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Alliance Energy, LLC

REMEDIAL COMPLETION REPORT

Service Station #10954 (17-HMB)

138-50 Hillside Avenue

Jamaica, New York

NYSDEC Spill No. 01-01410

January 2020

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Dawn Cacia
Environmental Scientist II

Klaus Beyrle
Project Geologist P.G.

Jerome Oertling
AFS Project Manager

Prepared for:

Alliance Energy, LLC

Prepared by:

Arcadis of New York, Inc.
213 Court Street
Suite 700
Middletown
Connecticut 06457
Tel 860 503 1500
Fax 860 346 2853

Our Ref.:

30007569

Date:

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1 INTRODUCTION

Arcadis of New York, Inc. (Arcadis) has prepared a Remedial Completion Report (RCR) for site #10954 (17-HMB), located at 138-50 Hillside Avenue, Jamaica, New York (Figure 1 and Figure 2), on behalf of the current owner, Alliance Energy, LLC (Alliance). This RCR is intended to satisfy requirements outlined in the New York State Department of Environmental Conservation (NYSDEC [2010a]) Division of Environmental Remediation (DER) Technical Guidance for Site Investigation and Remediation (DER-10) Section 3.3(c)4 and Appendix 3B to perform a qualitative human health exposure assessment.

2 SITE DESCRIPTION AND HISTORY

2.1 Site Location and Description

The 0.5-acre site is an active petroleum filling station with an automobile repair facility and a convenience store located at 138-50 Hillside Avenue, Jamaica, New York. The approximate geographical coordinates for the site are 40 degrees, 42 minutes, and 13.8 seconds North (Latitude) by 73 degrees, 48 minutes, and 55.3 seconds West (Longitude) and the approximate ground surface elevation is 61 feet above mean sea level (amsl) (Kleinfelder 2008; GES 2010; Arcadis 2012). The surrounding area consists of commercial businesses and residential properties with basements (Figure 3).

The site is bordered to the north by Hillside Avenue, beyond which are automobile dealerships. The site is bordered to the south by commercial and residential properties with basements. The site is bordered to the east by 139th Street, beyond which are commercial and residential properties with basements. The site is bordered to the west by Queens Boulevard, beyond which are commercial and residential properties with basements (Kleinfelder 2008; GES 2010).

The site is currently used as an active retail petroleum filling station with a single-story brick-faced and glass building convenience store and an automobile repair station with four underground hydraulic lifts and service bays. There are six dispenser islands, each with a double-sided multi product dispenser. A solid waste dumpster is located on the southwest corner of the property. The underground storage tank (UST) field contains five 4,000-gallon gasoline USTs and one 1,000-gallon fuel oil UST. Four tank field observation wells provide monitoring points at the corners of the tank field. The entire site is paved or occupied by buildings (Figures 2 and 3) (Kleinfelder 2008; GES 2010).

2.2 Site Chronology

The following environmental cases are associated with the property (Kleinfelder 2008, 2009; GES 2010; Arcadis 2012):

- NYSDEC Case No. 01-01410 was assigned to the site on May 6, 2001 in response to a tank overfill. NYSDEC Case No. 01-01410 remains open. (This RCR is requesting closure of this open case number).
- NYSDEC Case No. 94-02398 was assigned to the site on May 18, 1994 in response a release due to a tank overfill. NYSDEC Case No. 94-02398 was closed on February 11, 2003.
- NYSDEC Case No. 94-09159 was assigned to the site on October 1, 1994 in response to a release due to an equipment failure. NYSDEC Case No. 94-09159 was closed on March 29, 1995.
- NYSDEC Case No. 98-01762 was assigned to the site on May 11, 1998 in response to a release. NYSDEC Case No. 98-01762 was closed on May 11, 1998.
- NYSDEC Case No. 01-09472 was assigned to the site on December 27, 2001 in response to a release due to an equipment failure. NYSDEC Case No. 01-09472 was closed on March 10, 2003.
- NYSDEC Case No. 05-04048 was assigned to the site on July 6, 2005 when liquid phase hydrocarbons (LPH) were observed on an adjacent property (formerly Dura Spec Inc. [Jamaica

Electroplating] located at 87-83 139th Street). ExxonMobil was not considered the responsibility party and NYSDEC Case No. 05-04048 was closed on April 6, 2010.

- NYSDEC Case No. 06-12291 was assigned to the site on February 8, 2007 in response to a release due to a tank test failure. NYSDEC Case No. 06-12291 was closed on May 15, 2007.
- NYSDEC Case No. 08-09073 was assigned to the site on November 10, 2008, due to the discovery of approximately 5 gallons of gasoline in the northernmost regular gasoline UST (UST No. 1) submersible turbine pump (STP) sump during a response to a spill alarm. A faulty O-ring was determined to be the cause of the low rate leak into the sump and was subsequently replaced. NYSDEC Case No. 08-09073 was closed on November 12, 2008.

Between December 2005 and February 2006, subsurface investigations were conducted at the site that included the advancement of three on-site soil borings and one off-site soil boring, which were completed as monitoring wells. Soil samples were collected and analyzed for volatile organic compounds (VOCs) and semi-volatile organic compounds (SVOCs). Soil analytical results were compared to the NYSDEC Recommended Soil Cleanup Objectives (RSCOs) (Kleinfelder 2009). These RSCOs have since been replaced by the NYSDEC Soil Cleanup Levels for Gasoline Contaminated Sites and the Soil Cleanup Levels for Fuel Oil Contaminated Sites listed in the NYSDEC's 2010 Policy Document CP-51 (NYSDEC 2010b) (CP-51), Table 2 and Table 3, respectively. No compounds were detected at concentrations greater than the NYSDEC RSCOs. Details of the investigation, including soil data, were presented in the April 2006 Subsurface Investigation Report (Kleinfelder 2009a).

In June and July 2006, supplemental subsurface investigation activities were conducted at the site that included the advancement of one on-site soil boring, completed as monitoring well MW-5, and test pitting in the vicinity of previously detected metal anomalies. Results of the test pitting revealed that the anomalies consisted of metal pipes and concrete/metal debris at depths of approximately 2 to 4 feet below grade. No metal objects suggesting the presence of USTs were identified. Soil samples were collected and analyzed for VOCs and SVOCs. Soil analytical results were compared to the NYSDEC RSCOs. No compounds were detected at concentrations greater than the NYSDEC RSCOs. Details of the investigation, including soil data, were presented in the December 2006 Supplemental Subsurface Investigation Report (Kleinfelder 2009a).

Between February and April 2007, station upgrade activities were conducted at the site. Activities included tank top upgrades of five 4,000-gallon double-wall fiberglass gasoline USTs and one 1,000-gallon double-wall fiberglass fuel oil UST, the replacement of all vent, vapor recovery, and fill piping with double-wall fiberglass piping, as well as the installation of one 250-gallon used oil aboveground storage tank (AST). Additionally, one 1,000-gallon double-wall fiberglass used oil UST was excavated and disposed of off site, along with 175 gallons of tank bottom and cleaning solutions generated from the removal of the used oil UST. Three post-excavation soil samples were collected and analyzed for VOCs and SVOCs. Soil analytical results were compared to the NYSDEC RSCOs. With the exception of benzo(a)pyrene in one sample (UO-SWS-5'), no constituents were detected at concentrations greater than the NYSDEC RSCOs. Details of upgrades and excavations, including soil data, are presented in the January 2008 Station Upgrade Activity Report (Kleinfelder 2009a).

In April 2008, additional subsurface investigation activities were conducted at the site that included advancement of three on-site soil borings and one off-site soil boring completed as monitoring wells

MW-6 through MW-9. Soil samples were collected and analyzed for VOCs, and soil analytical results were compared to the NYSDEC RSCOs. VOCs were detected at concentrations greater than the NYSDEC RSCOs from soil samples collected from borings associated with MW-6 (6 to 8 feet below ground surface [bgs] and 32.8 to 36.4 feet bgs) and MW-8 (30 to 35 feet bgs). Details of the investigation, including soil data, were presented July 2008 Supplemental Subsurface Investigation Report (Kleinfelder 2009a).

In March and April 2009, additional investigation activities were conducted at the site which included advancement of seven soil borings completed as monitoring well MW-10 and injection wells IP-1 through IP-6. Two soil samples were collected from each boring between 30 and 50 feet bgs for analysis of VOCs and total petroleum hydrocarbons (TPH). Additionally, two soil samples (IP-1 [45 to 50 feet bgs] and IP-6 [45 to 50 feet bgs]) were analyzed for an expanded list of parameters in support of proposed in-situ chemical oxidation (ISCO) pilot testing. Soil analytical results were compared to the NYSDEC RSCOs. VOCs, including benzene, toluene, ethylbenzene, and total xylenes (BTEX), were detected at concentrations greater than the NYSDEC RSCOs in samples collected from each boring at 45 to 50 feet bgs. VOCs, including BTEX, were also detected at concentrations greater than the NYSDEC RSCOs in the samples collected from the borings associated with IP-1 and MW-10 at 30 to 35 feet bgs.

Groundwater samples were collected from all monitoring and injection wells and analyzed for BTEX and methyl-tert butyl ether (MTBE). Additionally, groundwater samples collected from the injection wells were analyzed for additional parameters including TPH – gasoline range organics (TPH-GRO), chromium, and hexavalent chromium. Groundwater analytical results were compared to the NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values (WQS). BTEX and MTBE were detected at concentrations greater than the NYSDEC WQS in samples collected from monitoring wells MW-1, MW-2, MW-6, MW-7, MW-8, and MW-10, and injection wells IP-1 through IP-6. Chromium was also detected at concentrations greater than the NYSDEC WQS in the samples collected from the injection wells. Based on the results of the investigation, ISCO pilot testing was proposed. Details of the investigation, including soil data, are presented in the June 2009 Supplemental Subsurface Investigation Report (Kleinfelder 2009a).

In September and October 2009, ISCO pilot study activities were conducted at the site. During the pilot study, approximately 500 gallons of catalyst and 1,430 gallons of a 6% hydrogen peroxide oxidizer were introduced into the subsurface via injection well IP-2. Following the injection, groundwater samples were collected from monitoring and injection wells. Results of the groundwater sampling indicated that ISCO was a viable remedial option to address dissolved-phased impacts associated with the site, and additional ISCO events were proposed. Details of the pilot study are presented in the December 2009 Feasibility Investigation Report/Site Status Update Report (Kleinfelder 2009b).

In January 2010, Phase II ESA activities were conducted at the site to evaluate Recognized Environmental Conditions (RECs) previously identified in the December 2008 Phase I ESA (Kleinfelder 2008, GES 2010). As part of the Phase II investigation activities, nine soil borings were advanced on site, two of which were completed as monitoring wells MW-A and MW-B. One soil sample was collected from each boring at depths between 3 and 8 feet bgs (MW-A and SB-C) and 28 and 42 feet bgs (MW-B, MW-C, SB-A, SB-E, SB-G, SB-I, and SB-J) and analyzed for VOCs, SVOCs, metals, and polychlorinated biphenyls (PCBs). Soil analytical results were compared to the NYSDEC RSCOs (GES 2010). Several VOCs, including total xylenes, 1,2,4-trimethylbenzene, and 1,3,5-trimethylbenzene, were detected at

concentrations greater than the NYSDEC RSCOs in soil samples collected from the borings associated with MW-B, SB-A, and SB-J. Additionally, SVOCs were detected at concentrations greater than the NYSDEC RSCOs in the soil samples collected from the borings associated with MW-A, MW-B, SB-C, and SB-J. Historical soil concentrations are also greater than the current CP-51 Soil Cleanup Levels.

Groundwater samples were collected from monitoring wells MW-2 through MW-8, MW-B, and MW-C and analyzed for VOCs, including BTEX and MTBE, SVOCs, metals, and PCBs. Groundwater analytical results were compared to the NYSDEC WQS. VOCs, including BTEX and MTBE, SVOCs, and metals were detected at concentrations greater than the NYSDEC WQS in samples collected from monitoring wells, MW-2, MW-6, MW-7, MW-8, MW-B, and MW-C. Details of the investigation, including soil data, are presented in the April 2010 Phase II ESA Report (GES 2010).

In September 2010, one additional soil boring was advanced and completed as injection well IP-7. During installation activities, four soil samples were collected from 3 to 4 feet bgs, 39.5 to 40 feet bgs, 40 to 43 feet bgs, and 43 to 45 bgs, and analyzed for VOCs, including BTEX and MTBE. Soil analytical results were compared to the NYSDEC RSCOs. VOCs, including BTEX and MTBE, were detected at concentrations greater than the NYSDEC RSCOs in samples collected from 40 to 43 feet bgs and 43 to 45 bgs.

Groundwater samples were collected from all monitoring and injection wells and analyzed for BTEX and MTBE. Groundwater analytical results were compared to the NYSDEC WQS. BTEX was detected at concentrations greater than the NYSDEC WQS in samples collected from injection wells IP-1 through IP-7, MW-1, MW-2, MW-6, MW-7, MW-8, and MW-10. Details of the investigation, including soil data, are presented in the December 2010 Site Status Update Report/Supplemental Subsurface Investigation Report (Kleinfelder 2010).

In November 2010, an additional round of ISCO injection activities were conducted at the site. During the injections, approximately 6,000 gallons of catalyst and 11,000 gallons of a 6% hydrogen peroxide oxidizer were introduced into the subsurface via injection wells IP-1 through IP-7. Details of the injections are presented in the December 2010 Site Status Update Report/Supplemental Subsurface Investigation Report (Kleinfelder 2010).

In April 2013, two soil borings were advanced at the site and completed as air sparge (AS) well AS-106 and soil vapor extraction (SVE) observation well SVE-OW-1 consistent with the February 2012 Remediation Action Plan, which proposed installation and operation of a combined AS/SVE remediation system (Arcadis 2012). The wells were installed to support the pilot study associated with the proposed AS/SVE system. As part of installation activities, one soil sample was collected from each boring and one composite soil sample was collected and analyzed for geotechnical parameters. The results of the pilot study indicated that AS/SVE can effectively remediate petroleum hydrocarbon impacts at the Site. Details of the pilot study are presented in the January 2014 Pilot Test Summary Report (Arcadis 2014).

Installation of the AS/SVE system components began in February and March 2014 with six AS wells and two SVE wells, followed by the installation of trenching and piping associated with the AS/SVE system in January and February 2015. Final electrical connections and Con Edison meter installation occurred on January 25, 2017. The soil vapor extraction portion of the system was activated on February 16, 2017. AS activation occurred on March 1, 2017. Operations, monitoring and maintenance (OM&M) of the AS/SVE system has been conducted on a monthly basis since the AS/SVE system came online on

February 16, 2017, except for the period from September 7, 2017 to February 15, 2018, when the catalytic oxidizer (Cat Ox) unit was being sourced and installed (Arcadis 2014, 2015, 2019).

Since January 2011, groundwater monitoring has been conducted at the site by Arcadis. Activities include gauging and groundwater sampling of on-site monitoring and injection wells to monitor dissolved-phase BTEX and MTBE concentrations and groundwater conditions associated with the site. Per the July 2019 Site Status Update Report (SSUR), Arcadis requested that monitoring wells MW-2, MW-3, MW-4, MW-6, MW-7, MW-9, MW-10, MW-B, MW-C, and injection well IP-4 be removed from the sampling program due to dissolved phase concentrations below standards for at least four consecutive quarters of sampling. Groundwater gauging data and analytical results are presented in Table 1.

During the April 2019 groundwater monitoring activities, groundwater samples were collected from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-8, MW-9, MW-10, MW-B, and MW-C and injection wells IP-1, IP-2, IP-3, IP-4, IP-5, IP-6, and IP-7 and analyzed for BTEX and MTBE. One or more constituents of BTEX and MTBE were detected at concentrations greater than the NYSDEC WQS in monitoring well MW-8 and injection well IP-3 (Arcadis 2019).

Additional groundwater monitoring was conducted in July and October 2019. Groundwater samples were collected from monitoring wells MW-8, IP-2, and IP-3 during an interim groundwater monitoring event conducted on July 30, 2019. The semi-annual sampling event was conducted on October 28, 2019. Groundwater samples were collected from monitoring wells MW-1, MW-5, MW-6, MW-8, MW-10, and injection wells IP-2, IP-3, and IP-6 and analyzed for BTEX and MTBE. Groundwater results associated with the interim July 2019 and semi-annual October 2019 sampling events are presented below in Section 3.2.

2.3 Site Characterization

2.3.1 Site Geology

The site is located in the Atlantic Coastal Plain physiographic province. According to the Surficial Geologic Map of New York, Lower Hudson Sheet (Cadwell, et al 1989), this area of New York is underlain by Pleistocene-age glacial till, dominantly consisting of fine to coarse grained sand with interstitial lenses of gravel and silt, which are the remnants of glacial deposition (Arcadis 2012). The bedrock stratigraphic unit underlying the unconsolidated soil was identified as Pleistocene in age (Kleinfelder 2008).

Site-specific geology was determined during historical soil boring activities performed at the site. Subsurface lithology descriptions provided in the available soil boring logs indicate that the site is underlain predominantly by sand and silty sand. An upper layer of fill material consisting of sand, gravel, cobbles, silt, concrete, and other debris is present at most locations onsite extending to a depth of between 2 to 12 feet bgs. The fill is underlain by a sandy unit which extends to a depth of at least 50 feet bgs, the maximum boring depth completed at the site. This sand unit is mostly fine to medium grained but is observed on site to be fine to silty fine at some locations. The sandy unit contains varying amounts of gravel and cobbles, which appear to be most prevalent within the 5 to 25 feet bgs. A layer of silt/sandy silt is present within the sand in the depth range of 32 to 44 feet bgs beneath the northwest portion of the site. The silty layer appears to be between 0.5 feet to 3 feet thick at most locations, with a maximum

thickness of more than 12 feet. Bedrock was not encountered in any of the previous investigations (Kleinfelder 2009a, 2009b, 2010; GES 2010; Arcadis 2012).

2.3.2 Nature and Extent of Petroleum Hydrocarbons

Remedial investigation activities have been conducted at the site since 2006. Since that time, VOCs and SVOCs have been detected at concentrations greater than the NYSDEC (1994) RSCOs for Gasoline Contaminated and Fuel Contaminated Soil in subsurface soil (i.e., sampling depths greater than 10 feet bgs) in on-site soil samples (Kleinfelder 2009a, 2009b, 2010; GES 2010; Arcadis 2012). The CP-51 Soil Cleanup Levels have since replaced the 1994 RSCO values.

The soil data are classified based on sample collection depths as being representative of unsaturated zone soil, smear zone soil (interval of soil between the average and high water table elevations where hydrocarbon impacts are transferred to the soil from groundwater during high water table conditions), and saturated zone soil. With the exception of benzo(k)fluoranthene, detected in a subsurface soil sample (i.e., MW-C) collected from the eastern side of the site near the tank field, available historical soil concentrations of VOCs and SVOCs collected from the unsaturated zone or above smear zone soils are less than the current NYSDEC (2010b) CP-51 Soil Cleanup Levels. Additional historical soil concentrations of VOCs and SVOCs greater than the current CP-51 Soil Cleanup Levels are associated with the saturated zone and are localized to the western portion of the site. Soil samples with VOC and SVOC concentrations above the CP-51 Soil Cleanup Levels are not expected to present a complete exposure pathway due to their depths (i.e., greater than 10 feet bgs). Additional discussion regarding potential exposure pathways is presented in Section 5.

3 QUARTERLY SITE ACTIVITIES

3.1 Site Hydrogeology

The depth to groundwater beneath the site and surrounding area ranges from approximately 35 feet to 39 feet bgs. Actual geologic and hydrogeologic conditions observed during investigation activities indicate that the apparent groundwater flow direction on site is generally towards the north-northwest across the site. Groundwater flow toward the south has also been observed on occasion. The inferred groundwater flow direction observed during the October 2019 sampling was to the northeast. The average horizontal hydraulic gradient across the site is estimated to be approximately 0.001 feet/foot (Arcadis 2012). Groundwater elevations are presented in Table 1. Groundwater elevations and contours associated with the three most recent groundwater monitoring events (i.e., October 31, 2018, April 2, 2019, and October 28, 2019) site are presented on Figures 4 through 6.

3.2 Groundwater Analytical Data

Monitoring well gauging and groundwater analytical data are provided in Table 1, and on Figures 7 through 9. Hydrographs presenting the concentration of total BTEX with respect to groundwater elevation for monitoring wells MW-1, MW-6, and MW-8, and injection wells IP-2, IP-3, IP-5, and IP-6 are presented on Figures 10 through 16.

As discussed above, groundwater samples were collected from three monitoring wells (MW-8, IP-2, and IP-3) during an interim sampling event conducted on July 30, 2019. Groundwater samples were collected from nine monitoring and injection wells (MW-1, MW-5, MW-6, MW-8, MW-10, IP-2, IP-3, IP-5, and IP-6) during the semiannual sampling event conducted on October 28, 2019.

A review of the most recent groundwater data from the interim July 30, 2019 and semi-annual October 28, 2019 monitoring events are discussed below. Analytical laboratory reports associated with these sampling events are included as Appendix A.

- LPH was not detected in any of the wells sampled during the July and October 2019 sampling events.
- Concentrations of BTEX were below NYSDEC WQS standards in on-site monitoring well IP-2 during the July 2019 sampling event. Concentrations of BTEX were below NYSDEC WQS standards in monitoring wells MW-1, MW-5, MW-6, and MW-10, and injection wells IP-2, IP-3, IP-5, and IP-6 during October 2019 event (Table 1, Figure 9).
- One or more BTEX constituents were detected at concentrations greater than the NYSDEC standards in injection well IP-3 during the July 2019 event and monitoring well MW-8 during both the July and October 2019 sampling events (Table 1, Figure 9).
- MTBE was not detected greater than the NYSDEC standard in any of the wells sampled during both the July and October 2019 sampling events (Table 1, Figure 9).

- Constituents of concern (COCs) historically associated with groundwater at the site include BTEX and MTBE. BTEX constituents were detected above NYSDEC WQS in at least one sample collected during the October 2018, April 2019, and October 2019 monitoring events (Figures 7 through Figure 9).

4 SENSITIVE RECEPTORS

The area surrounding the site consists of commercial and residential properties with basements. The site is bordered to the north by Hillside Avenue, beyond which are automobile dealerships. The site is bordered to the south by commercial and residential properties with basements. The site is bordered to the east by 139th Street, beyond which are commercial and residential properties with basements. The site is bordered to the west by Queens Boulevard, beyond which are commercial and residential properties with basements (Kleinfelder 2008, Arcadis 2012).

The nearest surface-water body is Willow Lake, located approximately 1.3 miles northwest of the site.

Records indicate that there are no private potable wells within a ¼-mile radius of the site. There is one private non-potable well located approximately 780 feet south of the site, and one public supply well (Jamaica Water Supply Company Well Q322 [ID#7011735-026]) located approximately ½-mile northwest of the site. Municipal water is supplied to the site and surrounding area by the New York City Department of Environmental Protection (NYCDEP) Bureau of Water and Sewer, and the sources of water are the Catskill and Delaware Watershed reservoirs located in upstate New York (Kleinfelder 2008, Arcadis 2012).

Based on current land use, receptors at the site likely include commercial workers (e.g., retail clerks) and commercial visitors to the gas station, automotive repair facility, and convenience store. Utility/construction workers represent a potential future receptor group.

5 EVALUATION OF EXPOSURE PATHWAYS

5.1 Direct Contact Exposure to Soil

Because the entire site is paved, exposure to surface soil via inhalation, ingestion and/or dermal contact is not anticipated to occur. Additionally, on-site receptors such as commercial workers and visitors would not be expected to be involved in intrusive activities and, as such, exposure to subsurface soil beneath the pavement does not represent a complete exposure pathway for current receptors. As discussed above, benzo(k)fluoranthene has been detected in one historical on-site soil sample collected from 28 to 30 feet bgs at a concentration greater than the current NYSDEC CP-51 Soil Cleanup Levels. Additional historical soil concentrations of VOCs and SVOCs greater than the current CP-51 Soil Cleanup Levels are associated with the saturated zone, as is supported by available boring logs which note increasing moisture with depth corresponding to saturated conditions at deeper intervals. As such, detected concentrations associated with these samples may be more reflective of groundwater conditions than soil. Utility/construction workers may be exposed to subsurface soils where impacts remain during future intrusive activities; however, these workers would be expected to operate under an appropriate health and safety plan (e.g., use of personal protective equipment) that would mitigate potential exposures.

5.2 Inhalation Exposure to Soil Vapor in Enclosed (Indoor) Air Space or Ambient (Outdoor) Air

As discussed above, the site consists of a single-story, brick-faced and glass building currently used as a convenience store and an automotive repair facility. The area surrounding the site consists of commercial businesses and residential properties with basements. The United States Environmental Protection Agency (USEPA) defines a vertical separation distance as the “thickness of clean, biologically active soil between the highest vertical extent of a contaminant source and the lowest point of an overlying building” and recommends that the vertical distance is greater than or equal to 6 feet (USEPA 2015). The depth to groundwater measured in monitoring wells on and off site ranges from approximately 35 to 39 feet bgs. Based on previous investigations, the vertical separation distance is greater than the USEPA recommended distance of 6 feet; therefore, the vapor intrusion exposure pathway is incomplete (Kleinfelder 2009a, 2009b, 2010; GES 2010; Arcadis 2012). Based on this information, the potential for soil vapor intrusion into nearby structures is expected to be insignificant and exposure to soil vapors in enclosed (i.e., indoor) air space or ambient (i.e., outdoor) air space is not anticipated to occur on or off site.

5.3 Ingestion Exposure to Groundwater through Potable Wells

Groundwater represents a potential exposure medium for off-site receptors; however, historical investigations to date have demonstrated that the groundwater plume is stable and/or decreasing and is localized to the area west of the on-site building, in the vicinity of monitoring well MW-8. Records indicate that there is one private non-potable well located approximately 780 feet south of the site, and one public supply well located approximately ½-mile northwest of the site. Based on the flow direction of groundwater at the site, the private non-potable well is potentially downgradient of the site and the public

supply well is potentially upgradient of the site. As discussed above, investigations to date have demonstrated that the groundwater plume is stable and/or decreasing and is localized to the site. Furthermore, NYSDEC restricts installation of potable water supply wells. Based on the absence of public potable water supply wells in the area and that municipal water is supplied to the site and surrounding area, exposure to groundwater via ingestion and/or dermal contact is not anticipated to occur on or off site

5.4 Inhalation Exposure to Groundwater Vapor in Enclosed (Indoor) Air Space or Ambient (Outdoor) Air

Depth to groundwater at the site and surrounding area ranges from approximately 35 feet to 39 feet bgs. Based on the depth to groundwater, exposure to groundwater vapor in enclosed (i.e., indoor) air or ambient (i.e., outdoor) air is not anticipated to occur on or off site because it is anticipated that constituent concentrations volatilizing from groundwater would naturally attenuate as the compounds migrate toward the ground surface.

5.5 Ingestion Exposure to Surface-Water

As discussed above, the nearest surface-water body is Willow Lake, located approximately 1.3 miles northwest of the site. It is anticipated that constituent concentrations would naturally attenuate as the compounds migrate away from the on-site source area to this off-site surface water body. Based on this and the distances of these water bodies with respect to the site, exposure to site-related impacts in surface-water via ingestion is not anticipated to occur.

6 SUMMARY AND CONCLUSIONS

Groundwater monitoring has been conducted at the site by Arcadis since January 2011. Investigations to date have demonstrated that the groundwater plume is stable and/or decreasing and is localized to the area west of the on-site building, in the vicinity of monitoring well MW-8.

Potential on- and off-site receptors and potential exposure pathways have been evaluated for COCs associated with the site. The area surrounding the site consists of commercial and residential properties. Potential on-site receptors include commercial workers (e.g., retail clerks) and commercial visitors to the gas station, automotive repair facility, and convenience store. Utility/construction workers represent a potential future receptor group. Soil and groundwater represent potential exposure media at the site. Soil does not represent a complete exposure pathway because the entire site is paved. The depth to groundwater measured in on-site monitoring wells ranges from approximately 35 feet to 39 feet bgs and site groundwater is not used as a potable source (potable water is supplied by a municipal source for all of NYC); therefore, groundwater does not represent a complete pathway for direct contact (i.e. ingestion and dermal contact). Vapor migrating from soil and groundwater also represent potential exposure media at the site. However, site-related impacts are localized to the site. Available soil analytical results indicate the vertical separation distance is greater than the USEPA recommended distance of 6 feet; therefore, the vapor intrusion exposure pathway is incomplete. Groundwater analytical data associated with remaining on- and off-site monitoring wells indicate that impacts are localized to the area of the area west of the on-site building, in the vicinity of monitoring well MW-8. Residential properties are located immediately south of the site. However, based on the depth to groundwater, exposure via inhalation of soil and/or groundwater vapor in indoor or ambient air does not represent a complete exposure pathway due to the natural attenuation of constituent concentrations as the compounds migrate towards the ground surface.

As discussed above, remedial activities conducted at the site include the installation and start-up of an AS/SVE system in February 2017 (Arcadis 2019). As of December 2019, the AS/SVE system has recovered 118 pounds of total BTEX and 1,842 pounds of TPH (Arcadis 2019). Table 2 and Table 3 summarize the AS/SVE system operational data and mass recovery.

It is Arcadis' conclusion that previous remedial activities have resulted in the removal and reduction of bulk hydrocarbon mass, to the extent feasible, in groundwater at the site and that groundwater quality is expected to continue to improve through ongoing natural degradation processes. Available groundwater analytical data indicates that concentrations of one or more constituents of BTEX and concentrations of MTBE detected in site groundwater have demonstrated an overall decreasing trend since groundwater sampling was initiated, and that impacts are localized to the site. A review of the surrounding area and site information, as well as NYSDEC restrictions on the installation of potable water supply wells, indicates that these localized impacts do not pose a significant risk to nearby receptors or the surrounding environment. In consideration of the above and the absence of complete exposure pathways between site-related impacts and potential receptors, Arcadis recommends that no further action is taken at the site and respectfully requests closure of NYSDEC Spill No. 01-01410.

7 REFERENCES

Arcadis. 2012. Remedial Action Plan. Mobil Branded Service Station. Former Mobil #10954 (17-HMB), 138-50 Hillside Avenue, Jamaica, New York, NYSDEC Case No. 01-01410, PBS No. 2-157228. February.

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TABLES

Table 1
Monitoring Well Gauging And Groundwater Analytical Data
February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	Comments
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-1	2/6/2006	99.70	36.22	ND	ND	63.48	**390**	**7,220**	**2,990**	**12,800**	23,400	ND<10	ND<1,000	NA	
	5/9/2006	99.70	36.42	ND	ND	63.28	**330**	**9,070**	**2,960**	**15,100**	27,460	ND<20	ND<2,000	NA	
	7/14/2006	99.70	35.89	ND	ND	63.81	**223**	**5,480**	**1,280**	**7,530**	14,513	1.4	ND<200	NA	
	10/4/2006	99.70	36.02	ND	ND	63.68	**95.5**	**5,660**	**1,860**	**9,400**	17,016	ND<25	ND<2,500	NA	
	1/10/2007	99.70	36.15	ND	ND	63.55	**67.7**	**6,760**	**2,120**	**11,300**	20,248	ND<50	ND<5,000	NA	
	4/23/2007	99.70	35.98	ND	ND	63.72	**23.1**	**4,920**	**1,910**	**8,880**	15,733	ND<20	ND<2,000	NA	
	7/18/2007	99.70	35.70	ND	ND	64.00	ND<50	**9,330**	**3,550**	**17,200**	30,080	ND<50	ND<5,000	NA	
	10/9/2007	99.70	36.91	ND	ND	62.79	**6.8 J**	**4,460**	**2,230**	**9,250**	15,947	ND<10	ND<100	NA	
	1/11/2008	99.70	36.32	ND	ND	63.38	ND<25	**3,400**	**1,600**	**7,880**	12,880	ND<25	ND<100	NA	
	4/30/2008	99.70	36.57	ND	ND	63.13	ND<50	**5,430**	**3,480**	**14,400**	23,310	ND<50	ND<100	NA	
	7/2/2008	99.70	36.61	ND	ND	63.09	ND<10	**3,930**	**1,640**	**8,630**	14,200	ND<10	ND<100	NA	
	10/15/2008	99.70	36.95	ND	ND	62.75	**6.9 J**	**3,060**	**2,670**	**13,900**	19,637	ND<20	ND<100	NA	
	1/21/2009	99.70	36.75	ND	ND	62.95	ND<25	**4,850**	**3,740**	**19,200**	27,790	ND<25	ND<100	NA	
	4/8/2009	99.70	37.11	ND	ND	62.59	ND<20	**3,320**	**3,330**	**15,700**	22,350	ND<20	ND<100	NA	
	7/7/2009	99.70	36.62	ND	ND	63.08	ND<20	**3,030**	**2,850**	**11,700**	17,580	ND<20	ND<100	0.74	
	10/28/2009	99.70	36.71	ND	ND	62.99	ND<20	**1,720**	**3,000**	**9,530**	14,250	ND<20	ND<100	1.48	
	1/19/2010	99.70	36.61	ND	ND	63.09	ND<20	**1,540**	**2,450**	**8,350**	12,340	ND<20	ND<100	1.19	
	4/26/2010	99.70	35.14	ND	ND	64.56	ND<10	**1,500**	**2,100**	**8,130**	11,730	ND<10	ND<100	1.15	
	7/14/2010	99.70	35.75	ND	ND	63.95	ND<25	**1,140**	**1,850**	**7,980**	10,970	ND<25	ND<100	2.79	
	10/1/2010	99.70	36.44	ND	ND	63.26	ND<20	**665**	**1,610**	**7,020**	9,295	ND<20	ND<100	1.95	
	1/24/2011	99.70	37.12	ND	ND	62.58	ND<3.0	**640**	**2,500**	**10,000**	13,140	3.0 J	ND<200	0.79	
	4/17/2011	99.70	36.34	ND	ND	63.36	1 J	**330**	**1,900**	**5,900**	8,131	1 J	ND<200	2.46	
	7/8/2011	99.70	36.34	ND	ND	63.36	ND<3.0	**360**	**2,100**	**7,800**	10,260	ND<3.0	ND<200	NA	
	10/25/2011	99.70	35.18	ND	ND	64.52	ND<3.0	**210**	**1,100**	**4,100**	5,410	ND<3.0	NA	NA	
	4/19/2012	99.70	36.51	ND	ND	63.19	ND<3.0	**270**	**1,600**	**8,000**	9,870	ND<3.0	NA	NA	
	10/3/2012	99.70	36.65	ND	ND	63.05	ND<3.0	**260**	**2,600**	**13,000**	15,860	ND<3.0	NA	NA	
	4/11/2013	99.70	37.15	ND	ND	62.55	ND<5.0	**110**	**1,600**	**7,800**	9,510	ND<5.0	NA	NA	
	10/17/2013	99.70	37.28	ND	ND	62.42	**11**	**87**	**1,800**	**8,200**	10,098	**21**	NA	NA	
	4/22/2014	99.70	37.24	ND	ND	62.46	ND<10	**69**	**2,300**	**11,000**	13,369	ND<10	NA	NA	
	10/23/2014	99.70	37.04	ND	ND	62.66	ND<13	**60**	**2,600**	**13,000**	15,660	ND<13	NA	NA	
	4/6/2015	99.70	36.40	ND	ND	63.30	ND<3.0	**22**	**980**	**5,800**	6,802	ND<3.0	NA	NA	
	10/1/2015	99.70	37.13	ND	ND	62.57	ND<0.5	4	**490**	**1,200**	1,694	1	NA	NA	
	4/7/2016	99.70	37.37	ND	ND	62.33	ND<5.0	**10**	**1,600**	**7,600**	9,210	ND<5.0	NA	NA	
	10/31/2016	99.70	38.19	ND	ND	61.51	ND<3.0	4 J	**900**	**3,200**	4,104 J	ND<3.0	NA	NA	
	4/18/2017	99.70	37.55	ND	ND	62.15	ND<1.0	4	**1,100**	**3,400**	4,504	ND<1.0	NA	NA	
	10/6/2017	99.70	37.01	ND	ND	62.69	ND<0.5	2	**190**	**220**	412	ND<0.5	NA	NA	
	4/6/2018	99.70	36.82	ND	ND	62.88	ND<0.5	0.7 J	**26**	**1,000**	1027 J	ND<0.5	NA	NA	
	10/31/2018	99.70	36.72	ND	ND	62.98	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	99.70	35.49	ND	ND	64.21	ND<0.2	ND<0.2	ND<0.4	3 J	3 J	ND<0.2	NA	NA	
	7/30/2019	99.70	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	99.70	36.36	ND	ND	63.34	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	
MW-2	2/6/2006	99.82	36.25	ND	ND	63.57	**23.7**	**31.7**	**106**	**1,120**	1,281	**11.1**	ND<100	NA	
	5/9/2006	99.82	36.45	ND	ND	63.37	**31.6**	**79.6**	**309**	**978**	1,398	6.9	ND<100	NA	
	7/14/2006	99.82	35.90	ND	ND	63.92	**46.2**	**290**	**1,140**	**3,700**	5,176	2.6	ND<200	NA	
	10/4/2006	99.82	36.05	ND	ND	63.77	**44.6**	**250**	**559**	**1,710**	2,564	2.6	ND<200	NA	
	1/10/2007	99.82	36.18	ND	ND	63.64	**86.0**	**426**	**892**	**2,580**	3,984	2.5	ND<250	NA	
	4/23/2007	99.82	36.00	ND	ND	63.82	**13.4**	**14.1**	**195**	**443**	666	**15.7**	ND<100	NA	

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		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	Comments
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-2 (continued)	7/18/2007	99.82	35.75	ND	ND	64.07	**22.8**	**20.2**	**46.9**	**231**	321	7.1	ND<100	NA	
	10/9/2007	99.82	35.45	ND	ND	64.37	**6.3**	1.5	**11.3**	**24.2**	43.3	7.0	ND<100	NA	
	1/11/2008	99.82	36.38	ND	ND	63.44	**14.6**	**12.0**	**273**	**499**	799	ND<2.5	ND<100	NA	
	4/30/2008	99.82	36.60	ND	ND	63.22	**3.9**	**21.0**	**331**	**624**	980	2.8	ND<100	NA	
	7/2/2008	99.82	36.62	ND	ND	63.20	**1.2**	1.5	**32.4**	**20.8**	55.9	**10.5**	ND<100	NA	
	10/15/2008	99.82	36.92	ND	ND	62.90	**1.8**	**44.2**	**463**	**1,570**	2,079	8.8	ND<100	NA	
	1/21/2009	99.82	36.75	ND	ND	63.07	0.86 J	**19.3**	**400**	**316**	736	**32.1**	ND<100	NA	
	4/8/2009	99.82	37.11	ND	ND	62.71	**1.5 J**	**17.4**	**324**	**259**	602	**20.7**	ND<100	NA	
	7/7/2009	99.82	36.63	ND	ND	63.19	1.0	1.5	**28.1**	**50.2**	80.8	**29.6**	ND<100	1.22	
	10/28/2009	99.82	36.72	ND	ND	63.10	0.83 J	**19.1**	**455**	**763**	1,238	0.31 J	ND<100	1.56	
	1/19/2010	99.82	36.61	ND	ND	63.21	0.95 J	**13.0**	**304**	**238**	556	3.1	ND<100	1.27	
	4/26/2010	99.82	35.16	ND	ND	64.66	0.68 J	**11.8**	**357**	**288**	657	0.71 J	ND<100	1.14	
	7/14/2010	99.82	35.75	ND	ND	64.07	**1.1**	2.2	**21.5**	**31.1**	55.9	2.6	ND<100	2.14	
	10/1/2010	99.82	36.45	ND	ND	63.37	ND<5.0	**32.7**	**548**	**1,050**	1,631	ND<5.0	ND<100	3.02	
	1/24/2011	Unable to locate well under snow					NS	NS	NS	NS	NS	NS	NS	NS	Unable to locate.
	4/17/2011	99.82	36.34	ND	ND	63.48	0.7 J	**13**	**270**	**280**	563.7	ND<0.5	ND<200	1.98	
	7/8/2011	99.82	36.36	ND	ND	63.46	1.0	0.9 J	**21**	**11**	33.9	1 J	ND<200	NA	
	10/25/2011	99.82	35.19	ND	ND	64.63	0.6 J	**11**	**140**	**290**	442	ND<0.5	NA	NA	
	4/19/2012	99.82	36.50	ND	ND	63.32	0.7 J	1	**38**	**8**	47.7	0.8 J	NA	NA	
	10/3/2012	99.82	36.64	ND	ND	63.18	1 J	**6**	**220**	**360**	587	1 J	NA	NA	
	4/11/2013	99.82	37.16	ND	ND	62.66	**2**	**8**	**210**	**340**	560	1	NA	NA	
	10/17/2013	99.82	37.32	ND	ND	62.50	0.7 J	0.9 J	0.9 J	2	4.5	0.9 J	NA	NA	
	4/22/2014	99.82	37.28	ND	ND	62.54	ND<0.5	0.6 J	0.9 J	16	17.5	1 J	NA	NA	
	10/23/2014	99.82	37.04	ND	ND	62.78	ND<0.5	ND<0.5	ND<0.5	1	1	ND<0.5	NA	NA	
	4/6/2015	99.82	36.44	ND	ND	63.38	ND<0.5	ND<0.5	1	0.9 J	1.9 J	ND<0.5	NA	NA	
	10/1/2015	99.82	37.11	ND	ND	62.71	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/7/2016	99.82	37.41	ND	ND	62.41	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2016	99.82	38.15	ND	ND	61.67	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/18/2017	99.82	38.84	ND	ND	60.98	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/6/2017	99.82	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	4/6/2018	99.82	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	10/31/2018	99.82	36.72	ND	ND	63.10	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	99.82	35.48	ND	ND	64.34	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	99.82	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	99.82	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
MW-3	2/6/2006	101.72	38.22	ND	ND	63.50	0.64 J	**8.0**	**29.0**	**165**	203	2.9	ND<100	NA	
	5/9/2006	101.72	38.42	ND	ND	63.30	0.46 J	0.57 J	2.5	**12.9**	16.4	4.2	ND<100	NA	
	7/14/2006	101.72	37.88	ND	ND	63.84	ND<0.50	ND<1.0	ND<1.0	ND<1.0	BRL	1.6	ND<200	NA	
	10/4/2006	101.72	38.00	ND	ND	63.72	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	1.0	ND<100	NA	
	1/10/2007	101.72	38.15	ND	ND	63.57	0.44 J	ND<1.0	ND<1.0	0.48 J	0.9	2.1	ND<100	NA	
	4/23/2007	101.72	38.00	ND	ND	63.72	0.36 J	ND<1.0	0.23 J	0.57 J	1.16	1.3	ND<100	NA	
	7/18/2007	101.72	37.73	ND	ND	63.99	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	0.40 J	ND<100	NA	
	10/9/2007	101.72	38.90	ND	ND	62.82	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	1/11/2008	101.72	38.31	ND	ND	63.41	ND<1.0	ND<1.0	ND<1.0	0.58 J	0.5	ND<1.0	ND<100	NA	
	4/30/2008	101.72	38.59	ND	ND	63.13	ND<1.0	0.33 J	0.39 J	1.8	2.5	ND<1.0	ND<100	NA	
	7/2/2008	101.72	38.61	ND	ND	63.11	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	10/15/2008	101.83	38.98	ND	ND	62.85	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	

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		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	Comments
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-3 (continued)	1/21/2009	101.83	38.76	ND	ND	63.07	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	4/8/2009	101.83	39.11	ND	ND	62.72	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	7/7/2009	101.83	38.64	ND	ND	63.19	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	1.01	
	10/28/2009	101.83	38.69	ND	ND	63.14	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	1.74	
	1/19/2010	101.83	38.60	ND	ND	63.23	ND<1.0	ND<1.0	ND<1.0	0.33 J	0.33	ND<1.0	ND<100	2.56	
	4/26/2010	101.83	37.14	ND	ND	64.69	ND<1.0	0.39 J	ND<1.0	ND<1.0	0.39	ND<1.0	ND<100	1.70	
	7/14/2010	101.83	37.74	ND	ND	64.09	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.71	
	10/1/2010	101.83	38.42	ND	ND	63.41	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	0.68	
	1/24/2011	101.83	39.04	ND	ND	62.79	ND<0.5	ND<0.5	ND<0.5	3.0	3.0	ND<0.5	ND<200	0.69	
	4/17/2011	101.83	38.35	ND	ND	63.48	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	1.12	
	7/8/2011	101.83	38.35	ND	ND	63.48	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NA	
	10/25/2011	101.83	37.14	ND	ND	64.69	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/19/2012	101.83	38.49	ND	ND	63.34	ND<0.5	ND<0.5	ND<0.5	0.9 J	0.9	ND<0.5	NA	NA	
	10/3/2012	101.83	38.64	ND	ND	63.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/11/2013	101.83	39.15	ND	ND	62.68	ND<0.5	ND<0.5	ND<0.5	1	1	ND<0.5	NA	NA	
	10/17/2013	101.83	39.25	ND	ND	62.58	ND<0.5	ND<0.5	ND<0.5	0.5 J	0.5	ND<0.5	NA	NA	
	4/22/2014	101.83	39.24	ND	ND	62.59	ND<0.5	ND<0.5	ND<0.5	3	3	ND<0.5	NA	NA	
	10/23/2014	101.83	39.04	ND	ND	62.79	ND<0.5	ND<0.5	ND<0.5	0.9 J	0.9	ND<0.5	NA	NA	
	4/6/2015	101.83	38.39	ND	ND	63.44	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/1/2015	101.83	39.13	ND	ND	62.70	ND<3.0	ND<3.0	ND<3.0	ND<3.0	BRL	ND<3.0	NA	NA	
	4/7/2016	101.83	39.36	ND	ND	62.47	ND<0.5	ND<0.5	1	8	9	ND<0.5	NA	NA	
	10/31/2016	101.83	40.22	ND	ND	61.61	ND<0.5	ND<0.5	ND<0.5	0.8 J	0.8 J	ND<0.5	NA	NA	
	4/18/2017	101.83	39.55	ND	ND	62.28	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/6/2017	101.83	39.01	ND	ND	62.82	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/6/2018	101.83	39.84	ND	ND	61.99	ND<0.5	ND<0.5	ND<0.5	4	4	ND<0.5	NA	NA	
	10/31/2018	101.83	38.98	ND	ND	62.85	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	101.83	38.03	ND	ND	63.80	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	101.83	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	101.83	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
MW-4	2/6/2006	101.29	37.65	ND	ND	63.64	0.25 J	ND<1.0	ND<1.0	0.41 J	0.66	3.2	ND<100	NA	
	5/9/2006	101.29	37.83	ND	ND	63.46	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	0.36 J	ND<100	NA	
	7/14/2006	101.29	37.31	ND	ND	63.98	ND<0.5	ND<1.0	ND<1.0	ND<1.0	BRL	2.6	ND<200	NA	
	10/4/2006	101.29	37.41	ND	ND	63.88	**2.4**	ND<1.0	ND<1.0	ND<1.0	2.4	4.5	ND<100	NA	
	1/10/2007	101.29	37.55	ND	ND	63.74	**12.4**	ND<1.0	ND<1.0	ND<1.0	12.4	8.0	ND<100	NA	
	4/23/2007	101.29	37.37	ND	ND	63.92	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	1.5	ND<100	NA	
	7/18/2007	101.29	37.10	ND	ND	64.19	0.40 J	ND<1.0	ND<1.0	ND<1.0	0.40	6.0	ND<100	NA	
	10/9/2007	101.29	36.82	ND	ND	64.47	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	2.8	ND<100	NA	
	1/11/2008	101.29	37.71	ND	ND	63.58	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	0.41 J	ND<100	NA	
	4/30/2008	101.29	37.96	ND	ND	63.33	ND<1.0	ND<1.0	ND<1.0	1.2	1.2	ND<1.0	ND<100	NA	
	7/2/2008	101.29	38.00	ND	ND	63.29	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	2.1	ND<100	NA	
	10/15/2008	101.29	38.31	ND	ND	62.98	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	1.5	ND<100	NA	
	1/21/2009	101.29	38.04	ND	ND	63.25	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	2.2	ND<100	NA	
	4/8/2009	101.29	38.45	ND	ND	62.84	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	3.0	ND<100	NA	
	7/7/2009	101.29	38.02	ND	ND	63.27	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	1.7	ND<100	1.20	
	10/28/2009	101.29	38.09	ND	ND	63.20	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	1.9	ND<100	1.90	
	1/19/2010	101.29	37.90	ND	ND	63.39	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.21	
	4/26/2010	101.29	36.50	ND	ND	64.79	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	0.61 J	ND<100	5.27	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data
February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-4 (continued)	7/14/2010	101.29	37.14	ND	ND	64.15	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	5.19	
	10/1/2010	101.29	37.82	ND	ND	63.47	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	1.5	ND<100	2.64	
	1/24/2011	101.29	38.52	ND	ND	62.77	ND<0.5	ND<0.5	ND<0.5	0.7 J	0.7	ND<0.5	ND<200	4.40	
	4/17/2011	101.29	37.72	ND	ND	63.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	0.8 J	ND<200	3.25	
	7/8/2011	101.29	37.74	ND	ND	63.55	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	0.7 J	ND<200	NA	
	10/25/2011	101.29	36.58	ND	ND	64.71	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/19/2012	101.29	37.87	ND	ND	63.42	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NA	NA	
	10/3/2012	101.29	38.04	ND	ND	63.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/11/2013	101.29	38.52	ND	ND	62.77	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/17/2013	101.29	38.65	ND	ND	62.64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/22/2014	101.29	38.63	ND	ND	62.66	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6	ND<0.5	NA	NA	
	10/23/2014	101.29	38.42	ND	ND	62.87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/6/2015	101.29	37.79	ND	ND	63.50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/1/2015	101.29	38.52	ND	ND	62.77	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/7/2016	101.29	38.75	ND	ND	62.54	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2016	101.29	39.59	ND	ND	61.70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/18/2017	101.29	39.05	ND	ND	62.24	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/6/2017	101.29	38.30	ND	ND	62.99	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/6/2018	101.29	38.28	ND	ND	63.01	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2018	101.29	38.24	ND	ND	63.05	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	101.29	37.07	ND	ND	64.22	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	101.29	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	101.29	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
MW-5	7/14/2006	99.30	35.71	ND	ND	63.59	ND<0.50	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<200	NA	
	10/4/2006	99.30	35.94	ND	ND	63.36	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	1/10/2007	99.30	35.96	ND	ND	63.34	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	4/23/2007	99.30	35.82	ND	ND	63.48	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	7/18/2007	99.30	35.55	ND	ND	63.75	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	10/9/2007	99.30	35.25	ND	ND	64.05	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	1/11/2008	99.30	36.16	ND	ND	63.14	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	4/30/2008	99.30	36.40	ND	ND	62.90	ND<1.0	0.61 J	0.55 J	3.6	4.8	ND<1.0	ND<100	NA	
	7/2/2008	99.30	36.46	ND	ND	62.84	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	10/15/2008	99.59	36.79	ND	ND	62.80	ND<1.0	ND<1.0	0.28 J	0.76 J	1.04	ND<1.0	ND<100	NA	
	1/21/2009	99.59	36.61	ND	ND	62.98	0.31 J	ND<1.0	ND<1.0	ND<1.0	0.31	ND<1.0	ND<100	NA	
	4/8/2009	99.59	36.96	ND	ND	62.63	0.31 J	ND<1.0	ND<1.0	ND<1.0	0.31	ND<1.0	ND<100	NA	
	7/7/2009	99.59	36.46	ND	ND	63.13	0.39 J	ND<1.0	ND<1.0	ND<1.0	0.39	ND<1.0	ND<100	1.05	
	10/28/2009	99.59	36.53	ND	ND	63.06	0.25 J	ND<1.0	ND<1.0	ND<1.0	0.25	ND<1.0	ND<100	3.42	
	1/19/2010	99.59	36.45	ND	ND	63.14	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	1.74	
	4/26/2010	99.59	34.96	ND	ND	64.63	0.23 J	ND<1.0	ND<1.0	ND<1.0	0.23	ND<1.0	ND<100	1.93	
	7/14/2010	99.59	35.56	ND	ND	64.03	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	4.64	
	10/1/2010	99.59	36.26	ND	ND	63.33	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	0.98	
	1/24/2011	99.59	37.01	ND	ND	62.58	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	1.31	
	4/17/2011	99.59	36.16	ND	ND	63.43	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	1.88	
	7/8/2011	99.59	36.17	ND	ND	63.42	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NA	
	10/25/2011	99.59	35.02	ND	ND	64.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/19/2012	99.59	36.34	ND	ND	63.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/3/2012	99.59	36.48	ND	ND	63.11	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6	ND<0.5	NA	NA	

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Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-5 (continued)	4/11/2013	99.59	37.01	ND	ND	62.58	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/17/2013	99.59	37.10	ND	ND	62.49	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/22/2014	99.59	37.10	ND	ND	62.49	ND<0.5	ND<0.5	ND<0.5	1	1	ND<0.5	NA	NA	
	10/23/2014	99.59	36.86	ND	ND	62.73	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/6/2015	99.59	36.24	ND	ND	63.35	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/1/2015	99.59	36.96	ND	ND	62.63	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/7/2016	99.59	37.21	ND	ND	62.38	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2016	99.59	38.05	ND	ND	61.54	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/18/2017	99.59	37.42	ND	ND	62.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/6/2017	99.59	37.85	ND	ND	61.74	ND<0.5	ND<0.5	ND<0.5	2	2	0.7 J	NA	NA	
	4/6/2018	99.59	36.66	ND	ND	62.93	ND<0.5	ND<0.5	**47**	**440**	487	ND<0.5	NA	NA	
	10/31/2018	99.59	36.63	ND	ND	62.96	ND<0.2	ND<0.2	1	**70**	71	ND<0.2	NA	NA	
	4/2/2019	99.59	35.49	ND	ND	64.10	ND<0.2	ND<0.2	ND<0.4	2 J	2 J	ND<0.2	NA	NA	
	7/30/2019	99.59	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	99.59	35.71	ND	ND	63.88	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	
MW-6	4/30/2008	100.91	37.99	ND	ND	62.92	**9.9 J**	**1,760**	**4,220**	**25,300**	31,290	ND<25	ND<100	NA	
	7/2/2008	100.91	38.02	ND	ND	62.89	ND<50	**1,160**	**2,830**	**14,600**	18,590	ND<50	ND<100	NA	
	10/15/2008	101.27	38.35	ND	ND	62.92	ND<50	**745**	**2,450**	**14,900**	18,095	ND<50	ND<100	NA	
	1/21/2009	101.27	38.17	ND	ND	63.10	**7.6 J**	**1,260**	**2,350**	**16,100**	19,718	6.6 J	ND<100	NA	
	4/8/2009	101.27	38.50	ND	ND	62.77	ND<50	**1,530**	**2,390**	**15,800**	19,720	ND<50	ND<100	NA	
	7/7/2009	101.27	38.03	ND	ND	63.24	**5.0**	**731**	**1,230**	**8,790**	10,756	4.4 J	ND<100	1.34	
	10/28/2009	101.27	38.08	ND	ND	63.19	ND<20	**932**	**1,680**	**9,500**	12,112	ND<20	ND<100	1.33	
	1/19/2010	101.27	38.01	ND	ND	63.26	ND<20	**858**	**1,550**	**8,110**	10,518	ND<20	ND<100	1.35	
	4/26/2010	101.27	36.55	ND	ND	64.72	**3.7 J**	**740**	**1,530**	**7,830**	10,104	ND<10	ND<100	2.36	
	7/14/2010	101.27	37.15	ND	ND	64.12	ND<20	**744**	**1,340**	**7,650**	9,734	ND<20	ND<100	3.28	
	10/1/2010	101.27	37.81	ND	ND	63.46	**2.5 J**	**415**	**962**	**5,300**	6,680	ND<10	ND<100	0.65	
	1/24/2011	101.27	38.55	ND	ND	62.72	**8.0**	**2,000**	**2,500**	**19,000**	23,508	3.0 J	ND<200	0.79	
	4/17/2011	101.27	37.75	ND	ND	63.52	**5**	**970**	**1,800**	**13,000**	15,775	3 J	ND<200	1.22	
	7/8/2011	101.27	37.74	ND	ND	63.53	**2**	**400**	**910**	**6,000**	7,312	ND<1.0	ND<200	NA	
	10/25/2011	101.27	36.56	ND	ND	64.71	ND<3.0	**370**	**930**	**6,400**	7,700	ND<3.0	NA	NA	
	4/19/2012	101.27	37.90	ND	ND	63.37	**2**	**340**	**1,100**	**8,300**	9,742	1	NA	NA	
	10/3/2012	101.27	38.04	ND	ND	63.23	ND<3.0	**350**	**910**	**6,100**	7,360	ND<3.0	NA	NA	
	4/11/2013	101.27	38.57	ND	ND	62.70	ND<3.0	**86**	**660**	**4,300**	5,046	ND<3.0	NA	NA	
	10/17/2013	101.27	38.66	ND	ND	62.61	ND<3.0	**120**	**650**	**4,400**	5,170	ND<3.0	NA	NA	
	4/22/2014	101.27	38.66	ND	ND	62.61	ND<3.0	**160**	**640**	**7,000**	7,800	ND<3.0	NA	NA	
	10/23/2014	101.27	38.43	ND	ND	62.84	1 J	**180**	**1,200**	**9,700**	11,081	1 J	NA	NA	
	4/6/2015	101.27	37.78	ND	ND	63.49	ND<5.0	**45**	**1,400**	**11,000**	12,445	ND<5.0	NA	NA	
	10/1/2015	101.27	38.53	ND	ND	62.74	ND<5.0	**34**	**540**	**3,600**	4,174	ND<5.0	NA	NA	
	4/7/2016	101.27	38.77	ND	ND	62.50	ND<3.0	26	300	1,700	2,026	ND<3.0	NA	NA	
	10/31/2016	101.27	39.60	ND	ND	61.67	ND<10	**230**	**580**	**10,000**	10,810	ND<10	NA	NA	
	4/18/2017	101.27	38.97	ND	ND	62.30	ND<0.5	1	**190**	**220**	411	ND<0.5	NA	NA	
	10/6/2017	101.27	38.41	ND	ND	62.86	ND<0.5	2	**34**	**530**	566	ND<0.5	NA	NA	
	4/6/2018	101.27	38.30	ND	ND	62.97	ND<0.5	**220**	**180**	**4,300**	4,700	ND<0.5	NA	NA	
	10/31/2018	101.27	38.30	ND	ND	62.97	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	101.27	39.29	ND	ND	61.98	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	101.27	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	101.27	40.90	ND	ND	60.37	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data
February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	Comments
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-7	4/30/2008	99.95	37.15	ND	ND	62.80	ND<5.0	**13.2**	**837**	**5,110**	5,960	2.1 J	ND<100	NA	
	7/2/2008	99.95	37.19	ND	ND	62.76	ND<5.0	4.9 J	**584**	**2,480**	3,069	ND<5.0	ND<100	NA	
	10/15/2008	100.28	37.54	ND	ND	62.74	ND<5.0	ND<5.0	**414**	**1,430**	1,844	ND<5.0	ND<100	NA	
	1/21/2009	100.28	37.35	ND	ND	62.93	ND<10	ND<10	**679**	**2,750**	3,429	ND<10	ND<100	NA	
	4/8/2009	100.28	37.70	ND	ND	62.58	ND<5.0	ND<5.0	**563**	**2,030**	2,593	ND<5.0	ND<100	NA	
	7/7/2009	100.28	37.20	ND	ND	63.08	ND<2.5	ND<2.5	**334**	**1,450**	1,784	ND<2.5	ND<100	1.20	
	10/28/2009	100.28	37.27	ND	ND	63.01	ND<5.0	ND<5.0	**612**	**2,480**	3,092	ND<5.0	ND<100	1.36	
	1/19/2010	100.28	37.18	ND	ND	63.10	ND<5.0	ND<5.0	**464**	**1,620**	2,084	ND<5.0	ND<100	1.25	
	4/26/2010	100.28	35.70	ND	ND	64.58	ND<2.5	1.7 J	**598**	**2,230**	2,830	ND<2.5	ND<100	1.50	
	7/14/2010	100.28	36.31	ND	ND	63.97	ND<2.5	ND<2.5	**359**	**1,100**	1,459	ND<2.5	ND<100	3.56	
	10/1/2010	100.28	37.02	ND	ND	63.26	ND<5.0	ND<5.0	**455**	**1,720**	2,175	ND<5.0	ND<100	1.02	
	1/24/2011	100.28	37.74	ND	ND	62.54	ND<0.5	ND<0.5	**180**	**580**	760	ND<0.5	ND<200	0.82	
	4/17/2011	100.28	36.92	ND	ND	63.36	ND<0.5	ND<0.5	**21**	**56**	77	ND<0.5	ND<200	1.54	
	7/8/2011	100.28	36.15	ND	ND	64.13	ND<0.5	ND<0.5	**250**	**500**	750	ND<0.5	ND<200	NA	
	10/25/2011	100.28	35.75	ND	ND	64.53	ND<1.0	ND<1.0	**300**	**1,300**	1,600	ND<1.0	NA	NA	
	4/19/2012	100.28	37.08	ND	ND	63.20	ND<0.5	ND<0.5	**32**	**130**	162	ND<0.5	NA	NA	
	10/3/2012	100.28	37.22	ND	ND	63.06	ND<0.5	ND<0.5	**6**	**13**	19	ND<0.5	NA	NA	
	4/11/2013	100.28	37.75	ND	ND	62.53	ND<0.5	ND<0.5	**140**	**540**	680	ND<0.5	NA	NA	
	10/17/2013	100.28	37.85	ND	ND	62.43	ND<0.5	ND<0.5	ND<0.5	0.8 J	0.8	ND<0.5	NA	NA	
	4/22/2014	100.28	37.84	ND	ND	62.44	ND<0.5	ND<0.5	0.7 J	1	1.7	ND<0.5	NA	NA	
	10/23/2014	100.28	37.62	ND	ND	62.66	ND<0.5	ND<0.5	0.9 J	5	5.9	ND<0.5	NA	NA	pad is sunken/cracked
	4/6/2015	100.28	36.96	ND	ND	63.32	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/1/2015	100.28	37.69	ND	ND	62.59	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/7/2016	100.28	38.94	ND	ND	61.34	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2016	100.28	38.78	ND	ND	61.50	ND<0.5	ND<0.5	3	**14**	17	ND<0.5	NA	NA	
	4/18/2017	100.28	38.14	ND	ND	62.14	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/6/2017	100.28	36.70	ND	ND	63.58	ND<0.5	ND<0.5	ND<0.5	2	2	ND<0.5	NA	NA	
	4/6/2018	100.28	37.45	ND	ND	62.83	ND<0.5	ND<0.5	ND<0.5	**9**	9	ND<0.5	NA	NA	
	10/31/2018	100.28	37.38	ND	ND	62.90	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	100.28	36.37	ND	ND	63.91	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	100.28	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	100.28	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
MW-8	4/30/2008	100.74	37.89	ND	ND	62.85	**89.2**	**14,600**	**5,130**	**23,700**	43,519	ND<50	ND<100	NA	
	7/2/2008	100.74	37.90	ND	ND	62.84	**53.2**	**10,800**	**3,270**	**16,800**	30,923	ND<50	ND<100	NA	
	10/15/2008	101.08	38.27	ND	ND	62.81	**41.2**	**8,630**	**2,520**	**10,400**	21,591	ND<20	ND<100	NA	
	1/21/2009	101.08	38.07	ND	ND	63.01	**34.6 J**	**15,200**	**5,540**	**32,200**	52,975	ND<100	ND<100	NA	
	4/8/2009	101.08	38.41	ND	ND	62.67	ND<100	**13,000**	**5,280**	**31,100**	49,380	ND<100	ND<100	NA	
	7/7/2009	101.08	37.94	ND	ND	63.14	**18.2 J**	**9,820**	**4,340**	**23,900**	38,078	ND<25	ND<100	0.64	
	10/28/2009	101.08	38.01	ND	ND	63.07	ND<50	**9,510**	**4,010**	**20,500**	34,020	ND<50	ND<100	1.24	
	1/19/2010	101.08	37.90	ND	ND	63.18	ND<50	**7,240**	**3,570**	**17,600**	28,410	ND<50	ND<100	0.77	
	4/26/2010	101.08	36.45	ND	ND	64.63	**8.0 J**	**6,100**	**3,420**	**14,700**	24,228	ND<25	ND<100	2.65	
	7/14/2010	101.08	37.05	ND	ND	64.03	ND<50	**6,960**	**3,390**	**18,000**	28,350	ND<50	ND<100	2.80	
	10/1/2010	101.08	37.73	ND	ND	63.35	ND<50	**4,800**	**3,530**	**18,000**	26,330	ND<50	ND<100	3.14	
	1/24/2011	101.08	38.48	ND	ND	62.60	**7.0 J**	**6,500**	**3,700**	**21,000**	31,207	ND<5.0	ND<200	0.52	
	4/17/2011	101.08	37.65	ND	ND	63.43	ND<5.0	**5,400**	**3,400**	**17,000**	25,800	ND<5.0	ND<200	0.86	
	7/8/2011	101.08	37.64	ND	ND	63.44	ND<10	**5,700**	**3,700**	**19,000**	28,400	ND<10	ND<200	NA	
	10/25/2011	101.08	36.49	ND	ND	64.59	**14**	**4,500**	**3,500**	**18,000**	26,014	ND<5.0	NA	NA	

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February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	Comments
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-8 (continued)	4/19/2012	101.08	37.82	ND	ND	63.26	ND<13	**3,200**	**3,200**	**16,000**	22,400	ND<13	NA	NA	
	10/3/2012	101.08	37.97	ND	ND	63.11	ND<5.0	**3,300**	**3,300**	**17,000**	23,600	ND<5.0	NA	NA	
	4/11/2013	101.08	38.47	ND	ND	62.61	ND<5.0	**3,400**	**3,900**	**19,000**	26,300	ND<5.0	NA	NA	
	10/17/2013	101.08	38.57	ND	ND	62.51	ND<5.0	**3,700**	**3,500**	**17,000**	24,200	ND<5.0	NA	NA	
	4/22/2014	101.08	38.57	ND	ND	62.51	ND<5.0	**3,200**	**3,400**	**15,000**	21,600	ND<5.0	NA	NA	
	10/23/2014	101.08	38.34	ND	ND	62.74	ND<5.0	**3,700**	**3,200**	**16,000**	22,900	ND<5.0	NA	NA	
	4/6/2015	101.08	37.72	ND	ND	63.36	ND<5.0	**2,600**	**2,900**	**14,000**	19,500	ND<5.0	NA	NA	
	10/1/2015	101.08	38.42	ND	ND	62.66	ND<5.0	**2,700**	**3,500**	**17,000**	23,200	ND<5.0	NA	NA	
	4/7/2016	101.08	38.70	ND	ND	62.38	ND<5.0	**2,800**	**3,300**	**14,000**	20,100	ND<5.0	NA	NA	
	10/31/2016	101.08	39.53	ND	ND	61.55	ND<10	**2,900**	**3,500**	**18,000**	24,400	ND<10	NA	NA	
	4/18/2017	101.08	38.87	ND	ND	62.21	ND<5.0	**2,900**	**3,600**	**15,000**	21,500	ND<5.0	NA	NA	
	10/6/2017	101.08	38.34	ND	ND	62.74	ND<10	**1,800**	**1,000**	**21,000**	23,800	ND<10	NA	NA	
	4/6/2018	101.08	38.57	ND	ND	62.51	ND<5.0	**1,200**	**1,200**	**19,000**	21,400	ND<5.0	NA	NA	
	7/31/2018	101.08	NM	ND	ND	NM	ND<0.5	2	**9**	**520**	531	ND<0.5	NA	NA	
	8/23/2018	101.08	38.79	ND	ND	62.29	ND<1.0	**54**	**68**	**5,700**	5,822	ND<1.0	NA	NA	
	10/31/2018	101.08	38.03	ND	ND	63.05	ND<2.0	**480**	**300**	**18,000**	18,780	ND<2.0	NA	NA	
	1/16/2019	101.08	33.51	ND	ND	67.57	ND<1.0	**630**	**760**	**15,000**	16,390	ND<1.0	NA	NA	
	4/2/2019	101.08	36.75	ND	ND	64.33	ND<1.0	**140**	**180**	**4,100**	4,420	ND<1.0	NA	NA	
	7/30/2019	101.08	36.30	ND	ND	64.78	ND<0.2	3	5	**140**	148	ND<0.2	NA	NA	
	10/28/2019	101.08	38.29	ND	ND	62.79	ND<0.2	3	**11**	**230**	244	ND<0.2	NA	NA	
MW-9	4/30/2008	99.17	36.38	ND	ND	62.79	ND<1.0	0.51 J	0.36 J	2.6	3.5	ND<1.0	ND<100	NA	
	7/2/2008	99.17	36.43	ND	ND	62.74	ND<1.0	ND<1.0	ND<1.0	0.81 J	0.81	ND<1.0	ND<100	NA	
	10/15/2008	99.46	36.36	ND	ND	63.10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	1/21/2009	99.46	36.57	ND	ND	62.89	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	4/8/2009	99.46	36.91	ND	ND	62.55	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	NA	
	7/7/2009	99.46	36.42	ND	ND	63.04	ND<1.0	ND<1.0	ND<1.0	0.33 J	0.33	ND<1.0	ND<100	0.88	
	10/28/2009	99.46	36.50	ND	ND	62.96	0.23 J	ND<1.0	ND<1.0	0.37 J	0.60	ND<1.0	ND<100	1.91	
	1/19/2010	99.46	36.40	ND	ND	63.06	ND<1.0	ND<1.0	ND<1.0	0.52 J	0.52	ND<1.0	ND<100	1.42	
	4/26/2010	99.46	34.95	ND	ND	64.51	0.23 J	ND<1.0	ND<1.0	ND<1.0	0.23	ND<1.0	ND<100	2.14	
	7/14/2010	99.46	35.35	ND	ND	64.11	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	3.34	
	10/1/2010	99.46	36.23	ND	ND	63.23	0.24 J	ND<1.0	ND<1.0	ND<1.0	0.24	ND<1.0	ND<100	2.92	
	1/24/2011	99.46	36.97	ND	ND	62.49	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6	ND<0.5	ND<200	1.01	
	4/17/2011	99.46	36.15	ND	ND	63.31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	1.30	
	7/8/2011	99.46	36.16	ND	ND	63.30	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NA	
	10/25/2011	99.46	34.98	ND	ND	64.48	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/19/2012	99.46	36.26	ND	ND	63.20	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/3/2012	99.46	36.45	ND	ND	63.01	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/11/2013	99.46	36.95	ND	ND	62.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/17/2013	99.46	37.05	ND	ND	62.41	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/22/2014	99.46	37.04	ND	ND	62.42	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/23/2014	99.46	36.83	ND	ND	62.63	ND<0.5	ND<0.5	ND<0.5	2	2	ND<0.5	NA	NA	
	4/6/2015	99.46	36.19	ND	ND	63.27	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/1/2015	99.46	36.94	ND	ND	62.52	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/7/2016	99.46	37.18	ND	ND	62.28	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2016	99.46	13.79	ND	ND	85.67	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/18/2017	99.46	37.41	ND	ND	62.05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/6/2017	99.46	36.80	ND	ND	62.66	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	

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February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-9 (continued)	4/6/2018	99.46	36.57	ND	ND	62.89	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2018	99.46	36.53	ND	ND	62.93	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	99.46	35.22	ND	ND	64.24	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	99.46	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	99.46	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
MW-10	4/8/2009	101.02	38.31	ND	ND	62.71	**17.6**	**1,090**	**4,870**	**26,200**	32,178	**11.1**	ND<100	NA	
	7/7/2009	101.02	37.83	ND	ND	63.19	**6.9 J**	**429**	**2,620**	**12,300**	15,356	ND<10	ND<100	0.85	
	10/28/2009	101.02	37.90	ND	ND	63.12	ND<20	**314**	**1,420**	**6,750**	8,484	ND<20	ND<100	1.16	
	1/19/2010	101.02	37.80	ND	ND	63.22	ND<20	**197**	**1,580**	**5,950**	7,727	ND<20	ND<100	2.55	
	4/26/2010	101.02	36.35	ND	ND	64.67	**1.4 J**	**61.6**	**960**	**3,310**	4,333	ND<5.0	ND<100	1.00	
	7/14/2010	101.02	36.96	ND	ND	64.06	ND<25	**53.7**	**1,530**	**6,630**	8,214	ND<25	ND<100	3.21	
	10/1/2010	101.02	37.60	ND	ND	63.42	ND<25	**56.1**	**1,620**	**6,140**	7,816	ND<25	ND<100	1.27	
	1/24/2011	101.02	38.36	ND	ND	62.66	ND<5.0	**220**	**3,500**	**17,000**	20,720	ND<5.0	ND<200	0.56	
	4/17/2011	101.02	37.56	ND	ND	63.46	**3**	**130**	**1,700**	**6,000**	7,833	1	ND<200	1.54	
	7/8/2011	101.02	37.55	ND	ND	63.47	ND<1.0	**25**	**450**	**1,400**	1,875	ND<1	ND<200	NA	
	10/25/2011	101.02	36.36	ND	ND	64.66	ND<1.0	**8**	**1,000**	**3,600**	4,608	ND<1	NA	NA	
	4/19/2012	101.02	37.70	ND	ND	63.32	0.5 J	**10**	**300**	**760**	1,071	ND<0.5	NA	NA	
	10/3/2012	101.02	37.85	ND	ND	63.17	0.9 J	**15**	**93**	**330**	438	ND<0.5	NA	NA	
	4/11/2013	101.02	38.37	ND	ND	62.65	0.6 J	5	**530**	**1,700**	2,236	ND<0.5	NA	NA	
	10/17/2013	101.02	38.50	ND	ND	62.52	**2**	**13**	**360**	**410**	785	ND<0.5	NA	NA	
	4/22/2014	101.02	38.47	ND	ND	62.55	1	**23**	**580**	**950**	1,554	ND<0.5	NA	NA	
	10/23/2014	101.02	38.24	ND	ND	62.78	ND<0.5	4	**100**	**240**	344	ND<0.5	NA	NA	pad is cracked
	4/6/2015	101.02	37.61	ND	ND	63.41	ND<0.5	ND<0.5	**170**	**150**	320	ND<0.5	NA	NA	
	10/1/2015	101.02	38.33	ND	ND	62.69	ND<0.5	1 J	**140**	**120**	261	ND<0.5	NA	NA	
	4/7/2016	101.02	38.58	ND	ND	62.44	ND<5.0	5 J	**1100**	**3300**	4,405	ND<5.0	NA	NA	
	10/31/2016	101.02	39.43	ND	ND	61.59	ND<0.5	4	**41**	**150**	195	ND<0.5	NA	NA	
	4/18/2017	101.02	38.76	ND	ND	62.26	ND<0.5	2	**46**	**150**	198	ND<0.5	NA	NA	
	10/6/2017	101.02	38.21	ND	ND	62.81	ND<0.5	ND<0.5	**86**	**220**	306	ND<0.5	NA	NA	
	4/6/2018	101.02	36.90	ND	ND	64.12	ND<0.5	ND<0.5	**7**	**360**	367	ND<0.5	NA	NA	
	10/31/2018	101.02	38.05	ND	ND	62.97	ND<0.2	ND<0.2	1	ND<1.0	1	ND<0.2	NA	NA	
	4/2/2019	101.02	36.99	ND	ND	64.03	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	101.02	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	101.02	35.67	ND	ND	65.35	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	
MW-B	4/19/2012	NM	38.92	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	0.5 J	NA	NA	
	10/3/2012	NM	39.10	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/11/2013	NM	39.60	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	1	1	ND<0.5	NA	NA	
	10/17/2013	NM	39.74	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	0.9 J	0.9	0.6 J	NA	NA	
	4/22/2014	NM	39.76	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	1	1	ND<0.5	NA	NA	
	10/23/2014	NM	39.49	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	0.9 J	0.9	2	NA	NA	
	4/6/2015	NM	38.85	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/1/2015	NM	39.58	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/7/2016	NM	39.83	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	1	1	0.7 J	NA	NA	
	10/31/2016	NM	40.66	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	0.9 J	NA	NA	
	4/18/2017	NM	40.00	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	0.6 J	NA	NA	
	10/6/2017	NM	39.45	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	0.6 J	NA	NA	
	4/6/2018	NM	39.40	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2018	NM	39.30	ND	ND	NM	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	0.2 J	NA	NA	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data
February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
MW-B (continued)	4/2/2019	NM	37.98	ND	ND	NM	ND<0.2	0.7 J	ND<0.4	ND<1.0	0.7 J	0.2 J	NA	NA	
	7/30/2019	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	NM	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
MW-C	4/19/2012	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	10/3/2012	NM	38.63	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	0.6 J	NA	NA	
	4/11/2013	NM	39.14	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	1	1	2	NA	NA	
	10/17/2013	NM	39.26	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NA	NA	
	4/22/2014	NM	39.22	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NA	NA	
	10/23/2014	NM	39.02	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	0.5 J	0.5	ND<0.5	NA	NA	
	4/6/2015	NM	38.41	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/1/2015	NM	39.12	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NA	NA	
	4/7/2016	NM	39.40	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/31/2016	NM	18.09	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/18/2017	NM	41.54	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	10/6/2017	NM	39.00	ND	ND	NM	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/6/2018	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	10/31/2018	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	4/2/2019	NM	37.42	ND	ND	NM	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	0.2 J	NA	NA	
	7/30/2019	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	NM	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
IP-1	4/8/2009	101.71	39.04	ND	ND	62.67	ND<100	**1,920**	**9,070**	**46,900**	57,890	ND<100	NA	NA	
	10/28/2009	101.71	38.65	ND	ND	63.06	ND<50	**959**	**7,790**	**44,000**	52,749	ND<50	NA	1.24	
	1/19/2010	101.71	38.51	ND	ND	63.20	ND<100	**981**	**8,280**	**44,700**	53,961	ND<100	ND<100	1.11	
	4/26/2010	101.71	37.05	ND	ND	64.66	ND<50	**468**	**4,940**	**24,000**	29,408	ND<50	ND<100	3.25	
	7/14/2010	101.71	37.68	ND	ND	64.03	ND<100	**396**	**5,980**	**34,000**	40,376	ND<100	ND<100	2.30	
	10/1/2010	101.71	38.33	ND	ND	63.38	ND<100	**426**	**6,600**	**39,800**	46,826	ND<100	ND<100	1.20	
	1/24/2011	101.71	39.10	ND	ND	62.61	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	4/17/2011	101.71	38.28	ND	ND	63.45	**6**	**240**	**6,300**	**33,000**	39,546	ND<3.0	ND<200	0.69	
	7/8/2011	101.71	38.27	ND	ND	63.44	**8 J**	**180**	**6,800**	**46,000**	52,988	ND<5.0	ND<200	NA	Sheen.
	10/25/2011	101.71	37.11	ND	ND	64.60	ND<25	**160**	**4,800**	**31,000**	35,960	ND<25	NA	NA	
	4/19/2012	101.71	38.43	ND	ND	63.28	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/3/2012	101.71	38.55	ND	ND	63.16	**6**	**320**	**4,600**	**30,000**	34,926	ND<3	NA	NA	
	4/11/2013	101.71	39.10	ND	ND	62.61	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/17/2013	101.71	39.19	ND	ND	62.52	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	4/22/2014	101.71	39.19	ND	ND	62.52	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/23/2014	101.71	38.96	ND	ND	62.75	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	4/6/2015	101.71	37.99	ND	ND	63.72	ND<3.0	**100**	**3,100**	**19,000**	22,200	ND<3.0	NA	NA	
	10/1/2015	101.71	38.70	ND	ND	63.01	NS	NS	NS	NS	NS	NS	NS	NS	
	4/7/2016	101.71	38.98	ND	ND	62.73	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/31/2016	101.71	39.02	ND	ND	62.69	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	4/18/2017	101.71	38.90	ND	ND	62.81	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/6/2017	101.71	36.60	ND	ND	65.11	NS	NS	NS	NS	NS	NS	NS	NS	
	4/6/2018	101.71	37.65	ND	ND	64.06	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/31/2018	101.71	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry
	4/2/2019	101.71	37.27	ND	ND	64.44	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	101.71	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	101.71	37.30	ND	ND	64.41	NS	NS	NS	NS	NS	NS	NS	NS	

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February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	Comments
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
IP-2	4/8/2009	101.67	39.00	ND	ND	62.67	ND<25	**2,830**	**4,280**	**25,800**	32,910	ND<25	NA	NA	
	10/28/2009	101.67	38.60	ND	ND	63.07	ND<20	**461**	**1,500**	**7,630**	9,591	ND<20	NA	0.49	
	1/19/2010	101.67	38.46	ND	ND	63.21	ND<50	**822**	**3,700**	**20,500**	25,022	ND<50	ND<100	2.20	
	4/26/2010	101.67	37.04	ND	ND	64.63	ND<20	**685**	**3,230**	**12,600**	16,515	ND<20	ND<100	2.42	
	7/14/2010	101.67	37.63	ND	ND	64.04	ND<50	**639**	**3,170**	**16,500**	20,309	ND<50	ND<100	3.95	
	10/1/2010	101.67	38.30	ND	ND	63.37	ND<25	**590**	**2,860**	**16,300**	19,750	ND<25	ND<100	2.01	
	1/24/2011	101.67	39.04	ND	ND	62.63	ND<3.0	**200**	**2,800**	**16,000**	19,000	ND<3.0	ND<200	0.73	
	4/17/2011	101.67	38.23	ND	ND	63.44	ND<5.0	**120**	**3,200**	**15,000**	18,320	ND<5.0	ND<200	2.37	
	7/8/2011	101.67	38.22	ND	ND	63.45	ND<3.0	**110**	**3,600**	**20,000**	23,710	ND<3.0	ND<200	NA	
	10/25/2011	101.67	37.06	ND	ND	64.61	ND<3.0	**110**	**2,200**	**11,000**	13,310	ND<3.0	NA	NA	
	4/19/2012	101.67	38.39	ND	ND	63.28	ND<3.0	**120**	**3,000**	**16,000**	19,120	ND<3.0	NA	NA	
	10/3/2012	101.67	38.52	ND	ND	63.15	ND<3.0	**89**	**3,400**	**18,000**	21,489	ND<3.0	NA	NA	
	4/11/2013	101.67	39.02	ND	ND	62.65	ND<5.0	**44**	**3,000**	**15,000**	18,044	ND<5.0	NA	NA	
	10/17/2013	101.67	39.14	ND	ND	62.53	ND<5.0	**59**	**4,300**	**23,000**	27,359	ND<5.0	NA	NA	
	4/22/2014	101.67	39.13	ND	ND	62.54	ND<5.0	**35**	**3,800**	**19,000**	22,835	ND<5.0	NA	NA	
	10/23/2014	101.67	38.93	ND	ND	62.74	ND<13	**35**	**2,900**	**17,000**	19,935	ND<13	NA	NA	
	4/6/2015	101.67	37.86	ND	ND	63.81	ND<5	**31**	**2,800**	**16,000**	18,831	ND<5	NA	NA	
	10/1/2015	101.67	38.58	ND	ND	63.09	ND<10	**32**	**2,800**	**18,000**	20,832	ND<10	NA	NA	
	4/7/2016	101.67	38.85	ND	ND	62.82	ND<5.0	**24**	**2,900**	**15,000**	17,924	ND<5.0	NA	NA	
	10/31/2016	101.67	39.69	ND	ND	61.98	ND<10	**12 J**	**2,600**	**15,000**	17,612 J	ND<10	NA	NA	
	4/18/2017	101.67	39.00	ND	ND	62.67	ND<3.0	**12**	**2,700**	**15,000**	17,712	ND<3.0	NA	NA	
	10/6/2017	101.67	38.47	ND	ND	63.20	0.5 J	**45**	**430**	**4,300**	4,775.5 J	ND<0.5	NA	NA	
	4/6/2018	101.67	38.21	ND	ND	63.46	ND<0.5	**17**	**120**	**1,400**	1,537	ND<0.5	NA	NA	
	7/31/2018	101.67	NM	ND	ND	NM	ND<5.0	**150**	**150**	**8,100**	8,400	ND<5.0	NA	NA	
	8/23/2018	101.67	38.21	ND	ND	63.46	ND<0.2	2	3	**300**	305	ND<0.2	NA	NA	
	10/31/2018	101.67	38.19	ND	ND	63.48	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	1/16/2019	101.67	26.21	ND	ND	75.46	ND<0.2	ND<0.2	0.6 J	20	20.6 J	ND<0.2	NA	NA	
	4/2/2019	101.67	36.94	ND	ND	64.73	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	101.67	36.46	ND	ND	65.21	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	
	10/28/2019	101.67	36.58	ND	ND	65.09	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	
IP-3	4/8/2009	100.58	38.00	ND	ND	62.58	**113**	**15,000**	**3,970**	**22,000**	41,083	ND<50	NA	NA	
	10/28/2009	100.58	37.61	ND	ND	62.97	**33.4 J**	**7,790**	**4,120**	**21,700**	33,643	ND<50	NA	0.84	
	1/19/2010	100.58	37.50	ND	ND	63.08	**27.5 J**	**9,120**	**3,920**	**21,900**	34,968	ND<50	ND<100	0.24	
	4/26/2010	100.58	36.01	ND	ND	64.57	**27.7**	**5,840**	**3,100**	**13,600**	22,568	ND<20	ND<100	2.65	
	7/14/2010	100.58	36.63	ND	ND	63.95	ND<50	**6,590**	**3,080**	**17,700**	27,370	ND<50	ND<100	2.02	
	10/1/2010	100.58	37.33	ND	ND	63.25	ND<50	**5,660**	**3,070**	**14,500**	23,230	ND<50	ND<100	2.07	
	1/24/2011	100.58	38.07	ND	ND	62.51	**5.0**	**2,400**	**2,400**	**15,000**	19,805	3.0 J	ND<200	1.22	
	4/17/2011	100.58	37.23	ND	ND	63.35	ND<10	**7,700**	**2,600**	**16,000**	26,300	ND<10	ND<200	2.06	
	7/8/2011	100.58	37.22	ND	ND	63.36	**4 J**	**7,800**	**3,300**	**20,000**	31,104	ND<3.0	ND<200	NA	
	10/25/2011	100.58	36.05	ND	ND	64.53	ND<5.0	**6,200**	**2,700**	**16,000**	24,900	ND<5.0	NA	NA	
	4/19/2012	100.58	37.40	ND	ND	63.18	ND<5.0	**5,000**	**2,500**	**14,000**	21,500	ND<5.0	NA	NA	
	10/3/2012	100.58	37.53	ND	ND	63.05	**6 J**	**1,500**	**2,400**	**12,000**	15,906	ND<5.0	NA	NA	
	4/11/2013	100.58	38.04	ND	ND	62.54	**7 J**	**1,900**	**2,000**	**11,000**	14,907	ND<5.0	NA	NA	
	10/17/2013	100.58	38.19	ND	ND	62.39	ND<5.0	**2,900**	**3,200**	**15,000**	21,100	ND<5.0	NA	NA	
	4/22/2014	100.58	38.13	ND	ND	62.45	ND<5.0	**2,700**	**2,900**	**15,000**	20,600	ND<5.0	NA	NA	
	10/23/2014	100.58	37.94	ND	ND	62.64	ND<13	**2,900**	**2,900**	**15,000**	20,800	ND<13	NA	NA	
	4/6/2015	100.58	37.31	ND	ND	63.27	ND<5.0	**1,800**	**2,400**	**13,000**	17,200	ND<5.0	NA	NA	

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138-50 Hillside Avenue
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Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
IP-3 (continued)	10/1/2015	100.58	38.02	ND	ND	62.56	ND<5.0	**140**	**2,500**	**8,900**	11,540	ND<5.0	NA	NA	
	4/7/2016	100.58	38.28	ND	ND	62.30	ND<3.0	**900**	**1,600**	**8,300**	10,800	ND<3.0	NA	NA	
	10/31/2016	100.58	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry
	4/18/2017	100.58	38.40	NM	NM	62.18	ND<3.0	**1,100**	**2,300**	**13,000**	16,400	ND<3.0	NA	NA	
	10/6/2017	100.58	37.91	NM	NM	62.67	**3**	**520**	**1,300**	**8,100**	9,920	ND<1.0	NA	NA	
	4/6/2018	100.58	37.72	NM	NM	62.86	ND<0.5	**41**	2	**1,800**	1,843	ND<0.5	NA	NA	
	7/31/2018	100.58		ND	ND		ND<0.5	ND<0.5	0.6 J	**10**	10.6	ND<0.5	NA	NA	
	8/23/2018	100.58	36.91	ND	ND	63.67	ND<0.2	5	**29**	**440**	474	ND<0.2	NA	NA	
	10/31/2018	100.58	37.60	ND	ND	62.98	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	1/16/2019	100.58	27.69	ND	ND	72.89	ND<0.2	ND<0.2	0.4 J	**34**	34.4 J	ND<0.2	NA	NA	
	4/2/2019	100.58	36.37	ND	ND	64.21	ND<0.2	ND<0.2	0.7 J	**12**	12.7 J	ND<0.2	NA	NA	
	7/30/2019	100.58	36.07	ND	ND	64.51	ND<1	ND<1	2 J	**82**	82 J	ND<1	NA	NA	
	10/28/2019	100.58	36.18	ND	ND	64.40	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	
IP-4	4/8/2009	100.40	37.72	ND	ND	62.68	ND<50	**69.5**	**3,280**	**16,900**	20,250	ND<50	NA	NA	
	10/28/2009	100.40	37.33	ND	ND	63.07	ND<25	**23.1 J**	**2,020**	**8,720**	10,763	ND<25	NA	1.16	
	1/19/2010	100.40	37.21	ND	ND	63.19	ND<10	**11.6**	**1,610**	**6,900**	8,522	ND<10	ND<100	1.41	
	4/26/2010	100.40	35.75	ND	ND	64.65	ND<5.0	**8.6**	**986**	**2,910**	3,905	ND<5.0	ND<100	1.33	
	7/14/2010	100.40	36.25	ND	ND	64.15	ND<10	**6.5 J**	**1,130**	**4,580**	5,717	ND<10	ND<100	3.24	
	10/1/2010	100.40	37.01	ND	ND	63.39	ND<10	3.2 J	**860**	**3,120**	3,983	ND<10	ND<100	0.74	
	1/24/2011	100.40	37.76	ND	ND	62.64	ND<3.0	ND<3.0	**690**	**4,200**	4,890	ND<3.0	ND<200	1.53	
	4/17/2011	100.40	36.95	ND	ND	63.45	ND<3.0	ND<3.0	**710**	**3,700**	4,410	ND<3.0	ND<200	1.52	
	7/8/2011	100.40	36.95	ND	ND	63.45	ND<1.0	ND<1.0	**710**	**2,600**	3,310	ND<1.0	ND<200	NA	
	10/25/2011	100.40	35.78	ND	ND	64.62	ND<3.0	ND<3.0	**700**	**1,500**	2,200	ND<3.0	NA	NA	
	4/19/2012	100.40	37.10	ND	ND	63.30	ND<0.5	ND<0.5	**490**	**880**	1,370	2.0	NA	NA	
	10/3/2012	100.40	37.23	ND	ND	63.17	ND<0.5	ND<0.5	**430**	**850**	1,280	0.6 J	NA	NA	
	4/11/2013	100.40	37.77	ND	ND	62.63	ND<1.0	ND<1.0	**350**	**1,100**	1,450	ND<1.0	NA	NA	
	10/17/2013	100.40	37.90	ND	ND	62.50	ND<3.0	ND<3.0	**320**	**790**	1,110	ND<3.0	NA	NA	
	4/22/2014	100.40	37.83	ND	ND	62.57	ND<3.0	ND<3.0	**210**	**650**	860	ND<3.0	NA	NA	
	10/23/2014	100.40	37.67	ND	ND	62.73	ND<0.5	ND<0.5	**130**	**330**	460	ND<0.5	NA	NA	
	4/6/2015	100.40	37.01	ND	ND	63.39	ND<0.5	ND<0.5	1	1	2	ND<0.5	NA	NA	
	10/1/2015	100.40	37.71	ND	ND	62.69	ND<0.5	ND<0.5	**32**	**42**	74	ND<0.5	NA	NA	
	4/7/2016	100.40	37.98	ND	ND	62.42	ND<0.5	ND<0.5	**52**	**140**	192	ND<0.5	NA	NA	
	10/31/2016	100.40	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	No access; Under car that could not be moved.
	4/18/2017	100.40	38.18	NM	NM	62.22	ND<0.5	ND<0.5	2	3	5	ND<0.5	NA	NA	
	10/6/2017	100.40	37.60	NM	NM	62.80	ND<0.5	ND<0.5	1	**12**	13	ND<0.5	NA	NA	
	4/6/2018	100.40	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	10/31/2018	100.40	37.44	ND	ND	62.96	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	4/2/2019	100.40	36.27	ND	ND	64.13	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	100.40	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	100.40	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
IP-5	4/8/2009	100.17	37.51	ND	ND	62.66	ND<50	**1,020**	**3,300**	**15,300**	19,620	ND<50	NA	NA	
	10/28/2009	100.17	37.13	ND	ND	63.04	ND<25	**369**	**2,110**	**8,870**	11,349	ND<25	NA	7.49	
	1/19/2010	100.17	37.00	ND	ND	63.17	ND<20	**331**	**3,080**	**10,400**	13,811	ND<20	ND<100	0.84	
	4/26/2010	100.17	35.55	ND	ND	64.62	ND<10	**363**	**2,680**	**9,950**	12,993	ND<10	ND<100	3.01	
	7/14/2010	100.17	36.14	ND	ND	64.03	ND<25	**355**	**2,510**	**9,760**	12,625	ND<25	ND<100	2.78	
	10/1/2010	100.17	36.79	ND	ND	63.38	ND<50	**368**	**3,290**	**12,800**	16,458	ND<50	ND<100	1.70	
	1/24/2011	100.17	37.54	ND	ND	62.63	ND<3.0	**180**	**2,300**	**13,000**	15,480	ND<3.0	ND<200	0.71	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data
February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

Sample ID	Date	Gauging Data					Analytical Data								Comments
		Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
IP-5 (continued)	4/17/2011	100.17	36.75	ND	ND	63.42	ND<3.0	**70**	**2,300**	**10,000**	12,370	ND<3.0	ND<200	2.23	
	7/8/2011	100.17	36.75	ND	ND	63.42	ND<3.0	**45**	**1,900**	**7,700**	9,645	ND<3.0	ND<200	NA	
	10/25/2011	100.17	35.58	ND	ND	64.59	ND<3.0	**36**	**1,800**	**6,600**	8,436	ND<3.0	NA	NA	
	4/19/2012	100.17	36.91	ND	ND	63.26	ND<3.0	**16**	**2,100**	**8,900**	11,016	ND<3.0	NA	NA	
	10/3/2012	100.17	37.04	ND	ND	63.13	ND<5.0	ND<5.0	**1,600**	**7,600**	9,200	ND<5.0	NA	NA	
	4/11/2013	100.17	37.60	ND	ND	62.57	ND<5.0	ND<5.0	**1,800**	**9,500**	11,300	ND<5.0	NA	NA	
	10/17/2013	100.17	37.64	ND	ND	62.53	ND<5.0	ND<5.0	**1,900**	**8,800**	10,700	ND<5.0	NA	NA	
	4/22/2014	100.17	37.66	ND	ND	62.51	ND<5.0	ND<5.0	**1,500**	**5,800**	7,300	ND<5.0	NA	NA	
	10/23/2014	100.17	37.45	ND	ND	62.72	ND<3.0	ND<3.0	**1,100**	**4,800**	5,900	ND<3.0	NA	NA	
	4/6/2015	100.17	36.82	ND	ND	63.35	ND<3.0	ND<3.0	**610**	**2,200**	2,810	ND<3.0	NA	NA	
	10/1/2015	100.17	37.52	ND	ND	62.65	ND<5.0	ND<5.0	**950**	**3,600**	4,550	ND<5.0	NA	NA	
	4/7/2016	100.17	37.80	ND	ND	62.37	ND<5.0	ND<5.0	**1,000**	**3,500**	4,500	ND<5.0	NA	NA	
	10/31/2016	100.17	37.83	ND	ND	62.34	ND<5.0	ND<5.0	**470**	**990**	1,460	ND<5.0	NA	NA	
	4/18/2017	100.17	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	10/6/2017	100.17	37.41	NM	NM	62.76	ND<0.5	2	**150**	**1,100**	1,252	ND<0.5	ND	ND	
	4/6/2018	100.17	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on top of well.
	10/31/2018	100.17	37.13	ND	ND	63.04	ND<0.2	2	ND<0.4	**130**	132	ND<0.2	NA	NA	
	4/2/2019	100.17	35.97	ND	ND	64.2	ND<0.2	0.2 J	ND<0.4	2 J	2.2 J	ND<0.2	NA	NA	
	7/30/2019	100.17	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	100.17	36.75	ND	ND	63.42	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	
IP-6	4/8/2009	99.80	37.13	ND	ND	62.67	**78.1**	**9,760**	**3,840**	**15,200**	28,878	ND<50	NA	NA	
	10/28/2009	99.80	36.75	ND	ND	63.05	**43.4 J**	**9,010**	**2,970**	**12,600**	24,623	ND<50	NA	0.60	
	1/19/2010	99.80	36.61	ND	ND	63.19	**28.3**	**10,100**	**2,560**	**11,400**	24,088	ND<25	ND<100	1.29	
	4/26/2010	99.80	35.30	ND	ND	64.50	**9.3 J**	**4,820**	**1,760**	**7,060**	13,649	ND<10	ND<100	1.25	
	7/14/2010	99.80	35.76	ND	ND	64.04	ND<50	**6,960**	**2,250**	**10,400**	19,610	ND<50	ND<100	3.07	
	10/1/2010	99.80	36.47	ND	ND	63.33	ND<25	**3,670**	**1,780**	**8,570**	14,020	ND<25	ND<100	1.81	
	1/24/2011	99.80	37.16	ND	ND	62.64	**99.0**	**2,700**	**2,900**	**12,000**	17,699	**17.0**	ND<200	0.95	
	4/17/2011	99.80	36.35	ND	ND	63.45	ND<10	**6,700**	**2,200**	**7,800**	16,700	ND<10	ND<200	2.01	
	7/8/2011	99.80	36.56	ND	ND	63.24	ND<3.0	**3,900**	**3,100**	**8,100**	15,100	ND<3.0	ND<200	NA	
	10/25/2011	99.80	35.20	ND	ND	64.60	ND<5.0	**2,900**	**1,800**	**6,000**	10,700	ND<5.0	NA	NA	
	4/19/2012	99.80	36.53	ND	ND	63.27	ND<3.0	**2,900**	**1,800**	**8,000**	12,700	ND<3.0	NA	NA	
	10/3/2012	99.80	36.64	ND	ND	63.16	1 J	**33**	**1,500**	**2,700**	4,234	ND<1.0	NA	NA	
	4/11/2013	99.80	37.19	ND	ND	62.61	**56**	**4,300**	**3,300**	**15,000**	22,656	7 J	NA	NA	
	10/17/2013	99.80	37.30	ND	ND	62.50	**4**	**160**	**680**	**1,500**	2,344	ND<1.0	NA	NA	
	4/22/2014	99.80	37.27	ND	ND	62.53	ND<3.0	**100**	**1,100**	**3,500**	4,700	ND<3.0	NA	NA	
	10/23/2014	99.80	37.06	ND	ND	62.74	ND<3.0	**310**	**1,900**	**7,000**	9,210	ND<3.0	NA	NA	
	4/6/2015	99.80	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	No access; under car.
	10/1/2015	99.80	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Abandoned, Dry at 1.30 feet
	4/7/2016	99.80	37.94	ND	ND	61.86	ND<0.5	**18**	**320**	**1,200**	1,538	1	NA	NA	
	10/31/2016	99.80	37.82	ND	ND	61.98	ND<0.5	ND<0.5	1	0.9 J	1.9 J	ND<0.5	NA	NA	
	4/18/2017	99.80	37.19	ND	ND	62.61	ND<0.5	ND<0.5	2	2	4	ND<0.5	NA	NA	
	10/6/2017	99.80	36.60	ND	ND	63.20	ND<0.5	0.9 J	**10**	**120**	130.9 J	ND<0.5	NA	NA	
	4/6/2018	99.80	36.45	ND	ND	63.35	ND<0.5	4	**6**	**140**	150	ND<0.5	NA	NA	
	10/31/2018	99.80	36.27	ND	ND	63.53	ND<0.2	ND<0.2	0.9 J	5	5.9	ND<0.2	NA	NA	
	4/2/2019	99.80	35.07	ND	ND	64.73	ND<0.2	ND<0.2	ND<0.4	ND<1.0	BRL	ND<0.2	NA	NA	
	7/30/2019	99.80	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	99.80	36.03	ND	ND	63.77	ND<0.2	ND<0.2	ND<0.4	ND<1	BRL	ND<0.2	NA	NA	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data
February 6, 2006 Through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation	Depth to Water (feet)	Depth to Hydro-carbon (feet)	Hydro-carbon Thickness (feet)	Corrected GW Elevation (feet)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	Total BTEX (µg/L)	MTBE (µg/L)	Ethyl Alcohol (µg/L)	Dissolved Oxygen (mg/L)	Comments
NYSDEC Standards		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**1**	**5**	**5**	**5**	**~**	**~**	**~**	**~**	
NYSDEC Guidance Values		**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**~**	**~**	**~**	**~**	**~**	**10**	**~**	**~**	
IP-7	10/1/2010	101.35	38.00	ND	ND	63.35	**28.1 J**	**4,580**	**5,750**	**40,000**	50,358	ND<100	ND<100	2.14	
	4/17/2011	101.35	37.89	ND	ND	63.46	NS	NS	NS	NS	NS	NS	NS	0.76	
	7/8/2011	101.35	37.93	ND	ND	63.42	**28**	**4,800**	**5,600**	**28,000**	38,428	ND<5.0	ND<200	NA	
	10/25/2011	101.35	36.72	ND	ND	64.63	**38**	**3,100**	**5,500**	**25,000**	33,638	6 J	NA	NA	
	4/19/2012	101.35	38.07	ND	ND	63.28	**73**	**1,100**	**4,700**	**25,000**	30,873	10	NA	NA	
	10/3/2012	101.35	38.20	ND	ND	63.15	**17**	**1,700**	**5,700**	**35,000**	42,417	3 J	NA	NA	
	4/11/2013	101.35	38.76	ND	ND	62.59	**11**	**960**	**4,800**	**28,000**	33,771	ND<5.0	NA	NA	
	10/17/2013	101.35	38.85	ND	ND	62.50	**59**	**1,600**	**6,000**	**36,000**	43,659	8 J	NA	NA	
	4/22/2014	101.35	38.81	ND	ND	62.54	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/23/2014	101.35	38.60	ND	ND	62.75	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	4/6/2015	101.35	37.74	ND	ND	63.61	**12**	**1,500**	**3,600**	**26,000**	31,112	8 J	NA	NA	
	10/1/2015	101.35	38.46	ND	ND	62.89	NS	NS	NS	NS	NS	NS	NS	NS	
	4/7/2016	101.35	38.71	ND	ND	62.64	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/31/2016	101.35	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	No access; Bolt Struck
	4/18/2017	101.35	38.70	NM	NM	62.65	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/6/2017	101.35	38.31	NM	NM	63.04	NS	NS	NS	NS	NS	NS	NS	NS	
	4/6/2018	101.35	38.44	NM	NM	62.91	NS	NS	NS	NS	NS	NS	NS	NS	Insufficient water.
	10/31/2018	101.35	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry
	4/2/2019	101.35	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry
	7/30/2019	101.35	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/28/2019	101.35	36.25	NM	NM	65.10	NS	NS	NS	NS	NS	NS	NS	NS	

Notes:
~ - no standard or guidance value exists
ND<1.0 - Not detected at or above the laboratory reporting limit shown
µg/L - micrograms per liter
BRL - Below laboratory reporting limits
BTEX - Benzene, toluene, ethylbenzene, and total xylenes
Corrected GW elevation - calculated with following formula:
(top of casing - depth to water) + (hydrocarbon thickness * (hydrocarbon specific gravity))
Depth to Water - measured in feet below land surface from top of casing
GW - Groundwater
Hydrocarbon - liquid-phase hydrocarbon (LPH)
J - Indicates an estimated value
mg/L - milligram per liter
MTBE - methyl tertiary-butyl ether
N/A - Not applicable
NA - Not analyzed
ND - Not detected
NM - Not monitored
NS - Not sampled
NSVD - Not surveyed to vertical datum
NYSDEC Standards and Guidance Values - New York State Department of Environmental Conservation Technical and Operational Guidance Series (TOGS) 1.1.1, Ambient Water Quality Standards and Guidance Values, June 1998 and Addendum April 2000
Bold Items - Reported concentration detected above the applicable standard(s) or guidance value(s)
Total Xylenes - summation of o-xylene and m & p-xylenes

Table 2
AS/SVE Influent Analytical Data
March 16, 2017 through December 12, 2019

Former Mobil #10954
138-50 Hillside Avenue
Jamaica, New York

DATE	HOUR METER READING	DAYS IN MONITORING PERIOD	ACTUAL RUN TIME	PERCENT RUN TIME	AIR FLOW	AIR SPARGE	BTEX				MTBE				TPH			
							CONCENT-RATION	MASS RECOVERY RATE	MASS RECOVERED OVER PERIOD	TOTAL MASS RECOVERED	CONCENT-RATION	MASS RECOVERY RATE	MASS RECOVERED OVER PERIOD	TOTAL MASS RECOVERED	CONCENT-RATION	MASS RECOVERY RATE	MASS RECOVERED OVER PERIOD	TOTAL MASS RECOVERED
	(hr)	(days)		(%)	(scfm)	(Y/N)	(mg/m^3)	(lb/day)	(lb)	(lb)	(mg/m^3)	(lb/day)	(lb)	(lb)	(mg/m^3)	(lb/day)	(lb)	(lb)
2/16/2017	38,702	NA	NA	NA	240	N	27	0.59	NA	NA	0.07	0.00	NA	NA	220	4.7	NA	NA
3/1/2017	39,008	13	13	98%	240	N	43	0.94	11.9	12	0.07	0.00	0.02	0.0	164	3.5	45	45
4/25/2017	40,088	55	45	82%	280	N	18	0.44	20.0	32	0.07	0.00	0.08	0.1	40	1.0	45	90
5/17/2017	40,470	22	16	71%	280	N	12	0.31	4.9	37	0.07	0.00	0.03	0.1	450	11	180	271
8/3/2017	40,804	NA	NA	NA	205	Y	71	1.31	NA	37	0.07	0.00	NA	0.1	2010	37	NA	271
9/7/2017	41,643	35	35	100%	200	Y	49	0.88	30.9	68	0.07	0.00	0.04	0.2	310	5.6	195	466
3/14/2018	42,312	NA	NA	NA	213	Y	24	0.47	NA	68	0.04	0.00	NA	0.2	530	10	NA	466
4/11/2018	42,984	28	28	100%	152	Y	49	0.68	18.9	87	0.04	0.00	0.01	0.2	540	7.4	207	672
5/2/2018	43,488	21	21	100%	148	Y	18	0.24	5.1	92	0.04	0.00	0.01	0.2	260	3.5	73	745
6/21/2018	44,517	50	43	86%	230	N	4	0.08	3.6	95	0.00	0.00	0.00	0.2	40	0.8	35	780
7/11/2018	44,994	20	20	100%	210	Y	5	0.09	1.8	97	0.00	0.00	0.00	0.2	30	0.6	11	792
8/20/2018	45,954	40	40	100%	175	Y	3	0.05	2.2	99	0.00	0.00	0.00	0.2	16	0.3	10	802
9/24/2018	46,800	35	35	100%	250	N	3	0.06	2.0	101	0.01	0.00	0.01	0.2	327	7.3	259	1061
10/25/2018	47,538	31	31	100%	215	Y	8	0.16	5.0	106	0.01	0.00	0.00	0.2	530	10	315	1376
11/14/2018	47,684	20	6	30%	215	N	0	0.00	0.0	106	0.01	0.00	0.00	0.2	180	3.5	21	1397
12/4/2018	48,071	20	16	81%	185	Y	5	0.09	1.5	108	0.01	0.00	0.00	0.2	420	7.0	112	1510
1/9/2019	48,606	35	22	64%	185	Y	9	0.14	3.2	111	0.01	0.00	0.00	0.2	210	3.5	78	1588
2/7/2019	49,326	30	30	100%	175	Y	9	0.14	4.1	115	0.01	0.00	0.00	0.2	110	1.7	52	1640
3/4/2019	49,925	25	25	100%	175	Y	7	0.10	2.6	118	0.01	0.00	0.00	0.2	95	1.5	37	1677
4/2/2019	50,620	29	29	100%	175	Y	1	0.01	0.4	118	0.00	0.00	0.00	0.2	46	0.7	21	1698
5/1/2019	51,318	29	29	100%	175	Y	0.1	0.002	0.1	118	0.00	0.00	0.00	0.2	30	0.5	14	1712
6/11/2019	52,301	41	41	100%	235	Y	0.02	0.000	0.0	118	0.00	0.00	0.00	0.2	20	0.4	17	1729
7/17/2019	53,164	36	36	100%	205	Y	0.01	0.000	0.0	118	0.00	0.00	0.00	0.2	20	0.4	13	1742
8/8/2019	53,333	22	7	32%	240	Y	0.01	0.000	0.0	118	0.00	0.00	0.00	0.2	20	0.4	3	1745
9/5/2019	53,981	27	27	100%	235	Y	0.01	0.000	0.0	118	0.00	0.00	0.00	0.2	81	1.7	46	1792
10/9/2019	54,819	35	35	100%	230	Y	0.04	0.001	0.0	118	0.00	0.00	0.00	0.2	20	0.4	14	1806
11/14/2019	55,689	36	36	100%	225	Y	0.10	0.002	0.1	118	0.00	0.00	0.00	0.2	20	0.4	15	1821
12/12/2019	55,880	28	8	28%	140	N	0.04	0.000	0.0	118	0.00	0.00	0.00	0.2	210	2.6	21	1842

Notes:

BTEX - Benzene, toluene, ethylbenzene and xylene
MTBE - Methyl tertiary butyl ether
TPH - Total petroleum hydrocarbons (C1-C10)
NA - Not applicable
NM - Not measured
scfm - Standard cubic feet per minute
mg/m^3 - Milligrams per cubic meter
lb - Pounds
MDL - Method detection limit

Calculations:

Release Rate (lb/hr) = Flow Rate (scfm) x Concentration (mg/m^3)

$$\frac{ft^3}{min} \times \frac{mg}{m^3} \times \frac{m^3}{35.31\ ft^3} \times \frac{lb}{453592\ mg} \times \frac{60\ min}{hr}$$

For mass calculations, half of the MDL is used for samples which are below the MDL.

Table 3
AS/SVE Effluent Analytical Data
March 16, 2017 through December 12, 2019

Former Mobil #10954
138-50 Hillside Avenue
Jamaica, New York

EFFLUENT SAMPLE DATE	AIR FLOW RATE	BENZENE		TOLUENE		ETHYLBENZENE		TOTAL XYLENES		MTBE		TPH	
	scfm	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr	mg/m^3	lb/hr
2/16/2017	240	0.003	2.88E-06	0.03	2.70E-05	0.03	2.34E-05	0.07	6.38E-05	0.004	3.24E-06	30	0.03
3/1/2017	240	0.032	2.88E-05	3.20	2.88E-03	0.57	5.12E-04	0.52	4.68E-04	0.036	3.24E-05	230	0.21
4/25/2017	280	0.007	6.92E-06	0.02	2.52E-05	0.02	1.68E-05	0.10	1.01E-04	0.002	2.31E-06	20	0.02
5/17/2017	280	0.002	1.68E-06	0.01	1.26E-05	0.00	4.30E-06	0.03	2.90E-05	0.000	3.78E-07	20	0.02
8/3/2017	205	0.001	9.98E-07	0.02	1.31E-05	0.00	1.15E-06	0.01	5.53E-06	0.000	2.76E-07	220	0.17
9/7/2017	200	0.065	4.87E-05	7.00	5.24E-03	0.34	2.55E-04	0.17	1.27E-04	0.070	5.24E-05	430	0.32
3/14/2018	213	0.007	5.19E-06	0.08	5.98E-05	0.01	6.78E-06	0.02	1.36E-05	0.007	5.59E-06	20	0.02
4/11/2018	152	0.001	6.26E-07	0.00	2.14E-06	0.00	6.26E-07	0.01	7.00E-06	0.000	2.05E-07	20	0.01
5/2/2018	148	0.001	6.65E-07	0.04	2.33E-05	0.01	4.77E-06	0.01	5.49E-06	0.000	2.00E-07	20	0.01
6/21/2018	230	0.003	2.33E-06	0.02	1.38E-05	0.00	9.48E-07	0.01	4.48E-06	0.000	3.10E-07	20	0.02
7/11/2018	210	0.001	8.65E-07	0.03	2.05E-05	0.00	1.89E-06	0.01	1.14E-05	0.000	2.83E-07	20	0.02
8/20/2018	175	0.001	4.65E-07	0.01	6.56E-06	0.00	7.21E-07	0.01	7.80E-06	0.000	2.36E-07	3	0.00
9/24/2018	250	0.001	1.12E-06	0.03	3.09E-05	0.00	1.12E-06	0.01	7.40E-06	0.000	3.37E-07	50	0.05
10/25/2018	215	0.007	5.32E-06	0.04	2.90E-05	0.01	8.05E-06	0.03	2.46E-05	0.001	5.64E-07	75	0.06
11/14/2018	215	0.003	2.58E-06	0.02	1.21E-05	0.01	8.05E-06	0.03	2.46E-05	0.007	5.64E-06	20	0.02
12/4/2018	185	0.003	2.22E-06	0.02	1.32E-05	0.01	6.93E-06	0.09	6.51E-05	0.007	4.85E-06	40	0.03
1/9/2019	185	0.004	2.98E-06	0.01	6.72E-06	0.01	3.47E-06	0.02	1.32E-05	0.004	2.49E-06	20	0.01
2/7/2019	175	0.002	1.38E-06	0.02	1.18E-05	0.00	1.25E-06	0.01	8.78E-06	0.000	2.36E-07	20	0.01
3/4/2019	175	0.002	1.44E-06	0.01	4.52E-06	0.00	1.64E-06	0.01	5.05E-06	0.002	1.18E-06	20	0.01
4/2/2019	175	0.002	1.05E-06	0.01	7.21E-06	0.01	3.28E-06	0.02	1.02E-05	0.004	2.36E-06	20	0.01
5/1/2019	175	0.001	7.21E-07	0.01	8.52E-06	0.00	2.69E-06	0.06	3.87E-05	0.001	4.59E-07	20	0.01
6/11/2019	235	0.001	8.80E-07	0.01	5.11E-06	0.00	8.80E-07	0.00	2.69E-06	0.001	6.16E-07	20	0.02
7/17/2019	205	0.001	9.22E-07	0.01	4.45E-06	0.00	1.08E-06	0.01	7.68E-06	0.000	2.76E-07	20	0.02
8/8/2019	240	0.001	1.17E-06	0.01	7.10E-06	0.00	1.17E-06	0.00	2.79E-06	0.000	3.24E-07	20	0.02
9/5/2019	235	0.002	1.32E-06	0.01	4.49E-06	0.00	4.40E-07	0.00	1.67E-06	0.000	3.17E-07	20	0.02
10/9/2019	230	0.001	9.48E-07	0.02	1.81E-05	0.00	4.31E-07	0.00	1.34E-06	0.000	3.10E-07	20	0.02
11/14/2019	225	0.001	9.27E-07	0.07	6.15E-05	0.00	1.26E-06	0.01	5.65E-06	0.000	3.03E-07	20	0.02
12/12/2019	140	0.002	1.21E-06	0.02	8.39E-06	0.00	1.15E-06	0.01	5.66E-06	0.000	1.89E-07	46	0.02
Discharge Limits (lb/hr)	NA	NA	4.94E-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

BTEX - Benzene, toluene, ethylbenzene and xylene
MTBE - Methyl tertiary butyl ether
TPH - Total petroleum hydrocarbons (C1-C10)
NA - Not applicable
scfm - Standard cubic feet per minute
mg/m^3 - Milligrams per cubic meter
lb - Pounds
MDL - Method detection limit

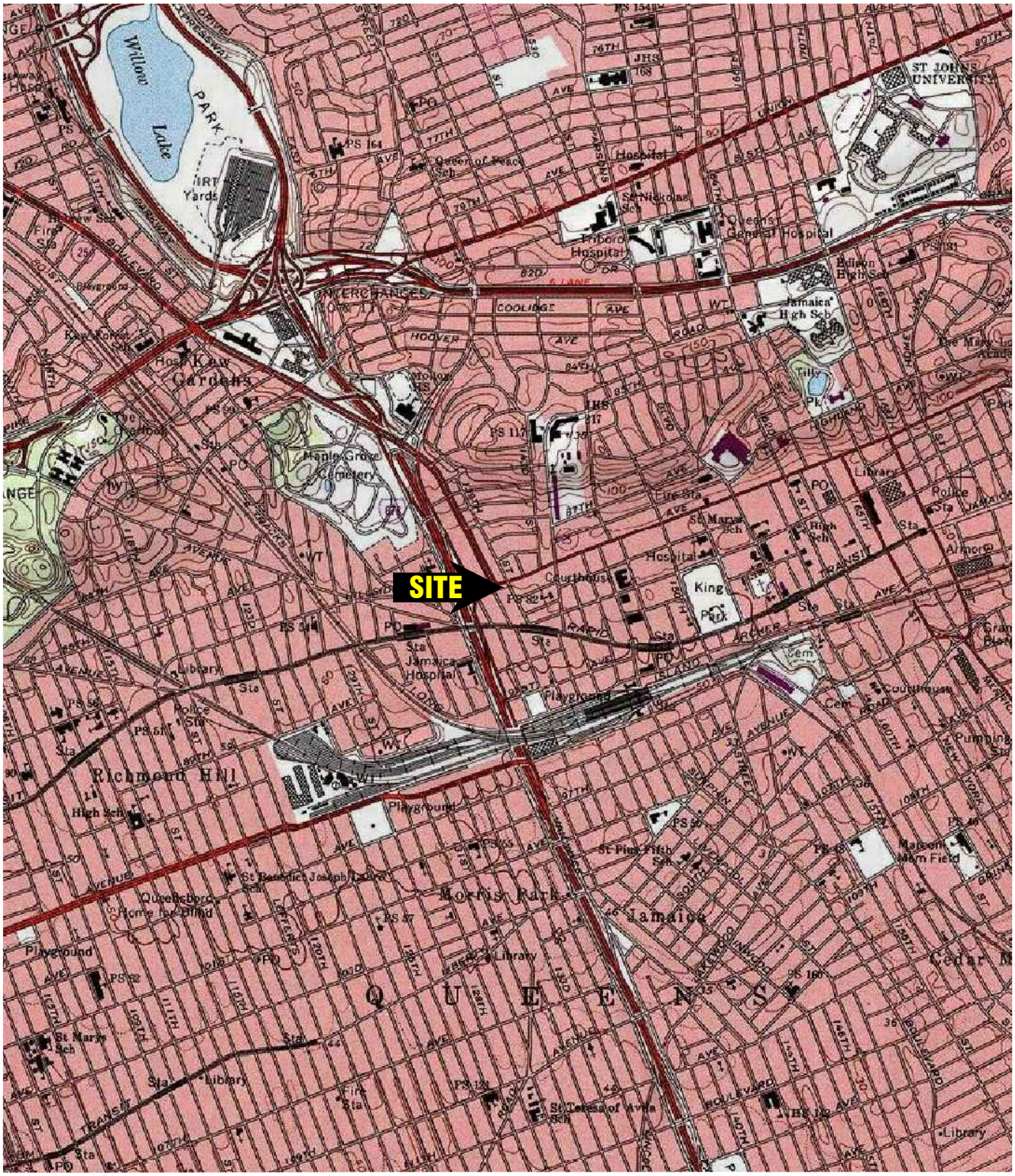
Calculations:

Release Rate (lb/hr) = Flow Rate (scfm) x Concentration (mg/m^3)

$$\frac{ft^3}{min} \times \frac{mg}{m^3} \times \frac{m^3}{35.31\ ft^3} \times \frac{lb}{453592\ mg} \times \frac{60\ min}{hr}$$

For mass calculations, half of the MDL is used for samples which are below the MDL

FIGURES



REFERENCE: TOPO!, USGS 7.5 MINUTE
QUAD: JAMAICA, NEW YORK
DATED: 2010

0 2000' 4000'

GRAPHIC SCALE

MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

SITE LOCATION MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
1

CITY: MANCHESTER, CT DIV/GROUP: ENVCAD DB: B. SMALL PM: E.CHOQUETTE
G:\ENVCAD\Manchester\ACT\B00858500\09541B00858500954-APR11.dwg LAYOUT: FIGURE 1 SAVED: 12/6/2011 5:12 PM ACADVER: 18.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 12/14/2011 4:49 PM BY: SMALL, BRIAN

TOYOTA DEALERSHIP

HILLSIDE AVENUE

COMMERCIAL (CAR LOT)

139TH STREET

RESIDENTIAL BUILDING WITH BASEMENT

RESIDENTIAL YARDS

RESIDENTIAL WITH BASEMENTS

APARTMENT BUILDING

COMMERCIAL (KFC RESTAURANT)

QUEENS BOULEVARD

CONCRETE SIDEWALK

ASPHALT

LANDSCAPING

SIGN

LIGHT

FILLED MANHOLE

SUBWAY EMERGENCY HATCH

FORMER USED OIL UST (REMOVED 3-07)

CANOPY

USED OIL AST

(1) FORMER 550-GALLON USED OIL UST (PREVIOUSLY REMOVED)

(1) FORMER 4,000-GALLON UST (REMOVED 10-89)

(12) FORMER 550-GALLON USTs (REMOVED 10-89)

(4) IN-GROUND HYDRAULIC LIFTS

TRAILER

FORMER REMOTE FILLS

VENTS

(5) 4,000-GALLON GASOLINE USTs

MOBIL SERVICE STATION No. 10954 (17-HMB)

COOLING FANS

SPILL RECOVERY CONTAINER

UST VENT

(1) FORMER 550-GALLON FUEL OIL UST (PREVIOUSLY REMOVED)

(3) 55-GALLON DRUMS

DUMPSTER

FUEL OIL UST

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10 MW-B MW-C

IP-1 IP-2 IP-3 IP-4 IP-5 IP-6

AS-101 AS-102 AS-103 AS-104 AS-105

SVE-101 SVE-102

LEGEND:

- FENCE LINE
- MONITORING WELL
- TANK FIELD WELL
- INJECTION WELL
- CLEAN-OUT
- FIRE HYDRANT
- V VACUUM
- SUBWAY (UNDERGROUND)
- CATCH BASIN
- E ELECTRIC VAULT
- S SEWER VAULT
- W WATER SUPPLY VAULT
- G NATURAL GAS VAULT
- UST UNDERGROUND STORAGE TANK
- AST ABOVE GROUND STORAGE TANK
- APPROXIMATE LOCATION OF SOIL VAPOR EXTRACTION WELL (SVE)
- APPROXIMATE LOCATION OF AIR SPARGE WELL (AS)

NOTE:

1. THIS DRAWING IS REFERENCED FROM THE FOLLOWING:

   A. "GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON DISTRIBUTION MAP", BY: KLEINFELDER, DATED: 10/25/10, SCALE: 1"=30'.

2. LOCATIONS FOR AIR SPARGE (AS) AND SOIL VAPOR EXTRACTION (SVE) WELLS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

CITY: BANGALORE; INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR LD: PIC: S. DAVIES PM: N.FRASCA TM: G. CUTSHALL LYR: ON=*; OFF=*REF*
K:\Environment - Arcadis\ARCADIS USA\ PROJECTS\1. EXXON MOBIL\NY\UB001767 - 10954 - East River 10954\UB001767-01E-Drawings\85850X01\85850G01.dwg LAYOUT: 2
PLOTTED: 12/8/2015 11:01 AM BY: YOGINATH NIMBARGIKAR SAVED: 12/8/2015 11:01 AM ACADVER: 19.1S (LMS TECH) PAGESETUP: C-LB-PDF PLOTSTYLETABLE: PLTFULL.CTB
XREFS: IMAGES: PROJECTNAME: ----
85850X01
85850X00

LEGEND:

- SITE BOUNDARY
- RESIDENTIAL PROPERTY
- COMMERCIAL PROPERTY
- PUBLIC USE PROPERTY
- B BASEMENT

SOURCE:

1. AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO.

0 170' 340'

GRAPHIC SCALE

MOBIL SERVICE STATION No. 10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

SURROUNDING LAND USE MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: (SYRACUSE, NY) MANCHESTER, CT DIV/GROUP: ENVCAD DB: (P. LISTER L. FORAKER) B. SMALL PM: T. ARMSTRONG TM: M. SWENNSON TR: A. ANDERSON LYR: ON=*;OFF=REF,{FRZ}
C:\BIM\OneDrive - ARCADIS\BIM 360 Docs\EXXON MOBIL\10954_Mobil Service - Jamaica, NY\2019\300756901-DWG\10954 SURROUNDING LAND USE.dwg LAYOUT: 2 SAVED: 11/26/2019 11:37 AM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 11/26/2019 11:37 AM BY: MURESAN, ELENA

TOYOTA DEALERSHIP

HILLSIDE AVENUE

COMMERCIAL (CAR LOT)

139TH STREET

QUEENS BOULEVARD

FILLED MANHOLE

SUBWAY EMERGENCY HATCH

LIGHT

SIGN

CANOPY

USED OIL AST

MW-B (NM)

MW-4 (63.05)

(5) 4,000-GALLON GASOLINE USTs

MW-C (NM)

MW-3 (62.85)*

MW-6 (62.97)

MW-10 (62.97)

MW-7 (62.90)

MW-5 (62.96)

AS-105

IP-7 (Dry)

AS-106

IP-1 (Dry)

IP-4 (62.96)

SVE-102

AS-102

IP-5 (63.04)

MW-8 (63.05)

IP-2 (63.48)

AS-103

MW-1 (62.98)*

AS-104

IP-6 (63.53)

IP-3 (62.98)*

AS-101

SVE-101

FUEL OIL UST

MW-9 (62.93)

MW-2 (63.10)*

63.10

62.90

63.30

63.50

TRAILER

VENTS

RESIDENTIAL BUILDING WITH BASEMENT

(4) IN-GROUND HYDRAULIC LIFTS

SPILL RECOVERY CONTAINER

MOBIL SERVICE STATION No. 10954 (17-HMB)

COOLING FANS

UST VENT

TRAILER

RESIDENTIAL YARDS

(3) 55-GALLON DRUMS

DUMPSTER

CONCRETE SIDEWALK

ASPHALT

LANDSCAPING

RESIDENTIAL WITH BASEMENTS

APARTMENT BUILDING

COMMERCIAL (KFC RESTAURANT)

LEGEND:

- FENCE LINE
- MONITORING WELL
- TANK FIELD WELL
- CLEAN-OUT
- FIRE HYDRANT
- VACUUM
- SUBWAY (UNDERGROUND)
- CATCH BASIN
- ELECTRIC VAULT
- SEWER VAULT
- WATER SUPPLY VAULT
- NATURAL GAS VAULT
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVE GROUND STORAGE TANK
- SOIL VAPOR EXTRACTION WELL (SVE)
- AIR SPARGE WELL (AS)
- OBSERVATION WELL
- (63.53) — GROUNDWATER ELEVATION
- 63.50 — GROUNDWATER CONTOUR LINE
- GROUNDWATER FLOW DIRECTION
- (NM) — NOT MONITORED
- * — ANOMALOUS DATA NOT USED IN CONTOURING

NOTES:

1. THIS DRAWING IS REFERENCED FROM THE FOLLOWINC

   A. "GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON DISTRIBUTION MAP", BY: KLEINFELDER, DATED: 10/25/10, SCALE: 1"=30'.

2. LOCATIONS FOR AIR SPARGE (AS) AND SOIL VAPOR EXTRACTION (SVE) WELLS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

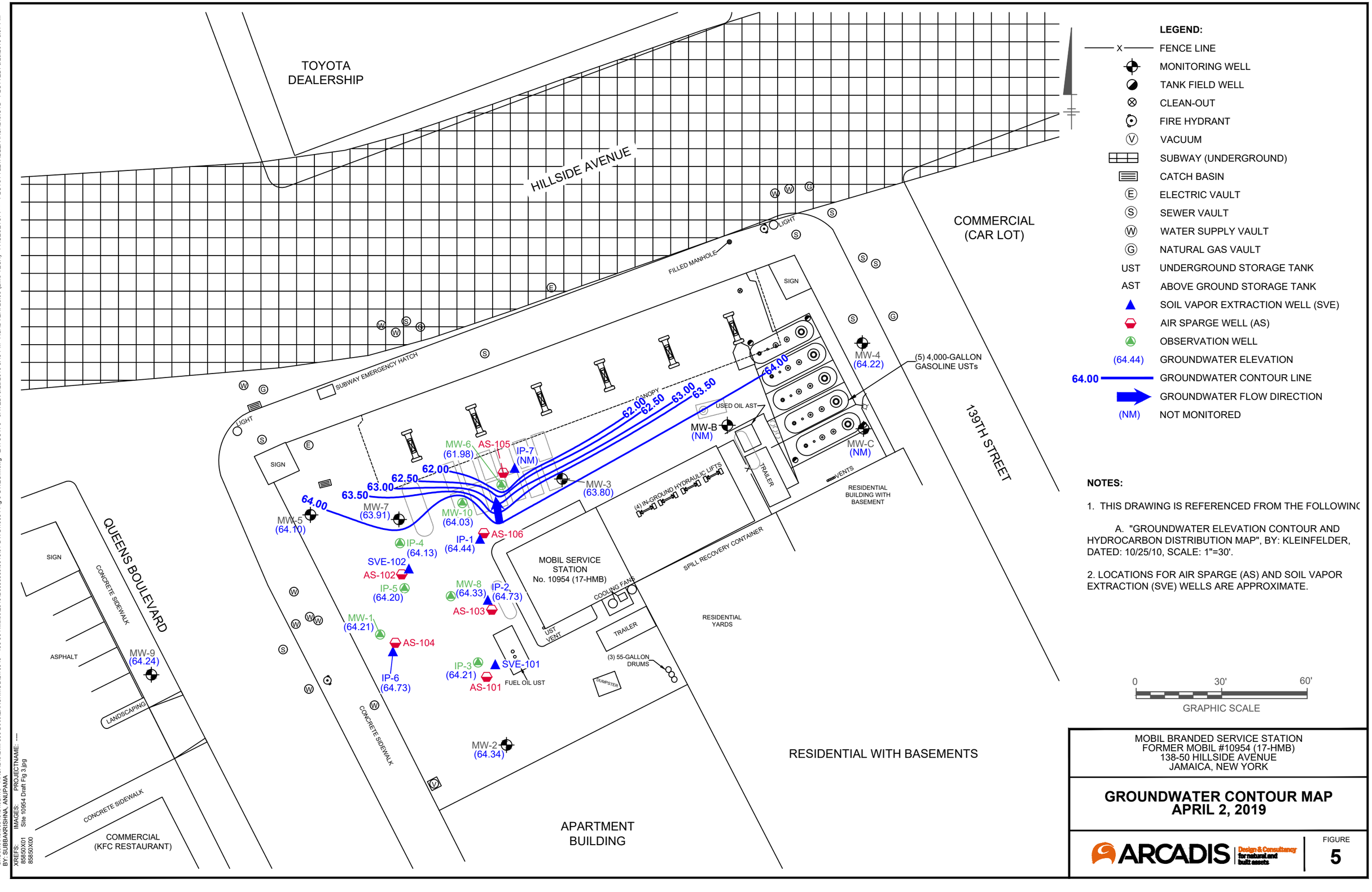
MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

GROUNDWATER CONTOUR MAP OCTOBER 31, 2018

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR LD: PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL LYR: ON=*; OFF=*REF*
C:\Users\nadigerc8191\OneDrive - ARCADIS\BIM 360 Docs\EXXONMOBIL\10945 - 138-50 Hillside\2018\B0085850.0945\01-DWG\10954 Fig 3 GWECM.dwg LAYOUT: 3 SAVED: 12/17/2018 7:15 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 12/18/2018 3:54 PM BY: NADIGERA, CHIDAMBARA
XREFS: IMAGES: PROJECTNAME: ----
85850X01 Site 10954 Draft Fig 3.jpg
85850X00



LEGEND:

- FENCE LINE
- MONITORING WELL
- TANK FIELD WELL
- CLEAN-OUT
- FIRE HYDRANT
- VACUUM
- SUBWAY (UNDERGROUND)
- CATCH BASIN
- ELECTRIC VAULT
- SEWER VAULT
- WATER SUPPLY VAULT
- NATURAL GAS VAULT
- UST — UNDERGROUND STORAGE TANK
- AST — ABOVE GROUND STORAGE TANK
- SOIL VAPOR EXTRACTION WELL (SVE)
- AIR SPARGE WELL (AS)
- OBSERVATION WELL
- (64.44) — GROUNDWATER ELEVATION
- 64.00 — GROUNDWATER CONTOUR LINE
- GROUNDWATER FLOW DIRECTION
- (NM) — NOT MONITORED

NOTES:

1. THIS DRAWING IS REFERENCED FROM THE FOLLOWINC

   A. "GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON DISTRIBUTION MAP", BY: KLEINFELDER, DATED: 10/25/10, SCALE: 1"=30'.

2. LOCATIONS FOR AIR SPARGE (AS) AND SOIL VAPOR EXTRACTION (SVE) WELLS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

GROUNDWATER CONTOUR MAP APRIL 2, 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 5

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR LD: PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL LYR: ON=*; OFF=*REF*
C:\Users\AS00813\OneDrive - ARCADIS\IBM 360 Docs\EXXONMOBIL\10945 - 138-50 Hillside\2019\B0085850.0945\01-DWG\10954 Fig 3 GWECM.dwg LAYOUT: 3 SAVED: 6/20/2019 5:48 PM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 6/20/2019 6:07 PM
BY: SUBBAKRISHNA, ANUPAMA
XREFS: IMAGES: PROJECTNAME: ----
85850X01 Site 10954 Draft Fig 3.jpg
85850X00

TOYOTA DEALERSHIP

HILLSIDE AVENUE

COMMERCIAL (CAR LOT)

139TH STREET

QUEENS BOULEVARD

MOBIL SERVICE STATION No. 10954 (17-HMB)

RESIDENTIAL BUILDING WITH BASEMENT

RESIDENTIAL YARDS

RESIDENTIAL WITH BASEMENTS

APARTMENT BUILDING

COMMERCIAL (KFC RESTAURANT)

SIGN

LIGHT

FILLED MANHOLE

SUBWAY EMERGENCY HATCH

CANOPY

USED OIL AST

(5) 4,000-GALLON GASOLINE USTs

(4) IN-GROUND HYDRAULIC LIFTS

TRAILER

VENTS

SPILL RECOVERY CONTAINER

COOLING FANS

UST VENT

(3) 55-GALLON DRUMS

DUMPSTER

FUEL OIL UST

CONCRETE SIDEWALK

ASPHALT

LANDSCAPING

MW-1 (63.34)
MW-2 (NM)
MW-3 (NM)
MW-4 (NM)
MW-5 (63.88)
MW-6 (60.37)
MW-7 (NM)
MW-8 (62.79)
MW-9 (NM)
MW-10 (65.35)*
MW-B (NM)
MW-C (NM)

AS-101
AS-102
AS-103
AS-104
AS-105
AS-106

IP-1 (64.41)
IP-2 (65.09)
IP-3 (64.40)
IP-4 (NM)
IP-5 (63.42)
IP-6 (63.77)
IP-7 (65.10)*

SVE-101
SVE-102

63.00
62.50
62.00
61.50
61.00
63.50
64.00
64.50

LEGEND:

X	FENCE LINE
	MONITORING WELL
	TANK FIELD WELL
	CLEAN-OUT
	FIRE HYDRANT
V	VACUUM
	SUBWAY (UNDERGROUND)
	CATCH BASIN
E	ELECTRIC VAULT
S	SEWER VAULT
W	WATER SUPPLY VAULT
G	NATURAL GAS VAULT
UST	UNDERGROUND STORAGE TANK
AST	ABOVE GROUND STORAGE TANK
	SOIL VAPOR EXTRACTION WELL (SVE)
	AIR SPARGE WELL (AS)
	OBSERVATION WELL
(63.88)	GROUNDWATER ELEVATION
64.50	GROUNDWATER CONTOUR LINE
	GROUNDWATER FLOW DIRECTION
(NM)	NOT MONITORED
*	ANOMALOUS DATA NOT USED IN CONTOURING

NOTES:

1. THIS DRAWING IS REFERENCED FROM THE FOLLOWINC

   A. "GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON DISTRIBUTION MAP", BY: KLEINFELDER, DATED: 10/25/10, SCALE: 1"=30'.

2. LOCATIONS FOR AIR SPARGE (AS) AND SOIL VAPOR EXTRACTION (SVE) WELLS ARE APPROXIMATE.

0 30' 60'

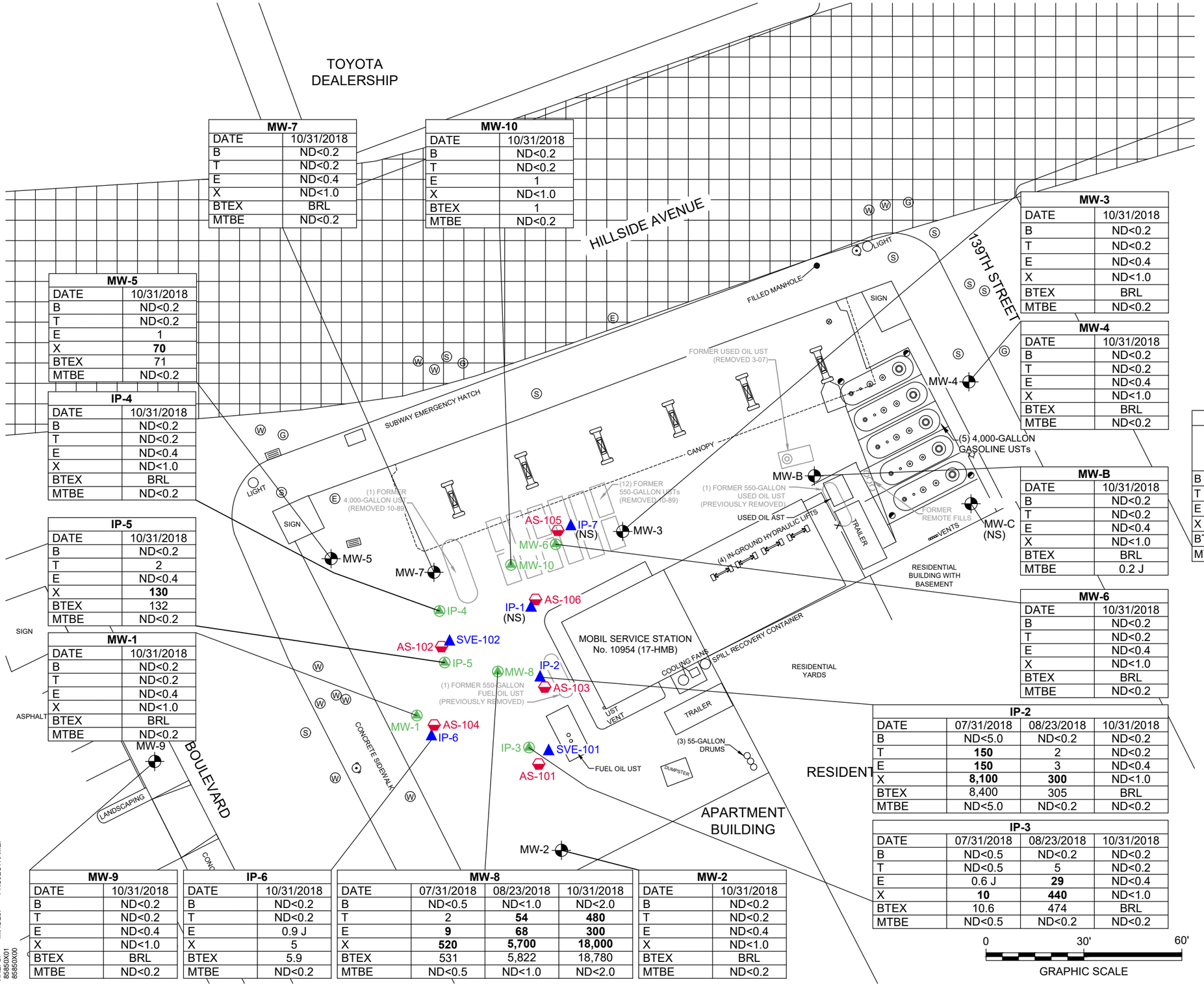
GRAPHIC SCALE

MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

GROUNDWATER CONTOUR MAP OCTOBER 28, 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 6



MW-7	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-10	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	1
X	ND<1.0
BTEX	1
MTBE	ND<0.2

MW-3	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-5	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	1
X	**70**
BTEX	71
MTBE	ND<0.2

MW-4	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

IP-4	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-B	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	0.2 J

IP-5	
DATE	10/31/2018
B	ND<0.2
T	2
E	ND<0.4
X	**130**
BTEX	132
MTBE	ND<0.2

MW-6	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-1	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

IP-2			
DATE	07/31/2018	08/23/2018	10/31/2018
B	ND<5.0	ND<0.2	ND<0.2
T	**150**	2	ND<0.2
E	**150**	3	ND<0.4
X	**8,100**	**300**	ND<1.0
BTEX	8,400	305	BRL
MTBE	ND<5.0	ND<0.2	ND<0.2

IP-3			
DATE	07/31/2018	08/23/2018	10/31/2018
B	ND<0.5	ND<0.2	ND<0.2
T	ND<0.5	5	ND<0.2
E	0.6 J	**29**	ND<0.4
X	**10**	**440**	ND<1.0
BTEX	10.6	474	BRL
MTBE	ND<0.5	ND<0.2	ND<0.2

MW-9	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

IP-6	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	0.9 J
X	5
BTEX	5.9
MTBE	ND<0.2

MW-8			
DATE	07/31/2018	08/23/2018	10/31/2018
B	ND<0.5	ND<1.0	ND<2.0
T	2	**54**	**480**
E	**9**	**68**	**300**
X	**520**	**5,700**	**18,000**
BTEX	531	5,822	18,780
MTBE	ND<0.5	ND<1.0	ND<2.0

MW-2	
DATE	10/31/2018
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

LEGEND:

- FENCE LINE
- MONITORING WELL
- TANK FIELD WELL
- CLEAN-OUT
- FIRE HYDRANT
- VACUUM
- SUBWAY (UNDERGROUND)
- CATCH BASIN
- ELECTRIC VAULT
- SEWER VAULT
- WATER SUPPLY VAULT
- NATURAL GAS VAULT
- UST UNDERGROUND STORAGE TANK
- AST ABOVE GROUND STORAGE TANK
- SOIL VAPOR EXTRACTION WELL (SVE)
- AIR SPARGE WELL (AS)
- OBSERVATION WELL

WELL IDENTIFICATION	
CONSTITUENT	GROUNDWATER STANDARDS AND GUIDANCE VALUES
B = BENZENE	1
T = TOLUENE	5
E = ETHYLBENZENE	5
X = TOTAL XYLENES	5
BTEX = TOTAL BTEX	--
MTBE = METHYL TERTIARY BUTYL ETHER	10

<	CONSTITUENT NOT DETECTED AT OR BELOW THE INDICATED REPORTING LIMIT
ND	NOT DETECTED
J	ESTIMATED VALUE
BRL	BELOW LABORATORY REPORTING LIMIT
(NS)	NOT SAMPLED

NOTES:

1. THIS DRAWING IS REFERENCED FROM THE FOLLOWING:
   A. "GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON DISTRIBUTION MAP", BY: KLEINFELDER, DATED: 10/25/10, SCALE: 1"=30'.
2. ALL UNITS REPORTED IN MICROGRAMS PER LITER (µg/L).
3. BOLDED VALUE INDICIATES RESULT ABOVE NYSDEC STANDARDS AND GUIDANCE VALUES.
4. LOCATIONS FOR AIR SPARGE (AS) AND SOIL VAPOR EXTRACTION (SVE) WELLS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

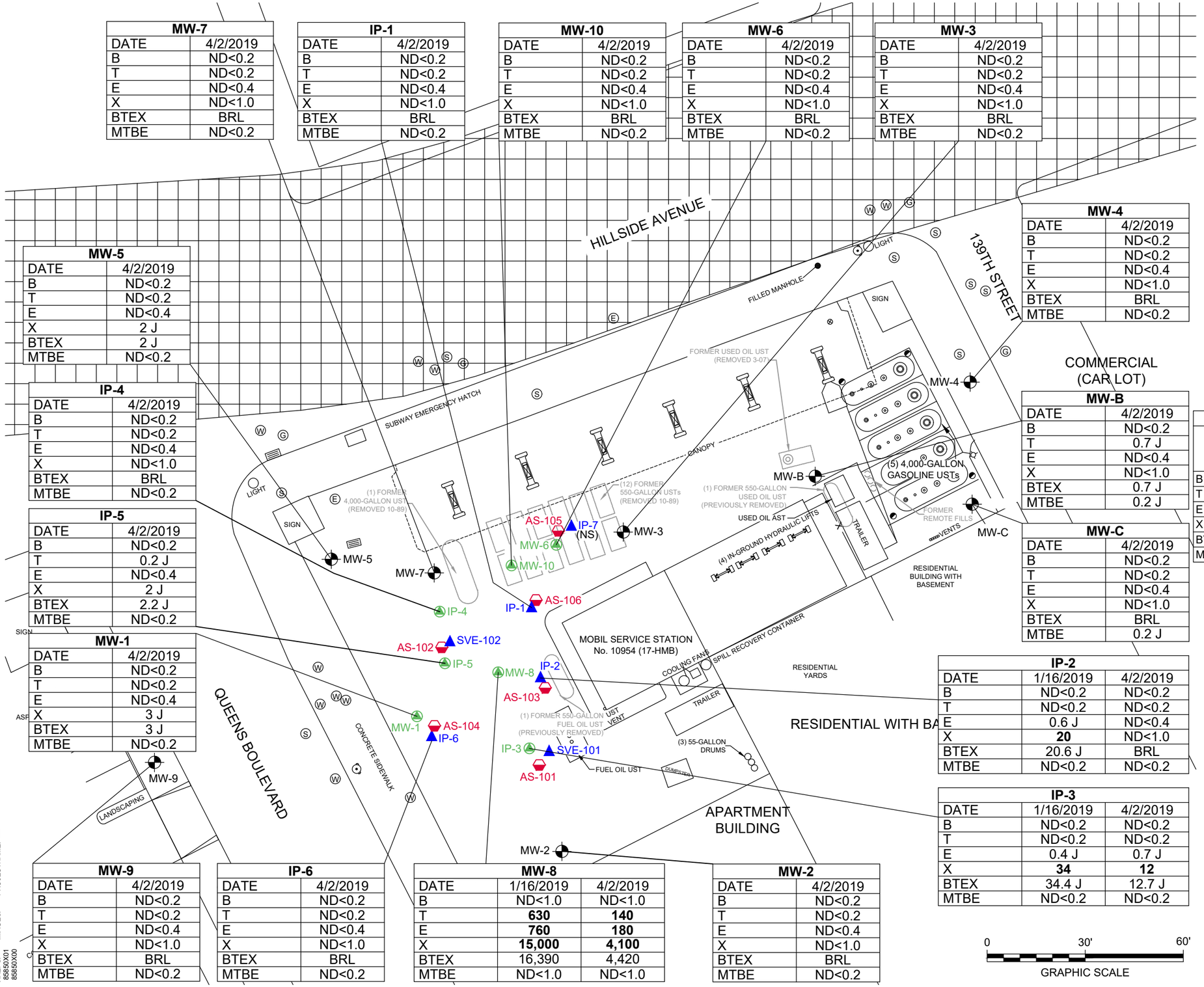
MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

GROUNDWATER ANALYTICAL MAP JULY - OCTOBER 2018

ARCADIS Design & Consultancy for natural and built assets

FIGURE 7

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y.NIMBARGIKAR LD: PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL LYR: ON=*; OFF=*REF*
C:\Users\nadigerc8191\OneDrive - ARCADIS\IBIM 360 Docs\EXXONMOBIL\10945 - 138-50 Hillside\2018\B0085850.0945\01-DWG\10954 Fig 4 GWARM.dwg LAYOUT: 4 SAVED: 12/18/2018 9:58 AM ACADVER: 21.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 12/18/2018
10:01 AM BY: NADIGERA, CHIDAMBARA
XREFS: 85850X01 85850X00 IMAGES: PROJECTNAME: ----



MW-7	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

IP-1	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-10	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-6	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-3	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-4	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-5	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	2 J
BTEX	2 J
MTBE	ND<0.2

IP-4	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

IP-5	
DATE	4/2/2019
B	ND<0.2
T	0.2 J
E	ND<0.4
X	2 J
BTEX	2.2 J
MTBE	ND<0.2

MW-1	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	3 J
BTEX	3 J
MTBE	ND<0.2

MW-B	
DATE	4/2/2019
B	ND<0.2
T	0.7 J
E	ND<0.4
X	ND<1.0
BTEX	0.7 J
MTBE	0.2 J

MW-C	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	0.2 J

IP-2		
DATE	1/16/2019	4/2/2019
B	ND<0.2	ND<0.2
T	ND<0.2	ND<0.2
E	0.6 J	ND<0.4
X	**20**	ND<1.0
BTEX	20.6 J	BRL
MTBE	ND<0.2	ND<0.2

IP-3		
DATE	1/16/2019	4/2/2019
B	ND<0.2	ND<0.2
T	ND<0.2	ND<0.2
E	0.4 J	0.7 J
X	**34**	**12**
BTEX	34.4 J	12.7 J
MTBE	ND<0.2	ND<0.2

MW-9	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

IP-6	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

MW-8		
DATE	1/16/2019	4/2/2019
B	ND<1.0	ND<1.0
T	**630**	**140**
E	**760**	**180**
X	**15,000**	**4,100**
BTEX	16,390	4,420
MTBE	ND<1.0	ND<1.0

MW-2	
DATE	4/2/2019
B	ND<0.2
T	ND<0.2
E	ND<0.4
X	ND<1.0
BTEX	BRL
MTBE	ND<0.2

LEGEND:

- FENCE LINE
- MONITORING WELL
- TANK FIELD WELL
- CLEAN-OUT
- FIRE HYDRANT
- VACUUM
- SUBWAY (UNDERGROUND)
- CATCH BASIN
- ELECTRIC VAULT
- SEWER VAULT
- WATER SUPPLY VAULT
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- AST ABOVE GROUND STORAGE TANK
- SOIL VAPOR EXTRACTION WELL (SVE)
- AIR SPARGE WELL (AS)
- OBSERVATION WELL

WELL IDENTIFICATION	
CONSTITUENT	GROUNDWATER STANDARDS AND GUIDANCE VALUES
B = BENZENE	1
T = TOLUENE	5
E = ETHYLBENZENE	5
X = TOTAL XYLENES	5
BTEX = TOTAL BTEX	--
MTBE = METHYL TERTIARY BUTYL ETHER	10

<	CONSTITUENT NOT DETECTED AT OR BELOW THE INDICATED REPORTING LIMIT
ND	NOT DETECTED
J	ESTIMATED VALUE
BRL	BELOW LABORATORY REPORTING LIMIT
(NS)	NOT SAMPLED

NOTES:

1. THIS DRAWING IS REFERENCED FROM THE FOLLOWING:
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2. ALL UNITS REPORTED IN MICROGRAMS PER LITER (µg/L).
3. BOLDED VALUE INDICIATES RESULT ABOVE NYSDEC STANDARDS AND GUIDANCE VALUES.
4. LOCATIONS FOR AIR SPARGE (AS) AND SOIL VAPOR EXTRACTION (SVE) WELLS ARE APPROXIMATE.

0 30' 60'

GRAPHIC SCALE

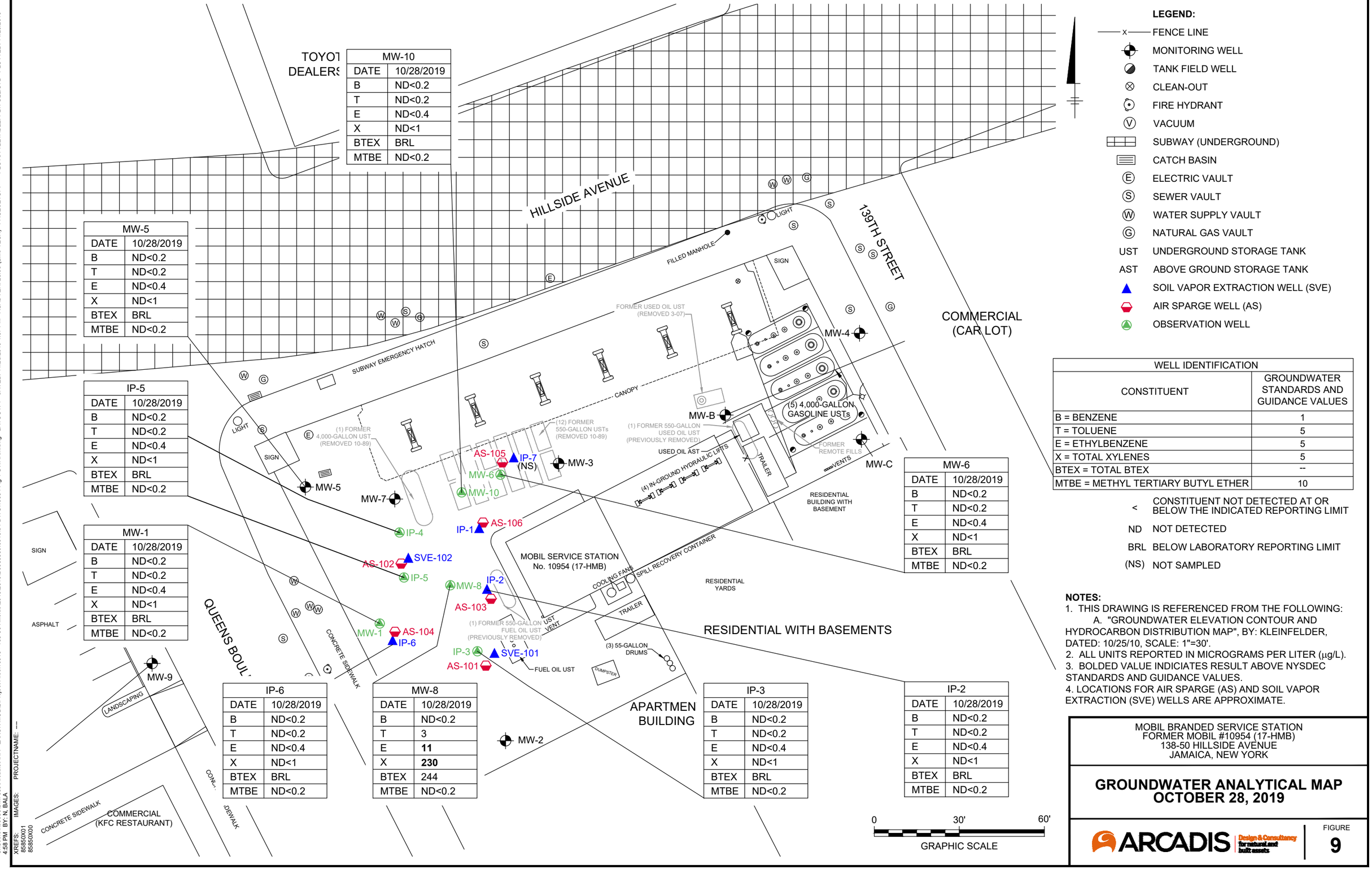
MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

GROUNDWATER ANALYTICAL MAP JANUARY 16 AND APRIL 2, 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 8

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR LD: PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL LYR: ON=*; OFF=*REF*
C:\BIM\OneDrive - ARCADIS\BIM 360 Docs\ANA - EXXON MOBIL\110945 - 138-50 Hillside\2019\B0085850.0945\01-DWG\110954 Fig 4 GWARM-JanApril2019.dwg LAYOUT: 4 SAVED: 7/24/2019 8:58 AM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 7/24/2019 8:58 AM BY: SMALL, BRIAN
XREFS: 85850X01 85850X00 IMAGES: PROJECTNAME: ----



LEGEND:

- FENCE LINE
- MONITORING WELL
- TANK FIELD WELL
- CLEAN-OUT
- FIRE HYDRANT
- VACUUM
- SUBWAY (UNDERGROUND)
- CATCH BASIN
- ELECTRIC VAULT
- SEWER VAULT
- WATER SUPPLY VAULT
- NATURAL GAS VAULT
- UST UNDERGROUND STORAGE TANK
- AST ABOVE GROUND STORAGE TANK
- SOIL VAPOR EXTRACTION WELL (SVE)
- AIR SPARGE WELL (AS)
- OBSERVATION WELL

WELL IDENTIFICATION	
CONSTITUENT	GROUNDWATER STANDARDS AND GUIDANCE VALUES
B = BENZENE	1
T = TOLUENE	5
E = ETHYLBENZENE	5
X = TOTAL XYLENES	5
BTEX = TOTAL BTEX	--
MTBE = METHYL TERTIARY BUTYL ETHER	10

<	CONSTITUENT NOT DETECTED AT OR BELOW THE INDICATED REPORTING LIMIT
ND	NOT DETECTED
BRL	BELOW LABORATORY REPORTING LIMIT
(NS)	NOT SAMPLED

NOTES:

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MOBIL BRANDED SERVICE STATION
FORMER MOBIL #10954 (17-HMB)
138-50 HILLSIDE AVENUE
JAMAICA, NEW YORK

GROUNDWATER ANALYTICAL MAP OCTOBER 28, 2019

ARCADIS Design & Consultancy for natural and built assets

FIGURE 9

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR LD: PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL LYR: ON=* OFF=*REF*
C:\Users\nb8986\BIM 360\Arcadis\ANA - EXXON MOBIL\Project Files\10945 - 138-50 Hillside\2018\2019\B0085850.0945\01-DWG\10954 Fig 4 GWARM.dwg LAYOUT: 4 SAVED: 11/26/2019 4:57 PM ACADVER: 23.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 11/26/2019 4:58 PM BY: N. BALA
XREFS: 85850X01 85850X00 IMAGES: PROJECTNAME: ---

Figure 10
MW-1 Hydrograph
February 6, 2006 through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

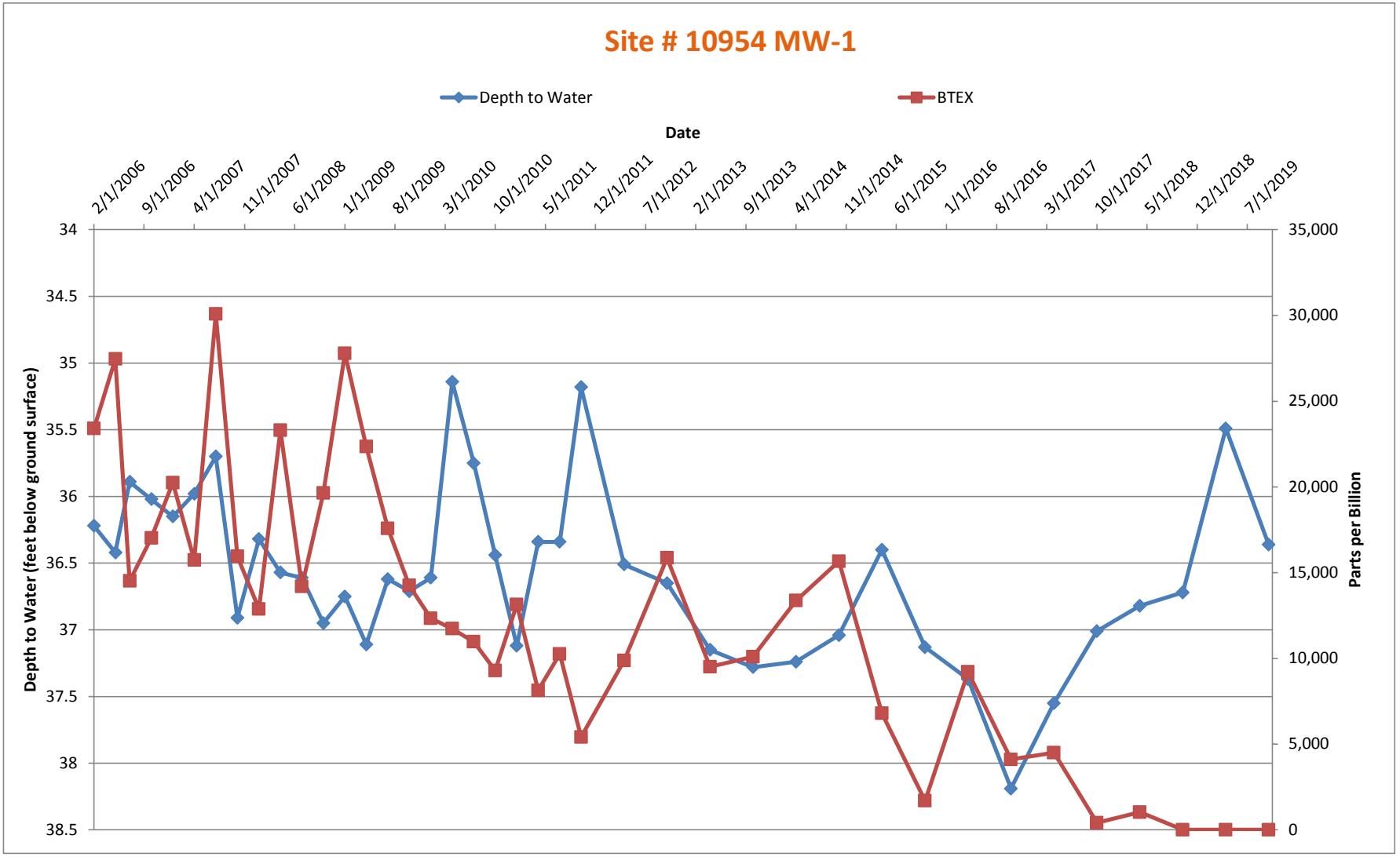


Figure 11
MW-6 Hydrograph
February 6, 2006 through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

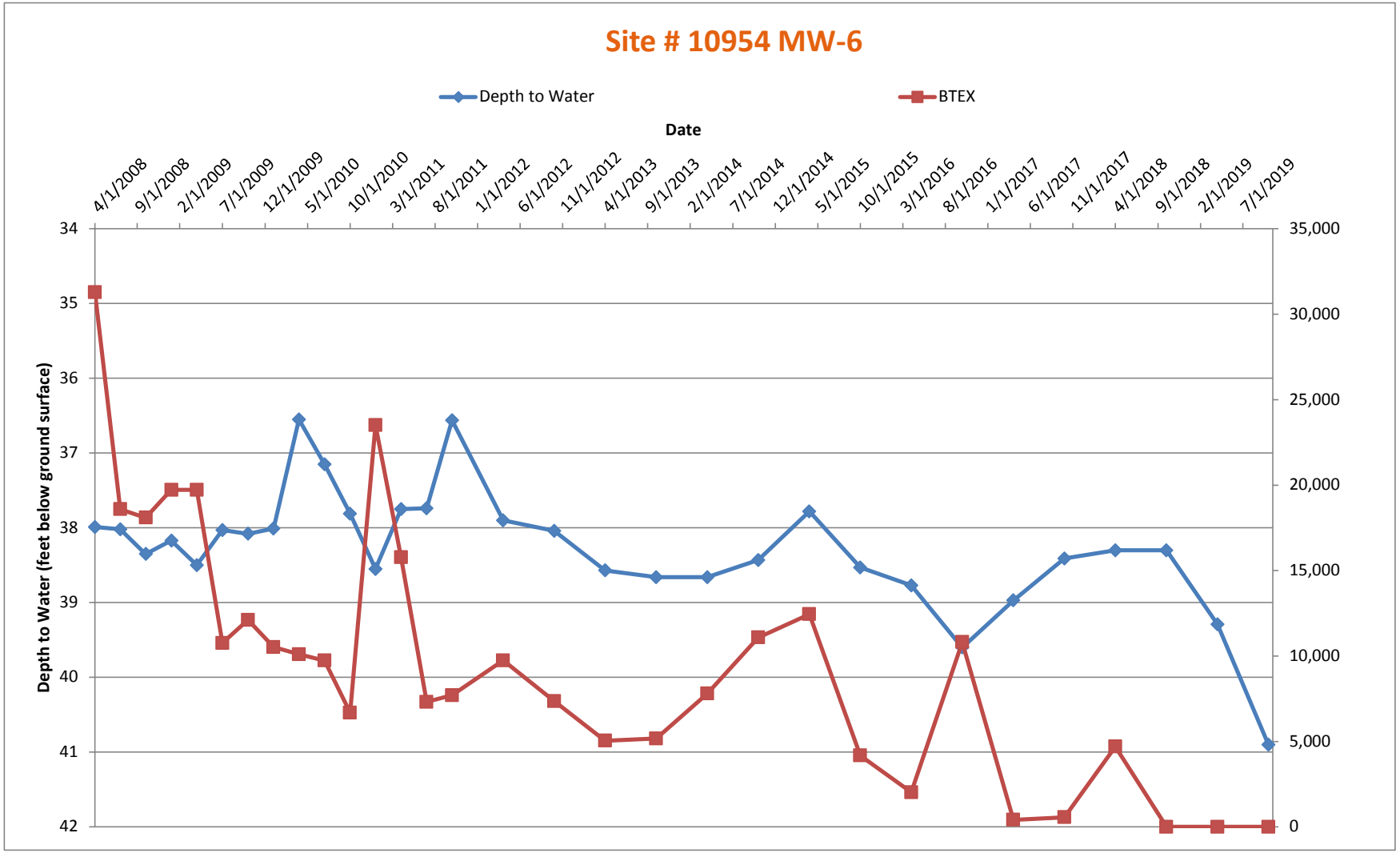


Figure 12
MW-8 Hydrograph
April 30, 2008 through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

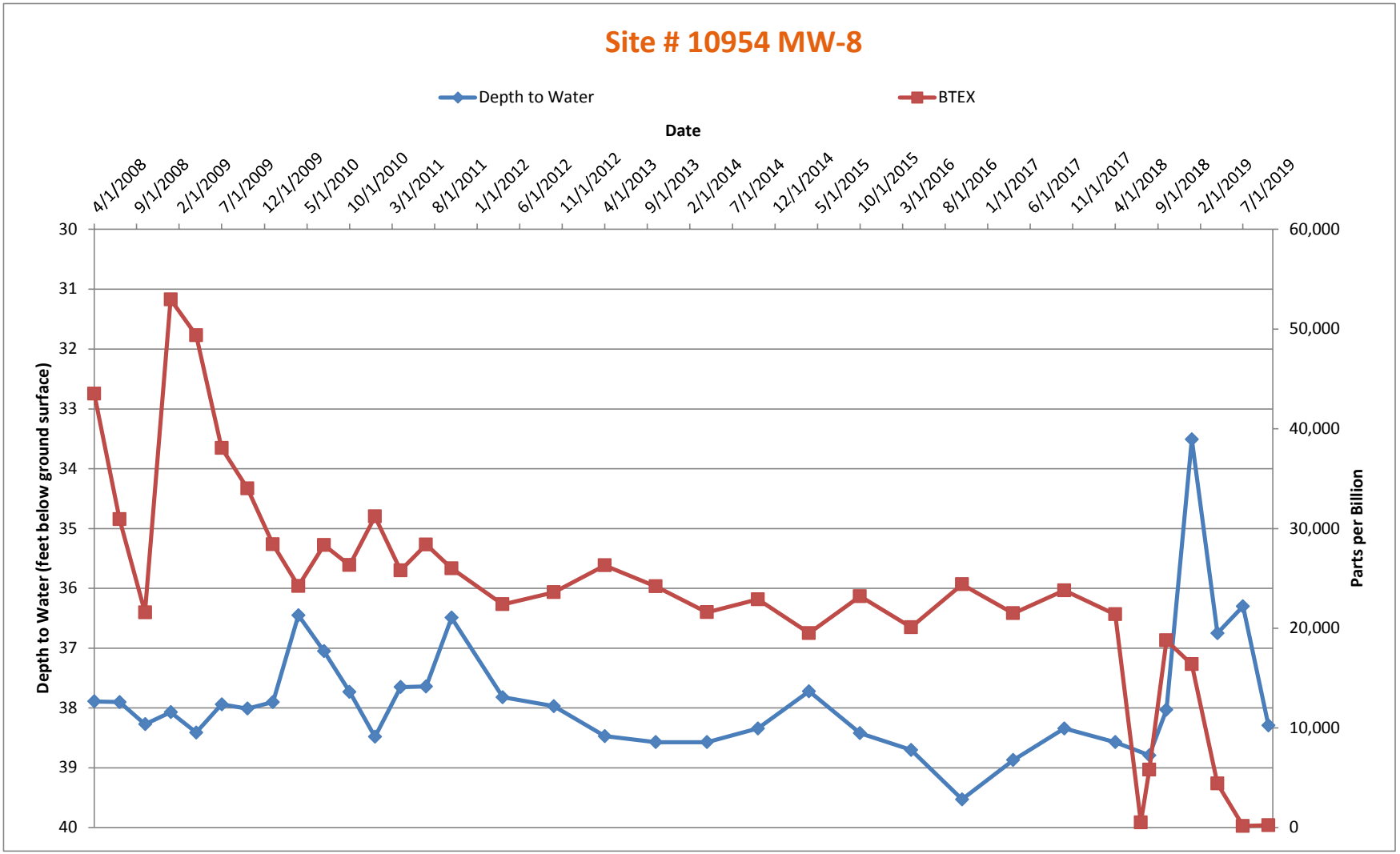


Figure 13
IP-2 Hydrograph
April 8, 2009 through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

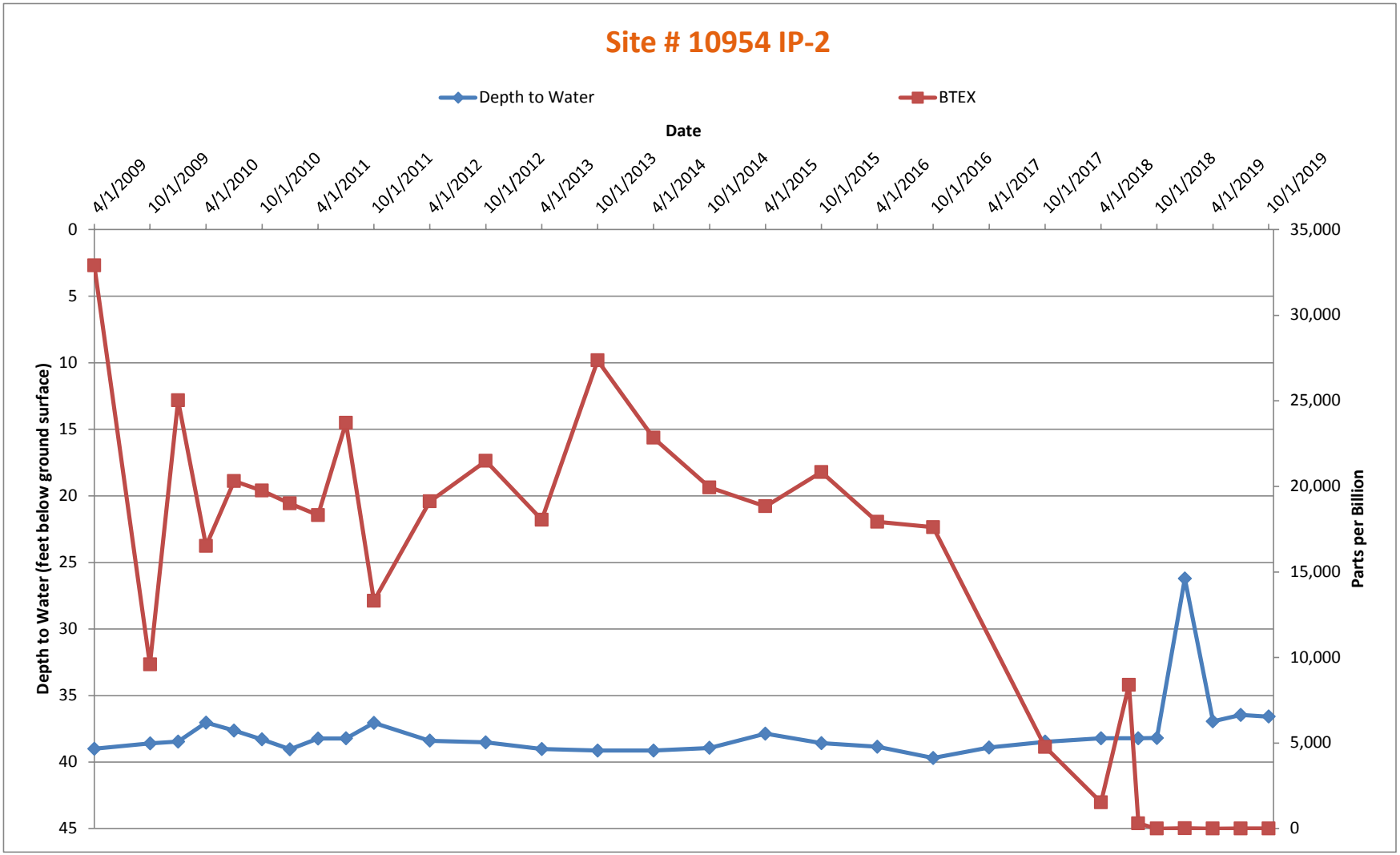


Figure 14
IP-3 Hydrograph
April 8, 2009 through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

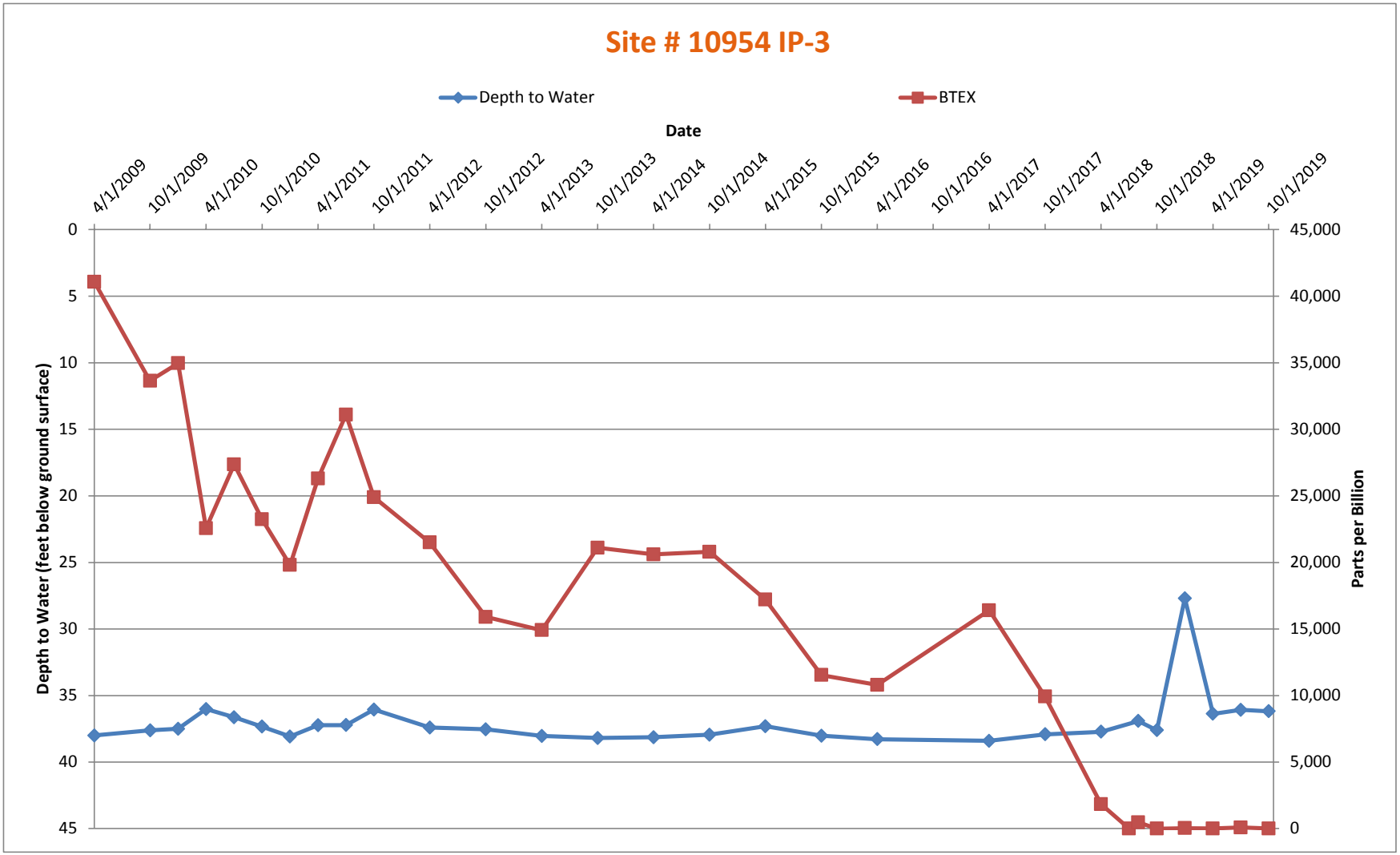


Figure 15
IP-5 Hydrograph
April 8, 2009 through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York

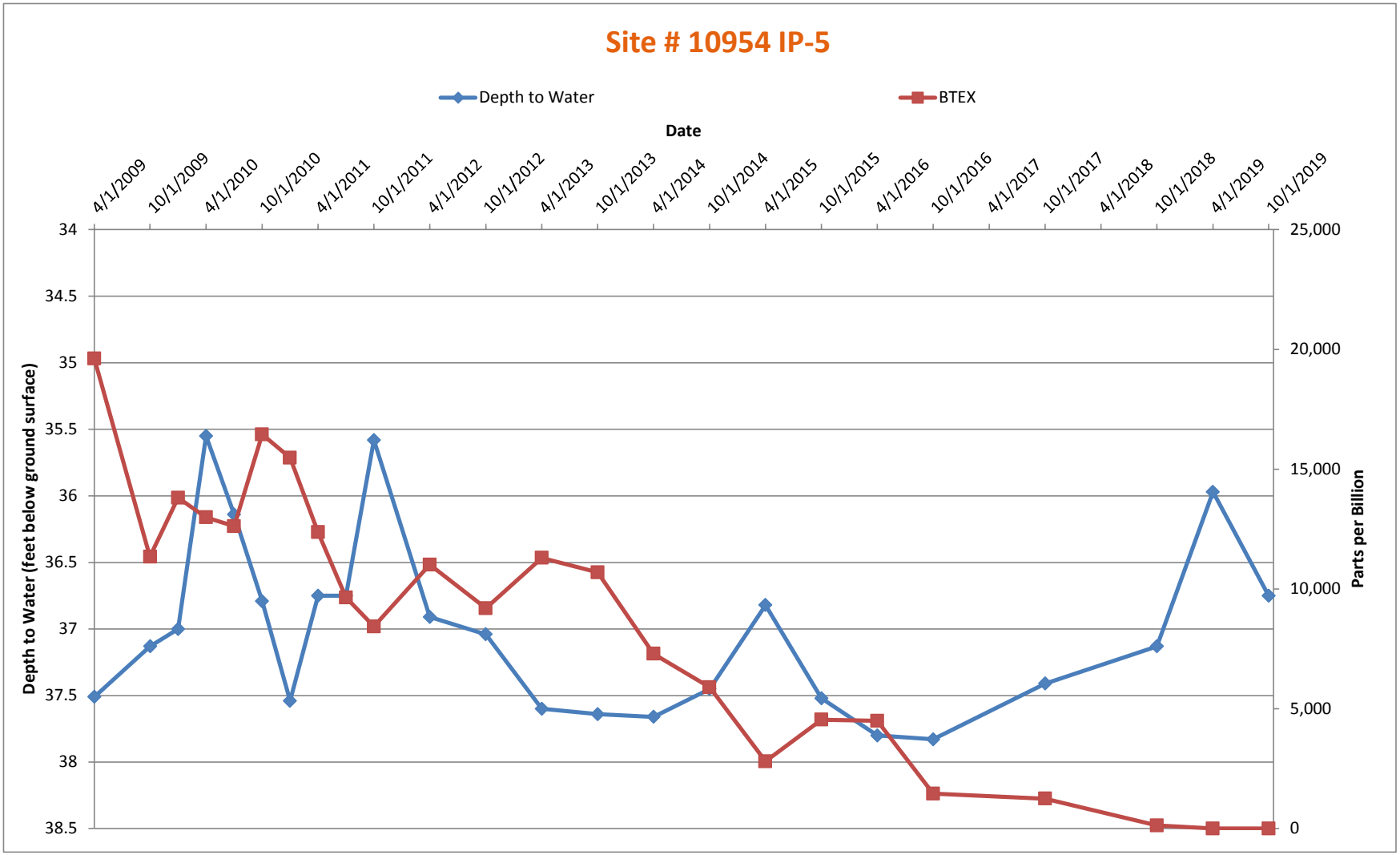
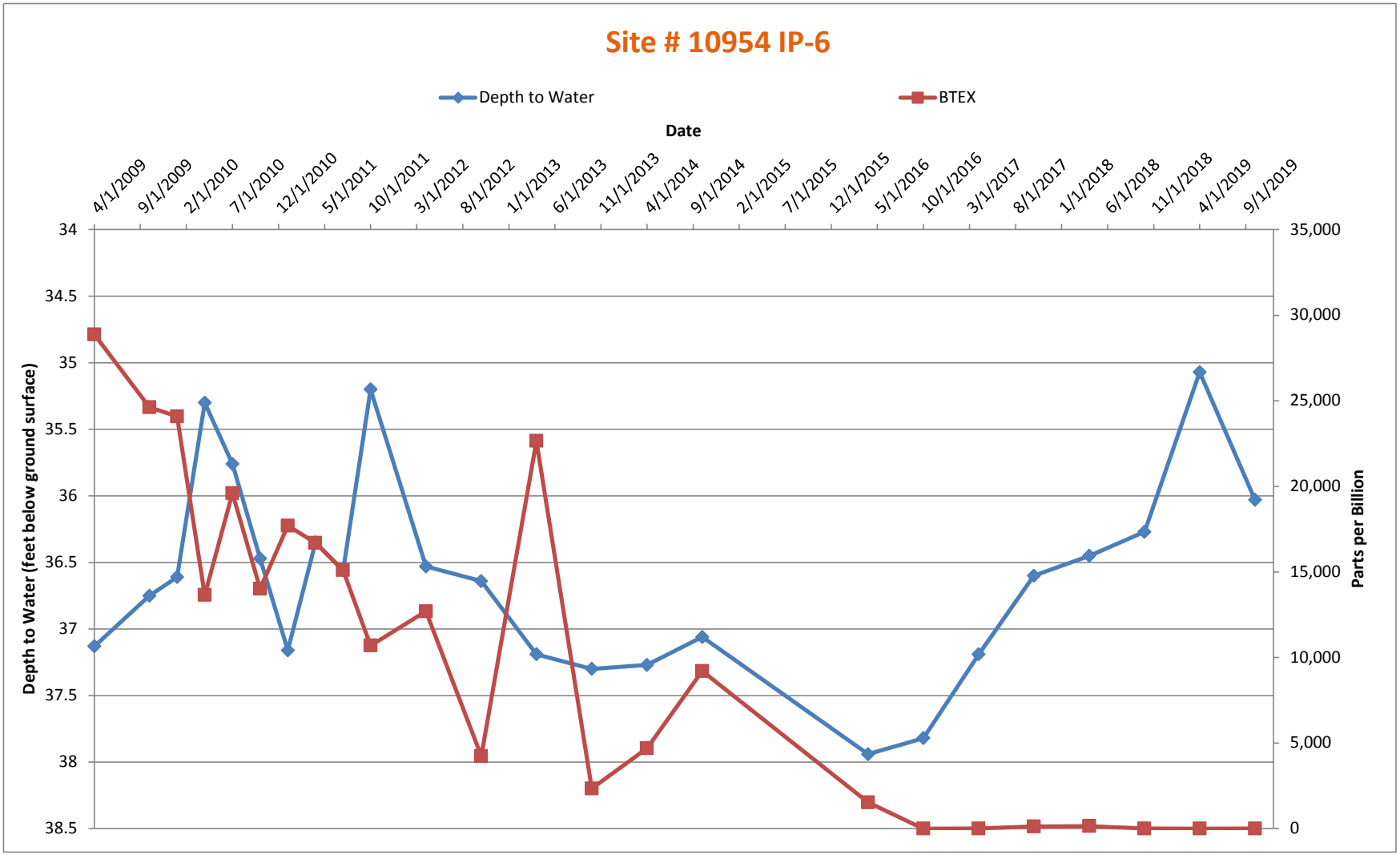


Figure 16
IP-6 Hydrograph
April 8, 2009 through October 28, 2019

Mobil Branded Service Station
Former Mobil #10954 (17-HMB)
138-50 Hillside Avenue
Jamaica, New York



APPENDIX A

Laboratory Analytical Reports - July 30, 2019 and October 28, 2019

eurofins | Lancaster Laboratories Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS
Suite 600
630 Plaza Drive
Highlands Ranch CO 80129

Report Date: August 12, 2019 09:50

Project: 10954

Account #: 13045
Group Number: 2057047
PO Number: B0085850.0954
Release Number: PM: OERTLING
State of Sample Origin: NY

Electronic Copy To	ARCADIS	Attn: Richard Hatch
Electronic Copy To	ARCADIS	Attn: Jerome Oertling
Electronic Copy To	ARCADIS	Attn: Nicholas Beyrle
Electronic Copy To	ARCADIS	Attn: Chad Colwell

Respectfully Submitted,

Hannah L. Cottman
Project Manager

(717) 556-7383

To view our laboratory's current scopes of accreditation please go to https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/ . Historical copies may be requested through your project manager.

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-6766 • www.EurofinsUS.com/LancLabsEnv

SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-8 Water	07/30/2019 08:45	1117323
IP-2 Water	07/30/2019 09:35	1117324
IP-3 Water	07/30/2019 10:50	1117325
Trip Blank TB 18176 Water	06/27/2019	1117326

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **MW-8 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 08/02/2019 10:10
Collection Date/Time: 07/30/2019 08:45

ARCADIS
ELLE Sample #: WW 1117323
ELLE Group #: 2057047
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	5	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	3	0.2	1	1
13130	Xylene (Total)	1330-20-7	140	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z192203AA	08/09/2019 01:06	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z192203AA	08/09/2019 01:05	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **IP-2 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 08/02/2019 10:10
Collection Date/Time: 07/30/2019 09:35

ARCADIS
ELLE Sample #: WW 1117324
ELLE Group #: 2057047
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z192203AA	08/09/2019 01:31	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z192203AA	08/09/2019 01:30	Hu Yang	1

*=This limit was used in the evaluation of the final result

Sample Description: **IP-3 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 08/02/2019 10:10
Collection Date/Time: 07/30/2019 10:50

ARCADIS
ELLE Sample #: WW 1117325
ELLE Group #: 2057047
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**		**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 1		1	5	5
13130	Ethylbenzene	100-41-4	2	J	2	5	5
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 1		1	5	5
13130	Toluene	108-88-3	< 1		1	5	5
13130	Xylene (Total)	1330-20-7	82		5	25	5

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z192203AA	08/09/2019 05:35	Hu Yang	5
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z192203AA	08/09/2019 05:34	Hu Yang	5

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank TB 18176 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 08/02/2019 10:10
Collection Date/Time: 06/27/2019

ARCADIS
ELLE Sample #: WW 1117326
ELLE Group #: 2057047
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	5	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z192203AA	08/08/2019 23:04	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z192203AA	08/08/2019 23:03	Hu Yang	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: ARCADIS
Reported: 08/12/2019 09:50

Group Number: 2057047

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: Z192203AA	Sample number(s): 1117323-1117326		
Benzene	< 0.2	0.2	1
Ethylbenzene	< 0.4	0.4	1
Methyl Tertiary Butyl Ether	< 0.2	0.2	1
Toluene	< 0.2	0.2	1
Xylene (Total)	< 1	1	3

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Z192203AA	Sample number(s): 1117323-1117326								
Benzene	20	19.15	20	19.67	96	98	80-120	3	30
Ethylbenzene	20	18.4	20	18.77	92	94	80-120	2	30
Methyl Tertiary Butyl Ether	20	16.68	20	16.74	83	84	69-122	0	30
Toluene	20	19.44	20	19.76	97	99	80-120	2	30
Xylene (Total)	60	58.89	60	60.65	98	101	80-120	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE
Batch number: Z192203AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1117323	95	98	98	100
1117324	94	99	97	94
1117325	94	99	97	94
1117326	95	99	96	92
Blank	94	100	96	92
LCS	94	101	98	96
LCSD	93	100	97	94

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

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Quality Control Summary

Client Name: ARCADIS
Reported: 08/12/2019 09:50

Group Number: 2057047

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE
Batch number: Z192203AA

Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Arcadis/Exxon

S-1117323-26 A-13045 G-2057047

Req Due Date (mm/dd/yy): ASAP- Standard Rush TAT: Yes ___ No x

Lab Work Order Number:

Lab Name:	Lancaster	Site Number:	10954	Consultant/Contractor:	EnviroTrac Ltd.
Lab Address:	2425 New Holland Pike	Facility Address:	138-50 Hillside Ave	Consultant/Contractor Project No:	
Lab PM:	Hannah Cottman	City, State, ZIP Code:	Jamaica, NY	Address:	5 Old Dock Road, Yaphank, New York 11980
Lab Phone:	(717) 656-2300 ext 1896	Lead Regulatory Agency:	NYSDEC	Consultant/Contractor PM:	Dan Ruffini
Lab Shipping Accnt:		Invoice to:	****BILL ARCADIS****	Phone:	631-924-3001
Lab Bottle Order No:				Email EDD To:	jerome.oertling@arcadis-us.com
Other Info:					

Arcadis PM: Jerome Oertling
PM Phone:
PM Email: jerome.oertling@arcadis-us.com

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: BTEX/MTBE 8260	Ethanol via 8015									
	MW-8	07/30/19	0845		X			3				X			X									
	IP-2	07/30/19	0935		X			3				X			X									
	IP-3	07/30/19	1050		X			3				X			X									
	Trip Blank TB 18176	6/27/19			X			2				X			X									

Report Type & QC Level: Standard x; Full Data Package ___

Comments: Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name:	Matthew Kivanka	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Envirotrac, Ltd.	Matthew Kivanka / Envirotrac	07/30/19	1400	Envirotrac Fridge	07/30/19	1400
Shipment Method:	Fed Ex Ship Date: 8/1/19	Envirotrac Fridge	~~07/30/19~~		[illegible] FEDEX	8/1/19	1315
Shipment Tracking No:	814382063571				ELLE	8/2/19	1010

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: (Yes) / No | Temp Blank: (Yes) / No | Cooler Temp on Receipt: 1.1 °F/C | Trip Blank: (Yes) / No | MS/MSD Sample Submitted: Yes / (No)

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Sample Administration Receipt Documentation Log

Doc Log ID: 255730

Group Number(s): 2057047

Client: EnviroTrac

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	08/02/2019 10:10
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	NY		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Simon Nies (25112) at 13:00 on 08/02/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	192099060	1.1	IR	Wet	Y	Bagged	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

ARCADIS
Suite 600
630 Plaza Drive
Highlands Ranch CO 80129

Report Date: November 11, 2019 11:54

Project: 10954

Account #: 13045
Group Number: 2072244
PO Number: 30007569.NA000.C
Release Number: PM: OERTLING
State of Sample Origin: NY

Electronic Copy To	ARCADIS	Attn: Richard Hatch
Electronic Copy To	ARCADIS	Attn: Chad Colwell
Electronic Copy To	ARCADIS	Attn: Nicholas Beyrle
Electronic Copy To	ARCADIS	Attn: Jerome Oertling

Respectfully Submitted,

Hannah L. Cottman
Project Manager

(717) 556-7383

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
MW-1 Water	10/28/2019 07:59	1190365
MW-5 Water	10/28/2019 08:15	1190366
MW-6 Water	10/28/2019 08:51	1190367
MW-8 Water	10/28/2019 08:16	1190368
MW-10 Water	10/28/2019 08:33	1190369
IP-2 Water	10/28/2019 09:35	1190370
IP-3 Water	10/28/2019 10:35	1190371
IP-5 Water	10/28/2019 09:42	1190372
IP-6 Water	10/28/2019 09:17	1190373
Trip Blank Water	10/28/2019	1190374

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: **MW-1 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 07:59

ARCADIS
ELLE Sample #: WW 1190365
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 14:41	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193122AA	11/08/2019 14:40	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-5 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 08:15

ARCADIS
ELLE Sample #: WW 1190366
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 15:06	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193122AA	11/08/2019 15:05	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-6 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 08:51

ARCADIS
ELLE Sample #: WW 1190367
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 15:30	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193122AA	11/08/2019 15:29	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-8 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 08:16

ARCADIS
ELLE Sample #: WW 1190368
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	11	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	3	0.2	1	1
13130	Xylene (Total)	1330-20-7	230	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/08/2019 06:35	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/08/2019 06:34	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

Sample Description: **MW-10 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 08:33

ARCADIS
ELLE Sample #: WW 1190369
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/08/2019 06:59	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/08/2019 06:58	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Sample Description: **IP-2 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 09:35

ARCADIS
ELLE Sample #: WW 1190370
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/08/2019 07:23	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/08/2019 07:22	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

Sample Description: **IP-3 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 10:35

ARCADIS
ELLE Sample #: WW 1190371
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 15:54	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193122AA	11/08/2019 15:53	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **IP-5 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 09:42

ARCADIS
ELLE Sample #: WW 1190372
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 11:27	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193122AA	11/08/2019 11:26	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **IP-6 Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019 09:17

ARCADIS
ELLE Sample #: WW 1190373
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Preservation requirements were not met.
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 2.2.

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	Z193122AA	11/08/2019 11:51	Alexander D Sechrist	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	Z193122AA	11/08/2019 11:50	Alexander D Sechrist	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank Water**
10954
138-50 Hillside Ave. - Jamaica, NY

Project Name: **10954**

Submittal Date/Time: 10/31/2019 15:48
Collection Date/Time: 10/28/2019

ARCADIS
ELLE Sample #: WW 1190374
ELLE Group #: 2072244
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C**		**ug/l**	**ug/l**	**ug/l**	
13130	Benzene	71-43-2	< 0.2	0.2	1	1
13130	Ethylbenzene	100-41-4	< 0.4	0.4	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.2	0.2	1	1
13130	Toluene	108-88-3	< 0.2	0.2	1	1
13130	Xylene (Total)	1330-20-7	< 1	1	6	1

Sample Comments

State of New York Certification No. 10670

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
13130	BTEX/MTBE	SW-846 8260C	1	D193114AA	11/07/2019 23:03	Kevin A Sposito	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D193114AA	11/07/2019 23:02	Kevin A Sposito	1

*=This limit was used in the evaluation of the final result

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Quality Control Summary

Client Name: ARCADIS
Reported: 11/11/2019 11:54

Group Number: 2072244

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: D193114AA	Sample number(s): 1190368-1190370,1190374		
Benzene	< 0.2	0.2	1
Ethylbenzene	< 0.4	0.4	1
Methyl Tertiary Butyl Ether	< 0.2	0.2	1
Toluene	< 0.2	0.2	1
Xylene (Total)	< 1	1	6
Batch number: Z193122AA	Sample number(s): 1190365-1190367,1190371-1190373		
Benzene	< 0.2	0.2	1
Ethylbenzene	< 0.4	0.4	1
Methyl Tertiary Butyl Ether	< 0.2	0.2	1
Toluene	< 0.2	0.2	1
Xylene (Total)	< 1	1	6

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D193114AA	Sample number(s): 1190368-1190370,1190374								
Benzene	20	20.89	20	21.61	104	108	80-120	3	30
Ethylbenzene	20	19.85	20	20.45	99	102	80-120	3	30
Methyl Tertiary Butyl Ether	20	20.08	20	20.6	100	103	69-122	3	30
Toluene	20	19.69	20	20.33	98	102	80-120	3	30
Xylene (Total)	60	61.11	60	63.21	102	105	80-120	3	30
Batch number: Z193122AA	Sample number(s): 1190365-1190367,1190371-1190373								
Benzene	20	20.02			100		80-120		
Ethylbenzene	20	19.89			99		80-120		
Methyl Tertiary Butyl Ether	20	19.51			98		69-122		
Toluene	20	21.12			106		80-120		
Xylene (Total)	60	65.1			108		80-120		

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: ARCADIS
Reported: 11/11/2019 11:54

Group Number: 2072244

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX/MTBE
Batch number: D193114AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1190368	98	98	100	104
1190369	100	96	97	99
1190370	97	96	96	101
1190374	98	97	96	99
Blank	98	97	99	100
LCS	96	102	100	105
LCSD	96	96	97	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: Z193122AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
1190365	84	93	98	94
1190366	85	91	97	93
1190367	84	88	97	85
1190371	84	91	96	93
1190372	84	92	92	96
1190373	84	91	89	87
Blank	91	99	95	93
LCS	91	93	97	100
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

13045 2072244 1190365-74

Arcadis/Exxon

Req Due Date (mm/dd/yy): ASAP- Standard Rush TAT: Yes ___ No x

Lab Work Order Number:

Lab Name:	Lancaster	Site Number:	10954	Consultant/Contractor:	EnviroTrac Ltd.
Lab Address:	2425 New Holland Pike	Facility Address:	138-50 Hillside Ave	Consultant/Contractor Project No:	
Lab PM:	Hannah Cottman	City, State, ZIP Code:	Jamaica, NY	Address:	5 Old Dock Road, Yaphank, New York 11980
Lab Phone:	(717) 656-2300 ext 1815	Lead Regulatory Agency:	NYSDEC	Consultant/Contractor PM:	Dan Ruffini
Lab Shipping Accnt:		Invoice to:	****BILL ARCADIS****	Phone:	631-924-3001
Lab Bottle Order No:				Email EDD To:	jerome.oertling@arcadis.com
Other Info:					

Arcadis PM:	Jerome Oertling
PM Phone:	
PM Email:	jerome.oertling@arcadis.com

Report Type & QC Level: Standard x; Full Data Package ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: BTEX/MTBE 8260	Ethanol via 8015									Comments
	MW-1	10/28/19	7:59		X			3				X			X										
	MW-5	10/28/19	8:15		X			3				X			X										
	MW-6	10/28/19	8:51		X			3				X			X										
	MW-8	10/28/19	8:16		X			3				X			X										
	MW-10	10/28/19	8:33		X			3				X			X										
~~—~~	~~IP-1~~	~~10/28/19~~			~~X~~			~~3~~				~~X~~			~~X~~										
	IP-2	10/28/19	9:35		X			3				X			X										
	IP-3	10/28/19	10:35		X			3				X			X										
	IP-5	10/28/19	9:42		X			3				X			X										
	IP-6	10/28/19	9:17		X			3				X			X										

Sampler's Name:	Josh Levy	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation / Date / Time
Sampler's Company:	EnviroTrac LTD.	(JL) / EnviroTrac LTD.	10/28/19		10/28/19 1520
Shipment Method:	Ship Date:		10/30/19	1400	EIE 1548 10/31/19
Shipment Tracking No:					

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: (Yes) No | Temp Blank: (Yes) / No | Cooler Temp on Receipt: 1.0 °F/C | Trip Blank: (Yes) / No | MS/MSD Sample Submitted: Yes / (No)

130AS 2072244 1190365-74

Arcadis/Exxon

Req Due Date (mm/dd/yy): ASAP- Standard Rush TAT: Yes ___ No x

Lab Work Order Number:

Laboratory Work Order Number:

Lab Name:	Lancaster	Site Number:	10954	Consultant/Contractor:	EnviroTrac Ltd.
Lab Address:	2425 New Holland Pike	Facility Address:	138-50 Hillside Ave	Consultant/Contractor Project No:	
Lab PM:	Hannah Cottman	City, State, ZIP Code:	Jamaica, NY	Address:	5 Old Dock Road, Yaphank, New York 11980
Lab Phone:	(717) 656-2300 ext 1815	Lead Regulatory Agency:	NYSDEC	Consultant/Contractor PM:	Dan Ruffini
Lab Shipping Accnt:		Invoice to:	****BILL ARCADIS****	Phone:	631-924-3001
Lab Bottle Order No:				Email EDD To:	jerome.oertling@arcadis.com
Other Info:					

Arcadis PM:	Jerome Oertling		
PM Phone:			
PM Email:	jerome.oertling@arcadis.com		

Report Type & QC Level: Standard x; Full Data Package ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		Requested Analyses: BTEX/MTBE 8260	Ethanol via 8015									Comments
~~IP-7~~					X			3				X			X										
	Trip Blank	10/28/19			X			3				X			X										
					X			3				X			X										
					X			3				X			X										
					X			3				X			X										
					X			3				X			X										
					X			3				X			X										
					X			3				X			X										
					x			3				x			x										
					x			3				x			x										
					x			2				x			x										

Sampler's Name:	Josh Levy	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	EnviroTrac Ltd.	EnviroTrac Ltd.	10/28/19			10/28/19	1520
Shipment Method:	Ship Date:		10/30/19	1400			
Shipment Tracking No:					ELIE	10/31	9 1548

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp. on Receipt: 1.0 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

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Sample Administration Receipt Documentation Log

Doc Log ID: 264821

Group Number(s): 2072244

Client: ARCADIS/ EXXON

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Date:	10/31/2019
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	New York		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	Total Trip Blank Qty:	2
Samples Chilled:	Yes	Trip Blank Type:	HCl
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Julissa Rivera-Santa

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	1.0	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17605-2425

T 717-656-2300
F 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Arcadis of New York, Inc.

213 Court Street

Suite 700

Middletown

Connecticut 06457

Tel 860 503 1500

Fax 860 346 2853

www.arcadis.com