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Alliance Energy, LLC

REMEDIAL COMPLETION REPORT

Service Station #12833 (17-GBR)
96-27 Queens Boulevard
Rego Park, New York
NYSDEC Spill No. 09-02519
PBS No. 2-157139

May 2018

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CONTENTS

TABLES

FIGURES

APPENDICES

1 INTRODUCTION

On behalf of Alliance Energy, LLC (Alliance), Arcadis of New York, Inc. (Arcadis) has prepared a Remedial Completion and Receptor Evaluation Report (RER) for Site #12833 (17-GBR), located at 96-27 Queens Boulevard, Rego Park, New York (site) (Figure 1). This RER is intended to satisfy the requirements outlined in the New York State Department of Environmental Conservation (NYSDEC) Division of Environmental Remediation Technical Guidance for Site Investigation and Remediation (DER-10) Section 3.3(c)4 and Appendix 3B (NYSDEC 2010a) to perform a qualitative human health exposure assessment. This report also serves to document remedial actions completed to date and to request No Further Action (NFA) and closure of Spill number 09-02519.

2 SITE DESCRIPTION AND HISTORY

2.1 Site Location and Description

The 0.28-acre site is an active petroleum filling station with a convenience store and automotive repair facility. The site is located at 96-27 Queens Boulevard, Rego Park, New York. The approximate geographical coordinates for the site are 40 degrees, 43 minutes, and 48.7 seconds North (Latitude) by 73 degrees, 51 minutes, and 41.8 seconds West (Longitude). The approximate ground surface elevation is 36 feet above mean sea level (amsl). The surrounding area consists of mixed commercial and residential properties (Figure 2).

The site is bordered to the north by 63rd Road, beyond which are commercial and retail properties, and to the south by Queens Boulevard, beyond which are additional commercial and retail properties. The site is bordered to the east by commercial and retail properties and to the west by the intersection of 63rd Road and Queens Boulevard. (Roux 2008, 2010; Arcadis 2017).

The site is currently used as an active retail petroleum filling station with a convenience store and automotive repair facility. The site consists of a single-story, brick-faced and glass building currently used as a convenience store and automotive repair facility. There are three dispenser islands each with one double-sided multi-product dispenser. A solid waste dumpster is located near the southern border of the site. The underground storage tank (UST) field contains one 10,000-gallon UST and one 12,000-gallon UST and is located in the western portion of the property. An air sparge/soil vapor extraction (AS/SVE) remediation system is present in an enclosure on the eastern corner of the site. Additionally, there is one 250-gallon waste oil above ground tank (AST) located outside the northeastern corner of the on-site building. Two tank field observation wells provide monitoring points at the northern and western sides of the tank field. The entire site is paved or occupied by buildings (Roux 2008, 2010; Arcadis 2017).

2.2 Site Chronology

The following environmental cases are associated with the property (Roux 2008, 2010; Arcadis 2017):

- NYSDEC Case No. 09-02519 was assigned to the site on June 20, 2009, when petroleum-impacted soil was observed during the removal of two 550-gallon USTs. The case remains open.
- NYSDEC Case No. 90-08859 was assigned to the site on November 13, 1990 when petroleum-impacted soil was discovered during removal of two 4,000-gallon capacity USTs. NYSDEC Case Number 90-08859 was closed on November 15, 2005.
- NYSDEC Case No. 92-02690 was assigned to the site on June 4, 1992, due to a gasoline UST test failure. NYSDEC Case Number 92-02690 was closed on June 22, 1992.
- NYSDEC Case No. 02-04910 was assigned to the site on August 9, 2002, due to a 550-gallon waste oil tank test failure. NYSDEC Case Number 02-04910 was closed on October 15, 2003.
- NYSDEC Case No. 09-09175 was assigned to the site on November 16, 2009, based on the results of a Phase II Environmental Site Assessment (ESA). NYSDEC Case Number 09-09175 was closed on November 20, 2009.

Subsurface investigations have been conducted at the site since 1991. In January 1991, four on-site soil borings were advanced and completed as monitoring wells MW-1 through MW-4. Analytical results of soil samples indicated the presence of benzene, toluene, ethylbenzene, and xylenes (BTEX) above the NYSDEC Recommended Soil Cleanup Objectives (RSCOs) and guidance values (BBL 1991). These RSCOs have since been superseded by the NYSDEC Soil Cleanup Levels for Gasoline Contaminated and Fuel Oil Contaminated Sites listed in NYSDEC's 2010 Policy Document CP-51 (CP-51), Table 2 and Table 3, respectively (NYSDEC 2010b).

Analytical results of groundwater indicated the presence of benzene at concentrations greater than NYSDEC Division of Water Technical and Operational Guidance Series (1.1.1) Ambient Water Quality Standards and Guidance Values (WQS) drinking water standards. Details of the investigation, including all data collected, were presented in the March 1991 Groundwater and Soil Investigation Report (BBL 1991).

An SVE system was in operation at the site between August 1994 and September 1995 and removed approximately 15,000 pounds (lbs) of volatile organic compounds (VOCs). Additional details of the SVE system were unavailable at the time of this RER (Arcadis 2017).

Between May and August 2009, UST system upgrades were conducted at the site. UST upgrade activities included excavation and removal of five 4,000-gallon USTs, associated piping, and approximately 830 tons of soil as well the installation of one 12,000-gallon UST and one 10,000-gallon UST. Post-excavation soil samples were collected and analyzed for VOCs, including BTEX. No compounds were detected in post-excavation samples at concentrations greater than laboratory reporting limits (Kleinfelder 2009).

Between November 2009 and January 2010, a Phase II ESA was completed to evaluate Recognized Environmental Conditions (RECs) previously identified in the December 2008 Phase I ESA (Roux 2008, 2010). As part of the Phase II investigation activities, seven soil borings were advanced on site, six of which were completed as monitoring wells MW-1 through MW-6. One to two soil samples were collected from each boring at depths between 7.5 and 22 feet below ground surface (bgs) and analyzed for VOCs, semi-volatile organic compounds (SVOCs), metals, and polychlorinated biphenyls (PCBs). Soil analytical results were compared to the NYSDEC RSCOs. Several VOCs, including BTEX, were detected at concentrations greater than the NYSDEC RSCOs in two soil samples; one sample from MW-2 at 18 to 20 feet bgs and one sample from MW-6/B-2 at 12 to 14 feet bgs. No SVOCs were detected at concentrations greater than the NYSDEC RSCOs in soil samples collected as part of the Phase II investigation activities. Chromium was detected at concentrations greater than the NYSDEC RSCOs in each of the four soil samples analyzed for metals. Historical soil concentrations of VOCs are also greater than current CP-51 Soil Cleanup Levels, and concentrations of SVOCs are below current CP-51 Soil Cleanup Levels.

Groundwater samples were collected from the newly installed monitoring wells and analyzed for VOCs and SVOCs (Roux 2010). Groundwater analytical results were compared to the NYSDEC WQS. Several VOCs, including one or more constituents of BTEX and methyl tert butyl ether (MTBE), and several SVOCs were detected at concentrations greater than the NYSDEC WQS in groundwater samples collected during the Phase II investigation in monitoring wells MW-1, MW-2, and MW-6. Details of the investigation, including all data collected are presented in the March 2010 Phase II ESA Report (Roux 2010).

In February 2010, additional subsurface investigation activities were conducted at the site to further evaluate potential soil impacts in an area adjacent to two previously removed USTs where post-excavation samples could not be collected at the time of the 2009 UST upgrade activities. Two soil borings were advanced and completed as monitoring wells MW-7 and MW-8. Three soil samples were collected from each soil boring between 16 and 36 feet bgs and analyzed for VOCs. Soil analytical results were compared to the NYSDEC RSCOs. Several VOCs, including BTEX, were detected at concentrations greater than the NYSDEC RSCOs in one soil sample collected from MW-7 at 18 to 20 feet bgs and two soil samples collected from MW-8 at 18 to 20 feet bgs and 28 to 30 feet bgs. Historical soil concentrations of VOCs are also greater than the current CP-51 Soil Cleanup Levels.

Groundwater samples were collected from the newly installed monitoring well MW-7 along with well previously installed during the April 2010 groundwater monitoring event. A groundwater sample could not be collected from newly installed monitoring well MW-8 due to the presence of liquid-phase hydrocarbon (LPH) at the time of the sampling. Groundwater analytical results were compared to the NYSDEC WQS. BTEX and MTBE were detected at concentrations greater than the NYSDEC WQS in groundwater samples collected from monitoring wells MW-1, MW-2, MW-6, and MW-7. Details of the investigation, including all data collected, are presented in the June 2010 Site Status Update Report (SSUR)/Subsurface Investigation Report (Kleinfelder 2010).

In June and July 2011, two off-site monitoring wells (MW-9 and MW-10) were installed downgradient of the site in the sidewalk on the west side of 63rd Road to evaluate the potential for off-site migration of site-related groundwater impacts. During monitoring well installation activities, three soil samples were collected from each boring between 17.5 and 26 feet bgs and analyzed for VOCs. Soil analytical results were compared to the CP-51 Soil Cleanup Levels and no compounds were detected at concentrations greater than their respective CP-51 Soil Cleanup Levels.

Following monitoring well installation, groundwater samples were collected from the newly installed monitoring wells MW-9 and MW-10 along with wells previously installed. Groundwater analytical results were compared to the NYSDEC WQS. BTEX and MTBE were detected at concentrations greater than the NYSDEC WQS in groundwater samples collected from on-site monitoring wells MW-1, MW-2, MW-6, MW-7, and MW-8, and off-site monitoring well MW-10. Details of the investigation, including all data collected, are presented in the September 2011 SSUR (Arcadis 2011).

In January 2012, one additional off-site monitoring well (MW-11) was installed downgradient of the site in the sidewalk on the west side of 63rd Road to further evaluate the potential for off-site migration of site-related groundwater impact. During installation, two soil samples were collected from 17 and 30 feet bgs and analyzed for VOCs and SVOCs. Soil analytical results were compared to CP-51 Soil Cleanup Levels. With the exception of xylenes (i.e., m&p-xylenes), no compounds were detected at concentrations greater than CP-51 Soil Cleanup Levels.

Groundwater samples were collected from the newly-installed monitoring well on February 7, 2012. BTEX and MTBE were detected at concentrations greater than the NYSDEC WQS in the groundwater sample collected from off-site monitoring well MW-11. Details of the investigation, including data collected, were presented in the March 2012 SSUR (Arcadis 2012a).

In January 2013, four AS/SVE well pairs were installed at the site in accordance with the approved Remedial Action Plan (RAP) (Arcadis 2012b). A pilot test was subsequently conducted in April 2013 and

the AS/SVE system was brought online on May 16, 2014. Operations, monitoring, and maintenance (OM&M) on the AS/SVE system has been conducted on a monthly basis since the AS/SVE system came online on May 16, 2014. Following completion of the first quarter sampling in 2016, the AS/SVE system was optimized to increase mass recovery in the vicinity of the highest groundwater concentrations near MW-8.

Historic OM&M and mass recovery information of the AS/SVE system were last summarized in the SSUR dated June 7, 2017. Total vapor phase BTEX recovered as of August 23, 2017 was 51.4 lbs. The total vapor phase hydrocarbon mass recovered as of August 23, 2017, was 1,996 lbs. See Table 2 and Table 3.

Arcadis installed an Oxygen Releasing Compound (ORC)-Advanced sock in MW-8 in July 2016 to increase dissolved oxygen and enhance natural attenuation of BTEX concentrations in the groundwater while continuing to operate the AS/SVE system. This sock was removed on September 28, 2017.

OM&M on the AS/SVE system was conducted on July 13 and August 24, 2017. Due to AS compressor issues, the system had been off since December 14, 2016 awaiting installation of a new sparge compressor. On June 1, 2017, a new sparge compressor was successfully installed and the AS/SVE system was brought online. On September 7, 2017, the system was shut down a second time after failure of the AS motor. The system is currently offline to assess any rebound of groundwater impacts at MW-8 and establish baseline conditions.

Groundwater monitoring has been conducted at the site since April 2010. Activities include gauging and groundwater sampling of on- and off-site monitoring wells to monitor dissolved-phase MTBE and BTEX constituent concentrations and groundwater conditions associated with the site. Groundwater gauging data and analytical results are presented in Table 1. A discussion of recent groundwater monitoring data is provided in Section 3.

2.3 Site Characterization

2.3.1 Site Geology

The site is located in the Atlantic Coastal Plain physiographic province. The site is underlain by a portion of the Cretaceous System of the Mesozoic Era. The series is the Upper Cretaceous (Roux 2008, 2010).

Site-specific geology was determined during historical soil boring activities performed at the site. Site lithology consists predominantly of well-graded sand and silt, with lesser amounts of clay and gravel to approximately 15 feet bgs. Material observed from 15 to 30 feet bgs consists primarily of poorly-graded sand. Bedrock has not been encountered during previous subsurface investigations (Roux 2010; Kleinfelder 2010; Arcadis 2011, 2012, 2018).

2.3.2 Nature and Extent of Petroleum Hydrocarbons

Remedial investigation activities have been conducted at the site since 1991. Since that time, VOCs have been detected at concentrations greater than the NYSDEC RSCOs for Gasoline Contaminated and Fuel Contaminated Soils in subsurface soil samples (i.e., sampling depths greater than 12 feet bgs) (Roux 2008, 2010; Kleinfelder 2010; Arcadis 2011, 2012). The NYSDEC RSCOs have been superseded by the

CP-51 Soil Cleanup Levels and available historical soil concentrations of VOCs are also greater then CP-51 Soil Cleanup Levels. Soil samples with VOC concentrations above CP-51 Soil Cleanup Levels are not expected to present a complete exposure pathway due to their depths (i.e., greater than 12 feet bgs). Additional discussion regarding potential exposure pathways is presented in Section 5 below.

3 QUARTERLY SITE ACTIVITIES

3.1 Site Hydrogeology

Depth to groundwater beneath the site ranges from approximately 11 feet bgs at monitoring well MW-7 to 19 feet bgs at monitoring well MW-5. Depth to groundwater measured in off-site monitoring wells ranges from approximately 17 to 18 feet bgs. Actual geologic and hydrogeologic conditions observed during investigation activities indicate the apparent groundwater flow direction on site is to the northwest. The site-specific hydraulic gradient ranges from 0.007 feet per foot (ft/ft) to 0.008 ft/ft (Arcadis 2017). Groundwater elevations are presented in Table 1 and Figure 3, Figure 4, and Figure 5. Groundwater elevations and contours associated with the January 2018 sampling are presented on Figure 5.

3.2 Groundwater Analytical Data

Groundwater data from the most recent monitoring events are provided on Figure 6, Figure 7, and Figure 8 and recent and historical groundwater analytical data are provided in Table 1.

A review of groundwater data for the January 16, 2018 monitoring event is discussed below. The analytical laboratory report associated with this sampling event is included as Appendix A.

- LPH was not detected in any of the wells sampled.
- Concentrations of BTEX were below NYSDEC standards in on-site monitoring wells MW-1, MW-3, MW-4, MW-5, and MW-6, and off-site monitoring well MW-9 (Figure 8).
- During the January groundwater monitoring event, one or more BTEX constituents were detected at concentrations greater than the NYSDEC standards in on-site monitoring wells MW-2 and MW-8, and off-site monitoring wells MW-10 and MW-11 (Figure 8).
- MTBE was detected at concentrations less than NYSDEC standards in each of the groundwater samples collected during the January 2018 groundwater monitoring event (Figure 8).

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 July 2017, October 2017, and January 2018 monitoring events. MTBE is no longer considered a COC, since it has not been detected at a concentration greater than the NYSDEC WQS in samples collected during July 2017, October 2017, and January 2018 (i.e., most recent monitoring events).

4 SENSITIVE RECEPTORS

The site is bordered to the north by 63rd Road, beyond which is a retail shopping center, and to the south by Queens Boulevard, beyond which are additional commercial and retail properties. The site is bordered to the east by commercial and retail properties and to the west by the intersection of 63rd Road and Queens Boulevard. (Rouix 2008, 2010; Arcadis 2017).

There are no surface water bodies located within approximately 950 feet of the site. The nearest surface-water bodies include Meadow Lake and Willow Lake, located approximately 0.6 miles east and 1.5 miles southeast of the site, respectively. Willow Lake is connected to Meadow Lake, which ultimately flows into Flushing Bay via Flushing Creek. As discussed above, groundwater in the vicinity of the site flows to the northwest; therefore, these surface water bodies are considered to be upgradient of the site. The nearest downgradient surface water bodies (i.e., Newtown Creek and the East River) are located between approximately 3 to 5 miles west and north/northwest of the site.

Records indicate that there are no reported active municipal water supply wells and no private potable or non-potable water supply wells within one mile of the site. There is one public water-supply well located within one mile southeast (upgradient) of the site and there are 19 Federal wells located within 1 mile 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 Operations; therefore, there is no potable use of site groundwater. The sources of municipal water are the Catskills, Delaware, and Croton watersheds located in upstate New York (Roux 2008, 2010).

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

5 EVALUATION OF EXPOSURE PATHWAYS

The following sections provide a discussion and evaluation of exposure media and exposure pathways related to site COCs and specific site exposure pathways.

5.1 Direct Contact Exposure to Soil

The entire site is covered by surface cover (i.e., pavement, building, and concrete); therefore, exposure to surface soil containing site COCs via inhalation, ingestion, and/or dermal contact is not anticipated to occur. On-site receptors such as commercial workers and visitors are not expected to be involved with intrusive activities and as such, exposure to subsurface soil beneath the surface cover does not represent a complete exposure pathway for current receptors. As discussed above, VOCs have been detected at concentrations greater than the NYSDEC CP-51 Soil Cleanup Levels in several historical soil samples collected at the depth intervals of 12 to 14 feet bgs, 18 to 20 feet bgs, and 28 to 30 feet bgs. Available boring logs note increasing moisture with depth, corresponding to saturated conditions at deeper intervals; therefore, detected concentrations may be more reflective of groundwater conditions than soil conditions. Utility/construction workers may be exposed to subsurface soil where impacts remain during future intrusive activities; however, these receptors would be expected to operate under an appropriate health and safety plan (e.g. use of personal protective equipment and air monitoring) that would mitigate potential exposures.

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

The site consists of a single-story, brick-faced and glass building currently used as a convenience store with a restroom facility, and automotive repair facility. The area surrounding the site consists of mixed commercial and residential buildings with sub-grade basements. Depth to groundwater on-site ranges from approximately 11 feet bgs at monitoring well MW-7 to 19 feet bgs at monitoring well MW-5. Depth to groundwater measured in off-site monitoring wells ranges from approximately 17 to 18 feet bgs. Investigations to date have demonstrated that the groundwater plume is stable and/or decreasing and is localized to on-site monitoring wells MW-7 and MW-8 located northwest (downgradient) of the product dispenser area. The United States Environmental Protection Agency (USEPA) recommends investigation of potential vapor intrusion to impact nearby structures if those structures are within 100 feet of site-related impacts (USEPA 2015). The nearest downgradient structure is approximately 65 feet from the on-site source area (i.e., monitoring wells MW-7 and MW-8). It is anticipated that constituent concentrations would naturally attenuate as the compounds migrate away from the source area towards the on- or off-site structures. Groundwater analytical data associated with downgradient on-site monitoring well MW-1 and downgradient off-site monitoring well MW-9 indicate that detected concentrations of BTEX and MTBE are currently less than the NYSDEC WQS in groundwater samples collected from these wells. Detected concentrations of BTEX in groundwater samples collected from off-site monitoring wells MW-10 and MW-11, located across 63rd Road and immediately upgradient of the retail shopping center, are currently elevated above the NYSDEC WQS. However, BTEX concentrations associated with these wells are much less than BTEX concentrations detected in on-site monitoring wells MW-7 and MW-8, indicating concentrations are attenuating as compounds migrate away from the on-site source area. Additionally,

detected concentrations of BTEX associated with off-site monitoring wells MW-10 and MW-11 have shown an overall decreasing trend since the installation of these wells in 2011 and 2012, respectively, and concentrations are expected to continue to decrease.

The nearest structures are located immediately northeast and southeast of the site approximately 50 feet from site-related impacts observed in samples collected from monitoring wells MW-7 and MW-8. As discussed above, groundwater at the site flows to the northwest. As such, these structures are considered upgradient of site-related impacts and unlikely to be impacted by site-related constituents. Furthermore, groundwater analytical data associated with monitoring wells closest to these buildings indicate that site-related impacts have not migrated southeast/northeast of monitoring wells MW-7 and MW-8. Detected concentrations of BTEX and MTBE in these wells (i.e., MW-3, MW-4, and MW-5) have been consistently less than the laboratory reporting limits or less than the NYSDEC WQS in groundwater samples collected since the onset of monitoring in 2010.

Based on this information, the potential intrusion of soil vapor containing site COCs into nearby structures is expected to be insignificant and exposure to soil vapor 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, although investigations to date have demonstrated that the groundwater plume is stable and/or decreasing and is localized to monitoring wells MW-7 and MW-8, located northwest of the product dispenser area. Additionally, there are no private potable water supply wells within one mile of the site. There is one public water supply well located within one mile of the site. However, records indicate that this well is located southeast of the site; therefore, it is considered to be upgradient of the site. NYSDEC restricts the installation of potable water supply wells. Based on the absence of private potable water supply wells in the area, the location of the one public water supply well, and that municipal water is supplied to the site and surrounding area, exposure to groundwater containing site COCs via ingestion and/or dermal contact is not anticipated to occur on or off site.

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

Depth to groundwater on site ranges from approximately 11 feet bgs at monitoring well MW-7 to 19 feet bgs at monitoring well MW-5. The depth to groundwater beneath measured in off-site monitoring wells ranges from approximately 17 to 18 feet bgs. As discussed above, investigations to date have demonstrated that the groundwater plume is stable and/or decreasing and is localized to the monitoring wells MW-7 and MW-8, located northwest of the product dispenser area. The nearest downgradient structure is approximately 65 feet from the on-site source area (i.e., monitoring wells MW-7 and MW-8). It is anticipated that constituent concentrations in groundwater vapor would naturally attenuate as the compounds migrate away from the on-site source area and towards these downgradient structures, as is supported by the groundwater analytical data associated with on-site monitoring well MW-1 and off-site monitoring well MW-9. Concentrations of BTEX and MTBE detected in these wells are currently less than the laboratory reporting limits and/or the NYSDEC WQS. Detected concentrations of BTEX in

groundwater samples collected from off-site monitoring wells located immediately upgradient of the retail shopping center are currently elevated above the NYSDE WQS. However, BTEX concentrations associated with these wells have shown an overall decrease since being initially sampled, and current BTEX concentrations in off-site monitoring wells are much less than BTEX concentrations detected in on-site monitoring wells, indicating that site-related concentrations are attenuating as compounds migrate away from the on-site source area.

The nearest structures are approximately 50 feet upgradient from site-related impacts; therefore, they are unlikely to be impacted by site-related constituents. In addition, available groundwater analytical data associated with monitoring wells closest to these buildings indicate that site-related impacts have not migrated southeast to monitoring wells MW-7 and MW-8.

Based on this information, exposure to groundwater vapor impacted by site COCs in enclosed (i.e., indoor) 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 away from site-related impacts toward on- or off-site structures. Because the majority of the site and surrounding area is paved with concrete and asphalt, exposure to groundwater vapor impacted by site COCs in ambient (i.e., outdoor air) is not expected to occur on or off site.

5.5 Ingestion Exposure to Surface-Water

As discussed above, there are no surface water bodies located within approximately 950 feet of the site, and the nearest surface-water bodies include Meadow Lake and Willow Lake, each located greater than 0.6 miles east/southeast of the site. As discussed above, groundwater in the vicinity of the site flows to the northwest; therefore, these surface water bodies are considered upgradient of the site. Based on the location and distances of these water bodies with respect to the site, there is not expected to be a hydraulic connection between the site and these water bodies, and as such, exposure to surface water via ingestion is not anticipated to occur.

The nearest downgradient surface water bodies (i.e., Newtown Creek and the East River) are located between 3 to 5 miles west and north/northwest of the site. Based on the distances of these water bodies from the site, there is not expected to be a hydraulic connection between the site and these water bodies, and as such, 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 since April 2010. Investigations to date have demonstrated that petroleum impacts are limited to groundwater and the groundwater plume is stable and/or decreasing and is localized to on-site monitoring wells MW-7 and 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 mixed commercial and residential properties. Potential on-site receptors include commercial workers (e.g., retail clerks) and commercial visitors to the gas station, convenience store, and automotive repair facility. 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. Depth to groundwater measured in monitoring wells on and off site ranges from approximately 11 to 19 feet bgs and 17 to 18 feet bgs, respectively, and site groundwater is not used as a potable source (potable water is supplied by a municipal source); 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 area northwest of the product dispensers. Groundwater analytical data associated with remaining on- and off-site monitoring wells indicate that impacts are localized to the area near the product dispensers; therefore, exposure via inhalation of vapor migrating from soil and/or groundwater into indoor air in nearby structures does not represent a complete exposure pathway. Additionally, the site and surrounding area are currently paved; therefore, exposure via inhalation of soil and/or groundwater vapor in ambient air does not represent a complete exposure pathway.

As discussed above, remedial activities conducted at the site include the operation of an AS/SVE system between 1994 and 1995, resulting in the removal of approximately 15,000 lbs of VOCs. UST upgrade activities in 2009 resulted in the excavation and removal of five 4,000-gallon USTs, associated piping, and approximately 830 tons of soil. A new AS/SVE system was brought online in May 2014 and operated until December 2016, when it was taken offline due to AS compressor issues. The system was brought back online in June 2017, but was taken offline again in September 2017 due to AS motor issues and is currently offline to monitor for rebound of dissolved phase impacts. Per the June 2017 SSUR, total vapor phase BTEX recovered to date is approximately 51 lbs. The total vapor phase hydrocarbon mass recovered to date is approximately 2,000 lbs. Additionally, an ORC-Advanced sock was installed in MW-8 and left in place from June 2016 to September 2017, to increase the dissolved oxygen and enhance natural attenuation of BTEX concentrations in groundwater while continuing to operate the AS/SVE system.

It is Arcadis' conclusion that previous remedial activities have resulted in removal and reduction of the 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 attenuation processes. Available groundwater analytical data indicates that concentrations of one or more BTEX constituents and concentrations of MTBE detected in site groundwater have demonstrated an overall stable to decreasing trend since groundwater sampling was initiated in 2010 and that impacts are localized to monitoring wells MW-7 and MW-8. A review of the surrounding area and site information, as well as NYSDEC restrictions on installation of potable water supply wells, indicate these localized impacts do not pose a significant risk to the nearby receptors or the surrounding environment. In consideration of the above information 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. 09-02519.

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TABLES

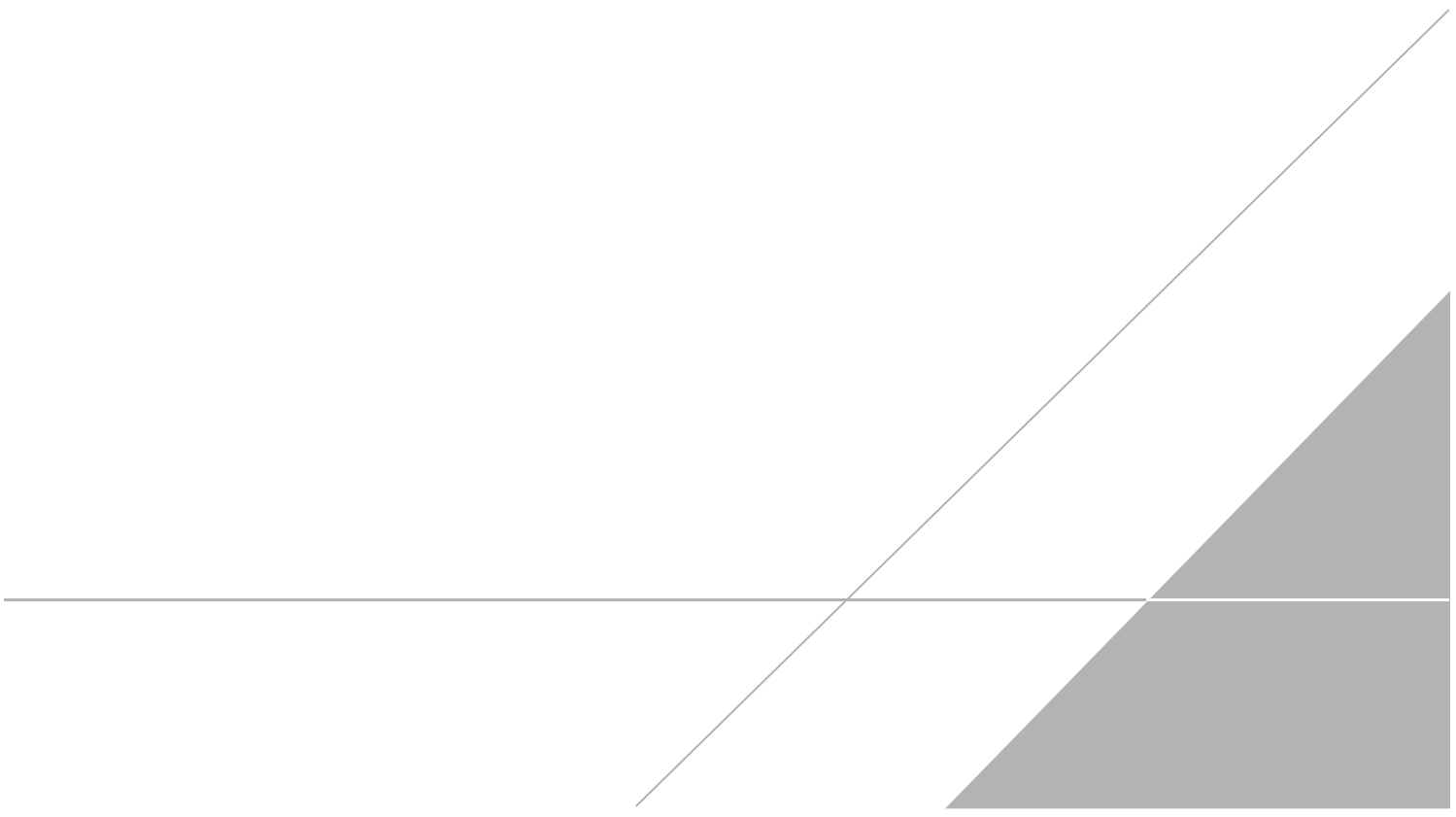

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation (feet)	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	4/22/2010	32.08	18.20	ND	ND	13.88	0.51 J	0.76 J	0.57 J	2.8	4.6	**1,480**	ND<100	3.62	
	7/16/2010	32.08	18.26	ND	ND	13.82	ND<1.0	ND<1.0	ND<1.0	0.66 J	0.66	**751**	ND<100	3.31	
	10/22/2010	32.08	18.31	ND	ND	13.77	0.51 J	ND<1.0	ND<1.0	ND<1.0	0.51	**123**	ND<100	0.85	
	1/19/2011	32.08	18.47	ND	ND	13.61	NS	NS	NS	NS	NS	NS	NS	0.99	Not submitted to laboratory.
	2/25/2011	32.08	18.28	ND	ND	13.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**210**	ND<200	NS	
	4/12/2011	32.08	18.32	ND	ND	13.76	ND<0.5	0.5 J	ND<0.5	1	1.5	**280**	ND<200	NS	
	7/29/2011	32.08	18.34	ND	ND	13.74	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**78**	ND<200	NS	
	10/25/2011	32.08	17.12	ND	ND	14.96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**110**	NS	NS	
	1/12/2012	32.08	16.98	ND	ND	15.10	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**110**	NS	NS	
	4/16/2012	32.08	17.84	ND	ND	14.24	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**67**	NS	NS	
	7/12/2012	32.08	17.90	ND	ND	14.18	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**36**	NS	NS	
	10/2/2012	32.08	17.90	ND	ND	14.18	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**25**	NS	NS	
	1/9/2013	32.08	18.06	ND	ND	14.02	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**25**	NS	NS	
	4/4/2013	32.08	18.10	ND	ND	13.98	ND<0.5	0.8 J	3	**14**	17.8	**33**	NS	NS	
	7/19/2013	32.08	17.94	ND	ND	14.14	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	**31**	NS	NS	
	10/15/2013	32.08	18.20	ND	ND	13.88	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6	**14**	NS	NS	
	1/16/2014	32.08	18.17	ND	ND	13.91	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	10	NS	NS	
	4/22/2014	32.08	18.06	ND	ND	14.02	ND<0.5	ND<0.5	ND<0	ND<0.5	BRL	9	NS	NS	
	7/9/2014	32.08	17.85	ND	ND	14.23	ND<0.5	ND<0.5	ND<0.5	0.7 J	0.7	8	NS	NS	
	10/29/2014	32.08	17.96	ND	ND	14.12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	5	NS	NS	
	1/20/2015	32.08	17.84	ND	ND	14.24	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NS	NS	
	4/1/2015	32.08	17.89	ND	ND	14.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	6	NS	NS	
	7/1/2015	32.08	17.72	ND	ND	14.36	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	4	NS	NS	
	10/15/2015	32.08	18.05	ND	ND	14.03	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NS	NS	
	1/7/2016	32.08	18.05	ND	ND	14.03	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	3	NS	NS	
	4/11/2016	32.08	18.03	ND	ND	14.05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	7/26/2016	32.08	18.10	ND	ND	13.98	ND<0.5	ND<0.5	ND<0.5	0.7 J	0.7 J	2	NS	NS	
	10/29/2016	32.08	18.13	ND	ND	13.95	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	1/5/2017	32.08	18.85	ND	ND	13.23	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	4/18/2017	32.08	17.85	ND	ND	14.23	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	7/28/2017	32.08	17.43	ND	ND	14.65	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	1	NS	NS	
	10/10/2017	32.08	18.52	ND	ND	13.56	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
	1/16/2018	32.08	17.80	ND	ND	14.28	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	2	NS	NS	
MW-2	4/22/2010	32.58	18.65	ND	ND	13.93	**33.1**	**8.0 J**	**1,540**	**8,580**	10,161	**150**	ND<2,500	3.10	
	7/16/2010	32.58	18.72	ND	ND	13.86	**44.7**	ND<20	**1,210**	**7,250**	8,505	**165**	ND<100	2.81	
	10/22/2010	32.58	18.77	ND	ND	13.81	**26.9**	ND<25	**976**	**5,680**	6,683	**117**	ND<100	2.60	
	1/19/2011	32.58	18.94	ND	ND	13.64	**7**	1.0 J	**390**	**2,200**	2,598	**27**	ND<200	0.31	
	4/12/2011	32.58	18.72	ND	ND	13.86	**20**	ND<3	**610**	**4,300**	4,930	**97**	ND<200	NS	
	7/29/2011	32.58	18.80	ND	ND	13.78	**18**	2.0 J	**770**	**3,800**	4,590	**60**	ND<200	NS	
	10/25/2011	32.58	17.53	ND	ND	15.05	**17**	ND<3	**770**	**4,100**	4,887	**37**	NS	NS	
	1/12/2012	32.58	17.38	ND	ND	15.20	**17**	ND<5	**840**	**3,500**	4,357	**34**	NS	NS	
	4/16/2012	32.58	18.19	ND	ND	14.39	**25**	ND<3	**970**	**3,000**	3,995	**76**	NS	NS	
	7/12/2012	32.58	18.28	ND	ND	14.30	**44**	ND<3	**1,500**	**4,000**	5,544	**120**	NS	NS	
	10/2/2012	32.58	18.30	ND	ND	14.28	**45**	ND<5	**1,200**	**3,100**	4,345	**80**	NS	NS	
	1/9/2013	32.58	18.45	ND	ND	14.13	**14**	ND<3	**500**	**1,300**	1,814	**23**	NS	NS	
	4/4/2013	32.58	18.51	ND	ND	14.07	**19**	ND<3	**670**	**1,100**	1,789	**26**	NS	NS	
	7/19/2013	32.58	18.32	ND	ND	14.26	**19**	ND<0.5	**660**	**1,300**	1,979	**17**	NS	NS	
	10/15/2013	32.58	18.78	ND	ND	13.80	**27**	ND<3	**1,000**	**2,100**	3,127	**26**	NS	NS	
	1/16/2014	32.58	18.61	ND	ND	13.97	**14**	ND<1	**620**	**990**	1,624	**14**	NS	NS	
	4/2/2014	32.58	18.45	ND	ND	14.13	**9**	ND<1	**490**	**650**	1,149	8	NS	NS	
	7/9/2014	32.58	18.01	ND	ND	14.57	**15**	1	**530**	**1,100**	1,646	**33**	NS	NS	

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		Gauging Data					Analytical Data								
Sample ID	**Date**	**Top of Casing Elevation (feet)**	**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)	10/29/2014	32.58	18.20	ND	ND	14.38	**11**	ND<3	**470**	**540**	1,021	4 J	NS	NS	
	1/20/2015	32.58	18.26	ND	ND	14.32	**17**	4 J	**1,200**	**1,900**	3,121	ND<3	NS	NS	
	4/1/2015	32.58	16.39	ND	ND	16.19	ND<0.5	ND<0.5	2	**8**	10	ND<0.5	NS	NS	
	7/1/2015	32.58	16.43	ND	ND	16.15	0.6 J	ND<0.5	**6**	**8**	14.6 J	ND<0.5	NS	NS	
	10/15/2015	32.58	18.39	ND	ND	14.19	0.9 J	2	**620**	**730**	1,352.9 J	ND<0.5	NS	NS	
	1/7/2016	32.58	18.44	ND	ND	14.14	ND<3	ND<3	**1,100**	**1,600**	2,700	ND<3	NS	NS	
	4/11/2016	32.58	18.39	ND	ND	14.19	ND<0.5	1	**720**	**410**	1,131	ND<0.5	NS	NS	
	7/26/2016	32.58	18.48	ND	ND	14.10	ND<0.5	1	**610**	**220**	831	ND<0.5	NS	NS	
	10/29/2016	32.58	17.00	ND	ND	15.58	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	32.58	18.52	ND	ND	14.06	ND<0.5	1 J	**680**	**110**	791 J	ND<0.5	NS	NS	
	4/18/2017	32.58	18.17	ND	ND	14.41	ND<0.5	0.8 J	**580**	**85**	665.8 J	ND<0.5	NS	NS	
	7/28/2017	32.58	17.70	ND	ND	14.88	ND<0.5	0.8 J	**410**	**150**	560.8 J	ND<0.5	NS	NS	
	10/10/2017	32.58	18.90	ND	ND	13.68	ND<0.5	1	**790**	**240**	1,031	ND<0.5	NS	NS	
	1/16/2018	32.58	18.03	ND	ND	14.55	ND<0.5	0.7 J	**490**	**160**	650.7 J	ND<0.5	NS	NS	
MW-3	4/22/2010	33.12	18.99	ND	ND	14.13	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.87	
	7/16/2010	33.12	19.07	ND	ND	14.05	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.55	
	10/22/2010	33.12	19.15	ND	ND	13.97	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	0.92	
	1/19/2011	33.12	19.33	ND	ND	13.79	ND<0.5	ND<0.5	ND<0.5	0.9 J	0.9	ND<0.5	ND<200	NS	
	4/12/2011	33.12	19.08	ND	ND	14.04	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	7/29/2011	33.12	19.14	ND	ND	13.98	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	10/25/2011	33.12	17.87	ND	ND	15.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/12/2012	33.12	17.74	ND	ND	15.38	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/16/2012	33.12	18.52	ND	ND	14.60	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/12/2012	33.12	18.64	ND	ND	14.48	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/2/2012	33.12	18.65	ND	ND	14.47	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/9/2013	33.12	18.81	ND	ND	14.31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2013	33.12	18.90	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	1 J	1	ND<0.5	NS	NS	
	7/19/2013	33.12	18.68	ND	ND	14.44	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2013	33.12	18.93	ND	ND	14.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2014	33.12	18.97	ND	ND	14.15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/2/2014	33.12	18.83	ND	ND	14.29	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/9/2014	33.12	18.59	ND	ND	14.53	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2014	33.12	18.75	ND	ND	14.37	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	33.12	18.66	ND	ND	14.46	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/1/2015	33.12	18.61	ND	ND	14.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/1/2015	33.12	18.50	ND	ND	14.62	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	33.12	18.81	ND	ND	14.31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	33.12	18.85	ND	ND	14.27	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/11/2016	33.12	18.80	ND	ND	14.32	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	33.12	18.88	ND	ND	14.24	ND<0.5	ND<0.5	ND<0.5	0.5 J	0.5 J	ND<0.5	NS	NS	
	10/29/2016	33.12	19.95	ND	ND	13.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	33.12	18.95	ND	ND	14.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NA	NA	
	4/18/2017	33.12	18.55	ND	ND	14.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	33.12	18.14	ND	ND	14.98	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	Could not access; parked car over well.
	10/10/2017	33.12	18.87	ND	ND	14.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	33.12	18.42	ND	ND	14.70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
MW-4	4/22/2010	32.47	18.36	ND	ND	14.11	ND<1.0	ND<1.0	ND<1.0	0.45 J	0.45	ND<1.0	ND<100	3.29	
	7/16/2010	32.47	18.48	ND	ND	13.99	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.58	
	10/22/2010	32.47	18.55	ND	ND	13.92	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.57	
	1/19/2011	32.47	18.70	ND	ND	13.77	ND<0.5	ND<0.5	ND<0.5	0.5 J	0.5	ND<0.5	ND<200	NS	
	4/12/2011	32.47	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not access; parked car over well.

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		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation (feet)	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-4 (Continued)	7/29/2011	32.47	18.15	ND	ND	14.32	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	10/25/2011	32.47	16.90	ND	ND	15.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/12/2012	32.47	17.11	ND	ND	15.36	ND<0.5	ND<0.5	ND<0.5	1 J	1 J	ND<0.5	NS	NS	
	4/16/2012	32.47	17.90	ND	ND	14.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/12/2012	32.47	18.03	ND	ND	14.44	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/2/2012	32.47	18.02	ND	ND	14.45	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/9/2013	32.47	18.20	ND	ND	14.27	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2013	32.47	18.25	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/19/2013	32.47	18.06	ND	ND	14.41	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2013	32.47	17.95	ND	ND	14.52	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2014	32.47	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not locate. Possibly destroyed.
	4/2/2014	32.47	17.83	ND	ND	14.64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/9/2014	32.47	17.57	ND	ND	14.90	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6	ND<0.5	NS	NS	
	10/29/2014	32.47	17.81	ND	ND	14.66	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	32.47	17.68	ND	ND	14.79	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/1/2015	32.47	17.54	ND	ND	14.93	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/1/2015	32.47	17.48	ND	ND	14.99	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	32.47	17.83	ND	ND	14.64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	32.47	17.87	ND	ND	14.60	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/11/2016	32.47	17.79	ND	ND	14.68	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	32.47	18.00	ND	ND	14.47	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2016	32.47	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not access; parked car over well.
	1/5/2017	32.47	NM	NA	NA	NM	NS	NS	NS	NS	NS	NS	NS	NS	Car parked on well, could not move
	4/18/2017	32.47	17.58	ND	ND	14.89	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	32.47	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	10/10/2017	32.47	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Could not access; parked car over well.
	1/16/2018	32.47	17.43	ND	ND	15.04	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
MW-5	4/22/2010	33.80	19.65	ND	ND	14.15	ND<1.0	0.32 J	ND<1.0	ND<1.0	0.32	ND<1.0	ND<100	4.42	
	7/16/2010	33.80	19.71	ND	ND	14.09	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	3.42	
	10/22/2010	33.80	19.78	ND	ND	14.02	ND<1.0	ND<1.0	ND<1.0	ND<1.0	BRL	ND<1.0	ND<100	2.72	
	1/19/2011	33.80	19.98	ND	ND	13.82	ND<0.5	**7**	2	**12**	21	ND<0.5	ND<200	3.15	
	4/12/2011	33.80	19.69	ND	ND	14.11	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	7/29/2011	33.80	19.79	ND	ND	14.01	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	ND<200	NS	
	10/25/2011	33.80	18.51	ND	ND	15.29	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/12/2012	33.80	18.40	ND	ND	15.40	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/16/2012	33.80	19.17	ND	ND	14.63	ND<0.5	0.7 J	ND<0.5	ND<0.5	0.70	ND<0.5	NS	NS	
	7/12/2012	33.80	19.31	ND	ND	14.49	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/2/2012	33.80	19.29	ND	ND	14.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/9/2013	33.80	19.47	ND	ND	14.33	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/4/2013	33.80	19.49	ND	ND	14.31	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/19/2013	33.80	19.32	ND	ND	14.48	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2013	33.80	19.59	ND	ND	14.21	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2014	33.80	19.61	ND	ND	14.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/2/2014	33.80	19.47	ND	ND	14.33	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/9/2014	33.80	19.21	ND	ND	14.59	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2014	33.80	19.42	ND	ND	14.38	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	33.80	19.29	ND	ND	14.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/1/2015	33.80	19.25	ND	ND	14.55	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/1/2015	33.80	19.15	ND	ND	14.65	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	33.80	19.45	ND	ND	14.35	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	33.80	19.52	ND	ND	14.28	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

		Gauging Data					Analytical Data								
Sample ID	Date	Top of Casing Elevation (feet)	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-5 (Continued)	4/11/2016	33.80	19.43	ND	ND	14.37	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	33.80	19.51	ND	ND	14.29	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2016	33.80	19.65	ND	ND	14.15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	33.80	19.58	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/18/2017	33.80	19.19	ND	ND	14.61	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	33.80	18.81	ND	ND	14.99	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/10/2017	33.80	19.55	ND	ND	14.25	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	33.80	18.06	ND	ND	15.74	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
MW-6	4/22/2010	33.26	19.25	ND	ND	14.01	**1.6**	0.49 J	**17**	**108**	127	2.1	ND<100	4.02	
	7/16/2010	33.26	19.26	ND	ND	14.00	1	ND<1.0	**10.8**	**68.5**	80.3	1	ND<100	3.11	
	10/22/2010	33.26	19.35	ND	ND	13.91	0.98 J	0.34 J	**11.3**	**65.5**	78.1	2.1	ND<100	2.97	
	1/19/2011	33.26	19.56	ND	ND	13.70	1	ND<0.5	**23**	**150**	174	0.8 J	ND<200	NS	
	4/12/2011	33.26	19.30	ND	ND	13.96	**4**	ND<0.5	**48**	**260**	312	ND<0.5	ND<200	NS	
	7/29/2011	33.26	19.41	ND	ND	13.85	**4**	0.8 J	**73**	**440**	518	3	ND<200	NS	
	10/25/2011	33.26	18.12	ND	ND	15.14	**4**	ND<0.5	**63**	**410**	477	8	NS	NS	
	1/12/2012	33.26	17.99	ND	ND	15.27	**4**	0.7 J	**87**	**460**	552	5	NS	NS	
	4/16/2012	33.26	18.79	ND	ND	14.47	**2**	0.6 J	**42**	**250**	295	3	NS	NS	
	7/12/2012	33.26	18.90	ND	ND	14.36	**2**	ND<0.5	**29**	**160**	191	3	NS	NS	
	10/2/2012	33.26	18.88	ND	ND	14.38	**3**	3	**66**	**340**	412	3	NS	NS	
	1/9/2013	33.26	19.06	ND	ND	14.20	1	ND<0.5	**28**	**160**	189	1	NS	NS	
	4/4/2013	33.26	19.12	ND	ND	14.14	1	ND<0.5	**27**	**150**	178	2	NS	NS	
	7/19/2013	33.26	18.93	ND	ND	14.33	1	ND<0.5	**22**	**75**	98	2	NS	NS	
	10/15/2013	33.26	19.19	ND	ND	14.07	1	ND<0.5	**33**	**120**	154	2	NS	NS	
	1/16/2014	33.26	19.21	ND	ND	14.05	1	ND<0.5	**25**	**110**	136	2	NS	NS	
	4/2/2014	33.26	19.05	ND	ND	14.21	1	ND<0.5	**20**	**89**	110	1	NS	NS	
	7/9/2014	33.26	18.72	ND	ND	14.54	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2014	33.26	19.00	ND	ND	14.26	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/20/2015	33.26	18.90	ND	ND	14.36	ND<0.5	ND<0.5	ND<0.5	2	2	ND<0.5	NS	NS	
	4/1/2015	33.26	18.96	ND	ND	14.30	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/1/2015	33.26	18.69	ND	ND	14.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/15/2015	33.26	19.06	ND	ND	14.20	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/7/2016	33.26	19.04	ND	ND	14.22	ND<0.5	ND<0.5	2	9	11	ND<0.5	NS	NS	
	4/11/2016	33.26	19.04	ND	ND	14.22	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/26/2016	33.26	19.11	ND	ND	14.15	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/29/2016	33.26	19.09	ND	ND	14.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	33.26	19.19	ND	ND	14.07	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	4/18/2017	33.26	18.81	ND	ND	14.45	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	7/28/2017	33.26	13.39	ND	ND	19.87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	10/10/2017	33.26	19.21	ND	ND	14.05	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	33.26	18.87	ND	ND	14.39	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
MW-7	4/22/2010	31.84	17.90	ND	ND	13.94	**1,120**	**16,800**	**4,830**	**23,800**	46,550	**19.9 J**	ND<5,000	2.72	
	7/16/2010	31.84	18.00	ND	ND	13.84	**1,980**	**21,000**	**5,150**	**31,800**	59,930	ND<200	ND<100	2.83	
	10/22/2010	31.84	18.06	ND	ND	13.78	**1,530**	**27,600**	**5,520**	**29,200**	63,850	ND<100	ND<100	1.16	
	1/19/2011	31.84	18.23	ND	ND	13.61	**1,100**	**15,000**	**3,900**	**24,000**	44,000	ND<10	ND<200	0.37	
	4/12/2011	31.84	18.51	ND	ND	13.33	**120**	**25,000**	**6,700**	**30,000**	61,820	ND<10	ND<200	NS	
	7/29/2011	31.84	18.05	ND	ND	13.79	**1,200**	**30,000**	**5,600**	**31,000**	67,800	ND<10	ND<200	NS	
	10/25/2011	31.84	16.80	ND	ND	15.04	**280**	**4,000**	**3,000**	**18,000**	25,280	**14**	NS	NS	
	1/12/2012	31.84	16.67	ND	ND	15.17	**250**	**5,900**	**3,700**	**23,000**	32,850	**11 J**	NS	NS	
	4/16/2012	31.84	17.47	ND	ND	14.37	**210**	**5,600**	**4,000**	**26,000**	35,810	ND<0.5	NS	NS	
	7/12/2012	31.84	17.60	ND	ND	14.24	**180**	**6,800**	**4,300**	**26,000**	37,280	ND<25	NS	NS	
	10/2/2012	31.84	17.59	ND	ND	14.25	**230**	**10,000**	**5,900**	**34,000**	50,130	ND<5	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

		Gauging Data					Analytical Data								
Sample ID	**Date**	**Top of Casing Elevation (feet)**	**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 (Continued)	1/9/2013	31.84	17.70	ND	ND	14.14	**140**	**5,800**	**4,200**	**26,000**	36,140	ND<5	NS	NS	
	4/4/2013	31.84	17.80	ND	ND	14.04	**150**	**7,900**	**5,300**	**27,000**	40,350	ND<3	NS	NS	
	7/19/2013	31.84	17.63	ND	ND	14.21	**87**	**1,500**	**4,000**	**21,000**	26,587	ND<5	NS	NS	
	10/15/2013	31.84	17.88	ND	ND	13.96	**93**	**1,000**	**3,100**	**18,000**	22,193	ND<5	NS	NS	
	1/16/2014	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/2/2014	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	7/9/2014	31.84	17.66	ND	ND	14.18	**3**	**140**	**450**	**2,800**	3,393	1 J	NS	NS	
	10/29/2014	31.84	17.91	ND	ND	13.93	**4**	**61**	**190**	**560**	815	ND<0.5	NS	NS	
	1/20/2015	31.84	17.91	ND	ND	13.93	**16**	**280**	**310**	**2,000**	2,606	ND<3	NS	NS	
	4/1/2015	31.84	17.76	ND	ND	14.08	**2**	**37**	**16**	**440**	495	ND<0.5	NS	NS	
	7/1/2015	31.84	17.12	ND	ND	14.72	ND<0.5	ND<0.5	3	**7**	10	ND<0.5	NS	NS	
	10/15/2015	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	1/7/2016	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/11/2016	31.84	2.80	ND	ND	29.04	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6 J	ND<0.5	NS	NS	
	7/26/2016	31.84	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	10/29/2016	31.84	11.58	ND	ND	20.26	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/5/2017	31.84	NM	ND	ND	NA	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	4/18/2017	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	7/28/2017	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	10/10/2017	31.84	11.62	ND	ND	20.22	ND<5	**1,900**	**2,500**	**13,000**	17,400	ND<5	NS	NS	
	1/16/2018	31.84	NM	ND	ND	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
MW-8	4/22/2010	32.36	18.52	18.4	0.12	13.93	NS	NS	NS	NS	NS	NS	NS	NS	LPH Present, not sampled
	7/16/2010	32.36	18.50	ND	ND	13.86	**226 J**	**34,600**	**7,370**	**32,800**	74,996	ND<250	ND<100	2.73	
	10/22/2010	32.36	18.56	ND	ND	13.80	**156**	**23,900**	**7,670**	**29,100**	60,826	ND<100	ND<100	2.82	
	1/19/2011	32.36	18.75	ND	ND	13.61	**120**	**20,000**	**6,100**	**33,000**	59,220	ND<13	ND<200	NS	
	4/12/2011	32.36	18.03	ND	ND	14.33	**1,200**	**20,000**	**3,500**	**32,000**	56,700	ND<10	ND<200	NS	
	7/29/2011	32.36	18.56	ND	ND	13.80	**89**	**25,000**	**7,000**	**30,000**	62,089	ND<10	ND<200	NS	
	10/25/2011	32.36	17.31	ND	ND	15.05	**120**	**26,000**	**7,300**	**31,000**	64,420	ND<25	NS	NS	
	1/12/2012	32.36	17.16	ND	ND	15.20	**110**	**25,000**	**6,900**	**31,000**	63,010	ND<10	NS	NS	
	4/16/2012	32.36	17.96	ND	ND	14.40	**80**	**25,000**	**6,800**	**27,000**	58,880	ND<25	NS	NS	
	7/12/2012	32.36	18.08	ND	ND	14.28	**82 J**	**24,000**	**6,100**	**27,000**	57,182	ND<50	NS	NS	
	10/2/2012	32.36	18.09	ND	ND	14.27	**53**	**20,000**	**6,000**	**28,000**	54,053	ND<5	NS	NS	
	1/9/2013	32.36	18.26	ND	ND	14.10	**53**	**23,000**	**5,500**	**25,000**	53,553	ND<25	NS	NS	
	4/4/2013	32.36	18.30	ND	ND	14.06	**40**	**22,000**	**6,100**	**25,000**	53,140	ND<5	NS	NS	
	7/19/2013	32.36	18.12	ND	ND	14.24	**31**	**22,000**	**6,000**	**25,000**	53,031	ND<5	NS	NS	
	10/15/2013	32.36	19.37	ND	ND	12.99	**30 J**	**25,000**	**6,400**	**26,000**	57,430	ND<25	NS	NS	
	1/16/2014	32.36	19.41	ND	ND	12.95	ND<25	**19,000**	**5,600**	**20,000**	44,600	ND<25	NS	NS	
	4/2/2014	32.36	18.26	ND	ND	14.10	ND<25	**24,000**	**6,700**	**26,000**	56,700	ND<25	NS	NS	
	7/9/2014	32.36	17.94	ND	ND	14.42	ND<25	**12,000**	**3,500**	**25,000**	40,500	ND<25	NS	NS	
	10/29/2014	32.36	18.07	ND	ND	14.29	ND<5	**8,500**	**1,100**	**25,000**	34,600	ND<5	NS	NS	
	1/20/2015	32.36	18.09	ND	ND	14.27	ND<25	**14,000**	**5,100**	**23,000**	42,100	ND<25	NS	NS	
	4/1/2015	32.36	17.98	ND	ND	14.38	ND<3	**5,200**	**990**	**17,000**	23,190	ND<3	NS	NS	
	7/1/2015	32.36	17.83	ND	ND	14.53	ND<10	**5,400**	**2,300**	**18,000**	25,700	ND<10	NS	NS	
	10/15/2015	32.36	18.19	ND	ND	14.17	ND<5	**2,900**	**1,600**	**12,000**	16,500	ND<5	NS	NS	
	1/7/2016	32.36	18.24	ND	ND	14.12	ND<10	**5,400**	**3,200**	**15,000**	23,600	ND<10	NS	NS	
	4/11/2016	32.36	18.19	ND	ND	14.17	ND<5	**1,200**	**2,500**	**10,000**	13,700	ND<5	NS	NS	
	7/26/2016	32.36	18.26	ND	ND	14.10	ND<5	**3,400**	**1,700**	**14,000**	19,100	ND<5	NS	NS	ORC sock installed
	10/29/2016	32.36	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	Dry; not sampled
	11/22/2016	32.36	NM	NM	NM	NM	ND<5	**2,900**	**910**	**9,400**	13,210	ND<5	NS	NS	
	1/5/2017	32.36	18.45	ND	ND	13.91	ND<10	**4,000**	**850**	**14,000**	18,850	ND<10	NS	NS	
	4/18/2017	32.36	17.99	ND	ND	14.37	ND<5	**2,100**	**650**	**13,000**	15,750	ND<5	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

		Gauging Data					Analytical Data								
Sample ID	**Date**	**Top of Casing Elevation (feet)**	**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)	7/28/2017	32.36	17.31	ND	ND	15.05	ND<0.5	3	3	**28**	34	ND<0.5	NS	NS	
	10/10/2017	32.36	18.35	ND	ND	14.01	ND<0.5	ND<0.5	**7**	1	8	ND<0.5	NS	NS	ORC sock removed September 28, 2017
	1/16/2018	32.36	17.89	ND	ND	14.47	ND<10	**3,100**	**3,400**	**12,000**	18,500	ND<10	NS	NS	
MW-9	7/29/2011	31.92	18.50	ND	ND	13.42	0.6 J	1 J	ND<0.8	3 J	5	ND<0.5	ND<200	NS	
	10/25/2011	31.92	17.45	ND	ND	14.47	0.7 J	2	5	**8**	15.7	ND<0.5	NS	NS	
	1/12/2012	31.92	17.33	ND	ND	14.59	1	2	4	**9**	16	ND<0.5	NS	NS	
	4/16/2012	31.92	18.10	ND	ND	13.82	**2**	3	4	**17**	26	ND<0.5	NS	NS	
	7/12/2012	31.92	18.18	ND	ND	13.74	**2**	3	1	**14**	20	ND<0.5	NS	NS	
	10/2/2012	31.92	18.17	ND	ND	13.75	1	2	0.8 J	**11**	14.8	ND<0.5	NS	NS	
	1/9/2013	31.92	18.23	ND	ND	13.69	**2**	4	1	**15**	22	ND<0.5	NS	NS	
	4/4/2013	31.92	18.31	ND	ND	13.61	**2**	4	1	**15**	22	ND<0.5	NS	NS	
	7/19/2013	31.92	18.17	ND	ND	13.75	**3**	5	2	**20**	30	ND<0.5	NS	NS	
	10/15/2013	31.92	18.37	ND	ND	13.55	1	4	1	**15**	21	ND<0.5	NS	NS	
	1/16/2014	31.92	18.39	ND	ND	13.53	1	3	1	**15**	20	ND<0.5	NS	NS	
	4/2/2014	31.92	18.27	ND	ND	13.65	2 J	4	1 J	**16**	23	ND<1	NS	NS	
	7/9/2014	31.92	18.13	ND	ND	13.79	ND<0.5	0.8 J	1 J	**6**	7.8	ND<0.5	NS	NS	
	10/29/2014	31.92	18.21	ND	ND	13.71	0.6 J	0.8 J	0.7 J	5	7.1	ND<0.5	NS	NS	
	1/20/2015	31.92	18.12	ND	ND	13.80	0.7 J	1	0.6 J	5	7.3	ND<0.5	NS	NS	
	4/1/2015	31.92	18.16	ND	ND	13.76	0.8 J	2	0.5 J	7	10.3	ND<0.5	NS	NS	
	7/1/2015	31.92	18.02	ND	ND	13.90	ND<0.5	0.8 J	1	5	6.8 J	ND<0.5	NS	NS	
	10/15/2015	31.92	18.27	ND	ND	13.65	ND<0.5	0.9 J	1	5	6.9 J	ND<0.5	NS	NS	
	1/7/2016	31.92	18.23	ND	ND	13.69	0.6 J	1	2	**8**	11.6 J	ND<0.5	NS	NS	
	4/11/2016	31.92	18.23	ND	ND	13.69	0.8 J	2	1	**8**	11.8 J	ND<0.5	NS	NS	
	7/26/2016	31.92	18.27	ND	ND	13.65	ND<0.5	0.8 J	0.6 J	5	6.4 J	ND<0.5	NS	NS	
	10/29/2016	31.92	18.34	ND	ND	13.58	ND<0.5	0.8 J	ND<0.5	2	2.8 J	ND<0.5	NS	NS	
	1/5/2017	31.92	18.36	ND	ND	13.56	ND<0.5	0.7 J	ND<0.5	2	2.7 J	ND<0.5	NS	NS	
	4/18/2017	31.92	18.07	ND	ND	13.85	ND<0.5	1	ND<0.5	4	5	ND<0.5	NS	NS	
	7/28/2017	31.92	17.49	ND	ND	14.43	ND<0.5	ND<0.5	ND<0.5	0.6 J	0.6 J	ND<0.5	NS	NS	
	10/10/2017	31.92	18.29	ND	ND	13.63	ND<0.5	ND<0.5	ND<0.5	ND<0.5	BRL	ND<0.5	NS	NS	
	1/16/2018	31.92	17.95	ND	ND	13.97	0.6 J	1	0.6 J	5	7.2 J	ND<0.5	NS	NS	
MW-10	7/29/2011	31.83	18.68	ND	ND	13.15	**680**	**71**	**9.0**	**174 J**	934	10	ND<200	NS	
	10/25/2011	31.83	17.82	ND	ND	14.01	**360**	**37**	3	**51**	451	**12**	NS	NS	
	1/12/2012	31.83	17.72	ND	ND	14.11	**350**	**37**	5	**64**	456	5	NS	NS	
	4/16/2012	31.83	18.36	ND	ND	13.47	**550**	**170**	**31**	**690**	1,441	5 J	NS	NS	
	7/12/2012	31.83	17.43	ND	ND	14.40	**600**	**140**	**12**	**810**	1,562	5	NS	NS	
	10/2/2012	31.83	18.46	ND	ND	13.37	**480**	**110**	5	**570**	1,165	3 J	NS	NS	
	1/9/2013	31.83	18.51	ND	ND	13.32	**400**	**60**	3 J	**310**	773	3 J	NS	NS	
	4/4/2013	31.83	18.57	ND	ND	13.26	**380**	**51**	4	**110**	545	3	NS	NS	
	7/19/2013	31.83	18.48	ND	ND	13.35	**230**	**33**	3 J	**59**	325	ND<3	NS	NS	
	10/15/2013	31.83	18.62	ND	ND	13.21	**200**	**53**	2	**48**	303	2	NS	NS	
	1/16/2014	31.83	18.64	ND	ND	13.19	**170**	**26**	ND<3	**42**	238	ND<3	NS	NS	
	4/2/2014	31.83	18.52	ND	ND	13.31	**33**	**36**	**75**	**80**	224	10	NS	NS	
	7/9/2014	31.83	18.40	ND	ND	13.43	**110**	**45**	4	**72**	231	2	NS	NS	
	10/29/2014	31.83	18.52	ND	ND	13.31	**93**	**24**	**12**	**110**	239	ND<3	NS	NS	
	1/20/2015	31.83	18.44	ND	ND	13.39	**97**	**29**	4	**57**	187	2	NS	NS	
	4/1/2015	31.83	18.43	ND	ND	13.40	**80**	**29**	3 J	**52**	164	ND<3	NS	NS	
	7/1/2015	31.83	18.31	ND	ND	13.52	**92**	**39**	**7**	**75**	213	0.9 J	NS	NS	
	10/15/2015	31.83	18.54	ND	ND	13.29	**71**	**28**	4 J	**47**	150 J	ND<3	NS	NS	
	1/7/2016	31.83	18.52	ND	ND	13.31	**55**	**35**	5 J	**42**	137 J	ND<3	NS	NS	
	4/11/2016	31.83	18.45	ND	ND	13.38	**35**	**30**	5 J	**39**	109 J	ND<3	NS	NS	
	7/26/2016	31.83	18.50	ND	ND	13.33	**21**	**40**	5	**40**	106	ND<0.5	NS	NS	

Table 1
Monitoring Well Gauging And Groundwater Analytical Data

Mobil Branded Service Station
Former Mobil #12833 (17-GBR)
96-27 Queens Blvd
Queens, New York

		Gauging Data					Analytical Data								
Sample ID	**Date**	**Top of Casing Elevation (feet)**	**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-10 (Continued)	10/29/2016	31.83	18.61	ND	ND	13.22	**12**	**28**	**9**	**27**	76	ND<3	NS	NS	
	1/5/2017	31.83	18.65	ND	ND	13.18	**12**	**37**	**6**	**34**	89	ND<3	NS	NS	
	4/18/2017	31.83	18.36	ND	ND	13.47	**12**	**46**	**6**	**42**	106	ND<3	NS	NS	
	7/28/2017	31.83	18.05	ND	ND	13.78	**6**	**38**	**8**	**43**	95	ND<3	NS	NS	
	10/10/2017	31.83	18.83	ND	ND	13.00	**5**	**36**	5	**38**	84	ND<0.5	NS	NS	
	1/16/2018	31.83	18.23	ND	ND	13.60	**5**	**42**	**7**	**36**	90	ND<0.5	NS	NS	
MW-11	2/7/2012	31.72	16.87	ND	ND	14.85	**120**	**38**	**69**	**133**	360	**55**	NS	NS	
	4/16/2012	31.72	17.49	ND	ND	14.23	**92**	**94**	**61**	**91**	338	**40**	NS	NS	
	7/12/2012	31.72	17.58	ND	ND	14.14	**94**	**180**	**67**	**100**	441	**42**	NS	NS	
	10/2/2012	31.72	17.58	ND	ND	14.14	**70**	**80**	**57**	**81**	288	**51**	NS	NS	
	1/9/2013	31.72	17.69	ND	ND	14.03	**63**	**48**	**79**	**98**	288	**34**	NS	NS	
	4/4/2013	31.72	17.80	ND	ND	13.92	**61**	**41**	**250**	**200**	552	**26**	NS	NS	
	7/19/2013	31.72	17.58	ND	ND	14.14	**39**	**27**	**290**	**120**	476	**18**	NS	NS	
	10/15/2013	31.72	17.82	ND	ND	13.90	**46**	**38**	**180**	**110**	374	**18**	NS	NS	
	1/16/2014	31.72	17.86	ND	ND	13.86	**33**	**30**	**82**	**77**	222	**12**	NS	NS	
	4/2/2014	31.72	17.70	ND	ND	14.02	**150**	**33**	**3**	**47**	233	2	NS	NS	
	7/9/2014	31.72	17.49	ND	ND	14.23	**33**	**43**	**58**	**91**	225	9	NS	NS	
	10/29/2014	31.72	17.64	ND	ND	14.08	**23**	**31**	**40**	**74**	168	8 J	NS	NS	
	1/20/2015	31.72	17.56	ND	ND	14.16	**28**	**27**	**43**	**60**	158	8	NS	NS	
	4/1/2015	31.72	17.56	ND	ND	14.16	**24**	**18**	**28**	**35**	105	4 J	NS	NS	
	7/1/2015	31.72	17.44	ND	ND	14.28	**31**	**18**	**31**	**46**	126	3	NS	NS	
	10/15/2015	31.72	17.70	ND	ND	14.02	**23**	**12**	**29**	**28**	92	ND<3	NS	NS	
	1/7/2016	31.72	17.74	ND	ND	13.98	**19**	**11**	**26**	**28**	84	ND<3	NS	NS	
	4/11/2016	31.72	17.66	ND	ND	14.06	**14**	**9**	**24**	**25**	72	ND<3	NS	NS	
	7/26/2016	31.72	17.72	ND	ND	14.00	**12**	**17**	**24**	**30**	83	ND<5	NS	NS	
	10/29/2016	31.72	17.76	ND	ND	13.96	**12**	**24**	**21**	**31**	88	ND<3	NS	NS	
	1/5/2017	31.72	17.81	ND	ND	13.91	**11**	**18**	**23**	**29**	81	ND<3	NS	NS	
	4/18/2017	31.72	17.49	ND	ND	14.23	**10**	**11**	**23**	**38**	82	ND<0.5	NS	NS	
	7/28/2017	31.72	17.08	ND	ND	14.64	**7**	**11**	**18**	**34**	70	ND<3	NS	NS	
	10/10/2017	31.72	17.61	ND	ND	14.11	**6**	**15**	**26**	**63**	110	ND<0.5	NS	NS	
	1/16/2018	31.72	17.32	ND	ND	14.40	**5**	**12**	**34**	**96**	147	ND<0.5	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
Bold Items - Reported concentration detected above the applicable standard or guidance value
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 - milligrams 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
Survey data - Monitoring wells surveyed to the Borough of Queens Highway Datum on May 25, 2010.
Total Xylenes for MW-9 and MW-10 calculated by adding results for individual congers (m+p and o) for July 29, 2011 sampling event.

Table 2
AS/SVE Influent Analytical Data
June 1, 2017 through August 23, 2017

ExxonMobil 12833
96-27 Queens Blvd
Rego Park, NY

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)
5/23/2014	156	NA	NA	NA	321	N	NS	NS	NA	0.0	NS	NS	NA	0.00	NS	NS	NA	NA
5/30/2014	324	7.0	7.0	100%	245	N	2.0	0.0	0.3	0.3	0.03	0.001	0.00	0.00	75	1.7	11.6	11.6
6/6/2014	493	7.0	7.0	100%	243	Y	3.4	0.1	0.5	0.8	0.04	0.001	0.01	0.01	2300	50.2	353.1	364.7
7/2/2014	1,120	26.2	26.1	100%	239	Y	16.9	0.4	9.5	10.3	0.04	0.001	0.02	0.03	1100	23.6	617.3	982.0
8/15/2014	2,165	43.5	43.5	100%	242	Y	17.5	0.4	16.6	26.9	0.04	0.001	0.03	0.06	270	5.9	255.7	1237.6
8/15/2014	2,169	0.2	0.2	96%	242	Y	17.5	0.4	0.1	27.0	0.04	0.001	0.00	0.06	270	5.9	1.1	1238.7
9/26/2014	3,173	42.0	41.8	100%	243	Y	6.3	0.1	5.7	32.7	0.04	0.001	0.03	0.10	300	6.5	273.5	1512.2
10/29/2014	3,962	32.8	32.9	100%	232	Y	0.2	0.0	0.1	32.8	0.00	0.000	0.00	0.10	10	0.2	6.8	1519.0
11/20/2014	4,477	22.0	21.5	98%	261	N	0.7	0.0	0.4	33.2	0.00	0.000	0.00	0.10	30	0.7	15.1	1534.1
12/12/2014	5,011	21.8	22.2	100%	254	Y	0.0	0.0	0.0	33.2	0.00	0.000	0.00	0.10	10	0.2	5.1	1539.2
3/13/2015	5,783	91.2	32.1	35%	254	Y	0.2	0.0	0.1	33.3	0.00	0.000	0.00	0.10	10	0.2	7.3	1546.6
4/7/2015	6,383	25.0	25.0	100%	246	Y	0.1	0.0	0.0	33.4	0.00	0.000	0.00	0.10	10	0.2	5.5	1552.1
5/19/2015	7,200	42.2	34.0	81%	269	Y	1.0	0.0	0.8	34.2	0.00	0.000	0.00	0.10	100	2.4	82.3	1634.4
6/30/2015	7,820	42.1	25.9	61%	259	Y	3.0	0.1	1.8	36.0	0.07	0.002	0.04	0.14	82	1.9	49.4	1683.8
7/31/2015	8,274	30.9	18.9	61%	248	Y	2.7	0.1	1.1	37.1	0.01	0.000	0.00	0.15	120	2.7	50.6	1734.4
8/28/2015	8,382	27.9	4.5	16%	251	Y	0.0	0.0	0.0	37.1	0.00	0.000	0.00	0.15	10	0.2	1.0	1735.4
9/30/2015	9,177	33.2	33.1	100%	260	Y	0.8	0.0	0.6	37.7	0.00	0.000	0.00	0.15	10	0.2	7.7	1743.1
10/8/2015	9,366	7.9	7.9	100%	249	Y	0.0	0.0	0.0	37.7	0.00	0.000	0.00	0.15	10	0.2	1.8	1744.9
11/12/2015	9,868	34.9	20.9	60%	263	Y	0.0	0.0	0.0	37.7	0.00	0.000	0.00	0.15	10	0.2	4.9	1749.8
12/21/2015	10,466	39.1	24.9	64%	230	Y	21.6	0.4	11.1	48.8	0.04	0.001	0.02	0.17	280	5.8	144.0	1893.8
1/11/2016	10,551	21.0	3.5	17%	230	Y	1.3	0.0	0.1	48.9	0.00	0.000	0.00	0.17	20	0.4	1.5	1895.3
2/11/2016	11,029	31.0	19.9	64%	223	Y	0.0	0.0	0.0	48.9	0.00	0.000	0.00	0.17	10	0.2	4.0	1899.3
3/22/2016	11,669	40.0	26.7	67%	191	Y	0.6	0.0	0.3	49.2	0.00	0.000	0.00	0.17	10	0.2	4.6	1903.9
4/20/2016	11,946	29.0	11.6	40%	178	Y	0.1	0.0	0.0	49.2	0.00	0.000	0.00	0.17	20	0.3	3.7	1907.6
5/18/2016	12,618	27.9	28.0	100%	178	Y	4.3	0.1	1.9	51.2	0.07	0.001	0.03	0.20	30	0.5	13.4	1921.0
6/15/2016	13,293	28.1	28.1	100%	175	N	0.0	0.0	0.0	51.2	0.00	0.000	0.00	0.20	20	0.3	8.8	1929.8
7/13/2016	13,794	27.9	20.9	75%	176	N	0.2	0.0	0.1	51.2	0.01	0.000	0.00	0.20	20	0.3	6.6	1936.4
8/10/2016	13,795	27.9	0.0	0%	177	N	3.2	0.1	0.0	51.2	0.01	0.000	0.00	0.20	110	1.7	0.1	1936.5
9/14/2016	14,636	35.0	35.0	100%	176	N	0.1	0.0	0.0	51.3	0.00	0.000	0.00	0.20	20	0.3	11.1	1947.6
10/12/2016	15,307	27.9	28.0	100%	177	N	0.05	0.0	0.0	51.3	0.00	0.000	0.00	0.20	20	0.3	8.9	1956.5
11/9/2016	15,978	28.1	28.0	99%	179	N	0.04	0.0	0.0	51.3	0.00	0.000	0.00	0.20	20	0.3	9.0	1965.5
12/14/2016	16,557	35.1	24.1	69%	180	N	0.2	0.0	0.1	51.4	0.00	0.000	0.00	0.20	20	0.3	7.8	1973.3
6/1/2017	16,856	NA	NA	NA	150	N	65.0	0.9	NA	0.0	0.04	0.000	NA	0.00	1200	16.2	NA	0.00
7/12/2017	17,837	40.9	40.9	100%	150	Y	0.02	0.000	0.01	0.01	0.00	0.000	0.00	0.00	20	0.3	11.0	11.0
8/23/2017	18,841	41.8	41.8	100%	150	Y	0.04	0.001	0.02	0.03	0.00	0.000	0.00	0.00	20	0.3	11.3	22.3

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
June 1, 2017 through August 23, 2017

ExxonMobil 12833
96-27 Queens Blvd
Rego Park, NY

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
5/23/2014	321	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
5/30/2014	245	0.002	1.47E-06	0.01	0.00	0.00	1.97E-06	0.01	1.01E-05	0.002	1.65E-06	10	0.01
6/6/2014	243	0.003	2.91E-06	0.01	8.54E-06	0.01	8.27E-06	0.02	2.09E-05	0.004	3.27E-06	30	0.03
7/2/2014	239	0.003	2.86E-06	0.03	2.60E-05	0.00	3.89E-06	0.05	4.21E-05	0.004	3.22E-06	69	0.06
8/15/2014	242	0.003	2.90E-06	0.23	2.08E-04	0.04	3.94E-05	0.45	4.08E-04	0.036	3.26E-05	30	0.03
8/15/2014	242	0.032	2.90E-05	0.23	2.08E-04	0.04	3.94E-05	0.45	4.07E-04	0.036	3.26E-05	30	0.03
9/26/2014	243	0.032	2.91E-05	0.04	3.40E-05	0.04	3.95E-05	0.04	3.95E-05	0.036	3.27E-05	42	0.04
10/29/2014	232	0.000	2.78E-07	0.04	3.13E-05	0.02	1.65E-05	0.23	1.99E-04	0.000	3.13E-07	10	0.01
11/20/2014	261	0.001	1.17E-06	0.01	6.45E-06	0.01	9.78E-06	0.02	2.41E-05	0.000	3.52E-07	10	0.01
12/12/2014	254	0.002	1.43E-06	0.01	5.81E-06	0.00	3.71E-06	0.02	1.86E-05	0.000	3.43E-07	10	0.01
3/13/2015	254	0.001	6.65E-07	0.00	7.60E-07	0.00	4.14E-07	0.00	4.14E-07	0.000	3.42E-07	10	0.01
4/7/2015	246	0.002	1.84E-06	0.01	1.10E-05	0.01	1.01E-05	0.03	2.54E-05	0.000	3.31E-07	10	0.01
5/19/2015	269	0.003	3.22E-06	0.00	3.78E-06	0.01	9.77E-06	0.03	3.41E-05	0.000	3.63E-07	10	0.01
6/30/2015	259	0.003	2.91E-06	0.01	9.32E-06	0.02	1.46E-05	0.05	4.47E-05	0.001	6.99E-07	20	0.02
7/31/2015	248	0.006	5.95E-06	0.01	7.16E-06	0.01	8.09E-06	0.01	1.02E-05	0.007	6.69E-06	20	0.02
8/28/2015	251	0.006	6.00E-06	0.01	7.03E-06	0.01	8.16E-06	0.02	1.63E-05	0.007	6.75E-06	20	0.02
9/30/2015	260	0.006	6.22E-06	0.02	2.14E-05	0.02	1.94E-05	0.13	1.29E-04	0.007	7.00E-06	20	0.02
10/8/2015	249	0.006	5.97E-06	0.01	7.00E-06	0.01	8.12E-06	0.02	1.62E-05	0.007	6.72E-06	20	0.02
11/12/2015	263	0.003	2.56E-06	0.02	1.57E-05	0.00	8.56E-07	0.00	3.74E-06	0.007	7.08E-06	20	0.02
12/21/2015	230	0.001	1.12E-06	0.01	1.20E-05	0.05	4.39E-05	0.02	1.87E-05	0.001	6.19E-07	20	0.02
1/11/2016	230	0.002	1.38E-06	0.01	1.12E-05	0.00	1.12E-06	0.01	5.26E-06	0.001	6.21E-07	20	0.02
2/11/2016	223	0.001	6.60E-07	0.00	3.26E-06	0.00	7.27E-07	0.00	7.52E-07	0.001	6.02E-07	20	0.02
3/22/2016	191	0.002	1.07E-06	0.01	5.44E-06	0.00	7.88E-07	0.00	3.22E-06	0.001	5.16E-07	20	0.01
4/20/2016	178	0.002	1.07E-06	0.01	5.33E-06	0.00	1.07E-06	0.01	5.39E-06	0.001	4.80E-07	20	0.01
5/18/2016	178	0.006	3.66E-06	0.03	1.80E-05	0.00	9.32E-07	0.01	4.33E-06	0.001	4.80E-07	20	0.01
6/15/2016	175	0.014	9.18E-06	0.01	4.79E-06	0.00	5.77E-07	0.00	2.43E-06	0.001	4.72E-07	20	0.01
7/13/2016	176	0.018	1.19E-05	0.01	8.58E-06	0.00	2.05E-06	0.01	4.88E-06	0.001	4.75E-07	20	0.01
8/10/2016	177	0.018	1.19E-05	0.02	1.32E-05	0.00	9.91E-07	0.01	4.56E-06	0.001	4.76E-07	20	0.01
9/14/2016	176	0.023	1.52E-05	0.06	3.95E-05	0.01	9.23E-06	0.01	4.61E-06	0.001	5.60E-07	20	0.01
10/12/2016	177	0.011	7.30E-06	0.45	2.99E-04	0.01	5.77E-06	0.02	1.15E-05	0.007	4.78E-06	20	0.01
11/9/2016	179	0.003	1.94E-06	0.15	1.00E-04	0.00	1.14E-06	0.00	2.34E-06	0.001	4.81E-07	20	0.01
12/14/2016	180	0.003	2.02E-06	0.06	3.98E-05	0.00	9.44E-07	0.00	2.29E-06	0.001	4.86E-07	20	0.01
6/1/2017	150	0.000	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.00	0.00E+00	0.000	0.00E+00	0	0.00
7/12/2017	150	0.020	1.12E-05	0.04	2.36E-05	0.00	7.31E-07	0.02	8.60E-06	0.000	2.02E-07	20	0.01
8/23/2017	150	0.005	2.87E-06	0.02	9.55E-06	0.00	2.44E-07	0.00	1.74E-06	0.000	2.02E-07	20	0.01
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

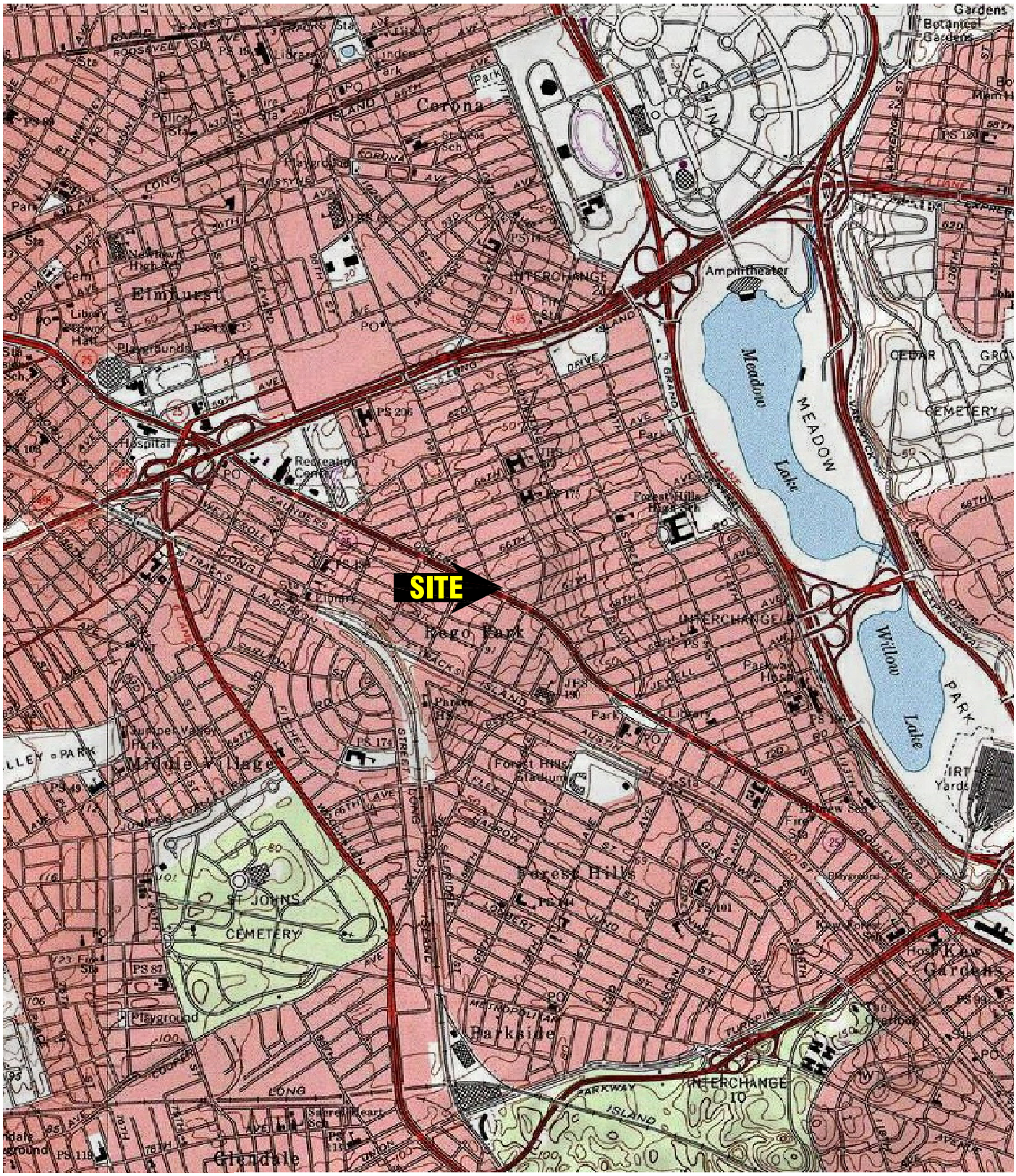
Calculations:

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

ft^3	mg	m^3	lb	60 min
min	m^3	35.31 ft^3	453592 mg	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

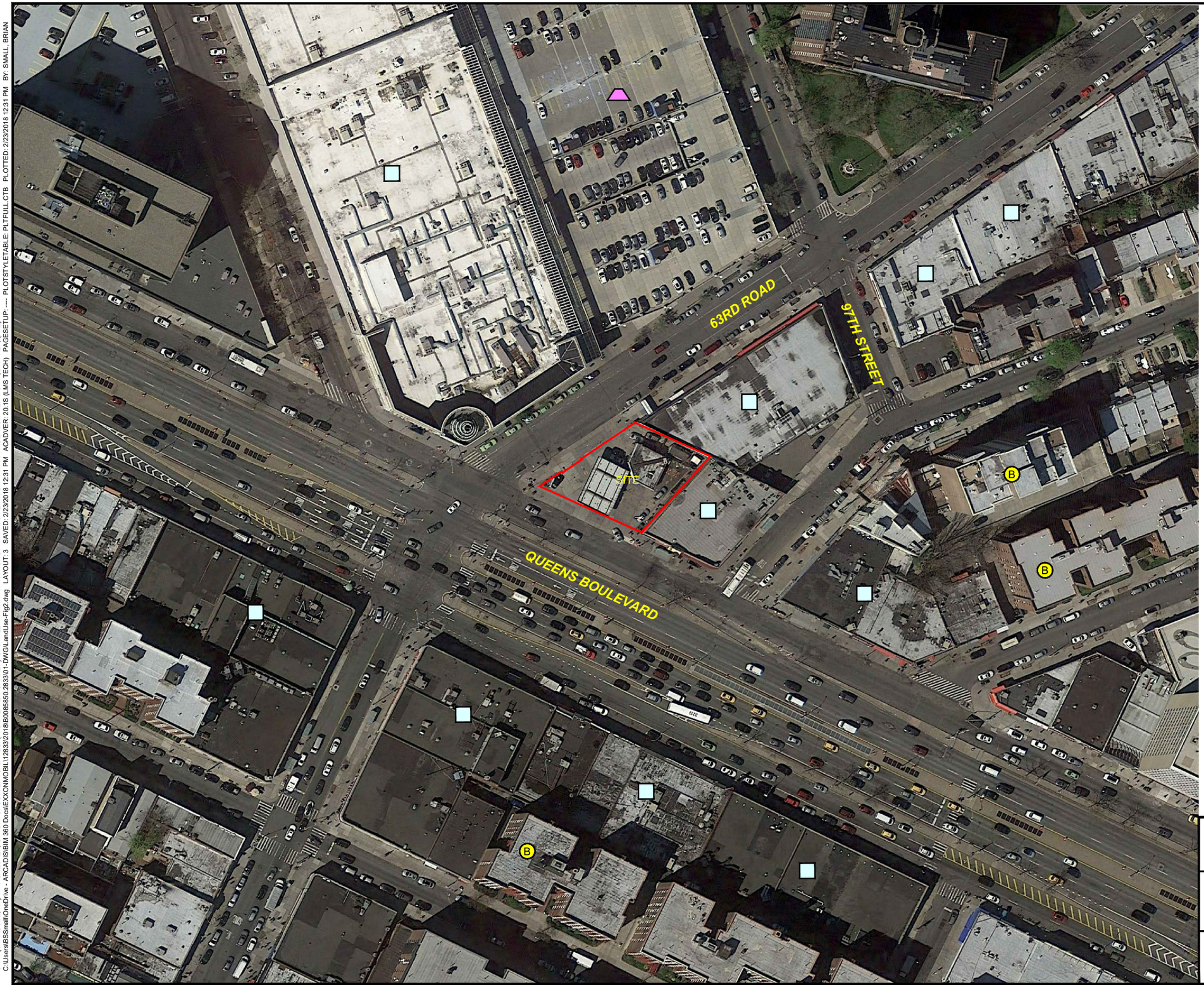
MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

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\ACTIB0085850\2833\00001\IB0085850283300001GW.dwg LAYOUT: FIGURE 1 SAVED: 3/21/2011 9:30 AM ACADVER: 18.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ---- PLOTTED: 3/21/2011 3:42 PM BY: SMALL, BRIAN



LEGEND:

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

SOURCE:

1. AERIAL PHOTOGRAPH FROM GOOGLE EARTH PRO (APRIL 19, 2016).

0 100' 200'

GRAPHIC SCALE

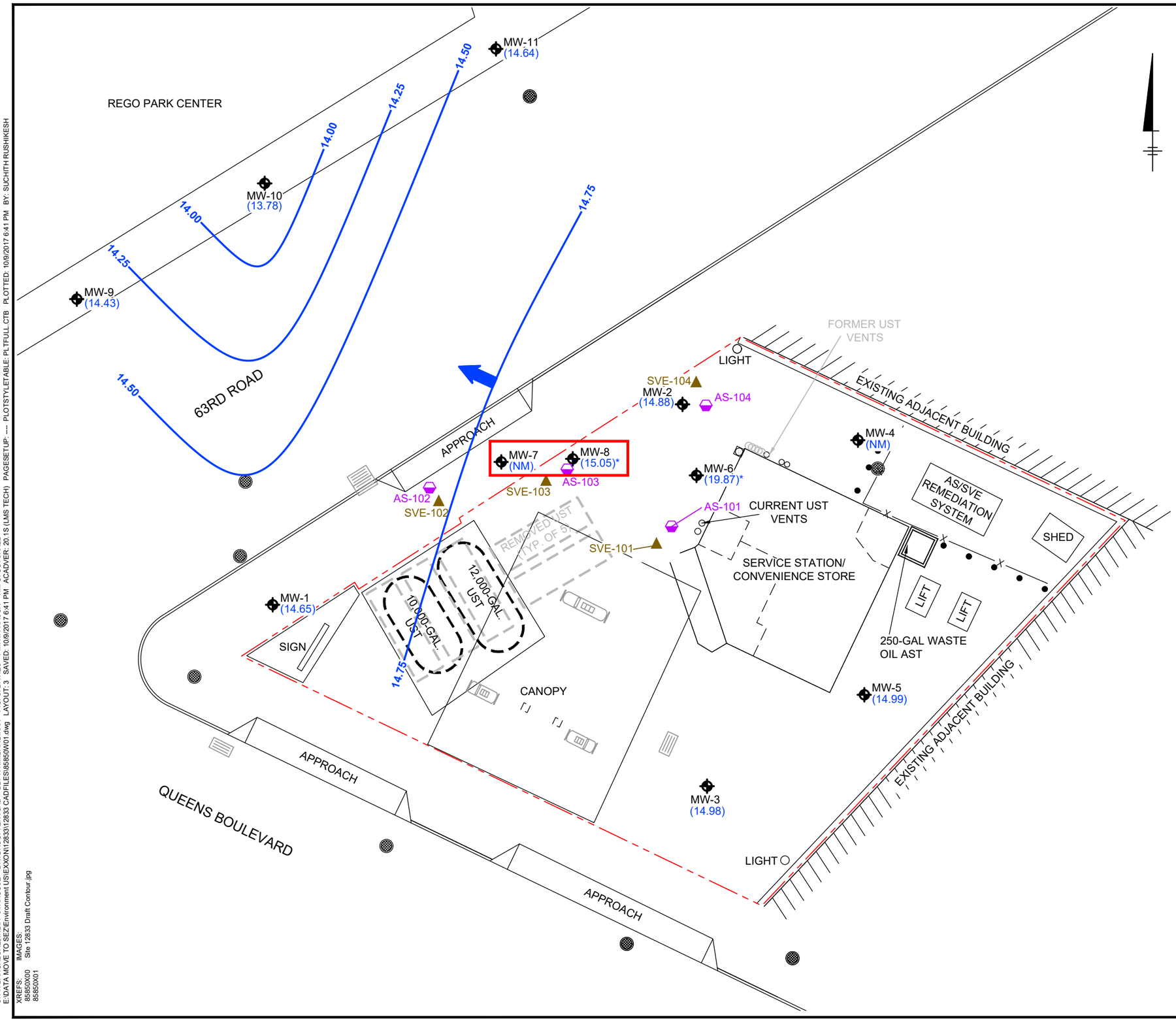
MOBIL BRANDED SERVICE STATION
FORMER MOBIL 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

SURROUNDING LAND USE MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 2

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:\Users\BSSmall\OneDrive - ARCADIS\BIM 360 Docs\EXXONMOBIL\128332018\B0086850.2833101-DWG\LandUse-Fig2.dwg LAYOUT: 3 SAVED: 2/23/2018 12:31 PM ACADVER: 20.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 2/23/2018 12:31 PM BY: SMALL, BRIAN



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK
- (14.99) — GROUNDWATER ELEVATION
- 14.75 — GROUNDWATER CONTOUR LINE
- GROUNDWATER FLOW DIRECTION
- (NM) — NOT MEASURED
- * — ANAMOLOUS DATA NOT USED FOR CONTOURING

NOTE:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.

0 20' 40'

GRAPHIC SCALE

MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER CONTOUR MAP
JULY 28, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: BANGALORE, INDIA SYRACUSE DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR PIC: S.DAVIES PM: N. FRASCA TM: G. CUTSHALL
E:\DATA MOVE TO SEZ\Environment US\EXXON\12833\12833 CADFILES\85850W01.dwg LAYOUT: 3 SAVED: 10/9/2017 6:41 PM ACADVER: 20.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: PLTFULL.CTB PLOTTED: 10/9/2017 6:41 PM BY: SUCHITH RUSHIKESH
XREFS:
85850X00
85850X01
IMAGES:
Site 12833 Draft Contour.jpg

REGO PARK CENTER

MW-11 (14.11)

MW-10 (13.00)

MW-9 (13.63)

13.50

13.25

13.50

13.75

14.00

63RD ROAD

APPROACH

MW-7 (20.22)*

MW-8 (14.01)

AS-102

SVE-102

SVE-103

AS-103

MW-2 (13.68)*

SVE-104

AS-104

FORMER UST VENTS

LIGHT

EXISTING ADJACENT BUILDING

MW-4 (NM)

MW-6 (14.05)

AS/SVE REMEDIATION SYSTEM

SHED

AS-101

CURRENT UST VENTS

SVE-101

REMOVED UST (TYP. OF 3)

12,000-GAL. UST

10,000-GAL. UST

SERVICE STATION/ CONVENIENCE STORE

LIFT

LIFT

250-GAL WASTE OIL AST

MW-1 (13.56)

SIGN

13.75

CANOPY

14.00

MW-5 (14.25)

MW-3 (14.25)

LIGHT

APPROACH

QUEENS BOULEVARD

APPROACH

EXISTING ADJACENT BUILDING

LEGEND:

	APPROXIMATE PROPERTY BOUNDARY
	DISPENSER ISLAND
UST	UNDERGROUND STORAGE TANK
	MONITORING WELL
	AIR SPARGE (AS) WELL
	SOIL VAPOR EXTRACTION (SVE) WELL
	MANHOLE
	CATCH BASIN
	BOLLARD
X	CHAIN LINK FENCE
AST	ABOVE GROUND STORAGE TANK
(14.01)	GROUNDWATER ELEVATION
14.00	GROUNDWATER CONTOUR LINE
	GROUNDWATER FLOW DIRECTION
(NM)	NOT MEASURED
*	NOT USED FOR CONTOURING

NOTE:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.

0 20' 40'

GRAPHIC SCALE

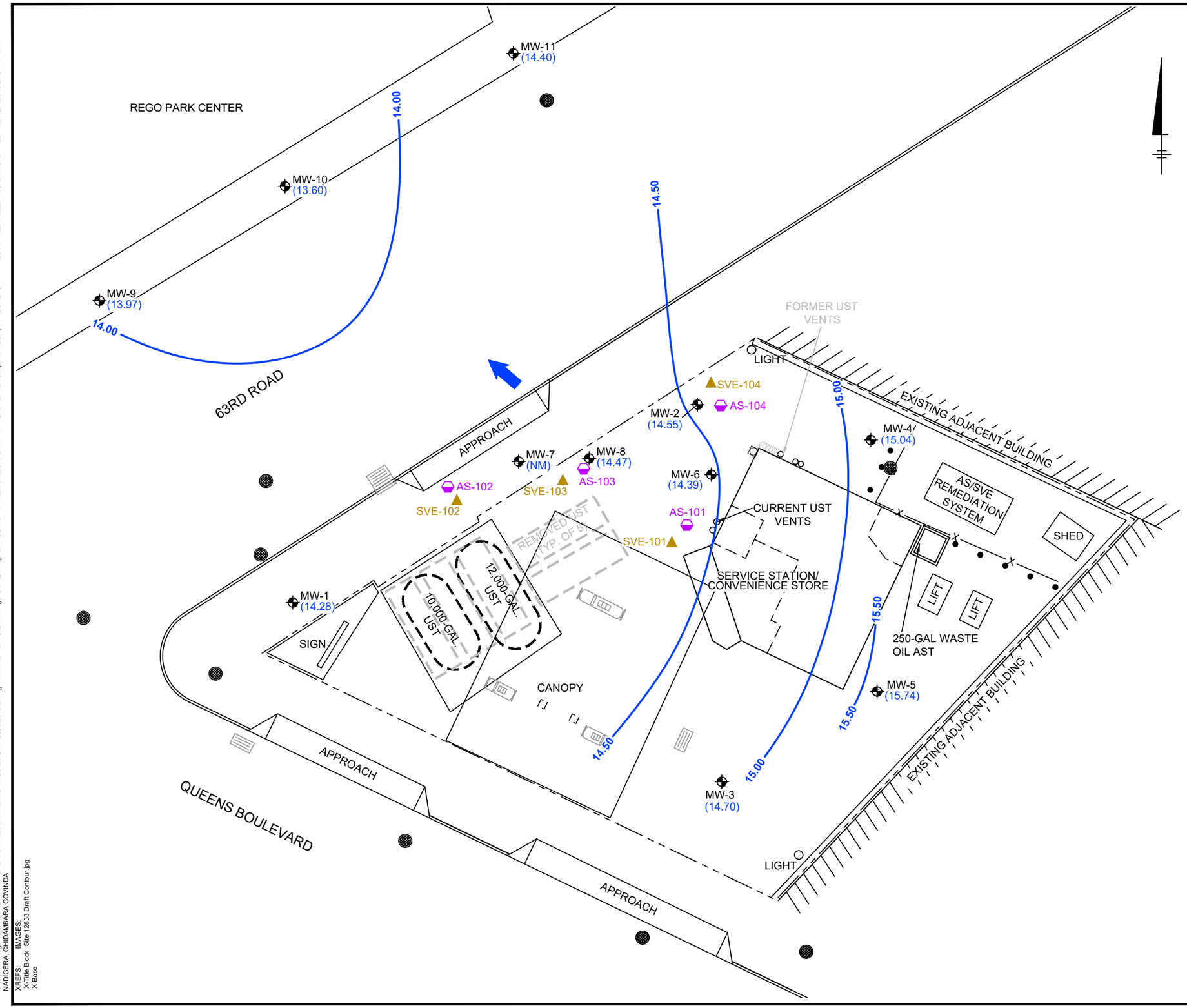
MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER CONTOUR MAP OCTOBER 10, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4

CITY: BANGALORE, INDIA SYRACUSE DIV/GROUP: ENV/CAD DB: Y. NIMBARGIKAR PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL
C:\Users\ynl0065\OneDrive - ARCADIS\BIM 360 Docs\EXXON\MOBIL\12833-96-27 QUEENS BOULEVARD, NY\2017\B0085850.2831\01-DWG\GWM-Fig3-GW-Q4.dwg LAYOUT: 3 SAVED: 12/12/2017 12:26 PM ACADVER: 20.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 12/14/2017 10:44 AM BY: NIMBARGIKAR, YOGINATH
XREFS:
X-Title Block
X-Base
IMAGES:
Site 12833 Draft Contour.jpg



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK
- (15.74) — GROUNDWATER ELEVATION
- 15.50 — GROUNDWATER CONTOUR LINE
- GROUNDWATER FLOW DIRECTION
- (NM) — NOT MONITORED

NOTE:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.

0 20' 40'

GRAPHIC SCALE

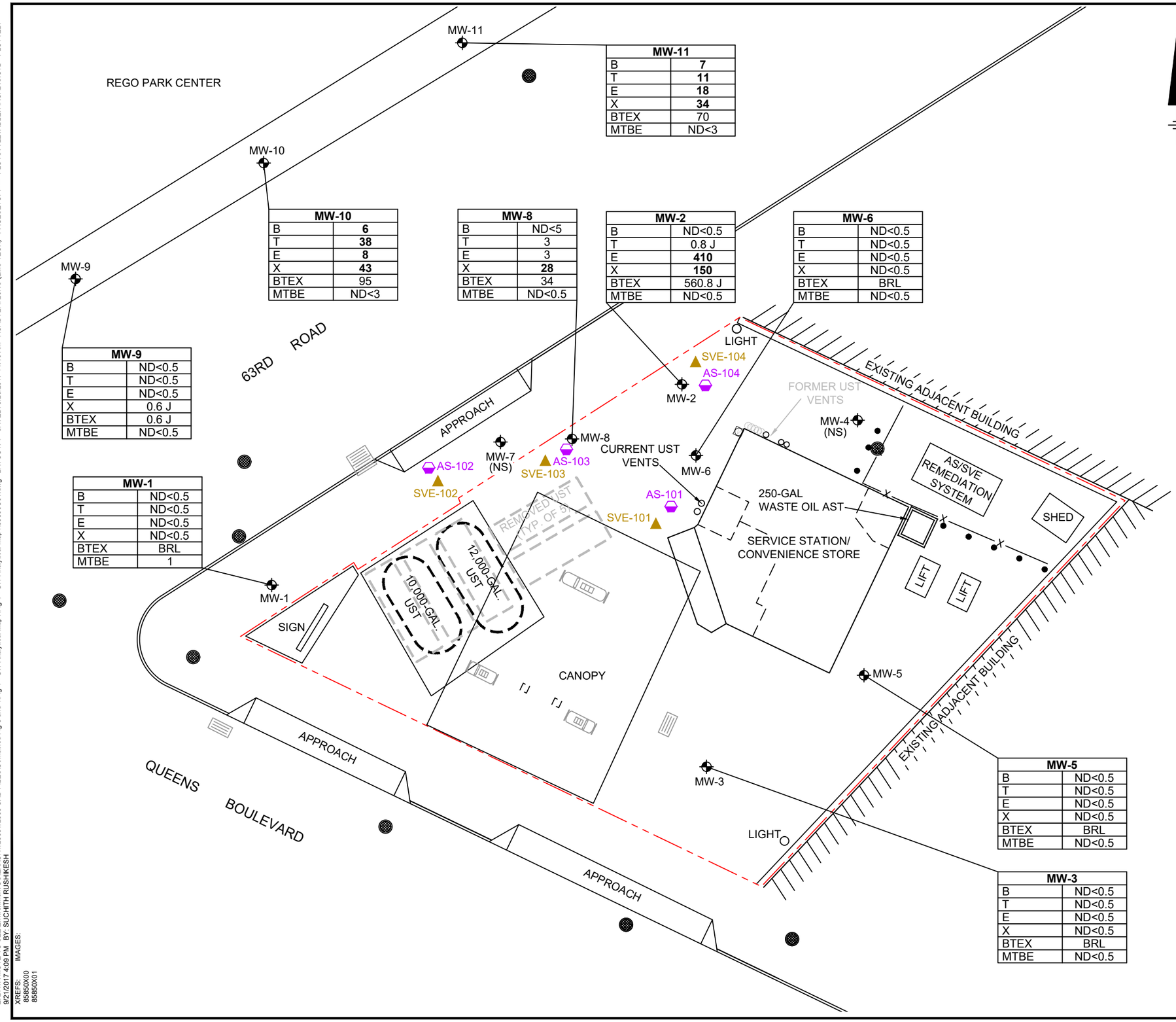
MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER CONTOUR MAP JANUARY 16, 2018

ARCADIS Design & Consultancy for natural and built assets

FIGURE 5

CITY: BANGALORE, INDIA SYRACUSE DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL
C:\Users\hadigerc81911\OneDrive - ARCADIS\IBM 360 Docs\EXXONMOBIL\XOM 12833\2018\Billing Number\01-DWG\GWM-Fig3-GW-Q4.dwg LAYOUT: 3 SAVED: 3/7/2018 2:44 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/7/2018 2:45 PM BY:
NADIGERA, CHIDAMBARA GOVINDA
XREFS: IMAGES:
X-Title Block Site 12833 Draft Contour.jpg
X-Base



MW-11	
B	**7**
T	**11**
E	**18**
X	**34**
BTEX	70
MTBE	ND<3

MW-10	
B	**6**
T	**38**
E	**8**
X	**43**
BTEX	95
MTBE	ND<3

MW-8	
B	ND<5
T	3
E	3
X	**28**
BTEX	34
MTBE	ND<0.5

MW-2	
B	ND<0.5
T	0.8 J
E	**410**
X	**150**
BTEX	560.8 J
MTBE	ND<0.5

MW-6	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-9	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	0.6 J
BTEX	0.6 J
MTBE	ND<0.5

MW-1	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	1

MW-5	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-3	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- X — CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK

WELL IDENTIFICATION	
CONSTITUENT	GROUNDWATER STANDARDS AND GUIDANCE VALUES
B = BENZENE	1
T = TOLUENE	5
E = ETHYL-BENZENE	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:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.
2. ALL UNITS REPORTED IN MICROGRAMS PER LITER (µg/L).
3. BOLDED VALUES INDICATE RESULT ABOVE NYSDEC STANDARDS AND GUIDANCE VALUES.

0 20' 40'

GRAPHIC SCALE

MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER ANALYTICAL MAP JULY 28, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE 6

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL
E:\DATA MOVE TO SEZ\Environment US\EXXON\12833\12833 CAD FILES\Combined Fig 3 and 4\Fig 4 - GW Analytical Map1\Fig 4 - GW Analytical Map1.dwg LAYOUT: 4 SAVED: 9/20/2017 11:46 AM ACADVER: 20.1S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 9/21/2017 4:09 PM BY: SUCHITH RUSHIKESH
XREFS:
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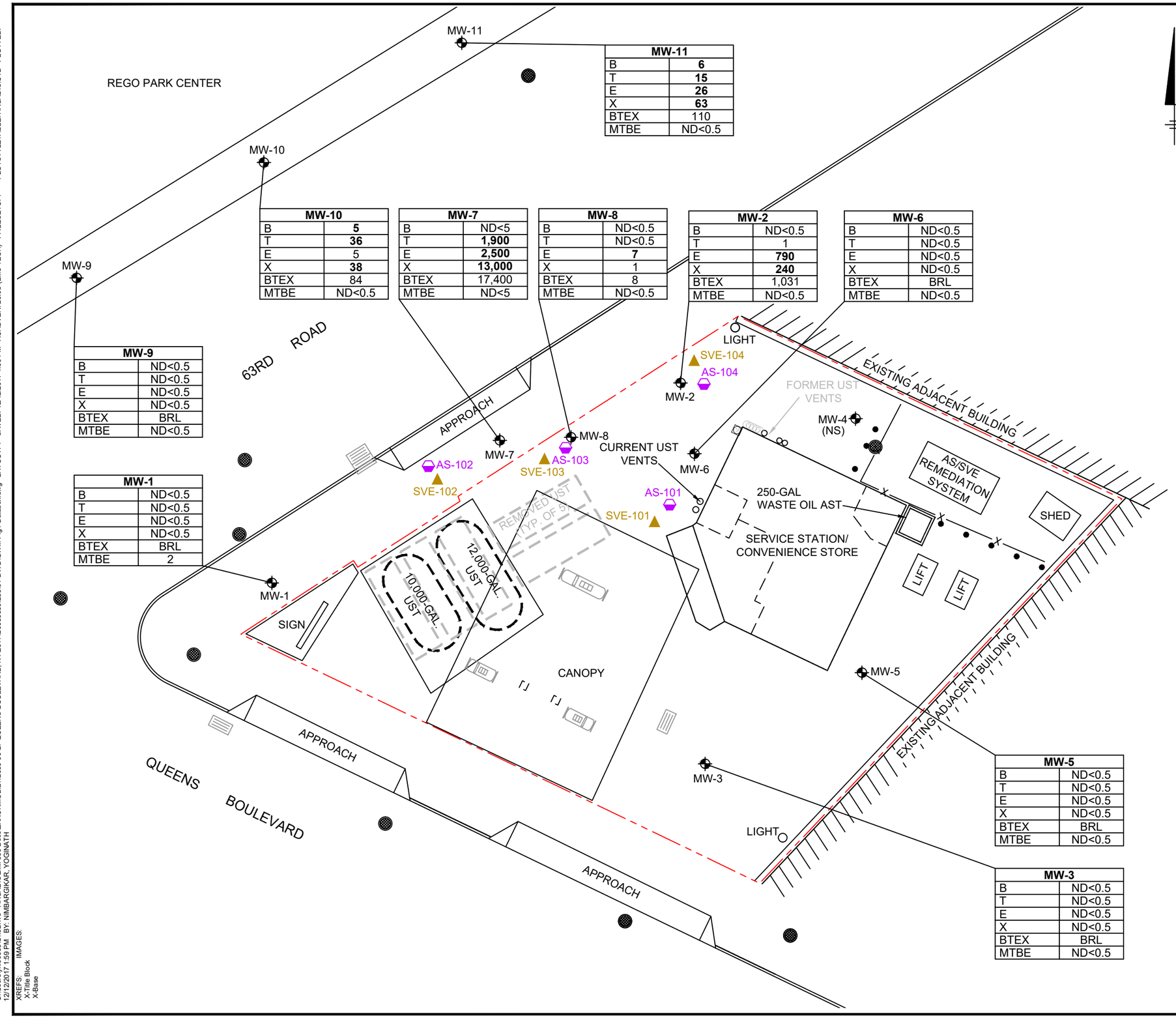
85850X01
IMAGES:



MW-11	
B	**6**
T	**15**
E	**26**
X	**63**
BTEX	110
MTBE	ND<0.5

MW-10	
B	**5**
T	**36**
E	5
X	**38**
BTEX	84
MTBE	ND<0.5

MW-7	
B	ND<5
T	**1,900**
E	**2,500**
X	**13,000**
BTEX	17,400
MTBE	ND<5

MW-8	
B	ND<0.5
T	ND<0.5
E	**7**
X	1
BTEX	8
MTBE	ND<0.5

MW-2	
B	ND<0.5
T	1
E	**790**
X	**240**
BTEX	1,031
MTBE	ND<0.5

MW-6	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-9	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-1	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	2

MW-5	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-3	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- X — CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK

WELL IDENTIFICATION	
CONSTITUENT	GROUNDWATER STANDARDS AND GUIDANCE VALUES
B = BENZENE	1
T = TOLUENE	5
E = ETHYL-BENZENE	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:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.
2. ALL UNITS REPORTED IN MICROGRAMS PER LITER (µg/L).
3. BOLDED VALUES INDICATE RESULT ABOVE NYSDEC STANDARDS AND GUIDANCE VALUES.

0 20' 40'

GRAPHIC SCALE

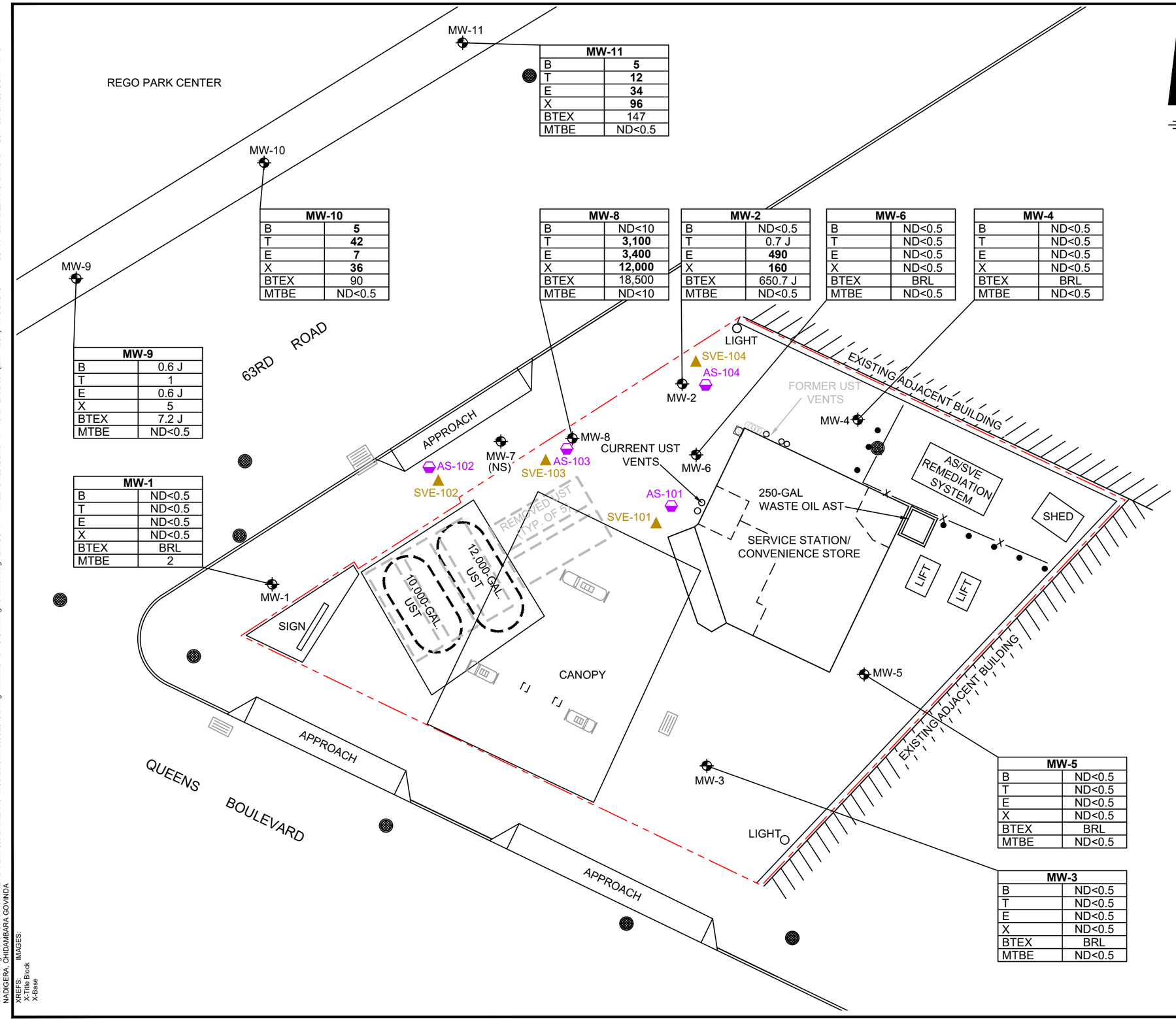
MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER ANALYTICAL MAP OCTOBER 10, 2017

ARCADIS Design & Consultancy for natural and built assets

FIGURE 7

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL
C:\Users\ynil0655\OneDrive - ARCADIS\BIM 360 Docs\EXXONMOBIL\12833-96-27 QUEENS BOULEVARD, NY\2017\B0085850.2830\1-DWG\GWM-Fig4-Databox.dwg LAYOUT: 4 SAVED: 12/12/2017 1:53 PM ACADVER: 20.0S (LMS TECH) PAGESETUP: ---- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 12/12/2017 1:59 PM BY: NIMBARGIKAR, YOGINATH
XREFS:
X-Title Block
X-Base
IMAGES:



MW-11	
B	**5**
T	**12**
E	**34**
X	**96**
BTEX	147
MTBE	ND<0.5

MW-10	
B	**5**
T	**42**
E	**7**
X	**36**
BTEX	90
MTBE	ND<0.5

MW-8	
B	ND<10
T	**3,100**
E	**3,400**
X	**12,000**
BTEX	18,500
MTBE	ND<10

MW-2	
B	ND<0.5
T	0.7 J
E	**490**
X	**160**
BTEX	650.7 J
MTBE	ND<0.5

MW-6	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-4	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-9	
B	0.6 J
T	1
E	0.6 J
X	5
BTEX	7.2 J
MTBE	ND<0.5

MW-1	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	2

MW-5	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

MW-3	
B	ND<0.5
T	ND<0.5
E	ND<0.5
X	ND<0.5
BTEX	BRL
MTBE	ND<0.5

LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- DISPENSER ISLAND
- UST — UNDERGROUND STORAGE TANK
- MONITORING WELL
- AIR SPARGE (AS) WELL
- SOIL VAPOR EXTRACTION (SVE) WELL
- MANHOLE
- CATCH BASIN
- BOLLARD
- X — CHAIN LINK FENCE
- AST — ABOVE GROUND STORAGE TANK

WELL IDENTIFICATION	
CONSTITUENT	GROUNDWATER STANDARDS AND GUIDANCE VALUES
B = BENZENE	1
T = TOLUENE	5
E = ETHYL-BENZENE	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:

1. BASEMAP FROM CT MALE DRAWING ENTITLED "SOIL VAPOR EXTRACTION REMEDIATION SYSTEM MOBIL SERVICE STATION #12833 (17-GBR) DATED JAN. 30, 2014 AT A SCALE OF 1"=20'.
2. ALL UNITS REPORTED IN MICROGRAMS PER LITER (µg/L).
3. BOLDED VALUES INDICATE RESULT ABOVE NYSDEC STANDARDS AND GUIDANCE VALUES.

0 20' 40'

GRAPHIC SCALE

MOBIL SERVICE STATION 12833 #17-GBR
96-27 QUEENS BOULEVARD
REGO PARK, NEW YORK

GROUNDWATER ANALYTICAL MAP JANUARY 16, 2018

ARCADIS Design & Consultancy for natural and built assets

FIGURE 8

CITY: BANGALORE, INDIA DIV/GROUP: ENVCAD DB: Y. NIMBARGIKAR PIC: S. DAVIES PM: N. FRASCA TM: G. CUTSHALL
C:\Users\nadigera81911\OneDrive - ARCADIS\BIM 360 Docs\EXXONMOBIL\XOM 12833\2018\Billing Number\01-DWG\GWM-Fig4-Databox.dwg LAYOUT: 4 SAVED: 3/7/2018 2:46 PM ACADVER: 21.0S (LMS TECH) PAGESETUP: --- PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 3/7/2018 2:47 PM BY:
NADIGERA, CHIDAMBARA GOVINDA
XREFS:
X-Title Block
X-Base
IMAGES:

APPENDIX A

Laboratory Analytical Report

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: January 30, 2018 15:38

Project: 12833

Account #: 13045
Group Number: 1897955
PO Number: B0085850.2833
Release Number: PM: OERTLING
State of Sample Origin: NY

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

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

Respectfully Submitted,

Hannah L. Cottman
Project Manager

(717) 556-7383

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-1(1-16-18) Water	01/16/2018 07:36	9413218
MW-2(1-16-18) Water	01/16/2018 07:58	9413219
MW-3(1-16-18) Water	01/16/2018 08:17	9413220
MW-4(1-16-18) Water	01/16/2018 08:34	9413221
MW-5(1-16-18) Water	01/16/2018 08:51	9413222
MW-6(1-16-18) Water	01/16/2018 09:08	9413223
MW-8(1-16-18) Water	01/16/2018 09:50	9413224
MW-9(1-16-18) Water	01/16/2018 10:17	9413225
MW-10(1-16-18) Water	01/16/2018 10:42	9413226
MW-11(1-16-18) Water	01/16/2018 11:11	9413227
Trip Blank(1-16-18) Water	01/16/2018	9413228

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

Sample Description: **MW-1(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 07:36

ARCADIS
ELLE Sample #: WW 9413218
ELLE Group #: 1897955
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	< 0.5	0.5	1	1
13130	Ethylbenzene	100-41-4	< 0.5	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	2	0.5	1	1
13130	Toluene	108-88-3	< 0.5	0.5	1	1
13130	Xylene (Total)	1330-20-7	< 0.5	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180231AA	01/24/2018 01:00	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180231AA	01/24/2018 01:00	Hu Yang	1

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

Sample Description: **MW-2(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 07:58

ARCADIS
ELLE Sample #: WW 9413219
ELLE Group #: 1897955
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	< 0.5	0.5	1	1
13130	Ethylbenzene	100-41-4	490	3	5	5
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	0.7 J	0.5	1	1
13130	Xylene (Total)	1330-20-7	160	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180231AA	01/24/2018 03:49	Hu Yang	5
13130	BTEX/MTBE	SW-846 8260C	1	D180251AA	01/26/2018 02:32	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180231AA	01/24/2018 03:49	Hu Yang	5
01163	GC/MS VOA Water Prep	SW-846 5030C	2	D180251AA	01/26/2018 02:32	Hu Yang	1

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

Sample Description: **MW-3(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 08:17

ARCADIS
ELLE Sample #: WW 9413220
ELLE Group #: 1897955
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	< 0.5	0.5	1	1
13130	Ethylbenzene	100-41-4	< 0.5	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	< 0.5	0.5	1	1
13130	Xylene (Total)	1330-20-7	< 0.5	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180231AA	01/24/2018 01:24	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180231AA	01/24/2018 01:24	Hu Yang	1

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

Sample Description: **MW-4(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 08:34

ARCADIS
ELLE Sample #: WW 9413221
ELLE Group #: 1897955
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	< 0.5	0.5	1	1
13130	Ethylbenzene	100-41-4	< 0.5	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	< 0.5	0.5	1	1
13130	Xylene (Total)	1330-20-7	< 0.5	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180231AA	01/24/2018 01:48	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180231AA	01/24/2018 01:48	Hu Yang	1

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

Sample Description: **MW-5(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 08:51

ARCADIS
ELLE Sample #: WW 9413222
ELLE Group #: 1897955
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	< 0.5	0.5	1	1
13130	Ethylbenzene	100-41-4	< 0.5	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	< 0.5	0.5	1	1
13130	Xylene (Total)	1330-20-7	< 0.5	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180231AA	01/24/2018 02:12	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180231AA	01/24/2018 02:12	Hu Yang	1

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

Sample Description: **MW-6(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 09:08

ARCADIS
ELLE Sample #: WW 9413223
ELLE Group #: 1897955
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	< 0.5	0.5	1	1
13130	Ethylbenzene	100-41-4	< 0.5	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	< 0.5	0.5	1	1
13130	Xylene (Total)	1330-20-7	< 0.5	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180251AA	01/25/2018 20:32	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180251AA	01/25/2018 20:32	Hu Yang	1

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

Sample Description: **MW-8(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 09:50

ARCADIS
ELLE Sample #: WW 9413224
ELLE Group #: 1897955
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	< 10	10	20	20
13130	Ethylbenzene	100-41-4	3,400	10	20	20
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 10	10	20	20
13130	Toluene	108-88-3	3,100	10	20	20
13130	Xylene (Total)	1330-20-7	12,000	100	200	200

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180292AA	01/29/2018 23:13	Hu Yang	20
13130	BTEX/MTBE	SW-846 8260C	1	D180292AA	01/29/2018 23:37	Hu Yang	200
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180292AA	01/29/2018 23:13	Hu Yang	20
01163	GC/MS VOA Water Prep	SW-846 5030C	2	D180292AA	01/29/2018 23:37	Hu Yang	200

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

Sample Description: **MW-9(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 10:17

ARCADIS
ELLE Sample #: WW 9413225
ELLE Group #: 1897955
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	0.6 J	0.5	1	1
13130	Ethylbenzene	100-41-4	0.6 J	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	1	0.5	1	1
13130	Xylene (Total)	1330-20-7	5	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180251AA	01/25/2018 21:44	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180251AA	01/25/2018 21:44	Hu Yang	1

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

Sample Description: **MW-10(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 10:42

ARCADIS
ELLE Sample #: WW 9413226
ELLE Group #: 1897955
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	5	0.5	1	1
13130	Ethylbenzene	100-41-4	7	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	42	0.5	1	1
13130	Xylene (Total)	1330-20-7	36	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180251AA	01/25/2018 22:08	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180251AA	01/25/2018 22:08	Hu Yang	1

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

Sample Description: **MW-11(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018 11:11

ARCADIS
ELLE Sample #: WW 9413227
ELLE Group #: 1897955
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	5	0.5	1	1
13130	Ethylbenzene	100-41-4	34	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	12	0.5	1	1
13130	Xylene (Total)	1330-20-7	96	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180292AA	01/29/2018 21:13	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180292AA	01/29/2018 21:13	Hu Yang	1

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

Sample Description: **Trip Blank(1-16-18) Water**
12833
96-27 Queens Blvd - Rego Park, NY

Project Name: **12833**

Submittal Date/Time: 01/18/2018 11:20
Collection Date/Time: 01/16/2018

ARCADIS
ELLE Sample #: WW 9413228
ELLE Group #: 1897955
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	< 0.5	0.5	1	1
13130	Ethylbenzene	100-41-4	< 0.5	0.5	1	1
13130	Methyl Tertiary Butyl Ether	1634-04-4	< 0.5	0.5	1	1
13130	Toluene	108-88-3	< 0.5	0.5	1	1
13130	Xylene (Total)	1330-20-7	< 0.5	0.5	1	1

Sample Comments

State of New York Certification No. 10670

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

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	D180251AA	01/25/2018 19:44	Hu Yang	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	D180251AA	01/25/2018 19:44	Hu Yang	1

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

Quality Control Summary

Client Name: ARCADIS
Reported: 01/30/2018 15:38

Group Number: 1897955

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: D180231AA	Sample number(s): 9413218-9413222		
Benzene	< 0.5	0.5	1
Ethylbenzene	< 0.5	0.5	1
Methyl Tertiary Butyl Ether	< 0.5	0.5	1
Toluene	< 0.5	0.5	1
Xylene (Total)	< 0.5	0.5	1
Batch number: D180251AA	Sample number(s): 9413219,9413223,9413225-9413226,9413228		
Benzene	< 0.5	0.5	1
Ethylbenzene	< 0.5	0.5	1
Methyl Tertiary Butyl Ether	< 0.5	0.5	1
Toluene	< 0.5	0.5	1
Xylene (Total)	< 0.5	0.5	1
Batch number: D180292AA	Sample number(s): 9413224,9413227		
Benzene	< 0.5	0.5	1
Ethylbenzene	< 0.5	0.5	1
Methyl Tertiary Butyl Ether	< 0.5	0.5	1
Toluene	< 0.5	0.5	1
Xylene (Total)	< 0.5	0.5	1

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: D180231AA	Sample number(s): 9413218-9413222								
Benzene	20	20.97			105		78-120		
Ethylbenzene	20	19.61			98		78-120		
Methyl Tertiary Butyl Ether	20	20.17			101		75-120		
Toluene	20	19.67			98		80-120		
Xylene (Total)	60	60.16			100		80-120		
Batch number: D180251AA	Sample number(s): 9413219,9413223,9413225-9413226,9413228								
Benzene	20	20.19			101		78-120		
Ethylbenzene	20	18.84			94		78-120		
Methyl Tertiary Butyl Ether	20	19.8			99		75-120		
Toluene	20	19.44			97		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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: ARCADIS
Reported: 01/30/2018 15:38

Group Number: 1897955

LCS/LCSD (continued)

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
Xylene (Total)	60	59.69			99		80-120		
Batch number: D180292AA	Sample number(s): 9413224,9413227								
Benzene	20	22.18			111		78-120		
Ethylbenzene	20	19.82			99		78-120		
Methyl Tertiary Butyl Ether	20	20.88			104		75-120		
Toluene	20	20.93			105		80-120		
Xylene (Total)	60	62.52			104		80-120		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: D180231AA	Sample number(s): 9413218-9413222 UNSPK: P413170									
Benzene	< 0.5	20	21.77	20	23.71	109	119	78-120	9	30
Ethylbenzene	< 0.5	20	20.12	20	21.86	101	109	78-120	8	30
Methyl Tertiary Butyl Ether	0.881	20	20.74	20	22.73	99	109	75-120	9	30
Toluene	< 0.5	20	20.71	20	22.56	104	113	80-120	9	30
Xylene (Total)	< 0.5	60	62.19	60	68.19	104	114	80-120	9	30
Batch number: D180251AA	Sample number(s): 9413219,9413223,9413225-9413226,9413228 UNSPK: 9413223									
Benzene	< 0.5	20	21.91	20	22.77	110	114	78-120	4	30
Ethylbenzene	< 0.5	20	20.2	20	21.04	101	105	78-120	4	30
Methyl Tertiary Butyl Ether	< 0.5	20	19.89	20	20.93	99	105	75-120	5	30
Toluene	< 0.5	20	20.44	20	21.11	102	106	80-120	3	30
Xylene (Total)	< 0.5	60	61.81	60	64.42	103	107	80-120	4	30
Batch number: D180292AA	Sample number(s): 9413224,9413227 UNSPK: P416353									
Benzene	4.53	20	29.13	20	26.59	123*	110	78-120	9	30
Ethylbenzene	< 0.5	20	21.48	20	19.35	107	97	78-120	10	30
Methyl Tertiary Butyl Ether	1.97	20	24.39	20	22.56	112	103	75-120	8	30
Toluene	< 0.5	20	22.54	20	20.32	113	102	80-120	10	30
Xylene (Total)	< 0.5	60	66.35	60	59.48	111	99	80-120	11	30

*- Outside of specification
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Quality Control Summary

Client Name: ARCADIS
Reported: 01/30/2018 15:38

Group Number: 1897955

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. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: BTEX/MTBE
Batch number: D180231AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9413218	107	100	97	95
9413220	109	102	97	93
9413221	106	99	97	94
9413222	108	100	98	94
Blank	104	100	99	96
LCS	101	98	101	101
MS	104	100	99	101
MSD	103	98	99	101
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: D180251AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9413219	100	94	100	105
9413223	107	101	97	95
9413225	101	97	99	103
9413226	101	97	99	106
9413228	107	100	98	96
Blank	105	97	97	93
LCS	103	102	98	101
MS	105	98	99	99
MSD	104	101	98	99
Limits:	80-120	80-120	80-120	80-120

Analysis Name: BTEX/MTBE
Batch number: D180292AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9413224	102	98	97	100
9413227	100	96	98	111
Blank	104	99	96	95
LCS	102	101	98	102
MS	102	101	98	102
MSD	101	99	97	103
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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Quality Control Summary

Client Name: ARCADIS
Group Number: 1897955
Reported: 01/30/2018 15:38

*- 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.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

A# 15045 G# 1897955 S# 94/3218-28

Arcadis/Exxon

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

Lab Work Order Number: ____

Lab Name:	Lancaster	Site Number:	12833	Consultant/Contractor:	EnviroTrac Ltd.
Lab Address:	2425 New Holland Pike	Facility Address:	96-27 Queens Blvd	Consultant/Contractor Project No:	
Lab PM:	Alison Bainbridge	City, State, ZIP Code:	Rego Park	Address:	5 Old Dock Road, Yaphank, New York 11980
Lab Phone:	(717) 656-2300 ext 1815	Lead Regulatory Agency:	NYSDEC	Consultant/Contractor PM:	Donna Amoscato
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	Soil / Solid	Water / Liquid	Air / Vapor		Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		BTEX/MTBE 8260	Ethanol 8015								
	MW-1 1-16-18	1-16-18	736		X			3				X			X									
	MW-2 1-16-18	1-16-18	958		X			3				X			X									
	MW-3 1-16-18	1-16-18	817		X			3				X			X									
	MW-4 1-16-18	1-16-18	834		X			3				X			X									
	MW-5 1-16-18	1-16-18	851		X			3				X			X									
	MW-6 1-16-18	1-16-18	904		X			3				X			X									
	~~MW-7~~				~~X~~			~~3~~				~~X~~			~~X~~									
	MW-8 1-16-18	1-16-18	950		X			3				X			X									
	MW-9 1-16-18	1-16-18	1017		X			3				X			X									
	MW-10 1-16-18	1-16-18	1043		X			3				X			X									
	MW-11 1-16-18	1-16-18	1111		x			3				x			x									
	Trip Blank 1-16-18	1-16-18			X			2				X			X									

Matrix | No. Containers / Preservative | Requested Analyses

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.

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Ken Davies						
Sampler's Company: Envirotrac	Sampler	1-16-18	1330	DAmoscato / ETNY	1-16-18	1331
Shipment Method: Fedex Ship Date: 1-17-18	DAmoscato / ETNY	1-17-18	1107			
Shipment Tracking No:				Edmond ELCE	1-18-18	11:20

Special Instructions. 811915200241

THIS LINE - LAB USE ONLY: Custody Seals In Place: (Yes) / No | Temp Blank: (Yes) / No | Cooler Temp on Receipt: 2.2 °F/(C) | Trip Blank: (Yes) / No | MS/MSD Sample Submitted: Yes / (No)

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 206258

Group Number(s): 1897955

Client: Arcadis

Delivery and Receipt Information

Delivery Method:	Fed Ex	Arrival Timestamp:	01/18/2018 11:20
Number of Packages:	1	Number of Projects:	1

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	VOA Vial Headspace ≥ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
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 Melvin Sanchez (8 943) at 14:13 on 01/18/2018

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	DT131	2.2	DT	Wet	Y	Bagged	N

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

<	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
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.
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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