



*HydroEnvironmental*  
SOLUTIONS, INC.

September 3, 2021

Via email: [daniel.bendell@dec.ny.gov](mailto:daniel.bendell@dec.ny.gov)

Mr. Dan Bendell  
New York State Department of Environmental Conservation (NYSDEC)  
21 South Putts Corner Road  
New Paltz, New York 12561

RE: Remedial Action Work Plan  
34 E Post Road and WPHA Building 33 Property  
White Plains, New York

Dear Mr. Bendell:

Please find a revised proposed Remedial Action Work Plan ("RAWP") for the two adjoining environmentally impacted sites—34 E. Post Road ("Marianina Site") and the White Plains Housing Authority ("WPHA") Property—for the Department's review on behalf of Marianina Oil Corporation ("Marianina"). This Revised RAWP supplements the RAWP submitted for your review on December 28, 2020, and incorporates the discussions that followed. The RAWP is based upon the extensive testing and investigation undertaken during the pendency of this matter. The purpose of the RAWP is to define protocol to remediate the gasoline release that has impacted both properties located in downtown White Plains, New York, and to attach same to a Consent Decree between Marianina, the Department, and potentially the White Plains Urban Renewal Agency ("WPURA") as discussed further below. The Site location is shown on **Figure 1**.

#### **Site Background and File Review**

In preparing this Plan, HES has reviewed, and relied upon:

(i) Subsurface Investigation Report and Remedial Costs dated November 2016, for both the Marianina Site and the WPHA Property, compiled by First Environment, Inc. ("FEI") of Boonton, New Jersey. All work completed by FEI was conducted on behalf of the WPHA.

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(ii) Expert Opinion Report of Heather Cloud, dated May, 2019 (“Cloud Report”), and an Expert Rebuttal Opinion of Heather Cloud, dated August 2019 (“Cloud Rebuttal Report”), respectively, for both the Marianina Site and the WPHA Property compiled by Groundwater & Environmental Services, Inc. (“GES”) of Hauppauge, NY. All work completed by GES was conducted on behalf of BP Products North America Inc. (“BP”) and Atlantic Richfield Company (“ARC”).

(iii) HES’s Subsurface Investigation Report of the Marianina Site prepared in November 2017, on behalf of Marianina. The investigation included the installation of Geoprobe soil borings and temporary monitor wells, and sampling of both soil and groundwater beneath the Marianina Site.

(iv) Relevant findings contained in an Opinion and Order on Summary Judgment by Judge Nelson Román dated August 27, 2020, in a related litigation, *White Plains Housing Authority v. BP Products North America Inc., Marianina Oil Corp., and Atlantic Richfield Co.*, No. 17-cv-06250 (“Román Decision”).

(v.) Letter from First Environment (on behalf of the White Plains Housing Authority), dated January 8, 2021 (“FEI Report”), commenting upon the prior proposed RAWP December 28, 2021 draft RAWP.

(vi.) Conceptual Plans prepared by the WPUA (“Garage Concept Plans”), describing footprint and areas of excavation of proposed parking garage to be constructed after acquisition of the subject properties by the WPUA. See Figure 6 attached. The Garage Concept Plans are overlaid onto the subject properties and Google Earth image of the site, together with relevant data from the soil borings and monitoring wells. See Figure 2 attached.

Based upon this file review, the conditions on the respective Sites can be summarized, as follows:

#### **Marianina Site**

- Sampling on the Marianina Site indicates that both soil and groundwater have been impacted, and that concentrations of gasoline constituents (BTEX compounds) were detected in both media above their respective New York State Department of Environmental Conservation (“NYSDEC”) guidelines and standards, and gasoline was detected floating on the water table in several of the temporary wells installed by HES at the site. See FEI Report at pages 7-11; HES Report at page 4.
- Based on soil borings and groundwater monitoring wells installed by HES in connection with its 2017 Report, the source area of the contamination and the highest concentrations is located on the Marianina Site in an area approximately 70-feet wide by 70-feet long by 8-to-10 feet deep. Its location is depicted in **Figure 2** by the green-colored polygon. Accord FEI Report at 8-9.
- The levels of contamination on the Marianina Site decline as they move away from the hot spot, and towards the WPHA Property. See Cloud Report at pages 61-63; **Figure 5**.

### **WPHA Property**

- Testing over the past six years has shown that the gasoline spill at the Marianina Site has minimally impacted an approximate 3,479-square-foot area on the neighboring WPHA Property. See Cloud Rebuttal Report at Table 5 & 6; FEI Report at pages 7-11; HES Report at page 4.
  - o The Cloud Rebuttal Report depicts this area in a yellow-hatched polygon at page 36 as shown on its Figure 10, which Ms. Cloud calls the “maximum area soils [that] should be excavated.” It totals approximately 1,443 tons of soil. Cloud Rebuttal Report at 35. The area runs from the Marianina Site up to the vicinity of MW-201, where, based on testing, TVOC levels and soil-impacted levels are expected to be mostly above Department guidelines. As discussed below, all recent testing outside the yellow-hatched polygon has produced compliant results. Also as discussed below, because the plume from the Marianina Site commingled with another plume from a nearby Getty station spill, which was remediated in 2015, all levels on the WPHA Property have been steadily declining even without remediation of the Marianina Property.
  - o The proposed soil excavation area comprises about 1,000 tons, and is depicted by the light-blue polygon on **Figure 2** attached, but stands in contrast to the area shown in red hatch—depicting First Environment’s proposed excavation area. First Environment claims this red area, totaling 5,400 square feet, must be completely excavated, even though there are few samples from within this area, and those that were taken just outside the area are within Department exceedance standards.
- Over the past six years, for example, the only sample above NYSDEC standards within the red polygon, besides MW-201, occurred at a temporary well (TWB-5) in 2015, which had a TVOC concentration of 12,500 µg/L. This well was not sampled again. See Cloud Report at page 49-50 and Cloud Report Figure 4. Sampling of surrounding wells, including wells *closer* to the source area than TWB-5, resulted in much lower concentrations. TVOC concentration at MW-201, the closest well to the Marianina Site and closer than TWB-5, for example, as of 2019, was tested at 86.69 µg/L.<sup>1</sup> See Cloud Rebuttal Report at page 30 and Cloud Report Figure 4.
  - o MW-203-33, which is located hydraulically upgradient of TWB-5 and hydraulically downgradient of the Marianina site, has also been trending downward since 2015. The concentration of benzene in MW-203 was 180 µg/L in November 2016, and had decreased to 35 µg/L in February of 2019. See Cloud Rebuttal Report at page 40; see also **Figure 2**, attached. In November of 2017 the TVOC concentration at nearby MW-106 was also only 4.1 µg/L. Thus, the contamination levels drop steeply as the plume moves from MW-201 further from the Marianina Site.

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<sup>1</sup> As discussed below, 2015 marks an important delineation, because that is when a different spill at a nearby Getty station was remediated.

- o In contrast, First Environment's depiction of the impacted area goes well beyond MW-201, right up to MW-203. There is no testing within that area to support such a large excavation. And, as stated above, nearby test results downgradient of this area are compliant. For examples, the most recently tested concentrations of TVOCs was 0.4 µg/L, at TWB-4, <5.7 µg/L, TWB-6, and MW-205, 0.004 µg/L. See Figure 2, attached. See also Cloud Report Figure 4. In fact, all wells within or just outside First Environment's red area—including TWB-3, TWB-4, MW-203, TWB-6, MW-205, and TWB-1—all tested with TVOC levels below NYSDEC Guidelines.<sup>2</sup> See Figure 2, attached. See also Cloud Report Figure 4.
- First Environment's proposed impact area is excessive by another measure. It proposes excavation of the entire red-hatched area based on projections of movement of the plume, without any consideration of natural attenuation or conditions that will result from removal of the primary source on the Marianina Property, and partial excavation on the WPHA Property as described below.
  - o According to travel time estimates, given the low-permeability underlying geology, the plume is not expected to reach Building 33 for years, if ever. See Román Decision at page 20; see also FEI Report at 5 (“[I]t is more probable than not (51 percent or more) that the migrating plume will reach Building 33's south wing in less than seven years.”); FEI Report at 5-8 (acknowledging that plume's trend is, at worst, stable).
  - o As discussed above, however, the data suggests that the plume is actually attenuating on the WPHA Property due to the prior remediation of the nearby Getty Site (26 East Post Road), and natural attenuation. The plume originating from the Getty Site migrated downgradient toward the WPHA Property near the basketball courts. See Cloud Rebuttal Report at pages 11 and 37; see also **Figure 2** attached. Approximately 5,409 tons of soil was excavated from the Getty Site and the Building 159 parking lot, extending up to about 36 feet from the southeastern edge of Building 159. See Cloud Rebuttal Report at 37. See Cloud Rebuttal Report at 37. As discussed above, after source-area removal from the Getty Site and the Building 159 parking lot, post-remediation groundwater concentrations trended downward through natural attenuation processes that ultimately led to the NYSDEC issuing a No Further Action letter. See Cloud Rebuttal Report at 37.

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<sup>2</sup> There do not appear to be any off-site soil borings that occurred after December 2015, so the analysis herein is based primarily upon the testing of monitoring wells as a proxy for the soil in the area. First Environment states that it took five soil borings (SB-201 to SB-205, which it then converted into MW-201 to MW-205), and found that in 2015 the PID readings were elevated only at SB-201 (1,200 ppm) and SB-203 (537ppm) — though First Environment did not report this to NYSDEC until a year later. Cloud Rebuttal Report at 13. As explained below, like the elevated results at the two wells that were installed at those locations, contaminants have steadily declined over time at those locations.

- We are confident that the contamination on the WPHA Property is limited to the vicinity of MW-201, which forms the basis for the remediation proposal on the WPHA Property as discussed below.

### **PROPOSED REMEDIAL ACTION WORK PLAN**

Marianina is currently in a bankruptcy proceeding. It is also in active negotiations to sell the Marianina Site to the WPURA. The WPURA is simultaneously engaged in condemnation proceedings to acquire several adjoining properties, including the abutting portion of the WPHA Property nearest to the Marianina Site, and plans to construct a public vehicle garage on the acquired properties. The Garage Conceptual Plans are attached here as Figure 6. As you can see in Figures 2 and 6, the WPURA's property acquisition, and the footprint of the WPURA's garage (and excavation area), would result in the excavation of the entire Marianina Site, and most, if not all, of the impacted soil on the WPHA Property as described above and shown in light blue and some red hatched area, to a depth of approximately 12-15 feet below grade.

As such, this Workplan presents two options. Option 1 is the Department's approved current plan forward, with Option 2 as a potential plan due to the fact that based on information and belief that the WPURA may be purchasing the facility and building a parking garage. This second option helps to streamline the first option and dovetail it with this plan and may be utilized if this occurs under separate institutional controls such as a supplemental order with the WPURA if this purchase occurs.. In the event that the WPURA acquires the Sites as contemplated, the RAWP as described hereunder will be performed simultaneous with the construction of the Garage on the Sites. If the Garage is never constructed for some reason, the RAWP will be performed at such time, either by WPURA (WPURA acquires the Marianina Sits) or Marianina, upon Marianina selling the property in Bankruptcy Court. The proceeds necessary to fund the RAWP will come either from the sale of the Marianina Site in Bankruptcy to the WPURA to build the garage, or if the WPURA for some reason does not go forward with its purchase, sale of the Marianina Property to another third party in an auction or other Bankruptcy proceeding. In either case, the cost of the RAWP approved herein will be escrowed with the ultimate buyer to implement the RAWP. Accordingly, there are two remediation plans described herein: (i) the WPURA purchases the Marianina Site for the purposes of building the parking garage, or (ii) sale in Bankruptcy to another third party.

### **Both Sites**

- Deed Restriction: Based on the proposed future use of the Site as a below-grade multi-level parking garage, or other public purpose, or if sold in Bankruptcy by auction or other

wise to a third non-municipal party, an institutional control in the form of an environmental easement and/or deed notice will be filed on the Marianina Site and the WPHA property shown in light blue hatch on **Figure 2**, allowing exclusively non-residential use. The Deed Restriction will not cover Building 33 on the WPHA Property.

### **Marianina Site**

#### **Option 1: No WPUA Municipal Garage:**

- **Dewatering and Mass Excavation:** As shown on **Figure 2** attached, the RAWP proposes excavating the green-colored polygon, which will dewater the gasoline-impacted area downgradient of the former USTs and pump islands. This would excavate, remove, and dispose of approximately 3,000 tons of soil in the source area. This area totals approximately 70 feet wide by 70 feet long by 8-to-10 feet deep. This is the area where free-phase gasoline and elevated concentrations of BTEX compounds were detected in both the soil and the groundwater. It is also the area immediately upgradient of the WPHA Property, and the source of migrating dissolved gasoline constituents in groundwater. The underground storage tanks on-site have been out of service for greater than 12 months and will be removed. Excavation on the site will continue until all soil exhibiting petroleum impacts are removed.

#### **Option 2: WPUA Constructs Parking Garage:**

- If the WPUA purchases the Marianina Site, the entire Marianina Site will be excavated, and the impacted soil in question will be removed to 14 to 15 ftbg as shown by the blue-colored area on **Figure 2** attached. In this scenario, we understand that the remediation will be conducted concurrent to the construction of the garage, which we expect will occur over the course of the next 18 months.
- **Well Monitoring:** The RAWP proposes, with respect to both Options, installing six (6) two-inch monitor wells, following source area removal as part of the remedial approach, with quarterly testing for a period to be determined with the Department's input and consent. Based on the actual extent of soil excavation and the final design of the garage, the number and location of post-cleanup monitor wells may change in consultation with the Department.
- **Sub Slab Depressurization System and Vapor Barrier:** As part of the institutional controls, the RAWP includes that any new construction on the Marianina Site be designed to include a passive sub-slab depressurization (SSDS) system and vapor barrier. See Cloud Rebuttal Report at 39-40.

## **WPHA Property**

### **Option 1: No WपुरA Municipal Garage**

- **Off-Site Soil Excavation**: As discussed above, soil excavation off-Site on the WPHA Property is guided by the premise that there are relatively lower levels of contaminants, and that the BTEX and MTBE plume is naturally attenuating. See Cloud Rebuttal Report at pages 8-9, 28; FEI Report at 5 (acknowledging that “the gasoline plume is stable . . . [based upon] groundwater sampling results as of October 2016”). Excavation of the Marianina Site source area will ensure that trend continues. See Cloud Report at pages 62-64. The remediated portion of the WPHA Property would also include non-residential restrictive use. Thus, the RAWP proposes excavating soil moving from the Marianina Site excavation area towards and onto the WPHA Property up to roughly 10 to 20 feet of monitoring well MW-201, at a depth of 8 to 10 feet, as shown as light blue hatch on **Figure 2**. MW-201 was the only well to detect elevated BTEX compounds on the WPHA Property after 2016 (after the remediation of the Getty Site and after the plume began naturally attenuating), so while it is expected that there is contamination in the area of the well, none of the wells beyond MW-201 detected elevated TVOCs. The added benefit of this approach is that it will preserve the integrity of the well, which can continue to be monitored to ensure that the natural attenuation on the Site continues. The total off-site area proposed to be excavated is depicted by the light-blue-colored polygon in **Figure 2**, attached, and represents approximately 1,350 sq ft or around 1,000 tons of soil. This approach is both tailored to effectuate a sufficient remediation while also making use of the documented evidence of attenuation from remediation of the Getty Site and natural attenuation. See Cloud Rebuttal Report at page 40 (The concentration of benzene in MW-203 was 180 µg/L in November 2016 and had decreased to 35 µg/L in February of 2019). Notwithstanding the above, post-excavation end-point soil samples will be collected, as required, from the bottom and sidewalls of the proposed off-site excavation, and will be analyzed for VOCs at a NYS certified laboratory to include EPA Method 8270 and be compared to CP-51 soil guidance values. The end-point soil results will be compared to NYSDEC Commercial Use Soil Cleanup Objectives (SCOs) to determine the excavation terminus. The end-point sampling results will be used to determine if the extent of the excavation must be altered to include excavation and removal of additional gasoline impacted soil. In this scenario, we understand that the remediation will be conducted concurrent to the construction of the garage, which we expect will occur over the course of the next 18 months.
- **Ground Water Monitoring**: The RAWP recommends a groundwater monitoring and sampling program, consisting of five existing wells—MW-201, MW-203, MW-204, MW-205 and MW-106—the locations of which are shown on **Figure 2**, with quarterly sampling for a period post-remediation to be determined and acceptable to the Department. It is proposed that if sampling of these existing wells confirms that a particular well reaches

compliant TVOC concentrations (or acceptable dissolved concentrations to the Department), said wells may be dropped from the long-term sampling plan.

- Due to the aforementioned levels on the WPHA Property, vapor intrusion should not be an issue, especially considering Building 33's distance from the impacted Site.

#### **Option 2: WPURA Constructs A Parking Garage:**

- If the WPURA purchases a portion of the WPHA Property and constructs the municipal garage, its excavation will extend beyond the hatched light-blue area proposed to be excavated in **Option 1**, and will include a portion of the red-colored polygon covered by the dark blue footprint of the garage on **Figure 2**. The WPURA's construction would excavate 3,300 tons of soil on the WPHA Property to a depth of 14 to 15 ftbg. As confirmed in both the FEI Report and all other investigations conducted on the WPHA Property, levels of BTEX compounds detected in the monitoring wells and soil samples outside of the Garage footprint are near or below NYSDEC applicable Guidelines and Standards. That includes TWB-3, TWB4, MW-203, TWB-6, MW-205, and TWB-1, all of which tested with TVOC levels below NYSDEC Guidelines and Standards. Cloud Report at 35 and Figure 9. These wells are all already naturally attenuating or, at worst, stabilized—and they will continue to attenuate at a faster rate once the source area is excavated. Mass removal of all soil in the balance of the red-hatched area as proposed by FEI is simply not warranted as levels in the area do not present a health and safety risk to the residents of the area or the WPHA buildings. Notwithstanding the above, post-excavation end-point soil samples will be collected, as required, from the bottom and sidewalls of the proposed off-site excavation and will be analyzed for VOCs at a NYS certified laboratory to include EPA Method 8270 and be compared to CP-51 soil guidance values. The end-point soil results will be compared to NYSDEC Commercial Use Soil Cleanup Objectives (SCOs) to determine the excavation terminus. The end-point sampling results will be used to determine if the extent of the excavation must be altered to include excavation and removal of additional gasoline impacted soil.
- Ground Water Monitoring: The RAWP recommends a groundwater monitoring and sampling program, consisting of four existing wells (this option will result in the destruction of MW-201)—MW-203, MW-204, MW-205 and MW-106—the locations of which are shown on **Figure 2**, with quarterly sampling for a period to be determined by the Department after the cleanup is completed. We also propose that a fifth monitoring well to replace MW-201 be reconstructed after the garage is built.

#### **Summary**

The proposed RAWP—under either scenario—will result in excavation of the grossly impacted soil at the source area on the Marianina Site, along with offsite excavation at or beyond

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MW-201, the only well showing heightened BTEX compounds. This, together with a proposed long-term monitoring program, planned future non-residential use of the Sites, a proposed vapor barrier, the fact that the water is not potable, and that there is no imminent threat to the public, will ensure that endangerment to human health and the environment is avoided.

If you have any questions, or should you require any additional information related to this matter, please contact this Firm at (914) 276-2560.

Very truly yours,  
HydroEnvironmental Solutions, Inc.

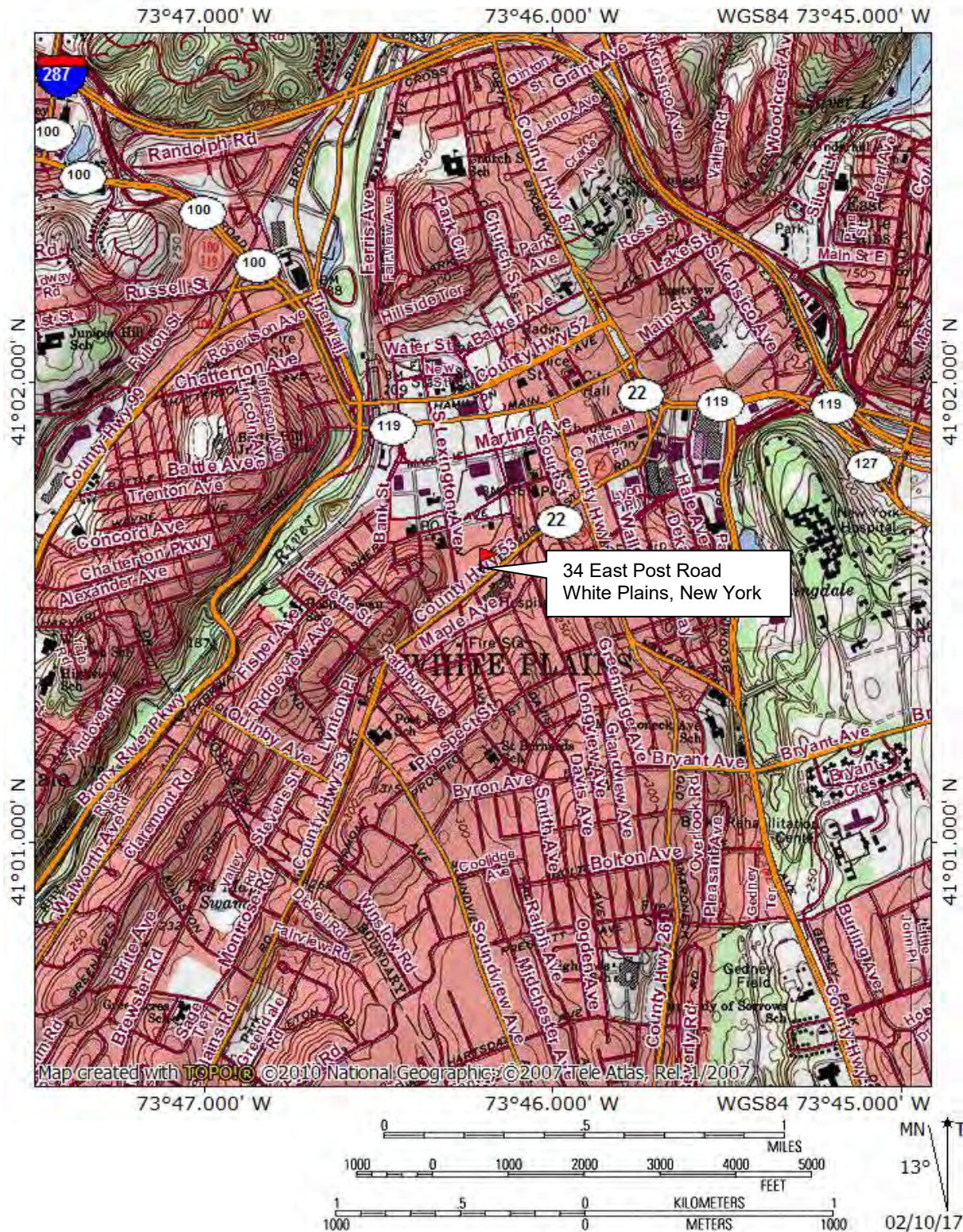


William A. Canavan, PG, LSRP  
President

Enclosures

cc: File

**FIGURE 1**  
**Site Location Map**





# LEGEND

- Permanent Monitor Well:  
Installed December 2015 (FEI)
- Temporary Well Points:  
Installed September 2014 (GES)
- Temporary Well Points:  
Installed April 2015 (FEI)
- Boring Location:  
Ground boring installed  
for PID field screening in  
January 2017 (HES)
- Boring Location:  
Ground boring installed  
for PID field screening and  
soil sample collected for  
laboratory analysis in  
January 2017 (HES)
- Boring Location:  
Ground boring installed  
for PID field screening and  
groundwater sample collected  
for laboratory analysis in  
January 2017 (HES)

HES Proposed Excavation Area-

First Environmental's  
Proposed Offsite Excavation Area-

Proposed Parking Garage -

Proposed HES Offsite  
Excavation area -

FIGURE 2

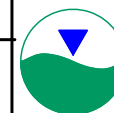
34 EAST POST ROAD  
WHITE PLAINS, NEW YORK  
NYSDEC Spill No.: I608924  
PBS No.: 3-601177

GENERALIZED SITE  
PLAN OF PROPOSED  
CLEAN-UP AREA

SEE ABOVE

MARCH 2021

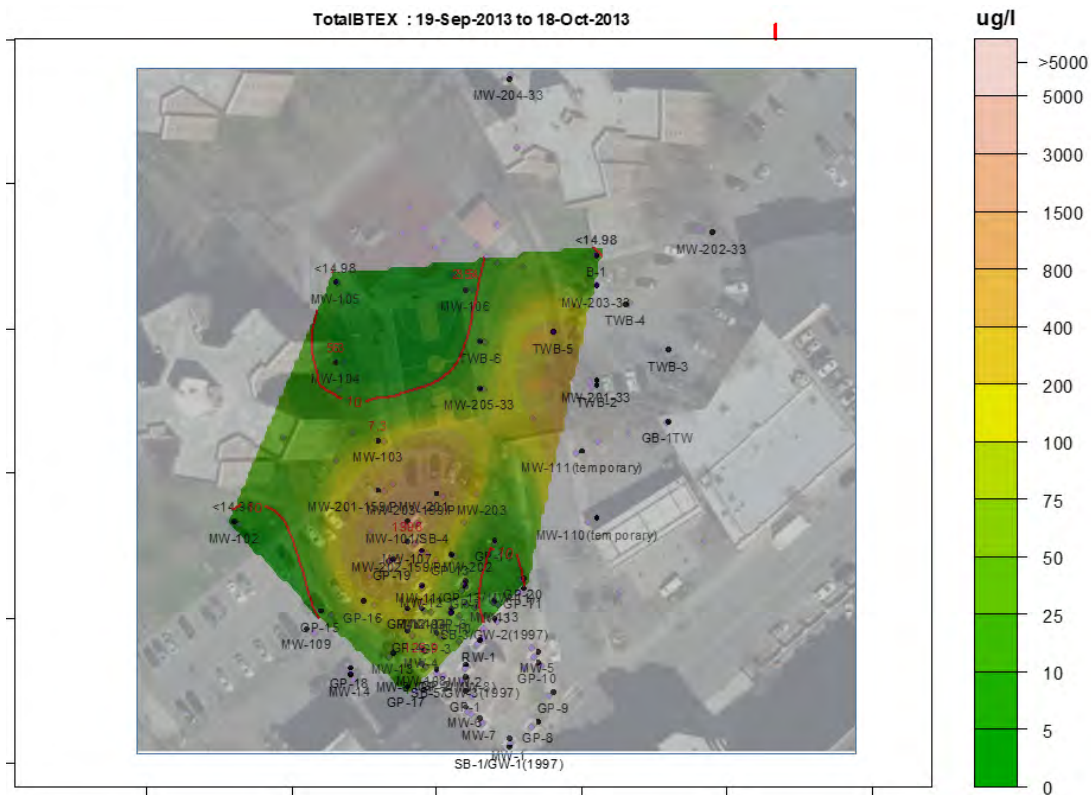
REMEDIAL INVESTIGATION  
WORKPLAN - REVISED



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One Deans Bridge Road  
Somers, New York 10589

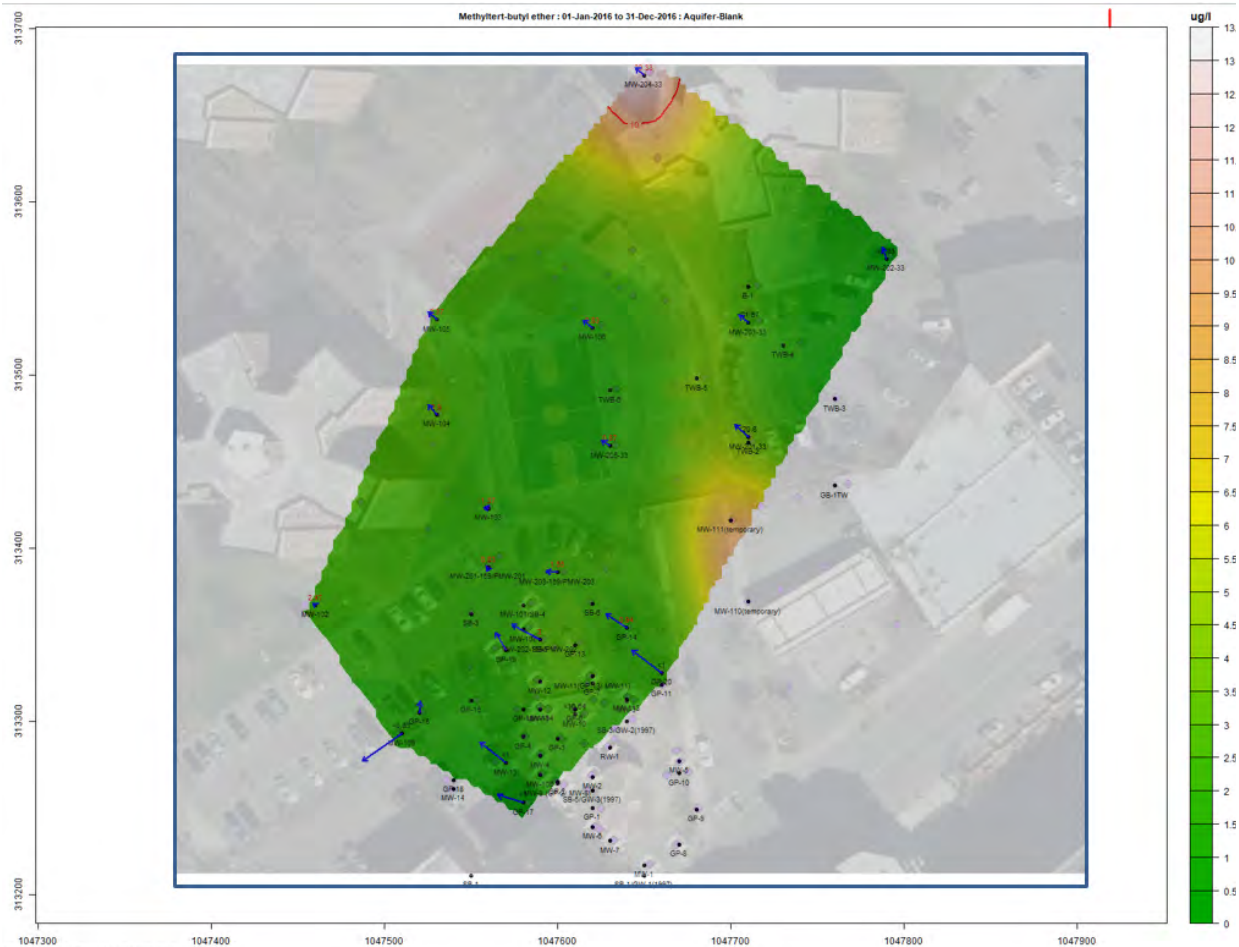
### Figure 7 – Dissolved-phase Total BTEX Plume (October 2013)

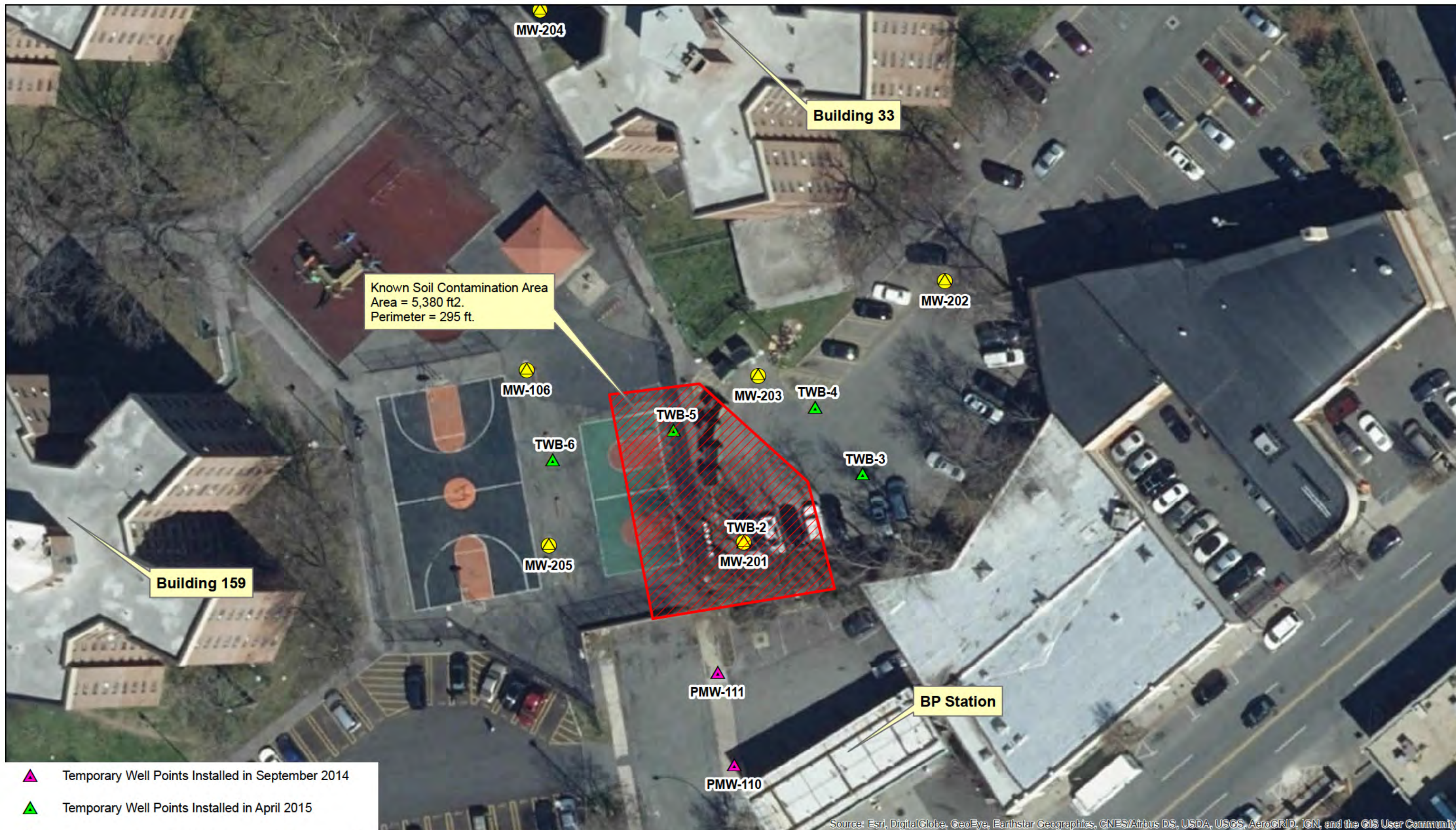
Marianina Property, Getty Site, WPHA Property  
 White Plains, Westchester County, New York



In addition to comingling BTEX Plumes, MTBE has been detected on both the Getty Site and the Marianina Property indicating that both properties had releases of gasoline with MTBE additives. **Figures 5 and 6** included herein and provided below depict the MTBE plumes on the Marianina Property and WPHA Property in 2016 and the MTBE plume on the Getty Site in 2013. While the dissolved-phase MTBE concentrations are below the NYSDEC WQSs, it provides evidence of MTBE releases from both properties.

*Marianina Property and WPHA Property  
White Plains, Westchester County, New York*





- ▲ Temporary Well Points Installed in September 2014
- ▲ Temporary Well Points Installed in April 2015
- Permanent Monitoring Wells Installed in December 2015

0 35 70 Feet  
1 inch = 35 feet

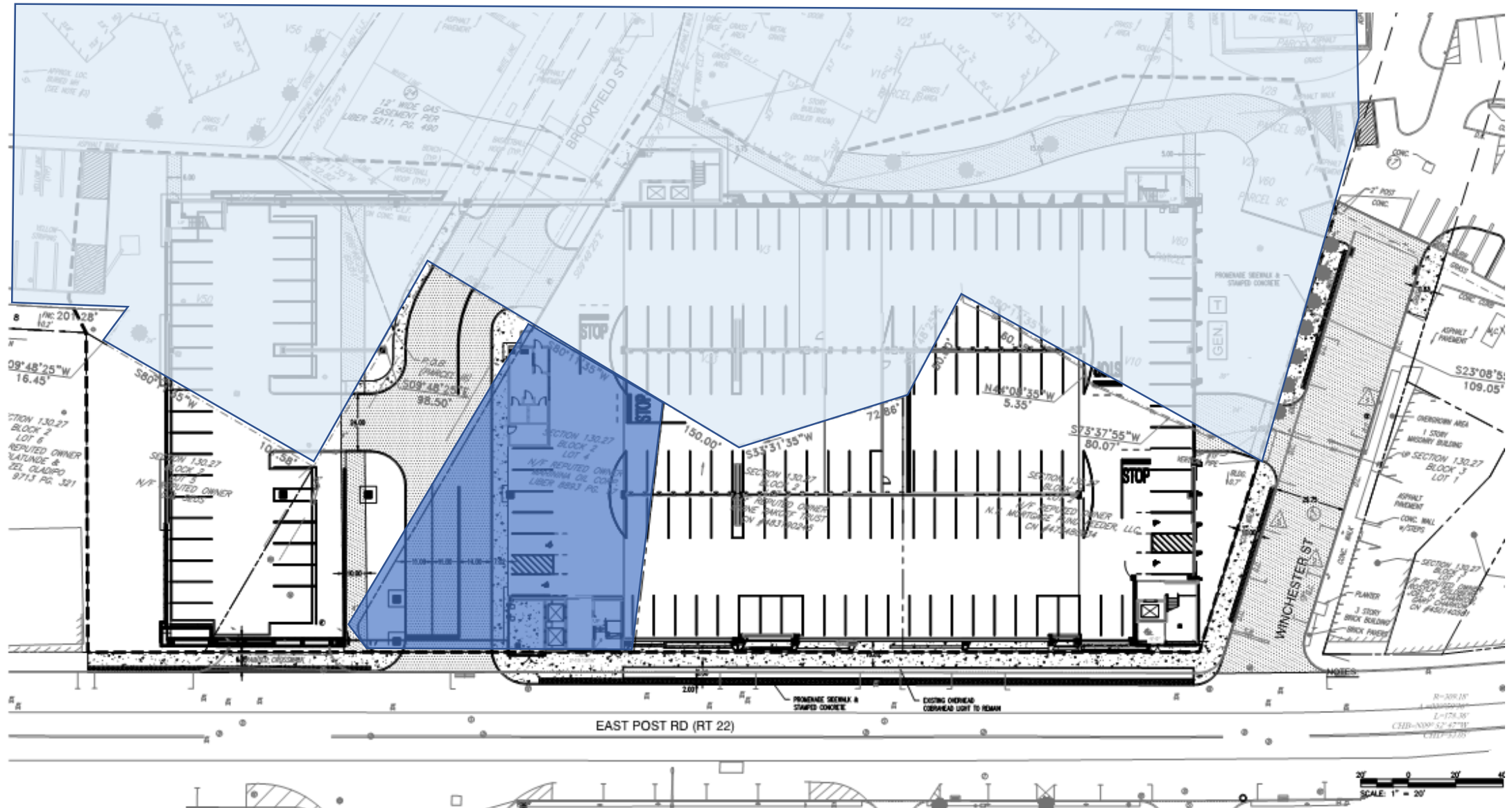


|                                                                           |                                                                                                       |              |         |          |                  |
|---------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|--------------|---------|----------|------------------|
| <b>FIRST ENVIRONMENT</b><br>91 Fulton Street<br>Boonton, New Jersey 07005 | WHITE PLAINS HOUSING AUTHORITY<br>Building 33<br>White Plains, New York<br>FIGURE A<br>AREA ESTIMATES |              |         |          | Date<br>4/2/2019 |
|                                                                           | Revised                                                                                               | Drawn<br>NMT | Checked | Approved |                  |

# EPR Parking Garage

Current Plan

For Below Street Grade Parking Level - Remove 14' to 15' of Soil



# EPR Parking Garage

Current Plan

For Below Street Grade Parking Level - Remove 14' to 15' of Soil

