8/27/2020	52.0 D
BP-24	1.5	7/26/2021	77.4 D
BP-25	1	7/26/2021	6.21
BP-26	1	7/26/2021	8.85
BP-27	1	7/26/2021	1.1
BP-28	1	7/26/2021	2.32
SB-01	0.5-1	3/2/2020	15.9
SB-02	0-0.5	3/2/2020	1.3
SB-03	0-0.5	3/5/2020	1.4
SB-04	0-0.5	3/2/2020	0.5
SB-16	0-0.5	3/2/2020	5.6

Legend

- Shallow Soil Sample Location
- 7.1

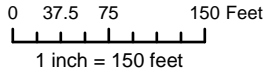
Surface Soil PFOS (ppb)
- ND

Not Detected
- D

Dilution
- E

Estimated
- Surface Soil PFOS 10 -50 ppb
- Surface Soil PFOS 50 -100 ppb
- Surface Soil PFOS 100 -1,000 ppb
- Inferred Isopleth
- Isopleth
- Stream
- Ephemeral Stream
- Former AFFF Burn Pit
- Subsurface Catch Basin
- Open Catch Area

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



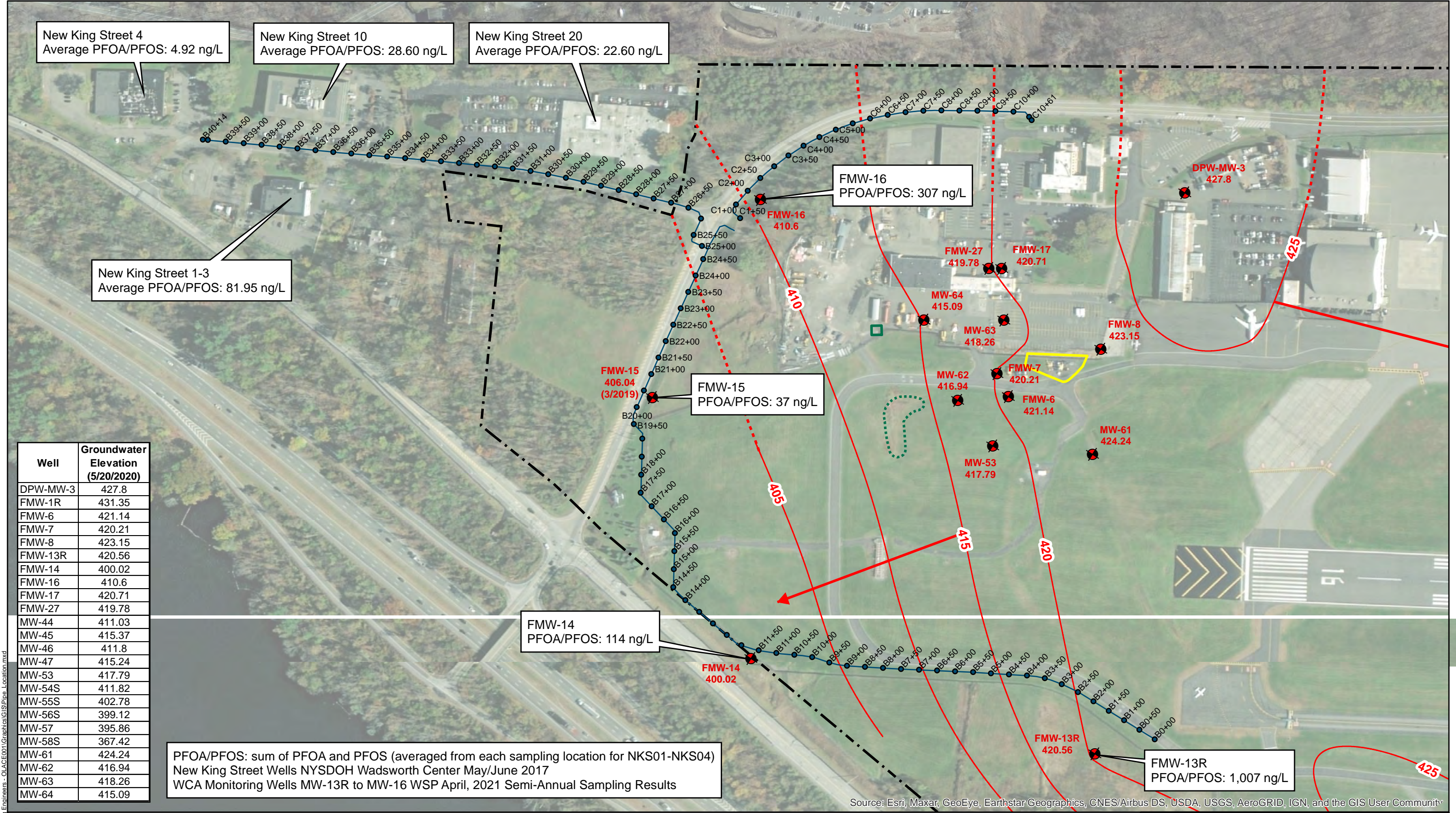
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White Plains, Westchester County, New York

FIGURE 12
BURN PIT SURFACE SOIL PFOS
ISOCONCENTRATION MAP EXPANDED VIEW

Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	2/23/2022



Well	Groundwater Elevation (5/20/2020)
DPW-MW-3	427.8
FMW-1R	431.35
FMW-6	421.14
FMW-7	420.21
FMW-8	423.15
FMW-13R	420.56
FMW-14	400.02
FMW-16	410.6
FMW-17	420.71
FMW-27	419.78
MW-44	411.03
MW-45	415.37
MW-46	411.8
MW-47	415.24
MW-53	417.79
MW-54S	411.82
MW-55S	402.78
MW-56S	399.12
MW-57	395.86
MW-58S	367.42
MW-61	424.24
MW-62	416.94
MW-63	418.26
MW-64	415.09

PFOA/PFOS: sum of PFOA and PFOS (averaged from each sampling location for NKS01-NKS04)
New King Street Wells NYSDOH Wadsworth Center May/June 2017
WCA Monitoring Wells MW-13R to MW-16 WSP April, 2021 Semi-Annual Sampling Results

Legend

- Unconsolidated Monitoring Well
- Unconsolidated Groundwater Elevation Contour (feet) as of 5/20/2020
- Inferred Unconsolidated Groundwater Elevation Contour (feet)
- 411.82 Unconsolidated Groundwater Elevation (feet) as of 5/20/2020
- Unconsolidated Groundwater Flow Direction
- Water Line
- Station
- Property Boundary
- Former AFFF Burn Pit
- Subsurface Catch Basin
- Open Catch Area

0 62.5 125 250 Feet
1 inch = 250 feet

North Arrow

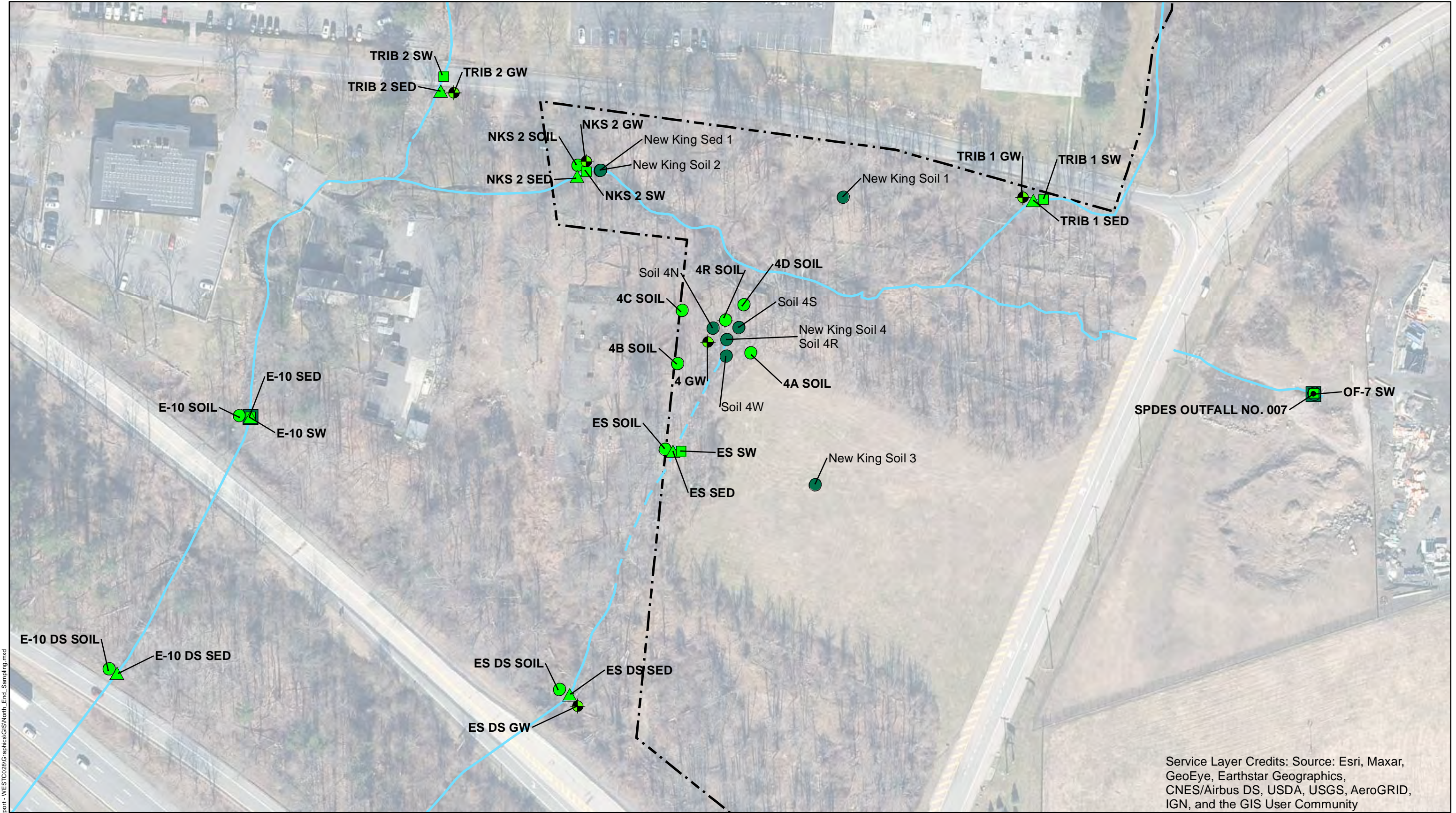
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FIGURE 13
New King Street PFOS/PFOA
Groundwater Concentrations

Revised	Drawn	Checked	Approved	Date
	LS	DL	SG	1/19/2022

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Legend

Outfall Location

Surface Soil Sample Location

Sediment Sample Location

Surface Water Sample Location

Shallow Groundwater Sample Location

Former Soil Sample Locations

Former Surface Water Sample Locations

Stream

Ephemeral Stream

Airport Property Boundary

Notes

ES Ephemeral Stream

DS Down Stream

NKS New King Street

TRIB Tributary

OF Outfall

0 25 50 100 Feet

1 inch = 100 feet

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Revised

Drawn
LS

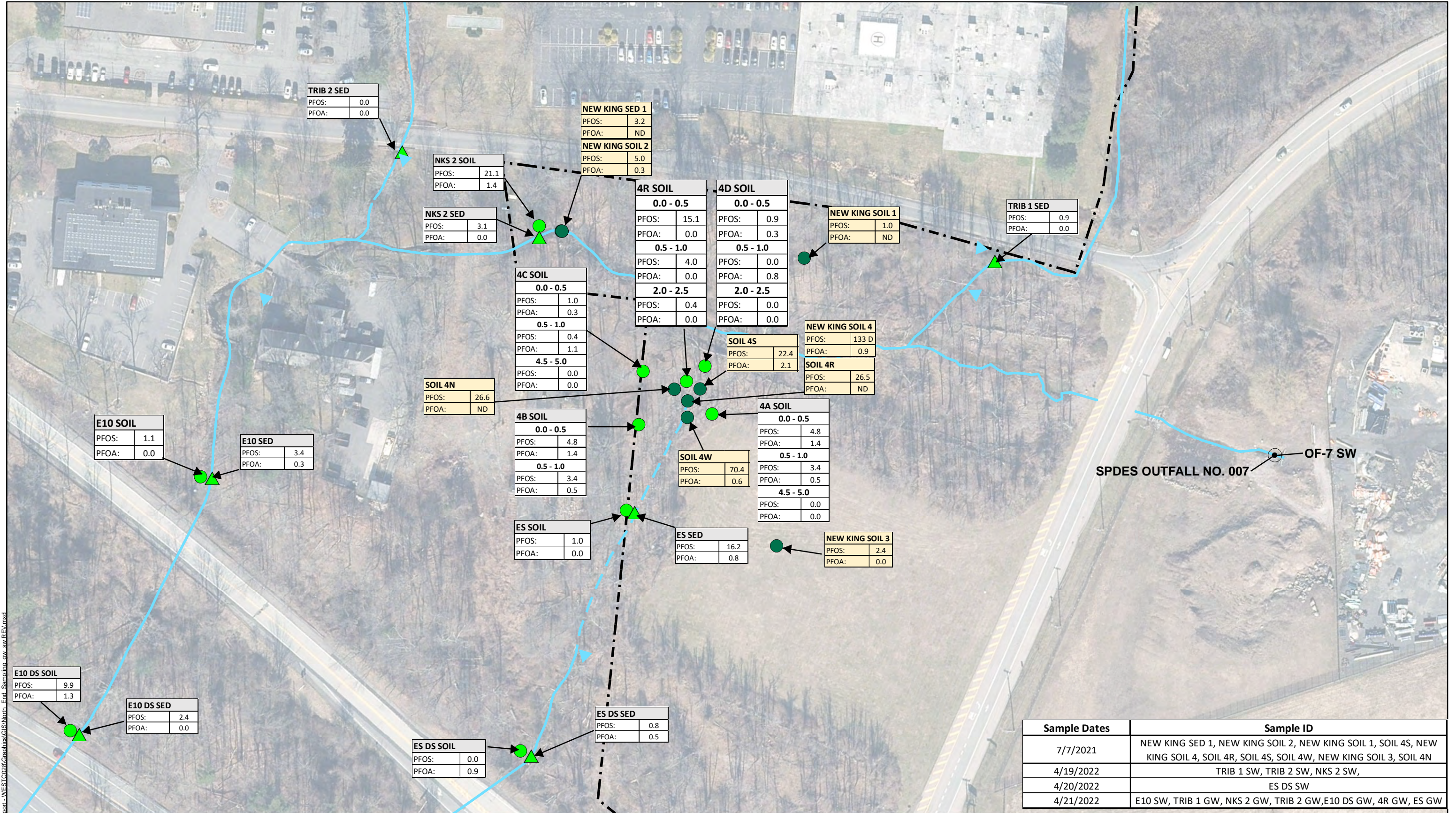
Checked
DL

Approved
SG

Date
5/27/2022

NYSDEC SITE NO. 360174
WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York

FIGURE 14
NEW KING STREET/AIRPORT
SAMPLE LOCATIONS



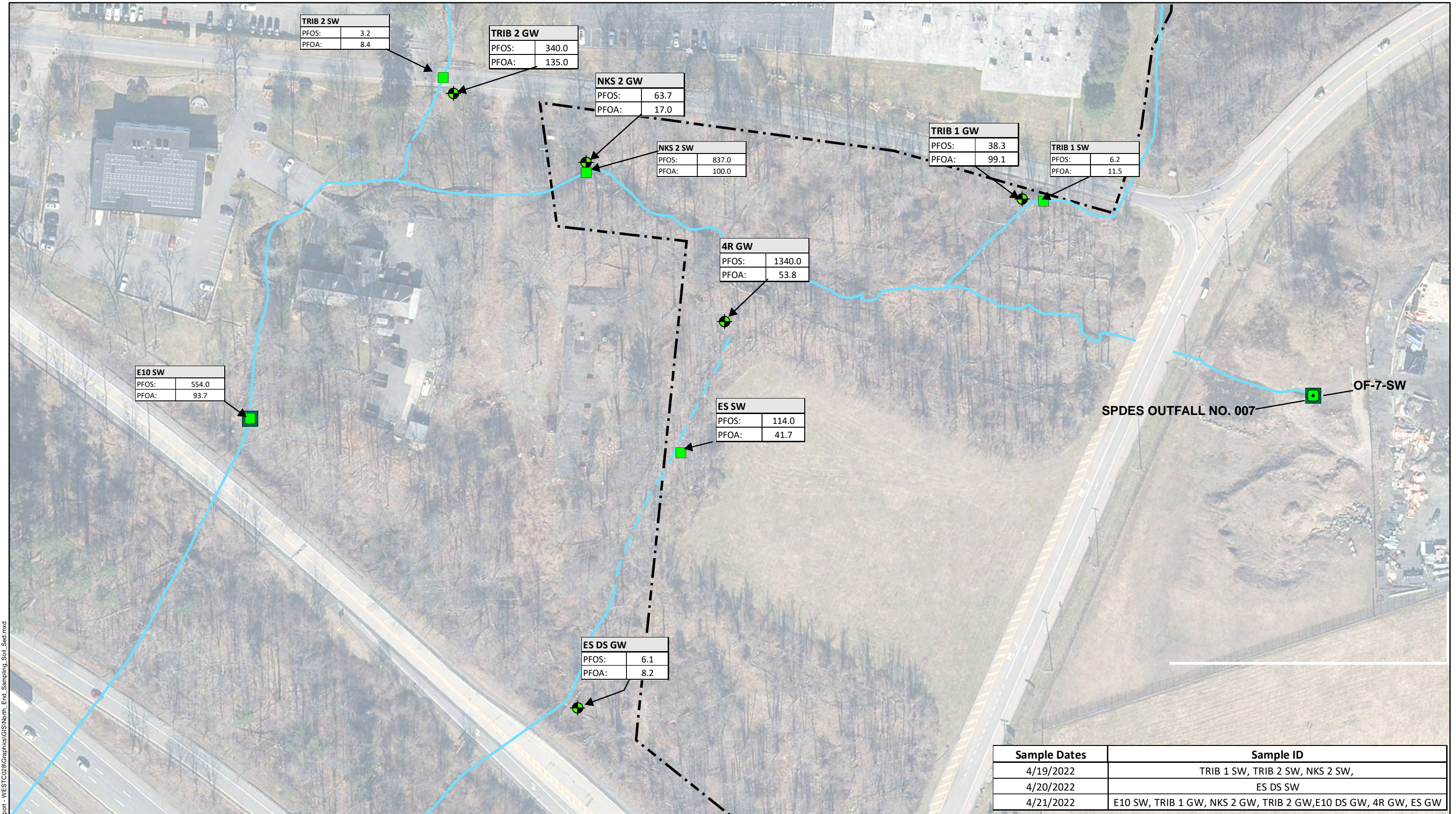
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NYSDEC SITE NO. 360174
WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York
FIGURE 15
NEW KING STREET/AIRPORT
SOIL AND SEDIMENT PFAS RESULTS

Revised	Drawn	Checked	Approved	Date
LS	DL	SG		5/27/2022

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Sample Dates	Sample ID
4/19/2022	TRIB 1 SW, TRIB 2 SW, NKS 2 SW,
4/20/2022	ES DS SW
4/21/2022	E10 SW, TRIB 1 GW, NKS 2 GW, TRIB 2 GW, E10 DS GW, 4R GW, ES GW

Legend

Outfall Location

Surface Water Sample Location

Shallow Groundwater Sample Location

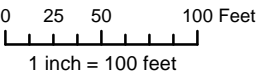
Former Surface Water Sample Locations

Stream

Ephemeral Stream

Airport Property Boundary

Notes
ES Ephemeral Stream
DS Down Stream
NKS New King Street
TRIB Tributary
OF Outfall



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Revised

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Date

LS

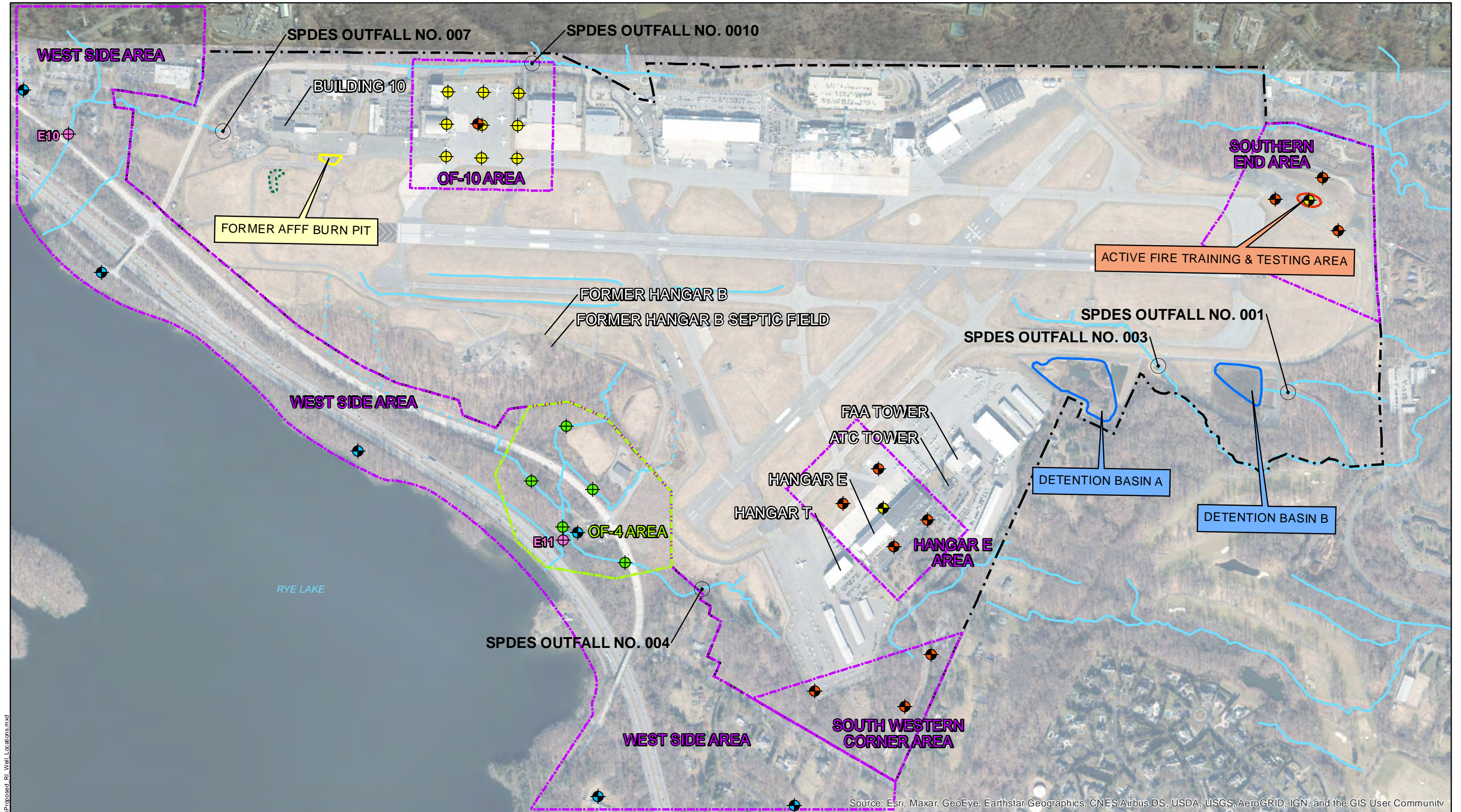
DL

SG

5/27/2022

NYSDEC SITE NO. 360174
WESTCHESTER COUNTY AIRPORT
White Plains, Westchester County, New York

FIGURE 16
New King Street/Airport Surfacewater/
Groundwater PFAS Results



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

\\WESTCHESTERAIRPORTGIS\Proposed RI Well Locations.mxd

Legend

- | | | | | |
|--------------------------------------|--------------------------|----------------------|-------------------------------------|-------------------|
| Proposed Shallow Well | Proposed Bedrock Well | Surface Water Sample | Outfall 4 Sample Area | Open Catch Area |
| Proposed Shallow/Deep Well Couplet | Proposed Soil Sample | Outfall Location | Active Fire Training & Testing Area | Stream |
| 251.0 PFOA (ppt) as of May/June 2020 | Proposed Sediment Sample | Sample Area | Former AFFF Burn Pit | Ephemeral Stream |
| | | | Detention Basin | Property Boundary |

Note: Proposed well locations will include surface soil collection for PFAs analysis.

0 175 350 700 Feet
1 inch = 700 feet



FIRST ENVIRONMENT

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NYSDEC SITE NO. 360174 WESTCHESTER COUNTY AIRPORT White Plains, Westchester County, New York				
FIGURE 18 PROPOSED RI WELL & SAMPLE LOCATIONS				
Revised	Down	Checked	Approved	Date
ES	DL	SG		6/8/2022

APPENDIX A

HASP TRACKING SHEET

Project Number: WESTC028

List all tasks at the site for which a HASP is required. Add tasks as needed for project:

Task Code	Task Description	Date added to HASP	Date(s) Task Revised in HASP	Reason(s) for Revision
A	Groundwater and surface water sample collection	6/3/19	06/25/2020	Added COVID-19 response information
B	Monitoring well installation/HPT/EC/MIP	6/3/19	06/25/2020	Added COVID-19 response information
C	GPR/Video Survey	9/9/19	06/25/2020	Added COVID-19 response information
D	Storm Sewer Replacement	9/9/19	02/11/2021	Task changed from modification to replacement
E	PlumeStop/Application at OF-4	9/19/19	06/25/2020	Added COVID-19 response information

Add more tasks as needed

Complete prior to each field effort:

Dates of Field Effort	Task Code(s) Included in Effort	Task Descriptions	Contractor on site for work? (Y,N)	Hazard Level	Completed by:	Field Team Leader/Field Health and Safety Officer

Dates of Field Effort	Task Code(s) Included in Effort	Task Descriptions	Contractor on site for work? (Y,N)	Hazard Level	Completed by:	Field Team Leader/Field Health and Safety Officer

Add more as needed

Site Health and Safety Plan¹

Section 1: General Information

Site Name:	Westchester County Airport	Project Manager:	David H. F. Luer
Project Name:	Westchester County Airport	Site Emer Contact:	David H. F. Luer
Project Number:	WESTC028	Site Emer Contact #:	973-229-8348
Project Location:	240 Airport Road, White Plains, NY 10604	HASP Revision #:	01
Client Name:	Westchester County	HASP Approval Date:	02/11/2021
Site Contact:	Peter Scherrer	HASP Effective Date:	02/11/2021
Contact #:	914-995-4856		

Section 2: Emergency Contact Information

Local Service Contact Numbers

Ambulance:	911	Poison Control:	800-462-6642
Fire:	911	Fire (non-emergency):	914 422-6360
Police:	911	Police (non-emergency):	914 422-6111

Spill Response Information

DOT HazMat Info:	202-366-4488	CHEMTREC	800-424-9300
National Response Center Hotline:	800-424-8802	CMA Chemical Referral Center:	800-262-8200
State Spill Response Hotline Name	NYDEC Emergency Hotline	Emergency Response Contractor Name:	NA
State Spill Response Hotline number:	800-457-7362	Emergency Response Contractor Number:	NA

First Environment Contact Information

Project Manager:	David H. F. Luer	FE Office Number:	973-334-0003
Cell Phone:	973-229-8348	Alternate FE Contact:	Phil Cicoello
Home Phone:	NA	Cell Phone:	908-346-3520
FE Medical Consultant:	Jeffrey Liva, M.D.	FE Human Resources Dir:	Scott Kymer
FE Medical Consultant #:	201-444-3060	Cell Phone:	973-632-6741

Hospital Information (Do NOT attempt to transport anyone for anything other than a minor injury in which the individual is ambulatory. Call 911 for an ambulance instead.)

Name:	White Plains Hospital		
Address:	41 E. Post Road, White Plains, NY 10601		
Non-Emerg. Phone:	914-681-1155	Hours of Operation:	24/7
Verified by:	PC	Date:	6/3/2019

¹ Note: This Health and Safety Plan & COVID-19 1.1 Plan has been written for the use of First Environment, Inc., its employees, and the tasks to be performed by First Environment employees. The plan is written for specific trained personnel who are under medical surveillance. The plan is applicable for the specific work stated and is representative of conditions believed to exist at the time of its preparation. First Environment, Inc. claims no responsibility for its use by others.

Section 3: Map to Hospital

This page reserved for a map and directions to the hospital.

18 min (8.7 miles)

via I-684 S

Fastest route, the usual traffic



Westchester County Airport

240 Airport Rd, White Plains, NY 10604

- Take Airport Rd and New King St to NY-120 S in North Castle

5 min (1.7 mi)

- Take I-684 S, Westchester Ave and Maple Ave to Davis Ave in White Plains

13 min (5.9 mi)

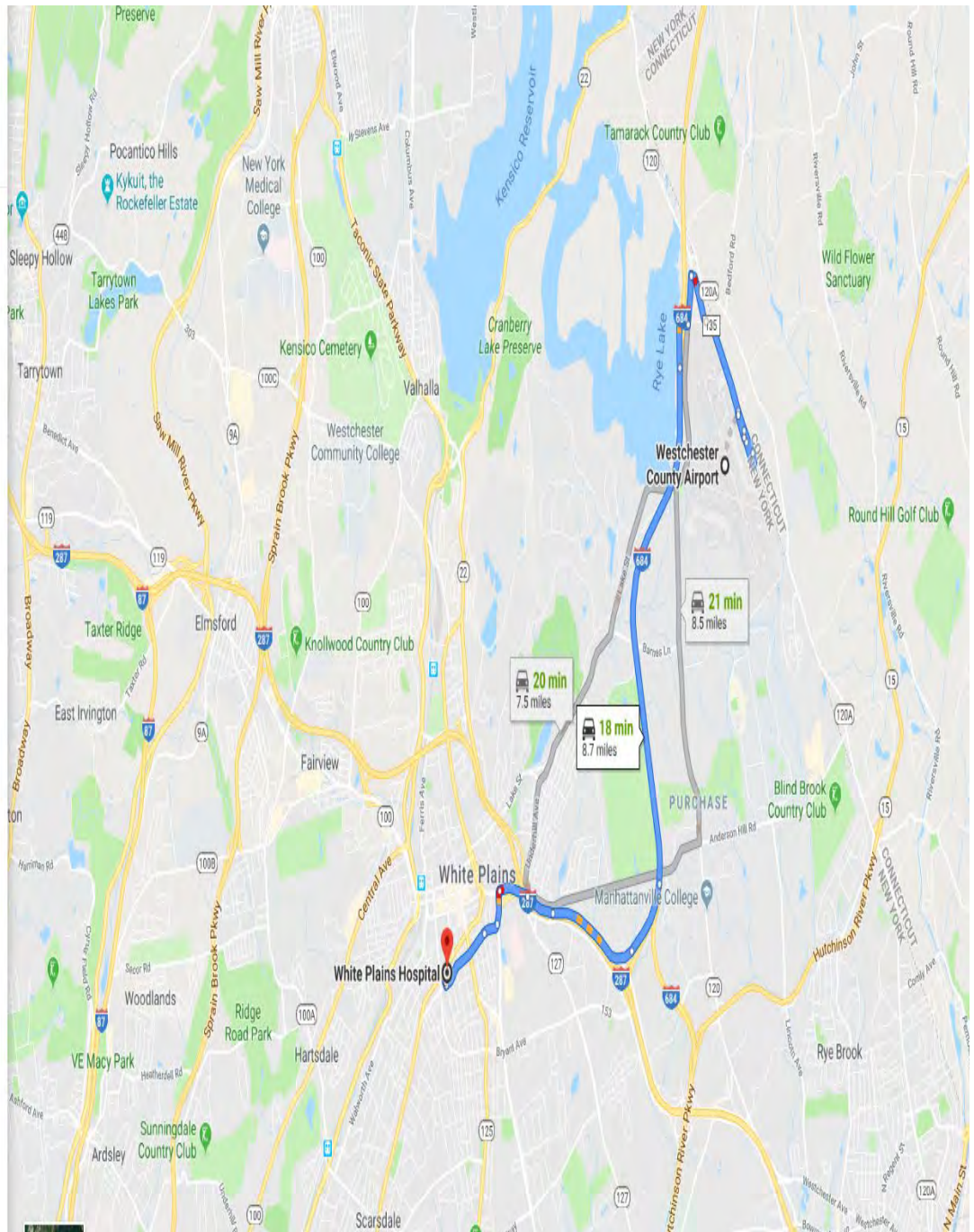
- Drive to your destination

46 s (413 ft)

White Plains Hospital

41 E Post Rd, White Plains, NY 10601

These directions are for planning purposes only. You may find that construction projects, traffic, weather, or other events may cause conditions to differ from the map results, and you should plan your route accordingly. You must obey all signs or notices regarding your route.



In the event of an injury, incident or release, notify the PM, Senior Management, and HR as soon as safe to do so

Section 4: Site Description

Field Effort Objectives (check those applicable)

Initial Assessment	
Delineate contamination	X
Remediate contamination	X
Other (list below)	X
On-going investigation soil, sediment, groundwater & surface water sample collection	

Site Characteristics (check all that apply)

First Entry		Hazardous (CERCLA/State Superfund)	
Previously Characterized	X	Hazardous (RCRA)	
Active	X	HAZWOPER	X
Inactive		Sanitary or C and D Landfill	
UST/LUST		Secure	
Manufacturing		Other (list below)	
Construction	X		

Project History

First Environment, Inc. was retained by Westchester County Airport to investigate environmental contamination associated with historic operations at the site. Specifically, the investigation includes evaluation of emerging contaminants PFOS and PFAS at the site and in the immediate vicinity of adjacent off-site properties.

Site Security and Control Measures

None by First Environment.

Section 5: Known General Site Hazards

Potential Chemical Hazards found at Site

Identify suspected compounds and levels if known. If levels are unknown, indicate unknown with **U**. If compounds are not present or not suspected to be present indicate with **NA**. If a class of compounds (in bold) is not present at the site, indicate NA for the class, it is then not necessary to fill in NA for compounds within the class.

Compounds	Known Concentration Ranges			Symptoms of Acute Exposure
	Soil (mg/kg)	W/GW (µg/L)	Indoor Air (ug/m ³)	
Nonchlorinated VOCs				
Benzene				Irritation: Eyes, Skin, Respiratory System
2-Butanone (MEK)				
Ethylbenzene				
Hexone (MIBK)				
Methyl-t-butyl Ether (MTBE)				
Toluene		220		
Xylene				
Other(specify)				
Chlorinated VOCs				
Carbon tetrachloride				
Chlorobenzene				
1,2-Dichloroethane				
1,1 Dichloroethylene (1,1-DCE)		15		Irritation: Eyes, Skin, Throat; Dizziness; Headache; Nausea, Breathing Difficulty
Tetrachloroethylene (PCE)		19		Irritation; Eyes, Skin, Nose; Throat, Respiratory System; Nausea; Flush Face and Neck; Dizziness; Lack of Coordination; Headache; Drowsiness
1,1,1-Trichloroethane (TCA)		8		Irritation; Eyes, Skin; Headache; Weakness; Exhaustion
Trichloroethylene (TCE)		21		Irritation: Eyes, Skin; Headache
Vinyl Chloride		12		Weakness; Abdominal Pain
Other (specify)				
1,4-dioxane		32		
Semi-Volatile Organics				
Naphthalene				
PAHs				
Other (specify)				

Compounds	Known Concentration Ranges			Symptoms of Acute Exposure
	Soil (mg/kg)	W/GW (µg/L)	Indoor Air (ug/m ³)	
Petroleum Products				
Gasoline				
Fuel Oil #2				
Fuel Oil #6				
Petroleum Distillates				
Other (specify)				
Metals				
Arsenic				
Cadmium				
Chromium				
Lead				
Mercury				
Other(specify)				
PCBs				
Coal/MGP Tar				
Pesticides				
Asbestos				
Fiberglass				
Other (specify)				
PFOA + PFOS	ND – 0.385	ND-53		

Potential Physical Hazards Found at Site

Check all that apply. Indicate NA if they do not apply.

Unknown/Partially Characterized	X	Stored Energy/Energized Equipment	
Utility Lines	X	Confined Space*	
Electrical (other than utilities)	X	Oxygen Deficiency	
Fire		Slippery Surfaces/Tripping Hazards	X
Explosion*		Fall Potential	
Toxic Gases		Flying or Falling Material	
Ionizing Radiation*		Pinch Points	
Uneven Terrain		Poor Visibility/Inadequate Light	
Traffic	X	Water Hazards (specify)	X (streams and creeks)

* If this risk is identified, Senior Management must approve the HASP.

Heavy Machinery/Moving Equipment	X	Air or steam emissions	
Crushing Hazard		Biological Waste (specify)	
Venomous Snakes	X	Wild Animals	
Poisonous Plants		Other (specify)	
Venomous Spiders			
Mosquitoes, Ticks or other Biting Insects	X	Aircraft taxing on and off runways; other airport equipment	X

Restroom Facilities Location: N/A

Section 6: Work (Task) Description

If multiple tasks with different hazard profiles and risk controls are planned or as tasks are added, copy Sections 6, 7, and 8 and fill out for each task to identify task related hazards and appropriate controls.

Task Code: A (see cover page)

Tasks to be performed by First Environment

Describe Tasks: Site Inspection/Collect Soil, sediment, groundwater & surface water sample collection

Work Plan attached to HASP or provide separately? Separately

Describe roles and responsibilities personnel will perform: Collect soil, sediment, groundwater & surface water samples

Tasks to be performed by First Environment contractors²

Task:	Groundwater & surface water sample analysis	Subcontract Type (place x beneath type of agreement)	
		MSA	Individual
			X
Contractor:	York Labs	Effective Dates:	Effective Dates: 6/3/2019

Task:	Cascade Drilling	Subcontract Type (place x beneath type of agreement)	
		MSA	Individual
			x
Contractor:		Effective Dates;	Effective Dates: 6/3/2019

Confirm all subcontracts covering tasks to be performed by subcontractors are in place, cover the work to be performed, and are for the time period of the work. Attach to back of HASP.

Section 7: FE Work Hazard Assessment

Task Code: A

All chemicals to be brought on site for work	Approximate Amount	Form (liquid, solid, gas)
Alconox	4 oz.	Solid
Gasoline		
Dilute Hydrochloric Acid	<40 mL	Liquid

² Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site work and have a site-specific health and safety plan covering their work on site.

Methanol		
Dilute Nitric Acid		
Dilute Sulfuric Acid		
Other (specify names)		

Is there a potential for a chemical release beyond an incidental release?

If yes, explain:

Heavy equipment brought on site for work	Check all Applicable
Drill rig	
Geoprobe	X
Excavator	
Backhoe	
Front End Loader	
Injection system	
Dump truck	
Generator	
Other (specify)	

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Unknown/Partially Characterized	X	Sample collection
Cold Exposure	X	Sample collection
Heat Stress	X	Sample collection
Explosion*		
Fire		
Toxic Gases		
Oxygen Deficiency*		
Confined Space*		
Ionizing Radiation*		
Chemical Dermal Exposure		
Chemical Inhalation		
Chemical Ingestion		
Dust/air emissions		
Air or steam emissions		

* If this hazard is present, Senior Management must approve the HASP.

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Biological Waste (specify)		
Extreme weather, heat	X	Sample collection; mapping
Stored Energy/Energized Equipment		
Heavy Machinery/Moving Equipment	X	Sample collection; mapping
Pump Winch		
Slippery Surfaces	X	Sample collection; mapping
Fall Potential		
Pinch Points		
Flying or Falling Material/Equipment		
Heavy Lifting		
Crushing		
Repetitive Motion		
Venomous Snakes	X	Sample collection; mapping
Poisonous Plants		
Mosquitoes, Ticks or other Biting Insects	X	Sample collection; mapping
Venomous Spiders		
Wild Animals		
On or Near Water	X	Surface water sample collection
Other (specify)		
Aircraft taxing on and off runways; other airport equipment	X	Sample collection; mapping

Overall Hazard Evaluation for Task

High		Medium		Low	X	Unknown ³	
Justification:	Sample collection						

Section 8 Risk Control:

(Must address all hazards identified under Sections 5 and 7, both those existing at the site and those associated with the work to be performed)

Task Code: A

Public Utilities

Utility Markout

Utility	Req.	Company Name	Telephone #
One Call		New York 811	811
Gas:		Con ED	800-752-6633
Electric:		Con Ed	800-752-6633
Water:		White Plains	914-422-1207
Sewer:		Mamaroneck	914-381-7825
Telephone:		Verizon	800-922-0204
Cable:		Verizon	800-922-0204

Markout Ticket Confirmation #	Date
NA	NA

Were non-public utility locations on site marked out or otherwise identified on facility? (Y/N) N

³ If unknown, treat as high hazard until sufficient information has been developed

If no, identify activity modifications to address unidentified utilities, on-site utility lines, and other buried anomalies:

Buddy System required? (Y/N) N

If yes, describe circumstances:

If no, describe communication contingencies:

If stored energy/energized equipment is present: N

Is LO-TO required? (Y/N)

Specify equipment to be locked out/tagged out:

Follow the LO-TO procedure. List any differences or additions below:

Add photos of equipment subject to LO-TO to back of plan.

If LO-TO is not required, describe actions to ensure stored energy/energized equipment is managed during equipment set up, operation, and demobilization:

Exclusion Zones:

Will exclusion zones be used at the site? (Y/N) N

If yes, indicate zones on the site map.

PPE

Specify primary protective equipment to be worn during this task		Specify applicable activities
Level C		
Level D		
Level D Modified	X	No Tyvek; follow protocol in QAPP for sampling; sampling
If PPE beyond Level D is required, consult the Project Manager or Senior Management		

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
<u>Respiratory</u>			
Respirator (full)			
Respirator (half)		X	
Cartridge type:			
P100			
Combo			
Other			
Dust Mask			
Other (specify)			
<u>Head and Eye</u>			
Safety Glasses	X		
Face Shield			
Goggles			
Hard Hat			
Other (specify)			
<u>Hearing</u>			
Ear plugs/muffs			
Dual			
<u>Feet</u>			
Overboots			
Safety-toed Workboots	X		
Other (specify)			

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
Hands			
Nitrile Gloves	X		
Overgloves			
Other (specify)			
Body			
Tyvek Coverall			
Polycoated Tyvek			
Cold Weather Gear (Carhart)			
Rain Gear		X	No pfas
Safety Vest	X		
U.S. Coast Guard-approved life jacket or buoyant work vest			
Other (specify)			
Other (specify)			
COVID-19 related precautions	X		See Attachment A

Other Equipment and Supplies:

Lighting	
Potable Water	
Insect Repellent	
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	
Spill Kit	X
First Aid Kit	X
Ring Buoys	
Lifesaving Skiff	
Portable Toilet	
Other (specify):	

Operational Control Procedures and Work Instructions: (Attach procedures to back of HASP)

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures (Y/N) N

If yes describe Discharge Control Measures:

Waste Disposal Practices:

Specify Waste Management Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water	X	X			
Soil	X	X		X	
PPE and other field related waste					X

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Other (Specify)					

Additional waste handling instructions:

Other instructions:

General Safe Work Practices:

To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.
- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.
- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Emergency Preparedness: (Attach procedures to back of HASP)

Field Emergency Response:

Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:

Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? (Y/N) If yes, explain: N

: Contractor:	Date Contacted:	Contacted by:

Section 6: Work (Task) Description

If multiple tasks with different hazard profiles and risk controls are planned or as tasks are added, copy Sections 6, 7, and 8 and fill out for each task to identify task related hazards and appropriate controls.

Task Code: B (see cover page)

Tasks to be performed by First Environment

Describe Tasks: Monitoring well installation and development

Work Plan attached to HASP or provide separately? Separately

Describe roles and responsibilities personnel will perform: Site inspection and Groundwater Sample Collection

Tasks to be performed by First Environment contractors⁴

Task:	Monitoring well installation and development	Subcontract Type (place x beneath type of agreement)	
		MSA	Individual
Contractor:	Summit Drilling	Effective Dates:	Effective Dates: 6/30/19

Task:	Geophysical/Video Storm Sewer/Modification	Subcontract Type (place x beneath type of agreement)	
		MSA	Individual
Contractor:	GPR One Call	Effective Dates;	Effective Dates:

Task:		Subcontract Type (place x beneath type of agreement)	
		MSA	Individual
Contractor:		Effective Dates;	Effective Dates:

Confirm all subcontracts covering tasks to be performed by subcontractors are in place, cover the work to be performed, and are for the time period of the work. Attach to back of HASP.

Section 7: FE Work Hazard Assessment

Task Code: B

All chemicals to be brought on site for work	Approximate Amount	Form (liquid, solid, gas)
Alconox	4 oz.	Solid
Gasoline		
Dilute Hydrochloric Acid		
Methanol		
Dilute Nitric Acid		
Dilute Sulfuric Acid		
Other (specify names)		

Is there a potential for a chemical release beyond an incidental release? N

If yes, explain:

Heavy equipment brought on site for work	Check all Applicable
Drill rig	X
Geoprobe	
Excavator	
Backhoe	

⁴ Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site work and have a site- specific health and safety plan covering their work on site.

Front End Loader	
Injection system	
Dump truck	
Generator	
Other (specify)	
Air compressor	X

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Unknown/Partially Characterized	X	Monitoring well installation
Cold Exposure		
Heat Stress	X	Monitoring well installation
Explosion*		
Fire		
Toxic Gases		
Oxygen Deficiency*		
Confined Space*		
Ionizing Radiation*		
Chemical Dermal Exposure		
Chemical Inhalation		
Chemical Ingestion		
Dust/air emissions		
Air or steam emissions		
Biological Waste (specify)		
Extreme weather, heat	X	Monitoring well installation
Stored Energy/Energized Equipment		
Heavy Machinery/Moving Equipment	X	Monitoring well installation
Pump Winch		
Slippery Surfaces	X	Monitoring well installation
Fall Potential		
Pinch Points		
Flying or Falling Material/Equipment		
Heavy Lifting		
Crushing		
Repetitive Motion		
Venomous Snakes		
Poisonous Plants		
Mosquitoes, Ticks or other Biting Insects	X	Monitoring well installation

* If this hazard is present, Senior Management must approve the HASP.

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Venomous Spiders		
Wild Animals		
On or Near Water		
Other (specify)		
Aircraft taxing on and off runways; other airport equipment	X	Monitoring well installation

Overall Hazard Evaluation for Task

High		Medium		Low	X	Unknown ⁵	
Justification:	Monitoring well installation/hpt/EC						

Section 8 - Risk Control:

(Must address all hazards identified under Sections 5 and 7, both those existing at the site and those associated with the work to be performed)

Task Code: B

Public Utilities

Utility Markout

Utility	Req.	Company Name	Telephone #
One Call		New York 811	811
Gas:		Con ED	800-752-6633
Electric:		Con Ed	800-752-6633
Water:		White Plains	914-422-1207
Sewer:		Mamaroneck	914-381-7825
Telephone:		Verizon	800-922-0204
Cable:		Verizon	800-922-0204

Markout Ticket Confirmation #

Date

NA	NA

Were non-public utility locations on site marked out or otherwise identified on facility? (Y/N) N

If no, identify activity modifications to address unidentified utilities, on-site utility lines, and other buried anomalies: Replacement monitoring well to be installed adjacent to existing monitoring well.

Buddy System required? (Y/N) N

If yes, describe circumstances:

If no, describe communication contingencies:

If stored energy/energized equipment is present: N

Is LO-TO required? (Y/N)

Specify equipment to be locked out/tagged out:

Follow the LO-TO procedure. List any differences or additions below:

Add photos of equipment subject to LO-TO to back of plan.

If LO-TO is not required, describe actions to ensure stored energy/energized equipment is managed during equipment set up, operation, and demobilization:

Exclusion Zones:

⁵ If unknown, treat as high hazard until sufficient information has been developed

Will exclusion zones be used at the site? (Y/N) N

If yes, indicate zones on the site map.

PPE

Specify primary protective equipment to be worn during this task		Specify applicable activities
Level C		
Level D		
Level D Modified	X	Monitoring well installation
If PPE beyond Level D is required, consult the Project Manager or Senior Management		

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
<u>Respiratory</u>			
Respirator (full)			
Respirator (half)		X	
Cartridge type:			
P100			
Combo			
Other			
Dust Mask			
Other (specify)			
<u>Head and Eye</u>			
Safety Glasses	X		
Face Shield			
Goggles			
Hard Hat	X		
Other (specify)			
<u>Hearing</u>			
Ear plugs/muffs	X		
Dual			
<u>Feet</u>			
Overboots			
Safety-toed Workboots	X		
Other (specify)			
<u>Hands</u>			
Nitrile Gloves	X		
Overgloves			
Other (specify)			
<u>Body</u>			
Tyvek Coverall			
Polycoated Tyvek			
Cold Weather Gear (Carhart)			
Rain Gear		X	
Safety Vest	X		
U.S. Coast Guard-approved life jacket or buoyant work vest			
Other (specify)			

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
Other (specify)			
COVID-19 related precautions	X		See Attachment A

Other Equipment and Supplies:

Lighting	
Potable Water	
Insect Repellent	
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	
Spill Kit	X
First Aid Kit	X
Ring Buoys	
Lifesaving Skiff	
Portable Toilet	
Other (specify):	

Operational Control Procedures and Work Instructions: (Attach procedures to back of HASP)

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures (Y/N) N

If yes describe Discharge Control Measures:

Waste Disposal Practices:

Specify Waste Management Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water	X	X			
Soil	X	X		X	
PPE and other field related waste					X
Other (Specify)					

Additional waste handling instructions:

Other instructions:

General Safe Work Practices:

To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.
- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.

- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Emergency Preparedness: (Attach procedures to back of HASP)

Field Emergency Response:

Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:

Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? (Y/N) If yes, explain: N

: Contractor:	Date Contacted:	Contacted by:

This page reserved for a site map showing work locations, staging areas, exclusion zones as appropriate, emergency response equipment locations as appropriate, and the evacuation route and muster point.

Section 6: Work (Task) Description

If multiple tasks with different hazard profiles and risk controls are planned or as tasks are added , copy Sections 6, 7, and 8 and fill out for each task to identify task related hazards and appropriate controls.

Task Code: C (see cover page)

Tasks to be performed by First Environment

Describe Tasks: Inspect Storm Sewers via downhole video camera.

Work Plan attached to HASP or provide separately? Separately

Describe roles and responsibilities personnel will perform: Oversight of subcontractor

Tasks to be performed by First Environment contractors⁶

Task:	GPR/Video	Subcontract Type (place x beneath type of agreement)	
		MSA	Individual
			x
Contractor:	GPR One Call	Effective Dates;	Effective Dates: 9/09/19

Confirm all subcontracts covering tasks to be performed by subcontractors are in place, cover the work to be performed, and are for the time period of the work. Attach to back of HASP.

Section 7: FE Work Hazard Assessment

⁶ Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site work and have a site- specific health and safety plan covering their work on site.

Task Code: C

All chemicals to be brought on site for work	Approximate Amount	Form (liquid, solid, gas)
Alconox	4 oz.	Solid
Gasoline		
Dilute Hydrochloric Acid	<40 mL	Liquid
Methanol		
Dilute Nitric Acid		
Dilute Sulfuric Acid		
Other (specify names)		

Is there a potential for a chemical release beyond an incidental release?

If yes, explain:

Heavy equipment brought on site for work	Check all Applicable
Drill rig	
Geoprobe	
Excavator	
Backhoe	
Front End Loader	
Injection system	
Dump truck	
Generator	
Other (specify)	

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location
Forklift	Air side – Will coordinate with Emily

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Unknown/Partially Characterized	X	Video inspection
Cold Exposure	X	Video inspection
Heat Stress	X	Video inspection
Explosion*		
Fire		
Toxic Gases		
Oxygen Deficiency*		
Confined Space*		
Ionizing Radiation*		
Chemical Dermal Exposure		

* If this hazard is present, Senior Management must approve the HASP.

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Chemical Inhalation		
Chemical Ingestion		
Dust/air emissions		
Air or steam emissions		
Biological Waste (specify)		
Extreme weather, heat	X	Video inspection
Stored Energy/Energized Equipment		
Heavy Machinery/Moving Equipment	X	Video inspection
Pump Winch		
Slippery Surfaces	X	Video inspection
Fall Potential	X	Video inspection
Pinch Points		
Flying or Falling Material/Equipment	X	Video inspection
Heavy Lifting		
Crushing		
Repetitive Motion		
Venomous Snakes	X	Video inspection
Poisonous Plants		
Mosquitoes, Ticks or other Biting Insects	X	Video inspection
Venomous Spiders		
Wild Animals		
On or Near Water	X	Video inspection
Other (specify)		
Aircraft taxing on and off runways; other airport equipment	X	Video inspection

Overall Hazard Evaluation for Task

High		Medium		Low	X	Unknown⁷	
Justification:	Video inspection						

Section 8 Risk Control:

(Must address all hazards identified under Sections 5 and 7, both those existing at the site and those associated with the work to be performed)

⁷ If unknown, treat as high hazard until sufficient information has been developed

Task Code: C

Public Utilities

Non-intrusive work for this task- No utility call out needed.

Utility	Req.	Company Name	Telephone #
One Call		New York 811	811
Gas:		Con ED	800-752-6633
Electric:		Con Ed	800-752-6633
Water:		White Plains	914-422-1207
Sewer:		Mamaroneck	914-381-7825
Telephone:		Verizon	800-922-0204
Cable:		Verizon	800-922-0204

Markout Ticket
Confirmation #

Date

NA	NA

or otherwise identified on facility? (Y/N) N

Were non-public utility locations on site marked out

Buddy System required? (Y/N) N

If yes, describe circumstances:

If no, describe communication contingencies:

If stored energy/energized equipment is present: N

Is LO-TO required? (Y/N)

Specify equipment to be locked out/tagged out:

Follow the LO-TO procedure. List any differences or additions below:

Add photos of equipment subject to LO-TO to back of plan.

If LO-TO is not required, describe actions to ensure stored energy/energized equipment is managed during equipment set up, operation, and demobilization:

Exclusion Zones:

Will exclusion zones be used at the site? (Y/N) N

If yes, indicate zones on the site map.

PPE

Specify primary protective equipment to be worn during this task	Specify applicable activities
Level C	
Level D	
Level D Modified	X No Tyvek; follow protocol in QAPP for sampling; sampling
If PPE beyond Level D is required, consult the Project Manager or Senior Management	

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
<u>Respiratory</u>			
Respirator (full)			
Respirator (half)		X	
Cartridge type:			
P100			
Combo			
Other			
Dust Mask			

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
Other (specify)			
Head and Eye			
Safety Glasses	X		
Face Shield			
Goggles			
Hard Hat			
Other (specify)			
Hearing			
Ear plugs/muffs			
Dual			
Feet			
Overboots			
Safety-toed Workboots	X		
Other (specify)			
Hands			
Nitrile Gloves	X		
Overgloves			
Other (specify)			
Body			
Tyvek Coverall			
Polycoated Tyvek			
Cold Weather Gear (Carhart)			
Rain Gear		X	Bad weather
Safety Vest	X		
U.S. Coast Guard-approved life jacket or buoyant work vest			
Other (specify)			
Other (specify)			
COVID-19 related precautions	X		See Attachment A

Other Equipment and Supplies:

Lighting	
Potable Water	
Insect Repellent	
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	
Spill Kit	X
First Aid Kit	X
Ring Buoys	
Lifesaving Skiff	
Portable Toilet	
Other (specify):	

Operational Control Procedures and Work Instructions: (Attach procedures to back of HASP)

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures (Y/N) N

If yes describe Discharge Control Measures:

Waste Disposal Practices:

Specify Waste Management Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water					
Soil					
PPE and other field related waste					X
Other (Specify)					

Additional waste handling instructions:

Other instructions:

General Safe Work Practices:

To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.
- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.
- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Emergency Preparedness: (Attach procedures to back of HASP)

Field Emergency Response:

Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:

Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? (Y/N) If yes, explain: N

: Contractor:	Date Contacted:	Contacted by:

Section 6: Work (Task) Description

If multiple tasks with different hazard profiles and risk controls are planned or as tasks are added, copy Sections 6, 7, and 8 and fill out for each task to identify task related hazards and appropriate controls.

Task Code: D (see cover page)

Tasks to be performed by First Environment

Describe Tasks: Replace Storm Sewer

Work Plan attached to HASP or provide separately? Separately

Describe roles and responsibilities personnel will perform: Oversight of operations, direction of excavation and modifications

Tasks to be performed by First Environment contractors⁸

N/A – Pugni and Sons directly contracted to Airport.

Confirm all subcontracts covering tasks to be performed by subcontractors are in place, cover the work to be performed, and are for the time period of the work. Attach to back of HASP.

Section 7: FE Work Hazard Assessment

Task Code: D

All chemicals to be brought on site for work	Approximate Amount	Form (liquid, solid, gas)
Alconox	4 oz.	Solid
Gasoline		
Dilute Hydrochloric Acid	<40 mL	Liquid
Methanol		
Dilute Nitric Acid		
Dilute Sulfuric Acid		
Other (specify names)		

Is there a potential for a chemical release beyond an incidental release?

If yes, explain:

Heavy equipment brought on site for work	Check all Applicable
Drill rig	
Geoprobe	
Excavator	X
Backhoe	X
Front End Loader	X
Injection system	

⁸ Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site work and have a site- specific health and safety plan covering their work on site.

Dump truck	X
Generator	
Other (specify)	

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Unknown/Partially Characterized		
Cold Exposure	X	Sewer Replacement
Heat Stress	X	Sewer Replacement
Explosion*		
Fire		
Toxic Gases		
Oxygen Deficiency*		
Confined Space*		
Ionizing Radiation*		
Chemical Dermal Exposure		
Chemical Inhalation		
Chemical Ingestion		
Dust/air emissions	X	Sewer Replacement
Air or steam emissions		
Biological Waste (specify)		
Extreme weather, heat	X	Sewer Replacement
Stored Energy/Energized Equipment		
Heavy Machinery/Moving Equipment	X	Sewer Replacement
Pump Winch		
Slippery Surfaces	X	Sewer Replacement
Fall Potential		
Pinch Points		
Flying or Falling Material/Equipment	X	Sewer Replacement
Heavy Lifting		
Crushing	X	Sewer Replacement
Repetitive Motion		
Venomous Snakes	X	Sewer Replacement
Poisonous Plants		
Mosquitoes, Ticks or other Biting	X	Sewer Replacement

* If this hazard is present, Senior Management must approve the HASP.

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Insects		
Venomous Spiders		
Wild Animals		
On or Near Water	X	Sewer Replacement
Other (specify)		
Aircraft taxing on and off runways; other airport equipment	X	Sewer Replacement

Overall Hazard Evaluation for Task

High		Medium		Low	X	Unknown ⁹	
Justification:	Dust monitoring						

Section 8 Risk Control:

(Must address all hazards identified under Sections 5 and 7, both those existing at the site and those associated with the work to be performed)

Task Code: D

Public Utilities

Utility Markout

Utility	Req.	Company Name	Telephone #
One Call		New York 811	811
Gas:		Con ED	800-752-6633
Electric:		Con Ed	800-752-6633
Water:		White Plains	914-422-1207
Sewer:		Mamaroneck	914-381-7825
Telephone:		Verizon	800-922-0204
Cable:		Verizon	800-922-0204

Markout Ticket Confirmation

Date

NA	NA

Were non-public utility locations on site marked out or otherwise identified on facility? (Y/N) N

If no, identify activity modifications to address unidentified utilities, on-site utility lines, and other buried anomalies:

In areas needing modification, GPR as well as referencing site as built will mitigate risk of buried utilities during excavation activities.

Buddy System required? (Y/N) N

If yes, describe circumstances:

If no, describe communication contingencies:

If stored energy/energized equipment is present: N

Is LO-TO required? (Y/N)

Specify equipment to be locked out/tagged out:

Follow the LO-TO procedure. List any differences or additions below:

Add photos of equipment subject to LO-TO to back of plan.

If LO-TO is not required, describe actions to ensure stored energy/energized equipment is managed during equipment set up, operation, and demobilization:

⁹ If unknown, treat as high hazard until sufficient information has been developed

Exclusion Zones:

Will exclusion zones be used at the site? (Y/N) N

If yes, indicate zones on the site map.

PPE

Specify primary protective equipment to be worn during this task		Specify applicable activities
Level C		
Level D		
Level D Modified	X	No Tyvek; follow protocol in QAPP for sampling; sampling
If PPE beyond Level D is required, consult the Project Manager or Senior Management		

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
<u>Respiratory</u>			
Respirator (full)			
Respirator (half)		X	
Cartridge type:			
P100			
Combo			
Other			
Dust Mask			
Other (specify)			
<u>Head and Eye</u>			
Safety Glasses	X		
Face Shield			
Goggles			
Hard Hat	X		
Other (specify)			
<u>Hearing</u>			
Ear plugs/muffs	X		
Dual			
<u>Feet</u>			
Overboots			
Safety-toed Workboots	X		
Other (specify)			
<u>Hands</u>			
Nitrile Gloves	X		
Overgloves			
Other (specify)			
<u>Body</u>			
Tyvek Coverall			
Polycoated Tyvek			
Cold Weather Gear (Carhart)			
Rain Gear		X	No PFAS containing clothing to be used
Safety Vest	X		
U.S. Coast Guard-			

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
approved life jacket or buoyant work vest			
Other (specify)			
Other (specify)			
COVID-19 related precautions	X		See Attachment A

Other Equipment and Supplies:

Lighting	
Potable Water	
Insect Repellent	
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	
Spill Kit	X
First Aid Kit	X
Ring Buoys	
Lifesaving Skiff	
Portable Toilet	
Other (specify):	

Operational Control Procedures and Work Instructions: (Attach procedures to back of HASP)

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures (Y/N) N

If yes describe Discharge Control Measures:

Waste Disposal Practices:

Specify Waste Management Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water		X		X	
Soil		x	X		
PPE and other field related waste					X
Other (Specify)					

Additional waste handling instructions:

Other instructions:

General Safe Work Practices:

To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.

- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.
- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Emergency Preparedness: (Attach procedures to back of HASP)

Field Emergency Response:

Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:

Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? (Y/N) If yes, explain: N

: Contractor:	Date Contacted:	Contacted by:

Section 6: Work (Task) Description

If multiple tasks with different hazard profiles and risk controls are planned or as tasks are added , copy Sections 6, 7, and 8 and fill out for each task to identify task related hazards and appropriate controls.

Task Code: E (see cover page)

Tasks to be performed by First Environment

Describe Tasks: Site Inspection/Collect Soil, sediment, groundwater & surface water sample collection

Work Plan attached to HASP or provide separately? Separately

Describe roles and responsibilities personnel will perform: Collect soil, sediment, groundwater & surface water samples

Tasks to be performed by First Environment contractors¹⁰

Task:	PlumeStop/Application at OF-4	Subcontract Type (place x beneath type of agreement)	
		MSA	Individual
Contractor:	Spinello	X	
		Effective Dates:	Effective Dates: 6/3/2019

Task:	Subsurface injections of	Subcontract Type (place x beneath type of agreement)
--------------	--------------------------	--

¹⁰ Site characteristics to the best of First Environment's knowledge are included in this HASP. Per the subcontractor agreement, each subcontractor must assess hazards associated with their site work and have a site- specific health and safety plan covering their work on site.

	PlumeStop	MSA	Individual
			x
Contractor:		Effective Dates;	Effective Dates:6/3/2019

Confirm all subcontracts covering tasks to be performed by subcontractors are in place, cover the work to be performed, and are for the time period of the work. Attach to back of HASP.

Section 7: FE Work Hazard Assessment

Task Code: E

All chemicals to be brought on site for work	Approximate Amount	Form (liquid, solid, gas)
Alconox	4 oz.	Solid
Gasoline		
Dilute Hydrochloric Acid	<40 mL	Liquid
Methanol		
Dilute Nitric Acid		
Dilute Sulfuric Acid		
Other (specify names)		

Is there a potential for a chemical release beyond an incidental release?

If yes, explain:

Heavy equipment brought on site for work	Check all Applicable
Drill rig	
Geoprobe	
Excavator	
Backhoe	
Front End Loader	
Injection system	X
Dump truck	
Generator	X
Other (specify)	

If equipment at the facility is to be relied on, list the equipment and location:

Equipment	Location

Hazards that apply to work to be performed	Check all applicable	Describe work activities to which it applies
Unknown/Partially Characterized	X	PlumeStop/Application
Cold Exposure	X	PlumeStop/Application
Heat Stress	X	PlumeStop/Application
Explosion*		
Fire		
Toxic Gases		
Oxygen Deficiency*		
Confined Space*		
Ionizing Radiation*		
Chemical Dermal Exposure		
Chemical Inhalation		
Chemical Ingestion		
Dust/air emissions		
Air or steam emissions		
Biological Waste (specify)		
Extreme weather, heat	X	PlumeStop/Application
Stored Energy/Energized Equipment		
Heavy Machinery/Moving Equipment	X	PlumeStop/Application
Pump Winch		
Slippery Surfaces	X	PlumeStop/Application
Fall Potential		
Pinch Points		
Flying or Falling Material/Equipment	X	PlumeStop/Application
Heavy Lifting		
Crushing		
Repetitive Motion		
Venomous Snakes	X	PlumeStop/Application
Poisonous Plants	X	PlumeStop/Application
Mosquitoes, Ticks or other Biting Insects	X	PlumeStop/Application
Venomous Spiders		
Wild Animals		
On or Near Water	X	PlumeStop/Application
Other (specify)		
Aircraft taxiing on and off runways; other airport equipment	X	PlumeStop/Application

Overall Hazard Evaluation for Task

High		Medium		Low	X	Unknown¹¹	
Justification:	PlumeStop/Application						

Section 8 Risk Control:

(Must address all hazards identified under Sections 5 and 7, both those existing at the site and those associated with the work to be performed)

* If this hazard is present, Senior Management must approve the HASP.

¹¹ If unknown, treat as high hazard until sufficient information has been developed

Task Code: E

Public Utilities

Utility Markout

Utility	Req.	Company Name	Telephone #
One Call		New York 811	811
Gas:		Con ED	800-752-6633
Electric:		Con Ed	800-752-6633
Water:		White Plains	914-422-1207
Sewer:		Mamaroneck	914-381-7825
Telephone:		Verizon	800-922-0204
Cable:		Verizon	800-922-0204

Markout Ticket Confirmation #	Date
NA	NA

Were non-public utility locations on site marked out or otherwise identified on facility? (Y/N) N

If no, identify activity modifications to address unidentified utilities, on-site utility lines, and other buried anomalies:

Buddy System required? (Y/N) N

If yes, describe circumstances:

If no, describe communication contingencies:

If stored energy/energized equipment is present: N

Is LO-TO required? (Y/N)

Specify equipment to be locked out/tagged out:

Follow the LO-TO procedure. List any differences or additions below:

Add photos of equipment subject to LO-TO to back of plan.

If LO-TO is not required, describe actions to ensure stored energy/energized equipment is managed during equipment set up, operation, and demobilization:

Exclusion Zones:

Will exclusion zones be used at the site? (Y/N) N

If yes, indicate zones on the site map.

PPE

Specify primary protective equipment to be worn during this task	Specify applicable activities
Level C	
Level D	
Level D Modified	X No Tyvek; follow protocol in QAPP for sampling; sampling
If PPE beyond Level D is required, consult the Project Manager or Senior Management	

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
Respiratory			
Respirator (full)			
Respirator (half)		X	
Cartridge type:			
P100			
Combo			

PPE Equipment	Primary	Contingency**	Trigger for Contingency Requirements**
Other			
Dust Mask			
Other (specify)			
Head and Eye			
Safety Glasses	X		
Face Shield			
Goggles			
Hard Hat			
Other (specify)			
Hearing			
Ear plugs/muffs			
Dual			
Feet			
Overboots			
Safety-toed Workboots	X		
Other (specify)			
Hands			
Nitrile Gloves	X		
Overgloves			
Other (specify)			
Body			
Tyvek Coverall			
Polycoated Tyvek			
Cold Weather Gear (Carhart)			
Rain Gear		X	No PFAS
Safety Vest	X		
U.S. Coast Guard-approved life jacket or buoyant work vest			
Other (specify)			
Other (specify)			
COVID-19 related precautions	X		See Attachment A

Other Equipment and Supplies:

Lighting	
Potable Water	
Insect Repellent	
Fire Extinguisher (2.5 lb)	X
Fire Extinguisher (5 lb)	
Fire Extinguisher (10 lb)	
Eyewash Kit	
Spill Kit	X
First Aid Kit	X
Ring Buoys	
Lifesaving Skiff	
Portable Toilet	
Other (specify):	

Operational Control Procedures and Work Instructions: (Attach procedures to back of HASP)

Decontamination Procedures:

Follow the Field Decontamination Procedure. List any differences or additions below.

Discharge Control Measures (Y/N) N

If yes describe Discharge Control Measures:

Waste Disposal Practices:

Specify Waste Management Practices:

Waste Type	Sample	Containerize	Dispose of off Site	Return to Site	Dispose in FE Solid Waste
Drill Cuttings					
Purge Water		X		X	
Soil		X		X	
PPE and other field related waste					X
Other (Specify)					

Additional waste handling instructions:

Other instructions:

General Safe Work Practices:

To ensure the safety of First Environment personnel and the public at a site where fieldwork is being conducted, the Safe Work Practices listed below will be followed.

- Good housekeeping practices are to be maintained.
- A "buddy system" in which another worker is close enough to render immediate aid will be in effect when specified in the HASP.
- In the event of treacherous weather-related working conditions field tasks will be suspended until conditions improve or appropriate protection from the elements is provided.
- Smoking, eating, chewing gum or tobacco, or drinking are forbidden except in clean or designated area.
- Ignition of flammable liquids within or through improvised heating devices is forbidden.
- Contact with samples, excavated materials, or other contaminated materials must be minimized.
- Use of contact lenses is not advisable.
- If drilling equipment is involved, know where the 'kill switch' is.
- All electrical equipment used in outside locations, wet area or near water must be plugged into ground fault circuit interrupter protected outlets.
- Illumination - Work in the early morning or at dusk may require site lighting.

List any differences or additions below:

Emergency Preparedness: (Attach procedures to back of HASP)

Field Emergency Response:

Follow the Field Emergency Response Procedure. List any differences or additions below

Spill Response:

Follow the Field Spill Response Procedure. List any differences or additions below.

Is a stand-by external emergency response contractor required? (Y/N) If yes, explain: N

: Contractor:	Date Contacted:	Contacted by:



In the event of an injury, incident or release, notify the PM, senior management, and HR as soon as safe to do so.

H&S Monitoring and Measurement:

H&S field monitoring required? Y/N Y

If so, follow the Health and Safety Monitoring Table below.

Type of Meter/Monitoring	Monitors	Check if to be Used	Surveillance Methodology (select one)		Monitoring Locations	Guidance Action Levels*	Site Action Levels**
			Determined by FTL Based on Site Conditions	Specified Frequency			
<u>Photoionization Detector (PID)</u> <u>9.8eV</u> <u>10.2eV</u> <u>10.6 eV</u> <u>11.7eV</u> <u>Dust Monitoring</u>	Total Volatile Organics levels Fugitive dust					5 ppm above background - evacuate and notify 100 mg/m ³ , above background, halt activity, suppress dust. <u>9.8eV</u> <u>10.2eV</u> <u>10.6 eV</u> <u>11.7eV</u> <u>Dust Monitoring</u>	<u>Photoionization Detector (PID)</u>
<u>Flame Ionization Detector (FID)</u>	Total Volatile Organics levels					5 ppm above background - evacuate and notify	
<u>Multi-gas meters</u> <u>Oxygen</u> <u>Combustible Gas</u> <u>CO</u> <u>H2S</u> <u>Other Gas (Specify)</u>	Oxygen levels LEL Toxic gas levels Toxic gas levels					< 21% - notify < 19.5% - evacuate 10-20% - notify >20% - evacuate >9 ppm – notify >10 ppm – notify	
<u>Other equipment (specify)</u>							

* For notify action levels, move off worksite and contact PM to take corrective action or upgrade PPE. For evacuation, move off worksite and contact PM for further instructions.

**If site levels are different from guidance levels specify reason:

Heat and cold monitoring required: (Y/N) Y

If required, follow precautions in attached heat and cold guides.

Corrective/Preventive Action

In the event that corrective action becomes necessary and is taken in the field or a necessary preventive action is identified, the Field Team must ensure the notification of the PM so that appropriate modifications can be made to the HASP and fieldwork activities. In the event that a corrective or preventive action has application beyond the

immediate project and work being performed or in the event of an incident or accident, a PCAN must be filed by the PM or Field Team Leader.

Audits

As part of First Environment's Management System, the HASP and its implementation are subject to internal audit and audit by our third-party auditor. Findings are addressed through the PCAN Process.

Section 9: Plan Approval

The HASP must be reapproved for each new task and when a task in the HASP is revised. Minor revisions in the field may be made by the FTL. The FTL make changes, initials the changes, and documents the specifics on the last page of this HASP. Changes are cleared with the Project Manager who ensures others are consulted, as necessary.

In signing this plan, the signatories are confirming to the best of their knowledge the accuracy, adequacy, and suitability of the plan to address the H&S risks associated with the planned work.

HASP Initial Tasks

Complete each time a new task is added to the HASP

TASK A

Plan Prepared by: Date:

Plan Reviewed/Approved by: Date:

Project Manager: Date:

TASK B

Plan Prepared by: Date:

Plan Reviewed/Approved by: Date:

Project Manager: Date:

TASK C

Plan Prepared by: Date:

Plan Reviewed/Approved by: Date:

Project Manager: Date:

TASK D

Plan Prepared by: Date:

Plan Reviewed/Approved by: Date:

Project Manager: Date:

Add additional tasks as required.

HASP Task Revisions

Complete if the HASP is revised for a particular Task or Tasks.

TASK E

Plan Revised by:	<input type="text" value="David H. F. Luer"/>	Date:	<input type="text" value="9/9/19"/>
Revision Reviewed/Approved by:	<input type="text" value="Scott R. Green"/>	Date:	<input type="text" value="7/1/2020"/>
Project Manager:	<input type="text" value="David H. F. Luer"/>	Date:	<input type="text" value="09/27/19"/>

TASK ALL

Plan Revised by:	<input type="text" value="David H. F. Luer"/>	Date:	<input type="text" value="6/25/2020"/>
Revision Reviewed/Approved by:	<input type="text" value="Scott R. Green"/>	Date:	<input type="text" value="7/1/2020"/>
Project Manager:	<input type="text" value="David H. F. Luer"/>	Date:	<input type="text" value="6/25/2020"/>

TASK _____

Plan Revised by:	<input type="text"/>	Date:	<input type="text"/>
Revision Reviewed/Approved by:	<input type="text"/>	Date:	<input type="text"/>
Project Manager:	<input type="text"/>	Date:	<input type="text"/>

TASK _____

Plan Revised by:	<input type="text"/>	Date:	<input type="text"/>
Revision Reviewed/Approved by:	<input type="text"/>	Date:	<input type="text"/>
Project Manager:	<input type="text"/>	Date:	<input type="text"/>

Add additional tasks as required

Section 10: FE Field Personnel Acknowledgement

First Environment employees assigned to work on site have attended 40-hour HAZWOPER training and annual refreshers, as applicable, per 29 CFR 1910.120, and have been certified medically fit by a qualified occupational physician to work on hazardous sites and to wear a respirator. Medical and training records are maintained by Human Resources.

By signing below, First Environment employees acknowledge that they:

- Have participated in the morning meeting and been briefed on work to be performed and site H&S.
- Have read and understand this Site HASP.
- Have raised and had adequately answered any questions about the HASP and site H&S (all employees are authorized to raise health and safety concerns through the leadership chain and HR if required before beginning or continuing work).
- Meet the training and medical fitness requirements.
- Understand the process of continual improvement and will use the PCAN process.
- Agree to notify the field team leader of any unsafe conditions in the field as soon as they are observed or encountered.

	Name	Responsibilities	Site Task/#	Signature	Date
1		FTL / FT / FHSO			
2		FTL / FT / FHSO			
3		FTL / FT / FHSO			
4		FTL / FT / FHSO			
5		FTL / FT / FHSO			
6		FTL / FT / FHSO			
7		FTL / FT / FHSO			
8		FTL / FT / FHSO			
9		FTL / FT / FHSO			
10		FTL / FT / FHSO			
11		FTL / FT / FHSO			

	Name	Responsibilities	Site Task/#	Signature	Date
12		FTL / FT / FHSO			
13		FTL / FT / FHSO			
14		FTL / FT / FHSO			
15		FTL / FT / FHSO			
16		FTL / FT / FHSO			
17		FTL / FT / FHSO			
18		FTL / FT / FHSO			
19		FTL / FT / FHSO			
20		FTL / FT / FHSO			
21		FTL / FT / FHSO			
22		FTL / FT / FHSO			
23		FTL / FT / FHSO			
24		FTL / FT / FHSO			
25		FTL / FT / FHSO			
26		FTL / FT / FHSO			
27		FTL / FT / FHSO			
28		FTL / FT / FHSO			
29		FTL / FT / FHSO			
30		FTL / FT / FHSO			

	Name	Responsibilities	Site Task/#	Signature	Date
31		FTL / FT / FHSO			
32		FTL / FT / FHSO			
33		FTL / FT / FHSO			
34		FTL / FT / FHSO			
35		FTL / FT / FHSO			
36		FTL / FT / FHSO			
37		FTL / FT / FHSO			
38		FTL / FT / FHSO			
39		FTL / FT / FHSO			
40		FTL / FT / FHSO			
41		FTL / FT / FHSO			
42		FTL / FT / FHSO			
43		FTL / FT / FHSO			
44		FTL / FT / FHSO			
45		FTL / FT / FHSO			
46		FTL / FT / FHSO			
47		FTL / FT / FHSO			
48		FTL / FT / FHSO			

Complete for each day contractor is on site.

Contractor	Responsibilities	Date	Contractor Provided FE Safety Guide¹²	Subcontract on site and correct for tasks to be performed (Y/N)	Contractor HASP on Site (Y/N)¹³	Contractor Participated in Morning Meeting (Y/N)	Describe Corrective Action taken in case of deficiencies. Contractor work cannot proceed until deficiencies are addressed.	Signature FE Field Team Leader

¹² Subcontractor has received our Guide for Subcontractors and Vendors and has signed the Read and Acknowledge Form

¹³ Subcontractor is using HASP onsite and has reviewed it with employees

Contractor	Responsibilities	Date	Contractor Provided FE Safety Guide¹²	Subcontract on site and correct for tasks to be performed (Y/N)	Contractor HASP on Site (Y/N)¹³	Contractor Participated in Morning Meeting (Y/N)	Describe Corrective Action taken in case of deficiencies. Contractor work cannot proceed until deficiencies are addressed.	Signature FE Field Team Leader

If review of the plan at the site indicates changes to the HASP are necessary, provide the specifics below (Make changes in the HASP and initial the changes). Notify Project Manager after occurrence for minor changes. Clear major changes with Project Manager prior to performing work.

Date: _____

FTL: _____

APPENDIX B

Quality Assurance Project Plan Westchester County Airport White Plains, New York

NYSDEC Site No. 360174

July 2022

**Prepared for: Westchester County
240 Airport Road
White Plains, New York 10601**

**Prepared by: First Environment, Inc.
10 Park Place
Building 1A, Suite 504
Butler, New Jersey 07405**



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Attachment 2	Monitoring Wells Sample Protocol
Attachment 3	MDL and RL

Introduction

This Quality Assurance Project Plan (QAPP) has been developed as part of the Interim Remedial Measures Work Plan that has been prepared on behalf of the Westchester County Airport (the Airport), located at Airport Road, White Plains, New York.

Purpose

The purpose of this QAPP is to indicate the prime responsibilities of the Airport and its contractors and subcontractors during implementation of various pilot programs as well as Remedial Investigations (RI). This QAPP also describes the policy, organization, and specific Quality Assurance (QA) and Quality Control (QC) elements necessary to achieve data quality objectives and fulfill NYSDEC requirements. The QAPP also provides detailed descriptions of the field procedures that will be used during the implementation of the IRMWP.

In general, there are 10 elements to be addressed in a QAPP to ensure safe, efficient, and effective practices are implemented at contaminated sites. These elements include:

1. The project's scope and complexity and how the project relates to the overall site characterization strategy.
2. The data quality objectives specific to the site and sampling event.
3. Project organization, including the name and telephone number of each of the individuals responsible for overall project coordination, sampling activities, and laboratory analyses.
4. An "Analytical Methods/Quality Assurance Summary Table" (combination of Table 2 and Table 3).
5. A detailed description of the site-specific sampling methods, sample storage in the field, and sampling holding times requirements.
6. A detailed description of all calibration and preventative maintenance procedures for all field instrumentation.
7. A detailed description of the criteria and procedures to obtain duplicate and split samples.
8. A detailed description of the chain-of-custody procedures to be utilized in the field and the laboratory.
9. A detailed description of sample storage procedures to be utilized by the laboratory.
10. Laboratory data deliverable formats to be used.

Scope and Goals Relation to Pilot Programs and RI

The scope of the project involves addressing:

- Sampling and laboratory analysis of groundwater media at the Airport to identify per- and polyfluoroalkyl substances (PFAS) including perfluorooctanoic acid (PFOA) and perfluorooctane sulfonic acid (PFOS and Total Organic Carbon content in water.

Data Quality Objectives

In order to ensure that data generated during the RI sampling is of the highest quality, the analytical results of such sampling will be compared to appropriate data quality indicators. These indicators include precision, accuracy, representativeness, completeness, and comparability. Each of these indicators is described below:

1. Precision is the agreement or reproducibility among individual measurements on the same property, usually made under the same conditions.
2. Accuracy is the degree of agreement of a measurement with the true or accepted value.
3. Representativeness is the degree to which a measurement accurately and precisely represents a characteristic of a population, parameter, variations at a sampling point, a process condition, or an environmental condition.
4. Completeness is a measure of the amount of valid data obtained from a measurements' system compared with the amount that was expected to be obtained under correct and normal conditions.
5. Comparability is an expression of the confidence with which one data set can be compared with another data set with regard to the same parameter.

The data quality objectives (DQO) vary according to the specific objectives of each task that is being undertaken. For example, accuracy, precision, and representativeness of data are functions of sample origin, analytical procedures, and specific sample matrices. Quality control practices for the evaluation of these data quality indicators include the use of accepted analytical procedures, adherence to holding times, and the analysis of QC samples (blanks, duplicates, spikes, calibration standards, and reference standards).

Completeness is a function of the number of valid data results generated compared to the number of data results planned. Completeness can be less than 100 percent due to poor sample recovery, sample damage, or disqualification of results due to results being outside of laboratory control limits. Completeness is documented by including sufficient information in field logs and laboratory reports to allow the data user to assess the quality of the results. The overall completeness goal for each task is difficult to determine prior to data acquisition. However, all reasonable attempts will be made for this project to attain a completeness of 85

percent or better. The completeness goal for the analytical laboratory will be 90 percent or greater.

Comparability is a function of the analytical and field methodologies used. Ensuring comparable data will be accomplished by using standard and accepted methodologies; using methods traceable to the National Institute of Standards and Technologies (NIST), NYSDEC sources or USEPA sources; using appropriate levels of quality control; reporting results in consistent standard units of measure; and participating in studies designed to evaluate laboratory performance.

Table 1 identifies the different levels of quality assurance that are being assigned to each task that will be implemented during the Remedial Investigation.

Table 1: Levels of Quality Assurance

DQO Level	Description	Associated Activity
I	Level I is the lowest quality data but provides the fastest and least expensive results. Field screening or analysis provides Level I data. The generated data can indicate the presence or absence of certain constituents and is generally qualitative rather than quantitative.	<ul style="list-style-type: none">• Health and Safety Monitoring (PID, FID)
II	Level II data are generated by field laboratory analysis using more sophisticated portable laboratory instruments or a mobile laboratory on site. This provides fast results and better-quality data than in Level I.	<ul style="list-style-type: none">• Field Analyses (pH, specific conductance, temperature, dissolved oxygen)
III	Level III data may be obtained by a commercial laboratory with or without CLP procedures. The analysis does not usually use the validation or documentation procedures required of CLP (Level IV) analysis. The analyzed parameters are relevant to site characterization, risk assessment, and design and implementation of the remedial action.	<ul style="list-style-type: none">• Ongoing Groundwater sampling• Waste Classification Sampling

DQO Level	Description	Associated Activity
IV	Level IV data are typically used for risk assessment, engineering design, and cost-recovery documentation. All analyses are performed in a CLP analytical laboratory and follow CLP procedures. Level IV is characterized by rigorous QC protocols, documentation, and detection limits.	<ul style="list-style-type: none"> • Post-excavation soil sampling • Soil sampling for soil reuse • Final Groundwater sampling
V	Level V data are those obtained by non-standard analytical procedures. Method development or modification may be required for specific constituents or detection limits.	<ul style="list-style-type: none"> • Not Applicable
VI	Other methodologies not described above.	<ul style="list-style-type: none"> • Physical soil description • Geotechnical tests • Water level measurements • Aquifer tests

Project Organization and Responsibilities

First Environment and a qualified team of subcontractors will perform the work activities for the RI and pilot programs under the direction of representatives from the Airport. The lead regulatory agency for this project is the NYSDEC with the New York State Department of Health (NYSDOH) providing additional regulatory oversight. First Environment is the primary contractor for monitoring.

All respective roles for the Airport, First Environment, and other appropriate project personnel are described below. The project organization chart for the Site Characterization work is shown in Figure 1.

NYSDEC Project Manager

The NYSDEC Project Manager assigned to this project is Mr. Matthew Hubicki. Mr. Hubicki can be contacted at:

New York State Department of Environmental Conservation
Division of Environmental Remediation
625 Broadway
Albany, NY 12233-7014
Phone: (518) 402-9605
Fax: (518) 402-9679
E-mail: matthew.hubicki@dec.ny.gov

The Westchester County Airport

The Airport has the overall responsibility for achieving all project objectives. First Environment will be responsible for initiating project activities; monitoring and adjusting efforts and resources as needed to assure that established schedules, work programs, and costs are maintained; and interfacing with NYSDEC on administrative matters.

First Environment will also be responsible for retaining a NYSDOH-certified Environmental Laboratory Approval Program (ELAP) and Contract Laboratory Program (CLP) laboratory. All samples will be submitted to the chosen laboratory under the chain-of-custody procedures discussed below. In addition, the Airport will be responsible for retaining an appropriately licensed and certified waste transporter and disposal subcontractor for disposal of all Remedial Investigation derived wastes. All wastes generated at the Site will be disposed of in accordance with NYSDEC requirements.

The Airport's primary project contact, business address, and telephone number are:

Peter F. Scherrer, Airport Manager
240 Airport Road, Suite 202
White Plains, New York 10604
Phone: (914) 995-4887
E-mail: pfs5@westchestergov.com

First Environment, Inc.

First Environment, Inc. will be the prime contractor implementing the Site Characterization. The project responsibilities of First Environment personnel shall be as follows:

B. Tod Delaney, Ph.D., P.E., BCEE is the President of First Environment and will act as the Senior Scientist and Senior Project Manager. Dr. Delaney will provide senior management oversight and provide technical advice and review of all site characterization-related issues. Dr. Delaney has the responsibility of ensuring and overseeing the preparation of all deliverables, staffing, scheduling, coordinating subcontractors, and overseeing all technical project activities.

Mr. Scott R. Green, P.G. is a Market Area Director at First Environment and will act as the Project Coordinator. Mr. Green will be responsible for oversight of project operations, review of all deliverables, coordinating subcontractors, and oversight of the implementation of all work being performed in the field.

Mr. David H. F. Luer, P.G., C.P.G. is a Senior Geologist at First Environment and will act as the Project Manager. Mr. Luer will be responsible for the day-to-day project operations, preparation of all deliverables, coordinating subcontractors, and the implementation and oversight of all work being performed in the field. Mr. Luer will be responsible for oversight of all Health and Safety issues during the field activities.

First Environment employees can be contacted at:

First Environment, Inc.
10 Park Place
Building 1A, Suite 504
Butler, New Jersey 07405
Phone: (973) 334-0003
Fax: (973) 334-0928

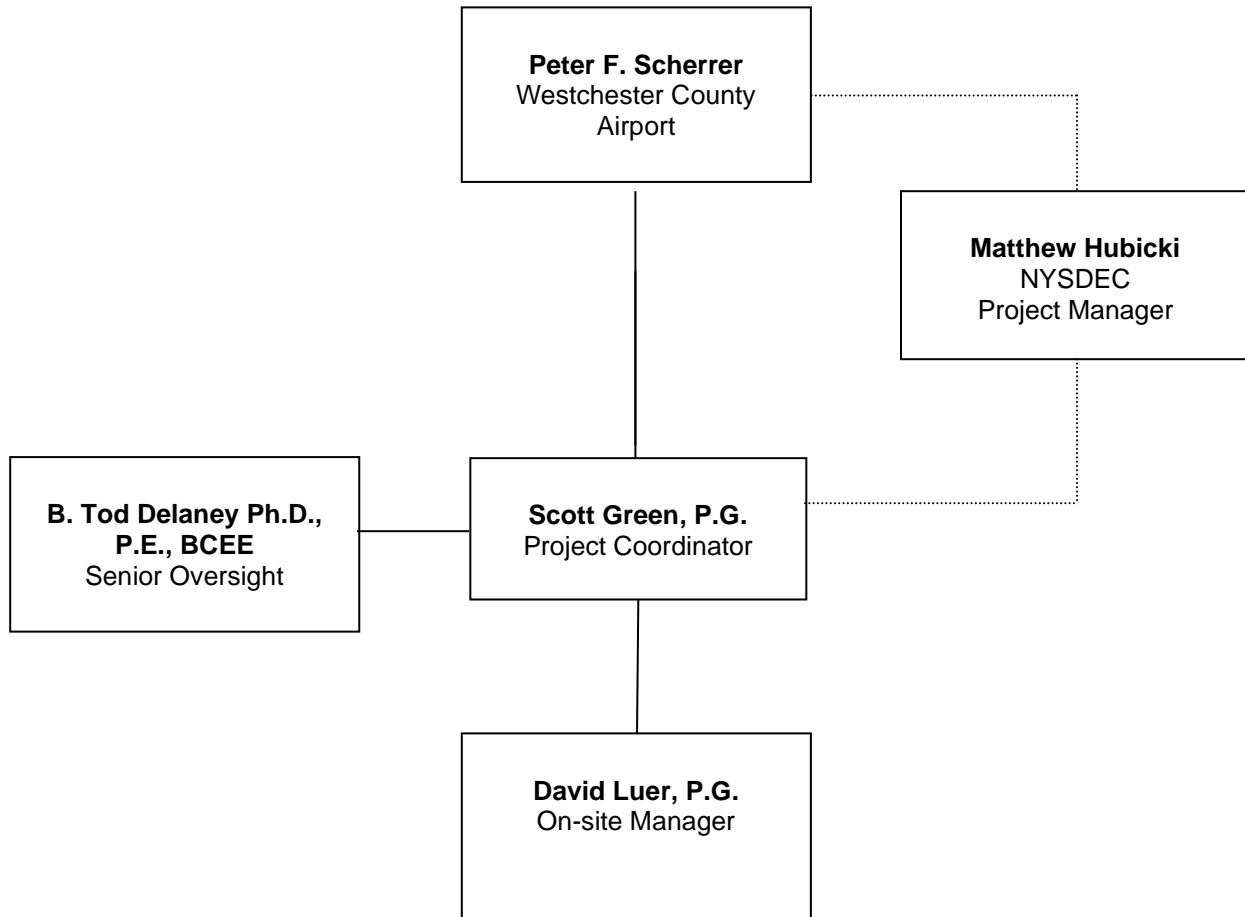
Subcontractors

First Environment is in the process of obtaining subcontractors to perform the various duties associated with the Storm Sewer Replacement and Excavation phases. To date, the following Subcontractors have been contracted to perform Site Characterization services:

Analytical Laboratory
York Analytical Laboratories
120 Research Drive
Stratford, CT 06615

Land Surveyor
Ward Carpenter
76 Mamaroneck Ave
White Plains, NY 10601

Figure 1: Organization Chart



Analytical Procedures

Method references for the analyses to be performed during the IRMWP are summarized in Table 2.

Table 2: Method References, Holding Times and Preservation Requirements

Parameters	Matrix	Method Reference	Holding Time	Preservation	Sample Volume	DQO Level
PFAS	Aqueous	USEPA Modified Method 537	14 days	4° C,	250 ml HDPE or polypropylene bottle	III/IV
PFAS	Aqueous	USEPA Method 1633	14 days	4° C,	250 ml HDPE or polypropylene bottle	III/IV

It should be noted that the NYSDEC has directed that all PFAS analysis shall use method 1633 for all workplans approved on or after November 1, 2022. Any workplans approved prior to that date shall use method 537 to ensure continuity of results.

Field Procedures

The accuracy of the data is dependent upon well-conceived and carefully implemented sampling and analysis procedures. This section presents the procedures with which samples will be collected or measurements made during the execution of this project.

Changes in Procedure

Field conditions may require changes to the QAPP. Significant changes to the sampling procedures specified in the QAPP that become necessary as a result of unanticipated field conditions will be identified to and discussed with the First Environment Project Manager prior to the implementation of any revised procedure. The Project Managers will in turn discuss the needed changes in procedure with the NYSDEC Project Manager. Changes in sampling procedures cannot be implemented unless approval is received from the NYSDEC Project Manager. Minor changes may be made with the concurrence of the First Environment Senior Project Manager but must be documented in the field logbook and/or interoffice memoranda. Any and all changes in sampling procedures will also be documented in the associated report submittal.

Acquisition of Samples

All samples will be adequately marked for identification from the time of collection and packaging through handling and storage. Marking for sample identification shall be on a sample label attached to each sample container. Sample identification will include, at a minimum, the following:

- sample identification number;
- analysis required;
- sample date and time; and
- initials of the individual performing the sampling.

A description of the sample will be included in the field logbook.

Alphanumeric codes will be used to identify sample locations. The coding for sample identification numbers should be consistent, identify a single sample location and, unless otherwise directed, use the following naming convention:

VS-XXX-MM-DD-YY	Verification Sample
-----------------	---------------------

Where XX is a numerical value, MM is the month, DD is the date and YY is the year the sample was collected.

The laboratory will provide appropriately cleaned and prepared sample containers. Reagents, preservation procedures, and analytical holding times will be in accordance with the published analytical methods.

The specific requirements for sample container preparation, sample preservation, holding times, and any special handling requirements are listed in Table 2. Sample containers will be kept closed until the time each set of sample containers is to be filled. After filling, the sample containers will be securely closed, residue wiped from the sides of the containers, sample identification marked on the container label, and the container immediately placed in a cooler that contains ice. Samples will be kept chilled and delivered to or picked up by the laboratory. Samples of dissimilar matrices will be shipped in separate coolers whenever possible. All reasonable effort will be used to limit the time the sample containers are on the Site to no more than two calendar days.

Calibration Procedures

Laboratory calibration procedures and frequency of calibration will be completed in accordance with the NYSDOH ELAP criteria. These criteria represent accepted techniques to ensure accurate sampling, monitoring, testing, and documentation as per QA/QC standards. Field instruments such as pH meters, dissolved oxygen meters, and specific conductivity meters will be standardized in accordance with the manufacturer's recommendations against National Institute of Standards and Technology (NIST) traceable standards, where appropriate. During sampling, calibration will be performed at the beginning of each day of use. Appropriate calibration records will be maintained in field logbooks.

Samples that do not contain concentrations of target analytes that exceed instrument calibration range, absent of matrix interference, will be analyzed so as to achieve the lowest practical quantitation limits. Samples that do contain concentrations of target analytes that exceed the instrument calibration range will be diluted in accordance with approved methodologies and good laboratory practice.

Field Sampling Procedures

Field screening will be used to obtain immediate site data that can be used to ensure the health and safety of site workers and/or assist in the selection of soil and groundwater sampling locations and depths. Subsurface characterization involves the collection of samples for analysis by the laboratory. The results generated from these sample analyses will be used to characterize and monitor site conditions.

Field sampling procedures when sampling for PFAS will be completed in accordance with the attached sampling protocol and checklist for sampling monitor wells for PFC's Attachment 1 and 2. Items like waterproof field notebooks, blue ice packs, Teflon containing materials, gore-tex fabrics, Tyvek are only few of the items that will be avoided due to the potential presence of PFAS in those items that could interfere with the laboratory results.

During sampling for PFAS, one field blank will be collected in the field using water provided by the laboratory. One field duplicate and one matrix spike/matrix spike duplicate will also be collected. All samples will be collected in laboratory supplied containers and placed in coolers on wet ice for overnight shipping to the laboratory or until laboratory pick up. Appropriate chain-of-custody procedures will be followed.

Laboratory Analysis

The samples will be picked up by York Analytical Laboratories, which is a New York State Certified ELAP laboratory. The samples will be analyzed for PFAS by EPA method 537 (modified) or EPA method 1633, depending on the approval date of the associated workplan with Category B deliverables. The data will be provided in an electronic data deliverable (EDD) format for the NYSDEC EQUIS Environmental Data Management System.

The field sampling activities for PFAS will follow the PFCs Sampling Checklist identified as Attachments 1 and 2.

Waste Handling Procedures

Any waste generated during sampling or during the pilot program will be collected and containerized as required for disposal according to all applicable laws and regulations.

Field Quality Control Procedures

Field Duplicates

Field Duplicate samples are collected to evaluate the laboratory's performance by comparing two separate samples that were collected from the same location. The frequency of duplicate sample collection will be five percent or one for every 20 samples, or part thereof, per matrix. If less than 20 samples are collected for a particular matrix, then one duplicate will be collected.

The collection of a duplicate groundwater sample will be obtained by alternately filling sample containers from the same sampling device for each parameter. The sample locations that require VOC analysis should have all the VOC sample containers filled from a single sampling device, whenever possible.

Field Blanks

Field Blanks will be collected as a mechanism of control on sample equipment handling, preparation, storage, and shipment. Field Blanks will be collected for all sampling events involving the collection of groundwater. Field Blanks will be collected for sampling events involving the collection of non-aqueous samples only if the samples are to be analyzed for PFAS and/or VOCs.

Field Blanks will be collected at a frequency of one per day during aqueous sampling events. They will be analyzed for any and all parameters analyzed during a particular sampling event on that day of sampling.

Field Blank water will be analyte free water provided by the analytical laboratory. The Field Blank water will be transported to the field in bottles that are of the same type as that which is used to contain the Field Blank sample. All Field Blank and sample containers will be transported to and from the field and handled in a manner that is identical, in every practical aspect, to the manner in which environmental samples and sample containers are handled.

Trip Blanks

No trip blanks will be generated during this phase, as PFAS is not a class of chemical subject to trip related contamination.

Chain-of-Custody Procedures, and Sample Storage

Chain-of-custody procedures have been established to ensure sample traceability from the time of collection through the completion of analyses. The National Enforcement Investigation/ Remediations Center (NEIC) of USEPA considers a sample to be in custody under the following conditions:

- it is in your possession; or
- it is in your view after being in your possession; or
- it was in your possession and you secured it with a lock; or
- it is in a designated secure area.

All environmental samples will be handled under strict chain-of-custody procedures beginning in the field. The First Environment Field Team Leader will be the Field Sample Custodian and will be responsible for ensuring that the procedures outlined in the applicable work plan and this QAPP will be followed. Sample custody for field activities will include the use of chain-of-custody forms, sample labels, and field logbooks. Dedicated field logbooks will be used throughout the project to document field activities.

Once samples are transported to the laboratory, custodial responsibility is transferred to the Laboratory Sample Manager to ensure that the appropriate procedures and methods are followed.

Data Reduction, Evaluation, and Reporting

The laboratory will submit analytical reports to First Environment. Precision, accuracy, representativeness, comparability, and completeness of the laboratory data will be evaluated based upon adherence to sample holding times and the analysis of QA/QC samples (i.e., duplicates, spikes, and blanks). Data validation of non-CLP reduced deliverables (Category A) will be based upon method-specific QC criteria similar to the criteria of Section 8 of the USEPA 600 series methods provided in 40 CFR Part 136. The overall responsibility for reporting laboratory data lies with the laboratory director. Professional judgment will be used to determine data usability with respect to the Data Quality Objectives. Data validation of CLP deliverables (Category B) will be performed by a third-party verifier and be reported in a Data Usability Summary Report (DUSR) as specified in the NYSDEC Draft DER-10 Technical Guidance for Site Investigation and Remediation dated May 2010.

In accordance with Section 502 of the Public Health Law, data upon which decisions impacting human health are based will be analyzed by an ELAP certified lab and documented by Category B deliverables. The following types of samples fall under this category:

- initial groundwater sampling (including both on-site and off-site sampling);
- soil to remain at the site (waste classification for reuse);
- post-excavation sampling; and
- air sampling, including outdoor air, indoor air, sub-slab vapor, and soil vapor samples.

Assessment of accuracy, precision, and completeness of both field and laboratory measurements is based upon obtaining acceptable results from QA/QC samples. Where appropriate, these may include blanks, duplicate samples, laboratory control spikes, or matrix spike/matrix spike duplicate samples. At least one physical set of Matrix Spike/Matrix Spike Duplicate (MS/MSD) samples will be collected and analyzed per 20 samples for each matrix. Duplicates and MS/MSDs will be collected at least once during each major analytical event.

Method blanks, field blanks, and trip blanks are expected not to contain any targeted analytes with concentrations greater than the reported detection limit, with the possible exception of common laboratory contaminants (e.g., methylene chloride and acetone).

Field and laboratory duplicate results will be assessed based upon the relative percent difference (RPD) between values, using the following equation:

$$RPD = \frac{(D1-D2)}{(D1+D2)/2} \times 100$$

where, D1 = Primary sample result; and
D2 = Duplicate sample result.

Laboratory Control Samples will be assessed based upon the percent recovery of spiked analytes. The percent recovery will be calculated using the following equation:

$$\text{Percent Recovery} = \frac{X}{TV} \times 100$$

where, X = observed value of measurement; and,
TV = "true" value of spiked analyte.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) data will be assessed based upon the percent recovery of spiked analytes using the following equation:

$$\text{Percent Recovery} = \frac{(\text{SSR} - \text{SR})}{\text{SA}} \times 100$$

where, SSA = Spiked sample result for analyte x;
 SR = Sample result for analyte x;
 SA = Spike of analyte x added.

Laboratory completeness will be assessed based upon the amount of valid data obtained from a particular measurement system. It may be quantitatively expressed using the following equation:

$$\text{Laboratory Completeness} = \frac{\text{N1}}{\text{N2}} \times 100$$

where, N1 = Number of valid measurements obtained; and,
 N2 = Number of measurements validated.

Project Data completeness will be assessed based upon the amount of valid data obtained from field sampling and laboratory analyses. It may be quantitatively expressed using the following equation:

$$\text{Project Completeness} = \frac{\text{N1}}{\text{N2}} \times 100$$

where, N1 = Number of valid measurements obtained; and,
 N2 = Number of measurements anticipated in the Groundwater Work Plan.

The laboratory will assess all QC data with regard to precision and accuracy. Individuals making field measurements will determine whether or not field QC criteria were met. A First Environment data validator will examine laboratory analytical data and field data to determine the usability of this data as well as the data's consistency with Analytical Data Quality Objectives.

Analytical Laboratory and Methods

Analytical Laboratory

York Analytical Laboratories
120 Research Drive
Stratford, CT 06615
Phone: 203-325-1371

Analytical Methods

Please refer to Table 2 for the analytical protocols, sample preservation, and holding times for the analyte to be investigated. Detection limits (Method Detection Limits or reporting Limits) for each analysis will be provided with the sample analytical results (see Attachment 3). The data will be provided in an electronic data deliverable (EDD) format for the NYSDEC EQUIS Environmental Data Management System.

Corrective Actions

The need for corrective action will be based upon predetermined limits for acceptability for all aspects of sample collection and analysis. Predetermined limits for acceptability may include, but are not limited to, historical data and precision, accuracy, representativeness, consistency, and completeness criteria.

Laboratory Corrective Actions are described in the laboratory's Quality Assurance Manual. Laboratory personnel will assess laboratory QC samples and, if applicable, re-analyze samples that do not meet Quality Assurance requirements prior to expirations of holding times. Other corrective actions may include collection and analysis of additional samples from the site. Problems that cannot be resolved by the laboratory's managers or QA officers will be brought to the attention of the First Environment Project Manager. The Project Manager, following consulting with NYSDEC, will determine the corrective action to be taken, if any.

The detection of system and performance problems during field activities and the implementation of any resulting corrective actions will be documented in the field logbook and placed in the project file. System and performance problems may include, but not be limited to, field equipment failure, limited or no site access, and unanticipated field conditions. The First Environment Project Manager will be notified of all system and performance problems immediately after field personnel discover them. The Project Manager may consult with the NYSDEC and the Airport, if necessary, to determine the corrective action to be taken, if any.

APPENDIX C

Community Air Monitoring Plan (CAMP) Westchester County Airport White Plains, New York

NYSDEC Site No. 360174

July 2022

**Prepared for: Westchester County
240 Airport Road
White Plains, New York 10601**

**Prepared by: First Environment, Inc.
10 Park Place
Building 1A, Suite 504
Butler, New Jersey 07405**



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Introduction

In addition to the precautions outlined in the Health and Safety Plan, the following measures will be taken to evaluate and control, as necessary, potential fugitive particulates and volatile organic compounds (VOC) generated during both ground intrusive and non-intrusive activities. Accordingly, the following Community Air Monitoring Plan (CAMP) was developed using the New York State Department of Health Generic Community Air Monitoring Plan in combination with site-specific information and proposed activities.

Depending on the type of activity, the levels of airborne particulates and/or VOCs will be monitored and recorded in real-time at both the upwind and downwind perimeters of the immediate work area. The purpose of the CAMP is to protect the downwind community from potential release of contaminants to the air generated during the activities. The action levels developed by the NYSDOH will be followed as part of the CAMP.

If the recorded levels approach pre-established action levels, or if airborne particulates are visually observed migrating off site or towards sensitive receptors, suppression measures will be implemented immediately. Suppression measures may include misting the particulate source with water, use of particulate suppression materials, wetting the work area prior to initiating the activities, or stopping work activities until recorded levels fall below the action level.

Scope-of-Work

This CAMP addresses the activities that will occur at the Westchester County Airport including the following:

1. Installation of a potable water system to supply New King Street.
2. Installation of soil borings and/or monitoring wells.
3. Collection of soil and groundwater samples.
4. Excavation of PFAS impacted soils

Continuous monitoring will be required for those activities considered ground intrusive.

Intrusive activities at the Site include replacement of the storm sewer system, installation of soil borings and monitoring wells and soil excavation.

Periodic monitoring for volatile organic compounds (VOCs) will be required during non-intrusive activities. Non-intrusive activities at the Site will include the lining of selected portions of the storm sewer system and the collection of groundwater samples from existing on-site monitoring wells. "Periodic" monitoring may consist of recording a reading upon arrival at a sample location while opening a well cap or overturning soil, monitoring during well bailing/purging, and taking a reading prior to leaving a sample location.

Table 1 presents a summary of the various tasks during the course of Site Characterization and IRM activities and the associated monitoring requirements.

TABLE 1 - Tasks Requiring CAMP

TASK NO.	TASK DESCRIPTION	ACTIVITY TYPE	MONITORING FREQUENCY
1	Installing new water line to New King Street	Ground Intrusive	Continuous for Particulates and VOCs
2	Subsurface Investigation Installation	Ground Intrusive	Continuous for Particulates and VOCs
3	Groundwater Sampling	Non-Ground Intrusive	N/A for Particulates; Periodic for VOCs
4	Excavation of PFAS impacted soils	Ground Intrusive	Continuous for Particulates and VOCs

Air Monitoring Procedures

Intrusive Activities

Particulate Monitoring, Response Levels, and Actions

Particulate concentrations will be monitored continuously at the upwind and downwind perimeters of the Site at temporary particulate monitoring stations. The particulate monitoring will be performed using real-time monitoring equipment capable of measuring particulate matter less than 10 microns in size (PM-10) and capable of integrating over a period of 15 minutes (or less) for comparison to the airborne particulate action level (Thermo MIE pDR-1000 or equivalent). The equipment will include an audible alarm or other means of alerting the operator to indicate exceedance of the action level. In addition, fugitive dust migration will be visually assessed during all work activities.

- If the downwind PM-10 level is 100 micrograms per cubic meter (mcg/m³) greater than background (upwind perimeter) for the 15-minute period, or if airborne dust is observed leaving the work area, then dust suppression techniques will be employed. Work will continue with dust suppression techniques provided that downwind PM-10 levels do not exceed 150 mcg/m³ above the upwind level and provided that no visible dust is migrating from the work area.
- If, after implementation of dust suppression techniques, downwind PM-10 levels are greater than 150 mcg/m³ above the upwind level, work will be stopped and a re-evaluation of activities initiated. Work will resume provided that dust suppression measures and other controls are successful in reducing the downwind PM-10 concentration to within 150 mcg/m³ of the upwind level and in preventing visible dust migration.

All readings will be recorded and be available for State (DEC and DOH) personnel to review.

VOC Monitoring, Response Levels, and Actions

The VOC monitoring for intrusive activities will be conducted on a continuous basis and will follow the same response levels and actions for VOCs as outlined below. The measurements will be collected from the immediate work area using a MiniRAE 3000 photoionization detector or equivalent.

VOCs will be continuously monitored at the downwind perimeter of the work area, or exclusion zone, during water line installation and soil boring and well installation activities using a MiniRAE 3000 photoionization detector or equivalent. Upwind measurements will also be

collected prior to the start of work each day and periodically throughout the day at locations away from the work areas to establish background conditions. A minimum of three background measurements will be collected daily. The monitoring work will be performed using equipment appropriate to measure the types of contaminants known or suspected to be present. The equipment will be calibrated at least daily against a standard VOC calibrations gas appropriate for the contaminants of concern and for concentrations which will be comparable to the levels specified below. The monitoring, response levels, and actions for VOCs are as follows:

- If the ambient air concentration of total organic vapors in the work area exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels in the work area persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the Site or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shut down.

Non-intrusive Activities

Based on the tasks requiring a CAMP presented in Table 1 above, the non-intrusive activity to be performed is groundwater sampling, which will not require particulate monitoring. Periodic monitoring for VOCs will be conducted during groundwater sampling activities.

VOC Monitoring, Response Levels, and Actions

The VOC monitoring for non-intrusive activities will be conducted on a periodic basis and will follow the same response levels and equipment for VOCs as outlined above. The measurements will be collected from the exclusion zone using a MiniRAE 2000 photoionization detector or equivalent.

Periodic VOC monitoring will consist of taking readings prior to the initiation of work at each well location, during bailing and purging activities, and prior to leaving each monitoring well location. Upwind concentrations will also be measured at the start of each workday and periodically thereafter to establish background conditions. The equipment will be calibrated at least daily against a standard VOC calibrations gas appropriate for the contaminants of concern and for

concentrations which will be comparable to the levels specified below. The monitoring, response levels, and actions for VOCs are as follows:

- If the ambient air concentration of total organic vapors in the work area exceeds 5 parts per million (ppm) above background for the 15-minute average, work activities will be temporarily halted and monitoring continued. If the total organic vapor level readily decreases (per instantaneous readings) below 5 ppm over background, work activities will resume with continued monitoring.
- If total organic vapor levels in the work area persist at levels in excess of 5 ppm over background but less than 25 ppm, work activities will be halted, the source of vapors identified, corrective actions taken to abate emissions, and monitoring continued. After these steps, work activities will resume provided that the total organic vapor level 200 feet downwind of the Site or half the distance to the nearest potential receptor or residential/commercial structure, whichever is less – but in no case less than 20 feet, is below 5 ppm over background for the 15-minute average.
- If the organic vapor level is above 25 ppm at the perimeter of the work area, activities must be shut down.

Weather Monitoring

In order to identify the specific upgradient and downgradient sampling locations, meteorological data will be gauged in the field and collected from a nearby weather station used by the Airport.

APPENDIX D

Citizen Participation Plan Westchester County Airport White Plains, New York

NYSDEC Site No. 360174

July 2022

**Prepared for: Westchester County
240 Airport Road
White Plains, New York 10601**

**Prepared by: First Environment, Inc.
10 Park Place
Building 1A, Suite 504
Butler, New Jersey 07405**



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Note: The information presented in this Citizen Participation Plan was current as of the date of its approval by the New York State Department of Environmental Conservation. Portions of this Citizen Participation Plan may be revised during the site's investigation and cleanup process.

Applicant: **County of Westchester (“Applicant”)**
Site Name: **Westchester County Airport (“Site”)**
Site Address: **240 Airport Road, West Harrison**
Site County: **Westchester County**
Site Number: **C360174**

1. What is New York’s Brownfield Cleanup Program?

New York’s Brownfield Cleanup Program (BCP) works with private developers to encourage the voluntary cleanup of contaminated properties known as “brownfields” so that they can be reused and developed. These uses include recreation, housing, and business.

A *brownfield* is any real property that is difficult to reuse or redevelop because of the presence or potential presence of contamination. A brownfield typically is a former industrial or commercial property where operations may have resulted in environmental contamination. A brownfield can pose environmental, legal, and financial burdens on a community. If a brownfield is not addressed, it can reduce property values in the area and affect economic development of nearby properties.

The BCP is administered by the New York State Department of Environmental Conservation (NYSDEC) which oversees Applicants who conduct brownfield site investigation and cleanup activities. An Applicant is a person who has requested to participate in the BCP and has been accepted by NYSDEC. The BCP contains investigation and cleanup requirements, ensuring that cleanups protect public health and the environment. When NYSDEC certifies that these requirements have been met, the property can be reused or redeveloped for the intended use.

For more information about the BCP, go online at:
<http://www.dec.ny.gov/chemical/8450.html>.

2. Citizen Participation Activities

Why NYSDEC Involves the Public and Why It Is Important

NYSDEC involves the public to improve the process of investigating and cleaning up contaminated sites, and to enable citizens to participate more fully in decisions that affect their health, environment, and social well-being. NYSDEC provides opportunities for citizen involvement and encourages early two-way communication with citizens before decision makers form or adopt final positions.

Involving citizens affected and interested in site investigation and cleanup programs is important for many reasons. These include:

- Promoting the development of timely, effective site investigation and cleanup programs that protect public health and the environment.

- Improving public access to, and understanding of, issues and information related to a particular site and that site's investigation and cleanup process.
- Providing citizens with early and continuing opportunities to participate in NYSDEC's site investigation and cleanup process.
- Ensuring that NYSDEC makes site investigation and cleanup decisions that benefit from input that reflects the interests and perspectives found within the affected community.
- Encouraging dialogue to promote the exchange of information among the affected/interested public, State agencies, and other interested parties that strengthens trust among the parties, increases understanding of site and community issues and concerns, and improves decision making.

This Citizen Participation (CP) Plan provides information about how NYSDEC will inform and involve the public during the investigation and cleanup of the Site identified above. The public information and involvement program will be carried out with assistance, as appropriate, from the Applicant.

Project Contacts

Appendix A identifies NYSDEC project contact(s) to whom the public should address questions or request information about the site's investigation and cleanup program. The public's suggestions about this CP Plan and the CP program for the Site are always welcome. Interested people are encouraged to share their ideas and suggestions with the project contacts at any time.

Locations of Reports and Information

The locations of the reports and information related to the site's investigation and cleanup program also are identified in Appendix A. These locations provide convenient access to important project documents for public review and comment. Some documents may be placed on the NYSDEC web site. If this occurs, NYSDEC will inform the public in fact sheets distributed about the Site and by other means, as appropriate.

Site Contact List

Appendix B contains the Site contact list. This list has been developed to keep the community informed about, and involved in, the site's investigation and cleanup process. The Site contact list will be used periodically to distribute fact sheets that provide updates about the status of the project. These will include notifications of upcoming activities at the site (such as fieldwork), as well as availability of project documents and announcements about public comment periods.

The Site contact list includes, at a minimum:

- chief executive officer and planning board chairperson of each county, city, town, and village in which the Site is located;
- residents, owners, and occupants of the Site and properties adjacent to the Site;
- the public water supplier which services the area in which the Site is located;
- any person who has requested to be placed on the Site contact list;
- the administrator of any school or day care facility located on or near the Site for purposes of posting and/or dissemination of information at the facility;
- location(s) of reports and information.

The Site contact list will be reviewed periodically and updated as appropriate. Individuals and organizations will be added to the Site contact list upon request. Such requests should be submitted to the NYSDEC project contact(s) identified in Appendix A. Other additions to the Site contact list may be made at the discretion of the NYSDEC project manager, in consultation with other NYSDEC staff as appropriate.

Note: The first Site fact sheet (usually related to the draft Remedial Investigation Work Plan) is distributed both by paper mailing through the postal service and through DEC Delivers, its email listserv service. The fact sheet includes instructions for signing up with the appropriate county listserv to receive future notifications about the Site. See <http://www.dec.ny.gov/chemical/61092.html>.

Subsequent fact sheets about the Site will be distributed exclusively through the listserv, except for households without internet access that have indicated the need to continue to receive site information in paper form. Please advise the NYSDEC site project manager identified in Appendix A if that is the case. Paper mailings may continue during the investigation and cleanup process for some sites, based on public interest and need.

CP Activities

The table at the end of this section identifies the CP activities, at a minimum, that have been and will be conducted during the site's investigation and cleanup program. The flowchart in Appendix D shows how these CP activities integrate with the site investigation and cleanup process. The public is informed about these CP activities through fact sheets and notices distributed at significant points during the program. Elements of the investigation and cleanup process that match up with the CP activities are explained briefly in Section 5.

- **Notices and fact sheets** help the interested and affected public to understand contamination issues related to a site, and the nature and progress of efforts to investigate and clean up a site.
- **Public forums, comment periods, and contact with project managers** provide opportunities for the public to contribute information, opinions and perspectives that have potential to influence decisions about a site's investigation and cleanup.

Documents related to the site can be accessed online here:

<https://airport.westchestergov.com/about-us/environmental-management-system>.

<https://www.dec.ny.gov/cfm/externalapps/derexternal/index.cfm?pageid=3>

For documents related to the current clean-up efforts:

<https://airport.westchestergov.com/about-us/environmental-management-system/pfas-program>.

The public is encouraged to contact project staff at any time during the site's investigation and cleanup process with questions, comments, or requests for information.

This CP Plan may be revised due to changes in major issues of public concern identified in Section 3 or in the nature and scope of investigation and cleanup activities. Modifications may include additions to the Site contact list and changes in planned citizen participation activities.

Technical Assistance Grant

NYSDEC must determine if the Site poses a significant threat to public health or the environment. This determination generally is made using information developed during the investigation of the Site, as described in Section 5.

If the Site is determined to be a significant threat, a qualifying community group may apply for a Technical Assistance Grant (TAG). The purpose of a TAG is to provide funds to the qualifying group to obtain independent technical assistance. This assistance helps the TAG recipient to interpret and understand existing environmental information about the nature and extent of contamination related to the Site and the development/implementation of a remedy.

An eligible community group must certify that its membership represents the interests of the community affected by the Site and that its members' health, economic well-being, or enjoyment of the environment may be affected by a release or threatened release of contamination at the Site.

As of the date the declaration (page 2) was signed by the NYSDEC project manager, **the significant threat determination for the site had not yet been made.**

To verify the significant threat status of the Site, the interested public may contact the NYSDEC project manager identified in Appendix A.

For more information about TAGs, go online at <http://www.dec.ny.gov/regulations/2590.html>

Note: The table identifying the citizen participation activities related to the site's investigation and cleanup program follows on the next page:

Citizen Participation Activities	Timing of CP Activity(ies)
<p align="center">Application Process:</p> <ul style="list-style-type: none"> • Prepare Site contact list • Establish document repository(ies) 	
<ul style="list-style-type: none"> • Publish notice in Environmental Notice Bulletin (ENB) announcing receipt of application and 30-day public comment period • Publish above ENB content in local newspaper • Mail above ENB content to Site contact list • Conduct 30-day public comment period 	<p>At time of preparation of application to participate in the BCP.</p> <p>When NYSDEC determines that BCP application is complete. The 30-day public comment period begins on date of publication of notice in ENB. End date of public comment period is as stated in ENB notice. Therefore, ENB notice, newspaper notice, and notice to the Site contact list should be provided to the public at the same time.</p>
<p align="center">After Execution of Brownfield Site Cleanup Agreement (BCA):</p> <ul style="list-style-type: none"> • Prepare Citizen Participation (CP) Plan 	
<p align="center">Before NYSDEC Approves Remedial Investigation (RI) Work Plan:</p> <ul style="list-style-type: none"> • Distribute fact sheet to Site contact list about proposed RI activities and announcing 30-day public comment period about draft RI Work Plan • Conduct 30-day public comment period 	<p>Before start of Remedial Investigation</p> <p>Note: Applicant must submit CP Plan to NYSDEC for review and approval within 20 days of the effective date of the BCA.</p> <p>Before NYSDEC approves RI Work Plan. If RI Work Plan is submitted with application, public comment periods will be combined and public notice will include fact sheet. Thirty-day public comment period begins/ends as per dates identified in fact sheet.</p>
<p align="center">After Applicant Completes Remedial Investigation:</p> <ul style="list-style-type: none"> • Distribute fact sheet to Site contact list that describes RI results 	
<p align="center">Before NYSDEC Approves Remedial Work Plan (RWP):</p> <ul style="list-style-type: none"> • Distribute fact sheet to Site contact list about draft RWP and announcing 45-day public comment period • Public meeting by NYSDEC about proposed RWP (if requested by affected community or at discretion of NYSDEC project manager) • Conduct 45-day public comment period 	<p>Before NYSDEC approves RI Report</p> <p>Before NYSDEC approves RWP. Forty-five day public comment period begins/ends as per dates identified in fact sheet. Public meeting would be held within the 45-day public comment period.</p>
<p align="center">Before Applicant Starts Cleanup Action:</p> <ul style="list-style-type: none"> • Distribute fact sheet to Site contact list that describes upcoming cleanup action 	
<p align="center">After Applicant Completes Cleanup Action:</p> <ul style="list-style-type: none"> • Distribute fact sheet to Site contact list that announces that cleanup action has been completed and that NYSDEC is reviewing the Final Engineering Report • Distribute fact sheet to Site contact list announcing NYSDEC approval of Final Engineering Report and issuance of Certificate of Completion (COC). 	<p>Before the start of cleanup action.</p> <p>At the time the cleanup action has been completed.</p> <p>Note: The two fact sheets are combined when possible if there is not a delay in issuing the COC.</p>

3. Major Issues of Public Concern

This section of the CP Plan identifies major issues of public concern that relate to the Site. Additional major issues of public concern may be identified during the course of the site's investigation and cleanup process.

The Site has been impacted by the chemicals formulated in Aqueous Fire Fighting Foams (AFFF) named per- and polyfluoroalkyl substances (PFAS). PFAS are man-made chemicals found across the Site in soil, sediment, surface water, and groundwater in varying concentrations. However, the north end of the Airport where the New York Air National Guard (NYANG) performed aircraft rescue and firefighting (ARFF) operations on a regular basis from 1968 to 1983 is the area where PFAS is most heavily concentrated in soil and groundwater. These firefighting exercises and training activities were performed at a former Burn Pit across from Building 10. The NYANG, as part of its firefighting exercises, used AFFF which historically contained high concentrations of PFAS, specifically perfluorooctane sulfonate (PFOS). Even today, Title 14 Code of Federal Regulation (CFR) Part 139 under Federal Aviation Administration (FAA) requires Airport operators to use AFFF containing PFAS. In 2018, the Airport discontinued the use of foams containing PFOS and perfluorooctanoic acid (PFOA) and transitioned to a more environmentally friendly AFFF National Foam Aer-O-Water 6%. In July 2020, New York State adopted PFOS and PFOA drinking water Maximum Contaminant Levels (MCLs) of 10 part per trillion (ppt).

The Site Characterization at the Airport has been completed and the next phase of focus is refining the investigation in remedial investigation. This work is being outlined in a remedial investigation workplan, estimated to be executed in the fall of 2022. In the last year, an investigation of soil, sediment, groundwater, and surface water has been conducted on the North Parcel of the Airport, which is the portion of Airport property that is north of Airport Road. Previously as an interim remedial measure, the stormwater system at the northern portion of the Airport that was allowing PFAS impacted groundwater to leave the Airport through OF-7 located inside the Rye Lake drainage basin was replaced with a watertight system to prevent the infiltration of impacted groundwater. Other planned IRMs include pilot tests at various locations to reduce the concentrations of contaminants in surface water. Investigative workplans, reports, and monthly progress reports can be found on Westchester County's website, as previously cited on page 6.

Water Supply – Rye Lake Reservoir – Rye Lake is a receptor for the surface water and groundwater from approximately 1/3 of the Airport area.

Water Supply – Some commercial buildings along New King Street have water wells that have been impacted by PFOS and PFOA.

4. Site Information

Appendix C contains a map identifying the location of the Site.

Site Description

The Site is located at 240 Airport Road in White Plains, Westchester County, New York and encompasses approximately 694 acres or 1.08 square miles. The Airport is located in a mixed-use area of commercial and residential parcels and has been assigned Site No. 360174 by the NYSDEC. Residential housing is located to the north of the Site across Airport Road. To the east and south of the Airport across Airport Road are residences and commercial properties, including a golf course. Interstate 684 and Rye Lake are located to the west of the Airport. As indicated, Rye Lake is part of the Kensico Reservoir.

About one-third of the Airport lies within the Rye Lake watershed while the remainder lies within the Blind Brook watershed. As used in this report, the “Site” refers to the area within the boundaries of the Airport. The Harrison Sub-residency Site is located outside of the Project Area (off-site) but is included in the discussion since PFAS were identified in surface and groundwater at this location by TRC in 2018. It should also be noted that the Harrison Sub-residency Site is located downgradient from the Airport.

In the northern portion, the Site generally slopes to the west toward Rye Lake, whereas the southern part of the Site slopes to Blind Brook. The Site is largely covered with earthen fill and vegetation with some areas covered by concrete, runways, asphalt, and/or gravel. The main structures at the Site consist of Airport and tenant buildings of a slab-on-grade construction. The buildings house offices, maintenance, Airport operations and management, lease holders of airlines, and private aircraft.

History of Site Use, Investigation, and Cleanup

Westchester County Airport (Airport code “HPN”) was initially constructed by the U.S. Army Corps of Engineers in 1942 on land owned by the County of Westchester and leased to the United States government “for the duration” of WW II for use by the U.S. Army Air Force. Before the end of the war, the U.S. government surrendered its lease and in February 1945 the Westchester County Airport opened as a public Airport. However, the Army Air Force never completely vacated the Airport. In 1947, following the creation of the United States Air Force and the New York Air National Guard (NYANG), the NYANG leased the northeast section of the Airport from Westchester County. The NYANG subsequently constructed air-support facilities on the leasehold and continuously occupied its leasehold until 1983 when the unit moved to Stewart Air Force Base.

The following presents a Timeline of Development at Westchester County Airport:

- 1942 – construction began;
- 1943 – runways completed;
- Late 1943 – U.S. Army Air Force (AAF) base opened;
- 2/13/1945 – base officially became the County Airport;
- 1946 – private pilots became tenants at the Airport;
- 9/18/1947 – New York State Air National Guard (NYANG) formed;

- 1948 – Hangar A completed;
- 11/1949 – permanent airline service began with American Airlines;
- 1952 – NYANG begins operations at Airport base;
- 1953 – Hangar D completed;
- 1967 - New Air Traffic Control Tower built to replace flight operations tower in Hangar A;
- 1978 – U.S. Airline Deregulation Act resulted in more flights in and out of HPN;
- 1980 – longer-distance jet travel began via Air Florida;
- 1983 – NYANG left the Airport and transferred to Stewart Airport in Newburgh, NY;
- 1993 – new passenger terminal built;
- 2007 – JetBlue service began.

In the late 1990s, and as a result of historical firefighting and training activities using flammables such as aviation fuel as the accelerant, concerns were raised regarding the potential environmental impacts to soil and groundwater in and around the former NYANG Burn Pit area.

To address this concern, First Environment, the County's environmental consultant, conducted a detailed reconnaissance of the Airport Property that included multiple site visits in the fall of 1999 and a review of historic aerial photographs of the Airport. The reconnaissance identified the location of the former NYANG Burn Pit west of Building 10 and its boundaries. Based on information reviewed, ARFF training activities consisted of the repeated burning and extinguishing of aviation fuel at this location. It should be noted at that time there were no known environmental concerns or regulatory standards for PFAS chemicals in AFFF.

In early 2000, 39 study areas were identified as possible contaminant sources at the Airport and investigated to determine their potential impact, if any, on environmental media. The investigations included a review of available documentation; interviews with Airport personnel and NYANG personnel in Latham, New York; as well as intrusive investigations consisting of soil and/or groundwater sampling.

On January 28, 2000, First Environment identified petroleum impacts in the former Burn Pit area associated with fire training activities. In an effort to remediate this area, First Environment removed the source of contamination.

From May 16 to October 20, 2000, First Environment oversaw the removal of approximately 2,800 tons of impacted soil. The excavation encompasses an area measuring 130-feet by 60-feet and extended to a depth of 4 to 6 feet below grade. The excavated soil was transported to Soil Safe, Inc., located in Salem, New Jersey, a facility certified to accept non-hazardous petroleum impacted soil. At the completion of the remedial excavations, post-excavation samples were collected to document the success of the remedial actions.

To restore the area of the excavation to original grade, soil previously stockpiled on-site

was evaluated to determine if it was suitable for reuse to backfill the former NYANG Burn Pit area excavation.

Additional Site investigation activities were completed from June to December 2000. As part of this additional investigation, First Environment collected approximately 125 soil samples, 30 post-excavation soil samples, and 130 groundwater samples from temporary and permanent monitoring wells located at the Site. All samples were submitted for laboratory analysis in order to chemically characterize the environmental media at the Site.

In 2001, following First Environment's review of the data, based on the hydrogeology, hydrology, and laboratory analytical results, First Environment concluded there was no pervasive petroleum groundwater plume emanating from the Airport that was threatening the water quality at Rye Lake. The findings of the investigation were detailed in First Environment's Site Investigation Report and Groundwater Monitoring Program dated February 2001.

From June 2001 until 2011, a voluntary site-wide groundwater monitoring program was performed by the Airport. The monitoring program included the semi-annual sampling and analysis of between 50 to 57 monitoring wells located across the Site. The analytical parameters included VOCs, SVOCs, glycols, and total and dissolved metals. The monitoring program was performed until the first quarter of 2011, at which point the program was discontinued by the prior County administration.

In June 2017, the NYSDOH sampled raw water intakes and finished water outlets corresponding to several potable wells that service a number of commercial buildings located on New King Street in North Castle, New York. The results of the sampling identified PFAS in these intake and outlet ports, some at concentrations that exceeded the combined action level of 70 ppt for PFOA and PFOS.

In November 2017, sampling conducted by WSP identified PFAS in eight monitoring wells located across the Site. This sampling event was conducted at the request of the NYSDEC to evaluate potential impacts from historic fire training activities conducted by the NYANG.

In August 2018, the County voluntarily restarted the semi-annual groundwater monitoring program and sampled 52 monitoring wells. To date, WSP has conducted six sampling events on the following dates: August 2018, March 2019, October 2019, April 2020, October 2020, March 2021. The 2018 sampling event was the first full-sampling event under the re-started monitoring program and encompassed an expanded list of analytical parameters, including a suite of 21 PFAS compounds as well as 1,4 dioxane. This event revealed concentrations of PFOA and PFOS exceeding the 70 ppt EPA lifetime contaminant health advisory level for combined PFOA and PFOS in 26 of the 52 sampled wells. The monitoring wells exhibiting the highest concentrations of PFAS in groundwater were located in the northern portion of the Site, near the former NYANG Burn Pit; although elevated levels have been identified at Hangar V Pepsi/ 37. It may be possible that the groundwater divide is separating ICA at UW-1, FMW-31, and FMW-PFAS in two directions or a potential

PFAS source exists at or near Hangar V. In addition, 1,4-dioxane was detected in five wells in proximity to Hangar D. VOCs were also identified; however, no glycols were detected. The VOCs and glycol results were generally consistent with the concentrations previously detected in the groundwater during the monitoring program from 2001 to 2011.

A second groundwater sampling event was conducted in March/April 2019. In total, 53 monitoring wells across the Site were sampled for PFAS. In addition, samples from 39 wells were analyzed for VOCs, samples from 12 wells were analyzed for 1,4-dioxane, and samples from 6 wells were analyzed for glycols. This event revealed concentrations of PFOS and PFOA exceeding the 70 ppt EPA combined PFOA and PFOS life-time contaminant health advisory level in 32 of the 53 sampled wells. The 2019 PFAS and VOCs concentrations were of similar concentrations when compared to those from 2018. The highest PFAS concentrations were detected in samples from shallow monitoring wells screened from 5.0 and 20.0 feet below ground surface (bgs).

The highest combined PFOA and PFOS concentrations have been consistently detected in wells FMW-6 and FMW-7, which are both located immediately adjacent to the former NYANG Burn Pit area which, as noted, is considered the primary source area at the Site where PFAS containing AFFF was used during fire training exercises. There has been a decrease in PFAS concentration in certain wells across the Site. First Environment believes the declining trend in some of the wells at the burn pit are the result of the removal of approximately 2,800 tons of VOC and SVOC impacted soil in 2000/2001. Based on recent investigation results, it is now apparent this former burn pit soil was also impacted with PFAS and therefore constituted a PFAS source removal event as well. As noted, WSP conducted groundwater sampling in 2018, 2019, 2020, and 2021.

In 2019-2020, First Environment performed a Site Characterization of the Airport and submitted the report to the NYSDEC in April 2021. First Environment implemented the storm sewer/groundwater IRM in 2021. In 2021 and 2022 site investigation of the north parcel of the Airport was executed. First Environment continues to dialogue with the NYSDEC monthly to the progress of the current and future remedial investigation and clean-up Site activities.

5. Investigation and Cleanup Process

Application

The Applicant has applied for and has been accepted into New York's Brownfield Cleanup Program as a Participant. This means that the Applicant was the owner of the Site at the time of the discharge of PFAS contaminants or was otherwise liable for the discharge of the contaminants. The Participant must fully characterize the nature and extent of contamination on site, as well as the nature and extent of contamination that has migrated from the Site. The Participant also must conduct a "qualitative exposure assessment," a process that characterizes the actual or potential exposures of people, fish, and wildlife to contaminants on the Site and to contamination that has migrated from the Site.

The Applicant in its Application proposes that the Site will be used for commercial purposes.

To achieve this goal, the Applicant will conduct clean-up activities at the Site with oversight provided by NYSDEC. The Brownfield Cleanup Agreement executed by NYSDEC and the Applicant sets forth the responsibilities of each party in conducting these activities at the Site.

NYSDEC will use the information in the investigation report to determine if the Site poses a significant threat to public health or the environment. If the Site is a “significant threat,” it must be cleaned up using a remedy selected by NYSDEC from an analysis of alternatives prepared by the Applicant and approved by NYSDEC. If the Site does not pose a significant threat, the Applicant may select the remedy from the approved analysis of alternatives.

Interim Remedial Measures

An Interim Remedial Measure (IRM) is an action that can be undertaken at a site when a source of contamination or exposure pathway can be effectively addressed before the site investigation and analysis of alternatives are completed. If an IRM is likely to represent all or a significant part of the final remedy, NYSDEC will require a 30-day public comment period.

Remedy Selection

When the investigation of the Site has been determined to be complete, the project likely would proceed in one of two directions:

1. The Applicant may recommend in its investigation report that no action is necessary at the Site. In this case, NYSDEC would make the investigation report available for public comment for 45 days. NYSDEC then would complete its review, make any necessary revisions and, if appropriate, approve the investigation report. NYSDEC would then issue a “Certificate of Completion” (described below) to the Applicant.

or

2. The Applicant may recommend in its investigation report that action needs to be taken to address site contamination. After NYSDEC approves the investigation report, the Applicant may then develop a clean-up plan, officially called a “Remedial Work Plan.” The Remedial Work Plan describes the Applicant’s proposed remedy for addressing contamination related to the Site.

When the Applicant submits a draft Remedial Work Plan for approval, NYSDEC would announce the availability of the draft plan for public review during a 45-day public comment period.

Cleanup Action

NYSDEC will consider public comments and revise the draft clean-up plan, if necessary, before approving the proposed remedy. The New York State Department of Health (NYSDOH) must concur with the proposed remedy. After approval, the proposed remedy becomes the selected remedy. The selected remedy is formalized in the Site Decision Document.

The Applicant may then design and perform the clean-up action to address the Site contamination. NYSDEC and NYSDOH oversee the activities. When the Applicant completes clean-up activities, it will prepare a final engineering report that certifies that clean-up requirements have been achieved or will be achieved within a specific time frame. NYSDEC will review the report to be certain that the cleanup is protective of public health and the environment for the intended use of the Site.

Certificate of Completion

When NYSDEC is satisfied that clean-up requirements have been achieved or will be achieved for the Site, it will approve the final engineering report. NYSDEC then will issue a Certificate of Completion (COC) to the Applicant. The COC states that cleanup goals have been achieved and relieves the Applicant from future liability for site-related contamination, subject to certain conditions. The Applicant would be eligible to redevelop the site after it receives a COC.

Site Management

The purpose of site management is to ensure the safe reuse of the property if contamination will remain in place. Site management is the last phase of the site clean-up program. This phase begins when the COC is issued. Site management incorporates any institutional and engineering controls required to ensure that the remedy implemented for the Site remains protective of public health and the environment. All significant activities are detailed in a Site Management Plan.

An *institutional control* is a non-physical restriction on use of the Site, such as a deed restriction that would prevent or restrict certain uses of the property. An institutional control may be used when the clean-up action leaves some contamination that makes the Site suitable for some, but not all uses.

An *engineering control* is a physical barrier or method to manage contamination. Examples include caps, covers, barriers, fences, and treatment of water supplies.

Site management also may include the operation and maintenance of a component of the remedy, such as a system that pumps and treats groundwater. Site management continues until NYSDEC determines that it is no longer needed.

Appendix A - Project Contacts and Locations of Reports and Information

Project Contacts

For information about the site's investigation and cleanup program, the public may contact any of the following project staff:

New York State Department of Environmental Conservation (NYSDEC):

Matthew Hubicki
Project Manager
NYSDEC Central Office
Division of Environmental Remediation
625 Broadway, Albany, NY 12233
(518) 402-9605
email: matthew.hubicki@dec.ny.gov

Stephanie Mossey Citizen Participation
Specialist
NYSDEC Region 3
21 South Putt Corners Rd, New Paltz, NY
(845) 256-3154

New York State Department of Health (NYSDOH):

Kristin Kulow Public Health Specialist
New York State Department of Health
Bureau of Environmental Exposure Investigation
28 Hill Street, Suite 201
Oneonta, NY 13820
(518) 402-7860
beei@health.ny.gov

Locations of Reports and Information

The facilities identified below are being used to provide the public with convenient access to important project documents:

Westchester County Airport Environmental Department
Main Terminal, Suite 202
240 Airport Rd White Plains NY 10604
Phone: (914) 995-3860 or (914) 995-4856
Hours: 8:00 am to 4:00 pm

NYSDEC Central Office
625 Broadway,
Albany, NY 12233
Attn: Matthew Hubicki Phone: (845) 256-3003
Hours: 8:30 am – 4:45 pm Monday through Friday (call for appointment)

Documents related to the site can be accessed online here:

[https://airport.westchestergov.com/about-us/environmental-management-system.](https://airport.westchestergov.com/about-us/environmental-management-system)
<https://www.dec.ny.gov/cfmx/extapps/derexternal/index.cfm?pageid=3>

For documents related to the current clean-up efforts:

<https://airport.westchestergov.com/about-us/environmental-management-system/pfas-program>.

Appendix B - Site Contact List

1. Chief Executive Officers and Planning Board Chairpersons

George Latimer County Executive, Office of the County Executive
9th Floor, 148 Martine Ave, White Plains, NY 10601

Richard Hyman, County Planning Board Chair, Westchester County Dept of Planning
Room 432, 148 Martine Ave, White Plains, NY 10601

Ron Belmont, Town/Village of Harrison Mayor, Town/Village of Harrison
1 Heineman Place Harrison, New York, 10528

Thomas Heaslip, Harrison Planning Board Chair Town/Village of Harrison
1 Heineman Place Harrison, New York, 10528

Paul Rosenberg, Village of Rye Brook Mayor, Village of Rye Brook
938 King Street Rye Brook, NY 1057

Robert Goodman, Rye Brook Planning Board Chair, Village of Rye Brook
938 King Street Rye Brook, NY 1057

Michael Schiliro, Town of North Castle Supervisor, Town of North Castle
15 Bedford Road Armonk, NY 10504

Christopher Carthy, North Castle Planning Board Chair, Town of North Castle
15 Bedford Road Armonk, NY 10504

Fairfield County, CT – As of 1960, Counties in Connecticut do not have any associated governmental structure. All services are provided by the towns.

Fred Camillo, Greenwich Township First Selectman
101 Field Point Road, First Floor, Greenwich, CT 06830

Katie DeLuca, AICP, Greenwich Township Planning Board Director
101 Field Point Road, Second floor, Greenwich, CT 06830

2. Residents, Owners, and Occupants of the Property and Properties Adjacent to the Property

<u>OWNER</u>	<u>OWNER ADDRESS</u>	<u>PROPERTY ADDRESS</u>
AMMIRATO, BARBARA	4282 Purchase St Purchase, NY 10577	Same
SPREWELL, LATRELL F	4340 Purchase St Purchase, NY 10577	Same
HIRABAYASHI, KAZUKO	4300Purchase St Purchase, NY 10577	Same
HASHEM J	5 Renaissance Sq - Apt White Plains, NY 10601	4350 Purchase St Purchase, NY 10577
SOCIETY OF FRIENDS	4455 Purchase St West Harrison NY 10604	Same
PRICE II, VIRGIL M	6-10 Wolfe Ln Purchase, NY 10577	Same
CITY OF NEW YORK	465 Columbus Ave Valhalla NY 10595	4440 Purchase St Purchase, NY 10577
VALENTINO ANTHONY A	2 Palma Dr Harrison NY 10528	38 Wolfe Ln Purchase, NY 10577
GJOKAJ, TONY T	36 Hickory Ln Thornwood NY 10594	22 Wolfe Ln Purchase, NY 10577
AMMIRATO, FULVIO	4288 Purchase St Purchase, NY 10577	Same
BURTON, STEVEN	4390 Purchase St Purchase, NY 10577	Same
BILLONE, JOSEPH	4443 Purchase St West Harrison NY 10604	Same
VALENTINO ANTHONY A WESTCHESTER JOINT WATER	2 Palma Dr Harrison, NY 10528	34 Wolfe Ln Purchase, NY 10577
SUMMERHILL REALTY LLC	1625 Mamaroneck Ave Mamaroneck, NY 10543	12 Stone Ridge Rd Purchase NY 10577
AMMIRATO, FULVIO	4330 Purchase St Purchase, NY 10577	Same
KANTER, MALCOLM J	4290 Purchase St Purchase, NY 10577	Same
SOCIETY OF FRIENDS	14 Wolfe Ln Purchase, NY 10577	Same
REHMAN ABAID	Purchase Meeting Purchase, NY 10577	Purchase St Purchase, NY 10577
STATE OF NEW YORK	251 Bedford Pk Blvd Bronx, NY 10453	4 Kempner Ln Purchase, NY 10577
KERN, HAL NYS HOUSING FINANCE AGENCY	A E Smith Office Bldg Albany, NY 12236	55 New King St West Harrison NY 10604
UNITED CEREBRAL PALSY	18 Wolfe Ln Purchase, NY 10577	Same
SAFE FLIGHT INST CORP	Lincoln Ave Purchase, NY 10577	Same
1194 KING STREET LLC	PO Box 555 Purchase, NY 10577	1186 King St Rye Brook NY 10573
PAUL ANTONIK	20 New King St West Harrison NY 10604	Same
KATHLEEN AUGUSTIN		1194 King Street, Greenwich, CT, 06831
BRUNSWICK SCHOOL, INC		1151 King Street, Greenwich, CT 06831
OLGA VALERIE COLLINS		1332 King St (Rear) Greenwich, CT 06831
SUSAN V AND ANDRE DEDEKAM		100 Maher Avenue, Greenwich, CT 06830
FAIRVIEW COUNTRY CLUB		1358 King St Greenwich, CT 06831
GREENWICH KING ST. ASSOC.		1147 King St. Greenwich, CT 06831
GREENWICH WOODS LIMITED		1241 King Street, Greenwich, CT 06831
GREENWICH WOODS REALTY		280 Park Ave, 24 th Fl. New York, NY 10017
HARVEST TIME ASSEMBLY		25250 Rockside Rd, Bedford Hts, OH 44146
		1621 59 th Street Brooklyn, NY 11204
		1338 King Street Greenwich, CT 06831

OF

KIM GIL SEUNG & KIM
YEAR

1368 King Street Greenwich, CT 06831

LAURELTON NURSING
HOME

1188 King Street, Greenwich, CT 06831

MICHAEL J & VICTORIA
MACK

1364 King Street, Greenwich, CT 06831

NEW KING STREET

205 Main St. PO Box 807 Chatham, NJ
07928

TRUSTEES OF CONVENT
OF

1177 King Street, Greenwich, CT 06831

ALLENT T & WILLIAMS

1400 King Street, Greenwich, CT 06831

JOHN & LORMA W/S ZICCA

1356 King Street, Greenwich, CT 06831

3.Local News Media

LoHUD, 1133 Westchester Avenue, Suite N110, White Plains, NY 10604

4.Public Water Supplier

Westchester Joint Water Works, 1625 Mamaroneck Avenue, Mamaroneck, NY 10543

5.Other Persons

Johanna Santarelli
4282 Purchase Street
Purchase NY 10577
Johanna_santarelli@yahoo.com

Mark Chertok (11 New King St LLC)
Margaret Holden
Sive, Paget & Riesel P.C.
560 Lexington Avenue, 15th Floor
New York, NY 10022
mchertok@sprlaw.com

Jeffrey M. Brown
Kim Frank
Jeffrey M. Brown Associates
11 New King Street LLC
2337 Philmont Avenue
Huntingdon Valley, PA 19006
jmb@associates.com
kfrank@mca-fl.com

Mitchel Benerofe
New King Street Associates (4 New King Street)
New King Holding LLC (10 New King Street)
10 New King Street, Suite 209
North Castle (White Plains), NY 10604
mib@benefores.com

P. Daniel Hollis III, Esq.
One New King Street
Hollis, Laidlaw, & Simon, P.C.
55 Smith Avenue
Mount Kisco, NY 10549
pdhollis@hollislaidlaw.com

Daniel Richmond, Esq. (Swiss Re America Holding Corporation)
Zarin & Steinmetz
81 Main Street, Suite 415
White Plains, NY 10601
dmrichmond@zarin-steinmetz.com

Swiss Re America (US) Holding Corporation
C/O Thomas Wolfe, Esq
1200 Main Street, Suite 800
Kansas City, MO 64105
Thomas.Wolfe@swissre.com

Swiss Re America
175 King Street
Armonk, NY 10504

Cynthia Garcia, NYCDEP Supervisor
SEQRA Coordination Section
465 Columbus Avenue
Valhalla, NY 10595
cgarcia@dep.nyc.gov

6.School Administrators

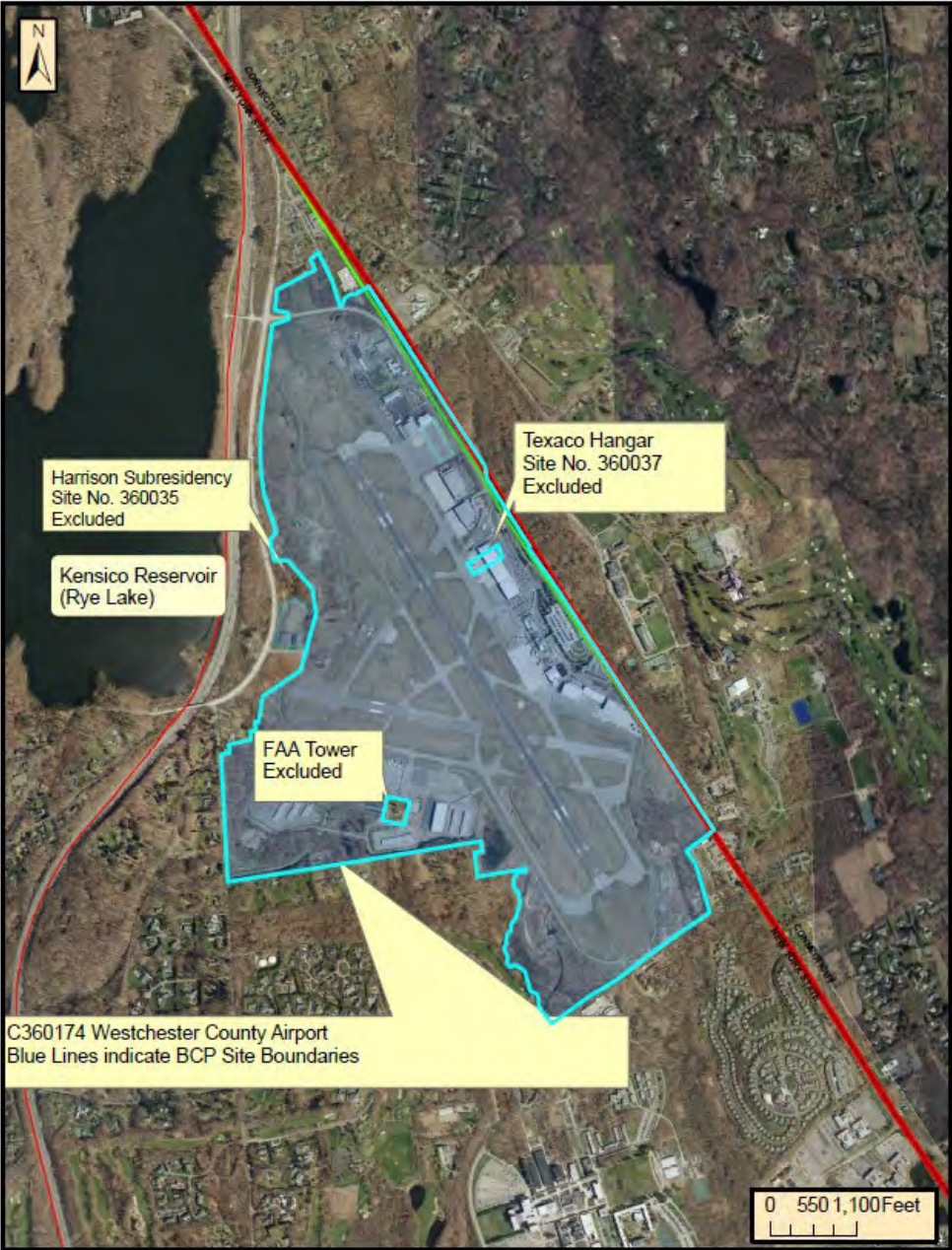
Thomas Phillip, Headmaster, The Brunswick School
1275 King Street, Greenwich, CT 06831.

Linda Kuck, Executive Director, Cerebral Palsy of Westchester
1186 King Street, Rye Brook, NY 10573.

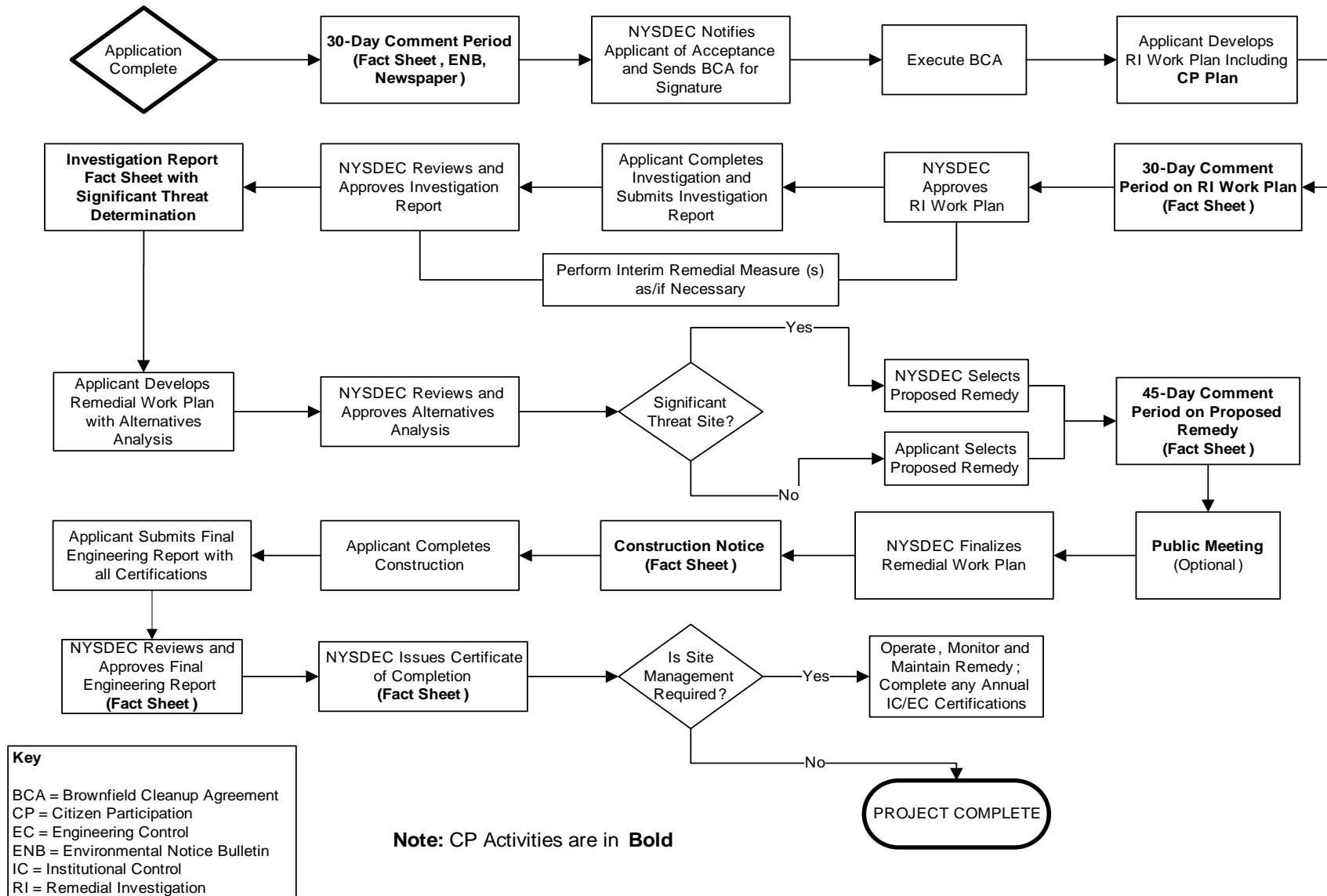
7.Document Repository

Westchester County Airport Environmental Department
Main Terminal, Suite 202
240 Airport Rd White Plains, NY 10604

Appendix C - Site Location Map



Appendix D– Brownfield Cleanup Program Process





Division of Environmental Remediation

Remedial Programs Scoping Sheet for Major Issues of Public Concern

Instructions

This Scoping Sheet assesses major issues of public concern; impacts of the site and its remedial program on the community; community interest in the site; information the public needs; and information needed from the public.

The information generated helps to plan and conduct required citizen participation (CP) activities, and to choose and conduct additional CP activities, if appropriate. The scoping sheet can be revisited and updated as appropriate during the site's remedial process to more effectively implement the site's CP program.

Note: Use the information as an aid to prepare and update the Major Issues of Public Concern section of the site CP Plan.

General Instructions

- When to prepare: During preparation of the CP Plan for the site. It can be revisited and updated anytime during the site remedial process.
- Fill in site name and other information as appropriate.
- The Scoping Sheet may be prepared by DEC or a remedial party but must be reviewed and approved by the DER site project manager or his/her designee.

Instructions for Numbered Parts

Consider the bulleted issues and questions below and any others that may be unique or appropriate to the site and the community to help complete the five Parts of this Scoping Sheet. Identify the issue stakeholders in Parts 1 through 3 and adjust the site's contact list accordingly.

Part 1. List Major Issues of Public Concern and Information the Community Wants.

- Is our health being impacted? (e.g., Are there problems with our drinking water or air? Are you going to test our water, yards, sumps, basements? Have health studies been done?)
- There are odors in the neighborhood. Do they come from the site and are they hazardous?
- Are there restrictions on what we may do (e.g., Can our children play outside? Can we garden? Must we avoid certain areas? Can we recreate (fish, hunt, hike, etc. on/around the site?)
- How and when were the site's contamination problems created?
- What contaminants are of concern and why? How will you look for contamination and find out where it is going? What is the schedule for doing that?
- The site is affecting our property values!
- How can we get more information (e.g., who are the project contacts?)
- How will we be kept informed and involved during the site remedial process?
- Who has been contacted in the community about site remedial activities?
- What has been done to this point? What happens next and when?

- The site is going to be cleaned up for restricted use. What does that mean? We don't want redevelopment on a "dirty" site.

Part 2. List Important Information Needed From the Community, if Applicable.

- Can the community supplement knowledge about past/current uses of the site?
- Does the community have knowledge that the site may be significantly impacting nearby people, properties, natural resources, etc.?
- Are activities currently taking place at the site or at nearby properties that may need to be restricted?
- Who may be interested or affected by the site that has not yet been identified?
- Are there unique community characteristics that could affect how information is exchanged?
- Does the community and/or individuals have any concerns they want monitored?
- Does the community have information about other sources in the area for the contamination?

Part 3. List Major Issues and Information That Need to be Communicated to the Community.

- Specific site investigation or remediation activities currently underway, or that will begin in the near future.
- The process and general schedule to investigate, remediate and, if applicable, redevelop the site.
- Current understanding about the site contamination and effects, if any, on public health and the environment.
- Site impacts on the community and any restrictions on the public's use of the site and/or nearby properties.
- Planned CP activities, their schedule, and how they relate to the site's remedial process.
- Ways for the community to obtain/provide information (document repositories, contacts, etc.).

Part 4. Community Characteristics

a. - e. Obtain information from local officials, property owners and residents, site reports, site visits, "windshield surveys," other staff, etc.

f. Has the affected community experienced other **significant** present or past environmental problems unrelated to this site? Such experiences could significantly affect public concerns and perspectives about the site; how the community will relate to project staff; the image and credibility of project staff within the community; and the ways in which project staff communicate with the community.

g. In its remedial programs, DER seeks to integrate, and be consistent with, environmental justice principles set forth in *DEC Commissioner Policy 29 on Environmental Justice* and *DER 23 – Citizen Participation Handbook for Remedial Programs*. Is the site and/or affected community wholly or partly in an Environmental Justice (EJ) Area? Use the Search feature on DEC's public web site for "environmental justice". DEC's EJ pages define an EJ area, and link to county maps to help determine if the site and/or community are in an EJ area.

h. Consider factors such as:

- Is English the primary language of the affected community? If not, provisions should be considered regarding public outreach activities such as fact sheets, meetings, door-to-door visits and other activities to ensure their effectiveness.
- The age demographics of the community. For example, is there a significant number of senior citizens in the community? It may be difficult for some to attend public meetings and use document repositories. This may suggest adopting more direct interaction with the community

with activities such as door-to-door visits, additional fact sheets, visits to community and church centers, nursing homes, etc.

- How do people travel about the community? Would most people drive to a public meeting or document repository? Is there adequate public transportation?

Part 5. Affected/Interested Public.

Individuals and organizations who need or want information and input can change during the site's remedial process. This need is influenced by real, potential, or perceived impacts of the site or the remedial process. Some people may want information and input throughout the remedial process. Others may participate only during specific remedial stages or may only be interested in particular issues.

It is important to revisit this question when reviewing this scoping sheet. Knowing who is interested in the site – and the issues that are important to them – will help to select and conduct appropriate outreach activities, and to identify their timing and the information to be exchanged.

Check all affected/interested parties that apply to the site. **Note: Adjust the site's contact list appropriately.** The following are some ways to identify affected/interested parties:

- Tax maps of adjacent property owners
- Attendees at public meetings
- Telephone discussions
- Letters and e-mails to DER, the remedial party, and other agencies
- Political jurisdictions and boundaries
- Media coverage
- Current/proposed uses of site and/or nearby properties (recreational, commercial, industrial)
- Discussions with community organizations: grass roots organizations, local environmental groups, environmental justice groups, churches, and neighborhood advisory groups

Division of Environmental Remediation

Remedial Programs
Scoping Sheet for Major Issues of Public Concern (see instructions)

Site Name: Westchester County Airport

Site Number: C360174

Site Address and County: 240 Airport Road, West Harrison Westchester County, New York

Remedial Party(ies): Westchester County

Note: For Parts 1. – 3. the individuals, groups, organizations, businesses, and units of government identified should be added to the site contact list as appropriate.

Part 1. List major issues of public concern and information the community wants. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and information needs. **Use this information as an aid to prepare or update the Major Issues of Public Concern section of the site Citizen Participation Plan.**

- *The on-site PFAS contamination identified at the Airport and its impact to groundwater and how impacted groundwater and surface water could impact Rye Lake. Although not detectable levels of PFAS have been identified in Rye lake, nor is it expected such will be encountered in the future. The Airport is performing IRMs to mitigate PFAS impacts on and offsite. The Site was used for fire training that historically AFFF containing PFAS inside the Rye Lake Drainage Basin. PFAS chemical have entered the groundwater and moved into surface water that have migrated offsite. IRM activities are underway to reduce PFAS at the source where fire training activities that used AFFF were performed in an effort to reduce PFAS concentrations. No other contaminants appear to be present of concern to the environment.*
- *For more information about the Site or BCP program, contact the NYSDEC or NYSDOH Project Manager. Contact information is provided in Appendix A.*
- *Adjacent property occupants and owners will be kept informed about the progress of the Site cleanup activities. Periodic fact sheets will be sent by mail and/or electronically and published on Westchester County's Website.*
- *Local, state, and federal officials will be contacted about the Site remediation activities.*

Findings Site Characterization will used to prepare Remedial Investigation Workplan, and from there it will be determined what if any addition remediation activities are necessary, in addition to the IRM currently being initiated at the Airport.

How were these issues and/or information needs identified?

These issues were identified based on a review of historic records of the Site, WSP semi-annual reports from 2017 to 2020, findings identified from Site Characterization activities conducted by First Environment in 2019 to 2021. A description of the proposed project was also presented in the BCP Application. The Site Characterization information was recently submitted and not all that information could have been provided in the Application.

Part 2. List important information needed **from** the community, if applicable. Identify individuals, groups, organizations, businesses and/or units of government related to the information needed.

- *Adjacent property owners and occupants will be informed of the Site remediation through fact sheet updates activities and can reach out to the Site's NYSDEC and/or NYSDOH Project Manager to obtain additional information.*
- *Nearby uses do not need to be restricted, since measures will be implemented during all investigation and remediation activities to protect the health safety of the public and local community. These measures include monitoring for dust that may be emanating from the Site and implementing controls such as spraying water or minimizing subsurface disturbance. Odors are not expected during but if encountered will be mitigated by the use of protective foams and/or covering any contaminated areas of disturbance or stockpiles with tarps.*

How were these information needs identified?

Research was completed to identify the names and contact information of adjacent property owners and local government officials. These individuals are included in the Site Contact List under Appendix B.

Part 3. List major issues and information that need to be communicated **to** the community. Identify individuals, groups, organizations, businesses and/or units of government related to the issue(s) and/or information.

- *A Site Characterization report was completed in April 2021 and groundwater, soil, sediment and surface water sampling conducted in 2019-2020. The findings of the 2019 and some of the 2020 investigation and groundwater monitoring was utilized to support the BCP Application. Currently IRM are under way and will continue in 2021 to remediate the area of greatest concern. It is expected Remedial Investigation Workplan will be prepared and submitted to the NYSDEC under the BCP and once approved implemented in 2021-2022.*
- *Document repositories, where copies of all documents regarding the investigation and remediation of the Site are available to the public, have been established at on Westchester County's website as shown below:*

Documents related to the site can be accessed online here:

<https://airport.westchestergov.com/about-us/environmental-management-system>

For documents related to the current clean-up efforts - <https://airport.westchestergov.com/about-us/environmental-management-system/pfas-program>.

How were these issues and/or information needs identified?

These needs were identified by summarizing the project timeline and a review of the information included in the BCP Application. Any contact information or details pertaining to the Site that have changed since issuance of the BCP Application, have been updated in this CP Plan or described in greater detail in the Site Characterization report submitted in March 2021 to the NYSDEC. In addition, First Environment submitted April 2021 OF-7 Storm Sewer Workplan.

Part 4. Identify the following characteristics of the affected/interested community. This knowledge will help to identify and understand issues and information important to the community, and ways to effectively develop and implement the site citizen participation plan (mark all that apply):

a. Land use/zoning at and around site:

- ☒ **Residential** ☐ **Agricultural** ☐ **Recreational**
☒ **Commercial** ☐ **Industrial**

b. Residential type around site:

☐ **Urban** ☒ **Suburban** ☒ **Rural**

c. Population density around site:

☐ **High** ☐ **Medium** ☒ **Low**

d. Water supply of nearby residences:

☒ **Public** ☒ **Private Wells** ☐ **Mixed**

e. Is part or all of the water supply of the affected/interested community currently impacted by the site?

☐ **Yes** ☒ **No**

Provide details if appropriate:

[Click here to enter text.](#)

f. Other environmental issues significantly impacted/impacting the affected community?

☐ **Yes** ☒ **No**

Provide details if appropriate:

[Click here to enter text.](#)

g. Is the site and/or the affected/interested community wholly or partly in an Environmental Justice Area?

☐ **Yes** ☒ **No**

h. Special considerations:

☐ **Language** ☐ **Age** ☐ **Transportation** ☐ **Other**

Explain any marked categories in **h**:

[Click here to enter text.](#)

Part 5. The site contact list must include, at a minimum, the individuals, groups, and organizations identified in Part 2. of the Citizen Participation Plan under 'Site Contact List'. Are *other* individuals, groups, organizations, and units of government affected by, or interested in, the site, or its remedial program? (Mark and identify all that apply, then adjust the site contact list as appropriate.)

☐ **Non-Adjacent Residents/Property Owners:** [Click here to enter text.](#)

☒ **Local Officials:** [Click here to enter text.](#)

☒ **Media:** [Click here to enter text.](#)

☐ **Business/Commercial Interests:** [Click here to enter text.](#)

☐ **Labor Group(s)/Employees:** [Click here to enter text.](#)

☐ **Indian Nation:** [Click here to enter text.](#)

☒ **Citizens/Community Group(s):** (need a list from Robert F. John N.)

☐ **Environmental Justice Group(s):** [Click here to enter text.](#)

☒ **Environmental Group(s):** (need a list from Robert F. John N.)

☐ **Civic Group(s):** [Click here to enter text.](#)

☐ **Recreational Group(s):** Click here to enter text.

☐ **Other(s):** Click here to enter text.

Prepared/Updated By: First Environment, Inc.

Date: 5/7/2021

Reviewed/Approved By: Click here to enter text.

Date: Click here to enter text.