



Remedial Action Report

Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey
SRP PI #033695
Incident #'s 93-12-09-1203-18 & 93-12-13-1133-58

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October 2021
Project #21GTY56955

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1.0 INTRODUCTION

Antea®Group (Antea Group) has prepared this Remedial Action Report (RAR), on behalf of Getty Properties Corp. (Getty), to summarize the environmental investigation activities conducted at Former Getty Service Station #56955 (Site), located at 1008 Kings Highway in Swedesboro, Gloucester County, New Jersey. The Site has been assigned Program Interest (PI) #033695. This RAR is being submitted in association with New Jersey Department of Environmental Protection (NJDEP) Incident #'s 93-12-09-1203-18 & 93-12-13-1133-58, Activity #LSR110001 and Case Tracking Number 32528. The current Licensed Site Remediation Professional (LSRP) is Gregory C. Carr (LSRP License No. 576004).

This report has been prepared in accordance with the NJDEP's Technical Requirements for Site Remediation (TRSR) [New Jersey Administrative Code [N.J.A.C.] 7:26E] readopted on December 17, 2002, with amendments on February 3, 2003, July 6, 2004, May 7, 2012, and August 6, 2018, and the NJDEP's Field Sampling Procedures Manual (FSPM) [NJDEP, 1992, updated 2005, 2011].

This RAR provides a general summary of all work completed at the Site and previously reported to the NJDEP to date, a detailed summary of all work conducted at the Site that was not previously submitted to the NJDEP, and provides information required for the submittal of a Groundwater Remedial Action Permit (GWRAP) Application for Monitored Natural Attenuation (MNA). A Case Inventory Document (CID), Authorization to Submit a Remedial Phase Report Through NJDEP Online Form, Classification Exception Area/Well Restriction Area (CEA/WRA) Form, Cover Certification Form, and an updated Receptor Evaluation (RE) Form are being submitted through the NJDEP on-line portal. A GWRAP application is being submitted to the NJDEP under separate cover.

1.1 RELEASE BACKGROUND

On December 13, 1993, The Tyree Organization, LTD (Tyree; Burlington, New Jersey) was retained by Getty to investigate a possible release from the unleaded gasoline underground storage tank (UST) system (Area of Concern (AOC) #1) at the Site. A leak was identified (and subsequently repaired) in the regular unleaded gasoline piping. The estimated quantity of petroleum released to the subsurface was 65-gallons. The NJDEP was notified, and Incident #'s 93-12-09-1203-18 and #93-12-13-1133-58 were assigned to this AOC. Subsequent remedial investigations conducted at the Site confirmed impacts to soil and groundwater. A Remedial Investigation Report (RIR) documenting historical soil and groundwater investigations was submitted to the NJDEP in May 2014 (TEC, 2014).

It is noted that groundwater investigations conducted as part of the petroleum related spill identified non-petroleum related compounds in groundwater (specifically bromodichloromethane, bromoform, dibromochloromethane, and chloroform) at concentrations above the NJDEP's Class II-A Groundwater Quality Standards (GWQS). These impacts from an unknown source were assigned Incident #15-01-20-1146-31. A Preliminary Assessment (PA) was conducted in December 2014. The PA did not identify any potential areas of concern (AOC) that could have caused or contributed to the non-petroleum related impacts to groundwater. Accordingly, an Unrestricted Use Response Action Outcome (RAO) was issued for Incident #15-01-20-1146-31 on January 30, 2015. The NJDEP assigned Incident #15-02-11-1110-09 to this unknown source. The non-petroleum impacts to groundwater are not addressed any further in this report submittal.

1.2 SITE CLEANUP STANDARDS

The applicable cleanup standards for this case are as follows:

- 2021 NJDEP Soil Remediation Standards (SRS).
- The applicable groundwater cleanup standards for the Site are the NJDEP's GWQS.

2.0 BACKGROUND

2.1 SITE CHARACTERISTICS

The Site location is shown on **Figure 1**, an annotated United States Geological Survey 7.5-minute quadrangle map (Bridgeport, New Jersey), which shows local topography, drainage patterns, and other topographical features. The Site is located at 39° 45' 02.23" North latitude and 75° 18' 20.36" West longitude.

The northwest portion of the Site property was formerly utilized as a gasoline service station and automotive repair shop, and is currently abandoned/vacant. A two-bay automotive repair garage with office and restrooms currently occupy the Site. A former pump island and canopy still remain at the Site. One (1) 5,000-gallon unleaded gasoline UST (E1) and one (1) 10,000-gallon unleaded gasoline UST (E2), both containing unleaded gasoline, were located to the southwest of the station building, and were removed from the Site in May 2013. The aforementioned USTs were registered under PI #010290.

In addition to the known unleaded gasoline USTs, three (3) out-of-service 2,000-gallon unleaded gasoline USTs (0004, 0005, 0006) were discovered during site upgrade activities by the property owner at the time, and removed by Getty in April 1999. One (1) out-of-service 1,000-gallon leaded gasoline UST (E6) was discovered at the Site during road widening activities along the corner of Glen Echo Avenue and Kings Highway. This UST was removed in October 2000. One (1) 550-gallon waste oil UST (E3) was abandoned in place in October 1998. In addition, one (1) 550-gallon waste oil UST (E4) was removed from the Site in April 1999. The waste oil USTs (E3 and E4) AOC were issued an Unrestricted Use Response Action Outcome on January 3, 2017.

The remainder of the property consists of upland and riparian forests, early successional fields, and mud flats associated with Raccoon Creek and Church Run. The current site layout including the locations of the former USTs are shown on **Figure 2**.

2.2 SITE OWNERSHIP

According to www.njtaxmaps.com, the Site occupies Borough of Swedesboro, Block 30, Lot 1, in Gloucester County, New Jersey. The property is owned by East Coast Commercial Real Estate, LLC and occupies approximately 1.05 acres. The Site was owned by Getty until March 27, 2014, when it was sold to the current owner.

The property was leased by Getty to Getty Petroleum Marketing Inc (GPMI) until December 2011, when GPMI filed for bankruptcy.

2.3 LAND USE

The Site is bordered by Glen Echo Avenue (County Road 538) to the west, Kings Highway to the north, and Racoon Creek to the east and south. Commercial and residential properties exist across Glen Echo Avenue to the west. The Swedesboro Sewage Treatment Plant and Trinity Episcopal Church exist across Kings Highway to the north. A Google Earth® image of the Site and surrounding properties is provided as **Figure 3**.

2.4 REGIONAL GEOLOGY/HYDROGEOLOGY

A review of the NJDEP's GeoWeb Environmental Mapping website indicates that subsurface soils beneath the Site consist of the Marshalltown and Englishtown geological formations. These formations consist of fine to coarse grained quartz sand, locally interbedded with thin - to thick beds of clay, quartz and glauconite silty and clayey sand. Surficial geology at the Site consists of the Cape May Formation Unit 2 and Swamp and Marsh Deposits. The Cape May Formation Unit 2 is comprised of very pale brown, yellow, reddish-yellow, white, olive-yellow and gray sand, pebble gravel, minor silt, clay, peat and cobble gravel. The formation is as much as 200-feet thick on the Cape May peninsula, but generally less than 50-feet thick elsewhere. The Site is also adjacent to Swamp and Marsh deposits, which are comprised of peat and gray, brown and black organic clay, silt and minor sand. The Swamp and Marsh deposits are as much as 40-feet thick, and are deposited in modern freshwater wetlands (GeoWeb, 2020).

The bedrock aquifers beneath the Site are identified as the Marshalltown-Wenonah confining unit along the western portion and the Englishtown aquifer system on the eastern portion of the Site. The Marshalltown-Wenonah confining unit is described as silt, clay, and thin layers of sand. The Englishtown aquifer system is described as upper and lower sand with localized clay beds (NJDEP Geoweb, 2020).

2.5 SITE GEOLOGY/HYDROGEOLOGY

The lithology encountered during historic subsurface activities conducted at the Site consists of gray fine sands to 5-feet below ground surface (bgs); gray clay to 7-feet bgs; brown soft clay with sand, rounded gravel, and cobbles to 10-feet bgs; and dark gray and brown clay with mica schist/silty clay to 40-feet bgs. Available soil boring and monitoring well logs associated with the remedial investigations at the Site are provided as **Appendix A**. A geologic cross-section is also included in **Appendix A**.

The depth to groundwater at the Site is primarily observed between 4.5-feet to 11.8-feet bgs. Groundwater flow has been determined to be east-southeast in the shallow wells, towards Raccoon Creek. Monitoring data from groundwater monitoring wells MW-5, MW-6, MW-7, and MW-10 installed along Raccoon Creek indicate a tidal influence fluctuating the groundwater table; with water levels ranging from 0.85-feet to 3-feet bgs. The hydraulic conductivity (K) determined during rising head permeability tests (slug tests) conducted at MW-3, MW-4, and MW-5 on July 11, 1996 indicated a geometric K value of 2.84 feet/day. The groundwater velocity at the Site was calculated to be 0.314 feet/day, or equivalently 115 feet/year. A detailed summary of the slug test procedures, K value and groundwater velocity calculations were submitted in the RAW submitted for the Site (Tyree, 1996).

3.0 RECEPTOR EVALUATION

The following Sections summarize receptor evaluations conducted in association with the remedial investigation at the Site.

3.1 NJDEP WELL SEARCH

A review of NJDEP Bureau of Water Allocation (BWA) well records was performed by Tyree in August 1995. This review included all domestic, irrigation, industrial, and public supply wells within a one-mile radius of the Site. The well search identified two industrial wells located within 1,000-feet of the Site. Neither of the wells identified existed within the applicable search radii that would warrant sampling (Tyree, 1996).

A CEA was established for the gasoline impacts associated with the Site on September 23, 2005. A supplemental well search was conducted as part of biennial CEA certification conducted by Tyree Environmental Corp. (TEC; Moorestown, New Jersey) in 2011 did not identify any newly installed wells within 250-feet upgradient, 500-feet side gradient, or 500-feet downgradient of the Site. The biennial CEA certification was previously submitted to the NJDEP (TEC, 2011).

A 1-mile XY well search for SRP receptor evaluation requirements using NJDEP Dataminer was performed April 10, 2014 as part of the RIR submittal for the gasoline related impacts. The XY well search did not identify any newly installed domestic, irrigation, or industrial wells since the performance of the 2011 well search (TEC, 2014)

A 1-mile XY well search for SRP receptor evaluation requirements using NJDEP Dataminer was performed in November 2016. The XY well search did not identify any newly installed domestic, irrigation, or industrial wells since the performance of the April 2014 well search (Antea Group, 2016).

An updated 1-mile XY well search for SRP receptor evaluation requirements using NJDEP Data Miner was performed on February 19, 2021. The XY well search identified a total of three wells installed within a 1-mile radius of the Site since the previous November 2016 well search; a domestic replacement well, a domestic well, and a public non-community well. All wells are more than ½-mile from the Site. A copy of the updated well search and a map showing the locations of the three new wells labeled with the applicable permit numbers are provided in **Appendix B**.

According to NJ GeoWeb, the Site is not located within a Community or Non-Community Wellhead Protection Area (NJDEP GeoWeb, 2020).

3.2 MANUAL WELL CANVASS

Tyree conducted a manual well search within a 1,000-foot radius of the Site in 1995. No water use wells were identified within a 1,000-foot radius of the Site. The results of the manual canvass were previously submitted to the NJDEP (Tyree, 1996).

3.3 POTABLE WELL SAMPLING

As water use wells have not been identified within 250-upgradient, 500-feet side or downgradient of the Site, no potable well sampling has been conducted as part of the remedial investigations.

3.4 VAPOR INTRUSION

As VOCs are present in on-site groundwater, a vapor intrusion evaluation and investigation were conducted for the Site in accordance with the NJDEP's Vapor Intrusion (VI) Guidance Document (NJDEP, 2006, updated 2013, updated 2017, updated 2018, updated 2021).

3.4.1 SENSITIVE POPULATIONS

In October 2013, TEC conducted an area canvass to determine the presence of daycare centers, nursing homes, schools, or hospitals (sensitive populations) within a 400-foot radius of the Site. No daycare centers, schools, hospitals or nursing homes were identified within a 400-foot search radius of the Site. The manual receptor canvass was previously submitted to the NJDEP in the November 2013 Site Investigation Report (TEC, 2013).

In November 2016, online searches were conducted to identify new daycare centers, nursing homes, schools, or hospitals within a 400-foot radius of the Site. The New Jersey Department of Children and Families (NJDCF) Division of Licensing list of licensed daycare centers (www.state.nj.us/dcf) was reviewed to identify daycare centers within the vicinity of the Site. The 2016 survey did not identify any sensitive populations within a 400-foot radius of the Site (Antea Group, 2016).

An updated sensitive population survey was conducted by Antea Group in October 2021. The survey was conducted of all properties within 400-feet of the Site. Sensitive populations were not identified as part of the updated search.

3.4.2 BUILDINGS

In accordance with the NJDEP's VI Guidance Document (NJDEP, 2021), a VI evaluation relative to structures located within 30-feet of the known limits of the dissolved petroleum related VOC plume that exist above the NJDEP's Vapor Intrusion Screening Levels (VISLs) in Groundwater was performed. This evaluation determined the on-site building as the only structure that exists within 30-feet of the known limits of the dissolved petroleum related VOC plume that exists above VISLs.

On-Site Building

On May 31, 2013, TEC collected two sub-slab soil gas samples from the on-site building (SS-1 and SS-2). The sub-slab soil gas sample locations are shown in **Figure 4**. The sub-slab soil gas samples were submitted to Accutest Laboratories (now SGS) (Accutest; Dayton, New Jersey; NJDEP Laboratory Certification #12129) for VOC analysis via USEPA Method TO-15.

Laboratory analytical results for the sub-slab soil gas samples are provided in **Table 1**. As shown in **Table 1**, all VOCs were detected in the sub-slab soil gas at concentrations below NJDEP's 2021 Residential and Non-Residential Soil Gas Screening Levels (RSGSL and NRSGSL, respectively). A NJDEP Full Data Deliverables Form along with copies of the original laboratory analytical data packages in NJDEP Full Data Deliverables Format associated with this sampling event were previously submitted to the NJDEP on June 19, 2013 (TEC, 2013a).

Of note, current groundwater data does not exist above GW VISLs, and vertical separation of greater than 5-feet exists between remaining petroleum hydrocarbon impacts and the vacant on-site building. Based on the current VI Guidance Document, a VI investigation would not currently be triggered at this building.

3.4.3 SUBSURFACE UTILITIES & BASEMENTS

Subsurface utilities identified at the Site consist of natural gas, sanitary and storm sewers, and water beneath Glen Echo Avenue and Kings Highway. Field screening of all accessible utility access areas was conducted in 1996 with a photoionization detector (PID), organic vapors above background conditions were detected. Given the groundwater flow direction away from these utilities, the utilities are not expected to act as preferential pathways for plume migration.

3.5 ECOLOGICAL EVALUATION (EE)

An EE was submitted for the Site by TEC as part of the RIR, associated with the gasoline compound related impacts dated May 6, 2014 (TEC, 2014). The purpose of the EE was to determine if any ecological receptors exist proximal to the Site, or may be affected by contaminant migration. The EE also included a NJDEP Natural Heritage Program Database search by the NJDEP's Division of Parks and Forestry, Office of Natural Lands Management. Based on a review of data collected during the EE, additional ecological investigations associated with the gasoline related compounds was warranted, and are discussed in future Sections of this RAR.

3.6 SURFACE WATER BODIES

As previously reported, the nearest surface water body, Raccoon Creek, borders the Site to the east and south. In addition, Church Run is located approximately 225-feet south-southeast of the Site (GeoWeb, 2021).

3.7 WETLANDS

Based on the NJDEP GeoWeb database, freshwater tidal marsh is located approximately 130-feet southeast (hydraulically downgradient) of the Site, on the eastern side of Raccoon Creek. Wetlands do not exist on or adjacent to the Site property (GeoWeb, 2021).

4.0 PREVIOUS REMEDIAL INVESTIGATIONS

This Section summarizes soil and groundwater investigations conducted at the Site that have been summarized in previous deliverables to the NJDEP. Detailed descriptions of the remedial work conducted in these Sections were provided in various deliverables to the NJDEP.

4.1 PREVIOUS SOIL INVESTIGATIONS

Eighty-nine (89) soil samples have been collected in association with unleaded gasoline release at the Site. Historical soil sample analytical data associated with these sampling events are provided in **Table 2**. Historical soil sample locations are depicted on **Figure 5**. Copies of the original laboratory data packages were submitted in previous deliverables to the NJDEP, including the RIR (TEC, 2014), unless otherwise noted in this RAR.

An SVE system operated at the Site from July 1999 to April 2001, and soil excavations were conducted in October 2000 and May 2013. A review of historical soil sample analytical results demonstrate compliance with the applicable NJDEP SRS for the Site. Soil compliance is summarized in future Sections of this RAR.

4.2 PREVIOUS GROUNDWATER INVESTIGATIONS

The following Sections summarize groundwater remedial investigations which were summarized in detail in various deliverables submitted to the NJDEP.

4.2.1 MONITORING WELL INSTALLATIONS

Fourteen (14) shallow monitoring wells (MW-1, MW-1R, MW-2, MW-2R, MW-3, MW-3R, MW-4, MW-5, MW-6, MW-8, MW-9, MW-10, MW-11, and SVE-1), four (4) intermediate wells (MW-7, MW-13, MW-14, and MW-15) and two (2) vertical delineation wells (MW-12D and MW-16D) have been installed to delineate impacted groundwater. The wells were installed between October 1994 and August 2019. Please note that monitoring wells MW-1 through MW-3 were properly abandoned by a licensed well driller and later replaced with wells MW-1R, MW-2R, and MW-3R. The monitoring well locations are shown in **Figure 2**. Well information is summarized in **Table 3**.

Available well logs are presented in **Appendix A**. Available well permits, well records, well abandonment reports, and Form B Well Certifications were provided in the RIR, unless otherwise stated in this RAR.

4.2.2 GROUNDWATER SAMPLING

Periodic groundwater sampling has been conducted at the Site between November 1994 and present. **Table 4** summarizes historical groundwater analytical results for the Site. Of the sampling events conducted, all events through the April 2016 sampling event have been summarized in detail in various submittals to the NJDEP. The laboratory analytical results associated with these sampling events indicated that concentrations of benzene, toluene, ethylbenzene, total xylenes (collectively BTEX), MTBE, TBA, total VOC tentatively identified compounds (TICs) and lead have existed in groundwater at the Site above the GWQS. In addition, waste oil LNAPL was historically detected at MW-1 (the waste oil AOC is not the subject of this RAR, as that AOC was already issued a URAO). Copies of the laboratory analytical results for the groundwater samples collected at the Site have been submitted to the NJDEP in various deliverables, unless otherwise noted in this RAR.

5.0 PREVIOUS REMEDIAL ACTIONS

Oxygen Release Compound (ORC™) socks were installed within select monitoring wells, limited withdrawals of groundwater (LWG) were conducted at select monitoring wells, an active SVE system operated, and potentially impacted soils were removed from the subsurface during UST removal activities to address soil and groundwater impacts at the Site. The following Sections provide summaries of the historical remedial actions performed that were previously submitted to the NJDEP in various deliverables.

5.1 ORC™ SOCK INSTALLATION

Natural biodegradation of the impacted groundwater was being enhanced via the introduction of oxygen within the saturated zone. This oxygen enhancement was accomplished via the introduction of ORC™ socks within monitoring wells MW-2, MW-3, MW-5, and MW-6. As per the RAW approval and Permit-By-Rule issued for the Site, the ORC™ socks were installed on May 16, 1997, and were subsequently removed on November 22, 1997. ORC™ monitoring data collected between May and November 1997 was submitted in various RAPR submittals to the NJDEP.

A RAW Addendum dated February 23, 2000 (Tyree, 2000) was submitted to the NJDEP proposing that groundwater at the Site be monitored under a Natural Attenuation Compliance Program. The revised remedial approach was approved by the NJDEP on January 11, 2005.

5.2 LIMITED WITHDRAWALS OF GROUNDWATER (LWG)

LWG events were conducted via a vacuum truck in March and April 1998 in an attempt to decrease the elevated concentrations of MTBE and TBA in groundwater. A total of 535-gallons of impacted groundwater was recovered from monitoring wells MW-2, MW-3, MW-5, and MW-6 utilizing a vacuum truck. The March and April 1998 LWG events were previously reported to the NJDEP (Tyree, 1998).

5.3 SVE SYSTEM OPERATION

An SVE remediation system was installed at the Site in 1999. The SVE remediation system utilized wells MW-2, MW-3, and SVE-1 as the extraction wells. In addition, a horizontal SVE well (SVE-2) was installed in the proximity of the former dispenser island. The influent vapor stream was treated via granular activated carbon units. The SVE remediation system operated between July 1999 and April 2001, when it was taken off-line due to low to non-detected VOC concentrations within the influent vapor stream.

During the operation of the SVE remediation system, approximately 594-pounds of vapor phase VOCs were removed from the subsurface and treated via the SVE system. Data collected from the SVE system was submitted in various RAPR submittals to the NJDEP.

5.4 SOIL EXCAVATION – OCTOBER 2000

On October 24, 2000, South Jersey Gas Company discovered an out-of-service 1,000-gallon presumed leaded gasoline UST during gas line maintenance activities along Kings Highway. The UST was subsequently removed from the ground. Approximately 5-tons of presumed petroleum impacted soil along with the pea gravel and sand contents of the UST were removed from the subsurface and properly disposed of off-site. The UST closure activities were discussed in detail in the January 2001 RAPR submitted by Tyree (Tyree, 2001).

5.5 SOIL EXCAVATION – MAY 2013

On May 28 through 30, 2013, TEC removed the 10,000-gallon and 5,000-gallon unleaded gasoline USTs and piping from the Site. Due to subsurface conditions, the excavation was extended approximately 15-feet towards Glen Echo Avenue to facilitate removal of the tanks, as well as to remove various debris (fill material) encountered in the subsurface to the west of the tank field, in the vicinity of former MW-1. The excavation in the vicinity of former MW-1 was conducted in an attempt to remove the source of free product consisting of waste oil historically detected at MW-1.

A total of 268-tons of presumed petroleum impacted soil were removed from the subsurface and properly disposed of off-site. This soil excavation project also removed the impacted soil historically detected at borings B-4 and GP-3R. The May 2013 UST closure activities and soil excavation activities were discussed in detail in the Site Investigation Report (SIR) submitted by TEC (TEC, 2013).

6.0 PREVIOUS CEA ESTABLISHMENT

As previously mentioned, a CEA was established for the Site on February 16, 2006. The CEA is identified as Block 30, Lot 1 in the Borough of Swedesboro, Gloucester County, New Jersey. The duration of the CEA was 13 years. The CEA encompassed the entire Site property footprint.

The CEA has been revised for the Site based on current site conditions. The CEA revisions are discussed in future Sections of this RAR.

7.0 ADDITIONAL REMEDIAL INVESTIGATIONS

The following Sections summarize additional soil and ecological remedial investigations conducted since the May 2014 RIR submittal (TEC, 2014), and groundwater remedial investigations since the submittal of the November 2016 RIR/RAR submittal to the NJDEP (Antea Group, 2016).

7.1 ADDITIONAL SOIL INVESTIGATION

Two (2) additional soil sampling events were collected at the Site in association with the unleaded gasoline release since the submittal of the RIR (TEC, 2014). These soil sampling events are discussed below.

7.1.1 SOIL SAMPLING – SEPTEMBER 19, 2014

On September 19, 2014, AmeriDrill, Inc. (AmeriDrill; Levittown, Pennsylvania), under the supervision of TEC, installed one soil boring (B-1) via direct-push drilling methods. The soil boring location is shown in **Figure 5**. The soil boring was completed to confirm delineation of MTBE impacts detected at soil samples B-4 and GP-3R. Continuous macrocores were collected from the boring. The macrocores were field screened with a PID upon retrieval from the subsurface. The soil boring log is included in **Appendix A**.

A soil sample was collected from the boring using laboratory supplied Encore™ sampling devices and glassware, labeled under chain-of-custody, and submitted in an ice-chilled cooler to Accutest (now SGS) for MTBE analysis via USEPA Method 8260B. The soil sample analytical results are summarized on **Table 2**. As shown in **Table 2**, MTBE was not detected above SRS or laboratory method detection limits (MDLs).

A copy of the original laboratory data package was previously submitted to the NJDEP (Antea Group, 2016). Electronic Data Deliverables (EDDs) were previously submitted to the NJDEP via email.

7.1.2 SOIL SAMPLING – AUGUST 11, 2021

On August 11, 2021, AmeriDrill, under the direction of Antea Group, advanced six (6) soil borings (GP-9R, TW-1R, TW-2R, TW-3R, TW-4R, and P-3R) for post-remedial soil sampling purposes. Historical concentrations of benzene, ethylbenzene, and/or MTBE exceeded the recently promulgated Migration to Groundwater Soil Remediation Standards (MTGSRS) in historically unsaturated soil samples GP-9, TW-1, TW-2, TW-3, TW-4, and P-3. The post-remedial soil samples were collected at the same depth interval as previous soil samples GP-9, TW-1, TW-2, TW-3, TW-4, and P-3. The soil boring locations are shown in **Figure 5**.

The soil borings were advanced using direct-push technology. Continuous macro core samples were collected from each boring. The core samples at each boring location were cut open, logged, and field screened with a photoionization detector (PID). Boring logs associated with this event are provided in **Appendix A**. The soil samples were collected using Encore™ sampling devices, labeled under chain-of-custody, and submitted in an ice-chilled cooler to SGS for benzene, ethylbenzene, and/or MTBE analysis via USEPA Method 8260D. Trip and field blanks were collected for quality assurance/quality control (QA/QC) purposes.

As shown in **Table 2**, concentrations of compounds of concern were not detected above applicable MTGSRS. A copy of the laboratory data package associated with this sampling event is provided with this RAR. EDDs associated with this sampling event have been uploaded via the NJDEP's online portal.

7.2 ADDITIONAL ECOLOGICAL INVESTIGATIONS

Periodic sampling of the surface water from Raccoon Creek was conducted between July 1997 and May 2015. Historical surface water sampling results are provided in **Table 5**. Surface water sample locations are shown in **Figure 6**. In addition, periodic sediment sampling along Raccoon Creek was conducted between April 2006 and May 2015. Historical sediment sampling results are provided in **Table 6**. The sediment sample locations are shown in **Figure 6**. Upon reviewing the RIR, the NJDEP recommended that sediment pore water sampling and spatially/temporally co-located sediment and surface water samples be collected at the Site, to confirm/refute that impacts from the Site are/are not affecting Raccoon Creek. The following Sections summarize the additional sampling recommended by the NJDEP, along with additional soil sampling conducted adjacent to Raccoon Creek.

7.2.1 SOIL SAMPLING – DECEMBER 8, 2015

On December 8, 2015, T-Environmental, LLC (T-Env; Moorestown, New Jersey) collected twelve (12) shallow soil samples (S-1 thru SS-12) from the low-lying wooded area behind the former station building and AOCs associated with this RAR. The soil sample locations are shown in **Figure 7**. The soil samples were collected via bang-stick core sampler (for VOC analysis) and hand auger, transferred to Encore™ samplers and laboratory supplied glassware, and submitted under chain-of-custody in an ice-chilled cooler to SGS. The soil samples were analyzed for individual BTEX compounds, MTBE, and TBA via USEPA Method 8260C, and lead via USEPA Method 6010.

Table 7 summarizes the soil sample analytical results associated with the ecological soil samples collected on December 8, 2015. As shown in **Table 7**, lead was detected at a concentration above NJDEP MTGSRS at SS-1, SS-2, SS-3, SS-4, SS-5, SS-6, SS-9, SS-10, SS-11, and SS-12. A copy of the laboratory data package associated with this sampling event is provided in **Attachment 1**. EDDs associated with this sampling have been uploaded via the NJDEP portal.

7.2.2 SEDIMENT SAMPLING – DECEMBER 7 & 11, 2015

On December 7 and 11, 2015, T-Env collected six (6) sediment samples (Location #1 thru Location #6) on each day from the sediments associated with Raccoon Creek. The sediment samples collected on December 7, 2015 were collected at high tide, and the sediment samples collected on December 11, 2015 were collected at low tide. The sediment sample locations are shown in **Figure 7**. The sediment samples were collected via bang-stick core sampler (for VOC analysis) and hand auger, transferred to Encore™ samplers and laboratory supplied glassware, and submitted under chain-of-custody in an ice-chilled cooler to SGS. The sediment samples were analyzed for individual BTEX compounds, MTBE, and TBA via USEPA Method 8260C, and lead via USEPA Method 6010.

Table 8 summarizes the sediment sample analytical results. As shown in **Table 8**, lead was detected at all sample locations, with the exception of Location #3 during low tide, above NJDEP's Ecological Screening Criteria Lowest Effects Level (ESC LEL). A copy of the laboratory data package associated with this sampling event is provided in **Attachment 1**. EDDs associated with this sampling have been uploaded via the NJDEP portal.

7.2.3 SURFACE WATER SAMPLING – DECEMBER 7 & 11, 2015

On December 7 and 11, 2015, T-Env collected six (6) surface water samples (Location #1 thru Location #6) on each day from the surface water of Raccoon Creek. The surface water samples collected on December 7, 2015 were collected at high tide, and the surface water samples collected on December 11, 2015 were collected at low tide. The surface water sample locations are shown in **Figure 7**. The surface water samples were collected via disposable bailers, transferred to preserved laboratory supplied glassware and submitted under chain-of-custody in an ice-chilled cooler to SGS. The surface water samples were analyzed for individual BTEX compounds, MTBE, and TBA via USEPA Method 8260C, and lead via USEPA Method 6010.

Table 9 summarizes the surface water sample analytical results. As shown in **Table 9**, total lead was detected at surface water sample Location #1 (both high and low tide), Location #5 (low tide), and Location #6 (low tide) above NJDEP's Most Stringent Freshwater Aquatic Ecological Screening Criteria (FW-2-ESC). A copy of the laboratory data package associated with this sampling event is provided in **Attachment 1**. EDDs associated with this sampling have been uploaded via the NJDEP portal.

7.2.4 SEDIMENT PORE WATER SAMPLING – DECEMBER 11, 2015

On December 11, 2015, T-Env collected six (6) sediment pore water samples (Location #1 thru Location #6) from the sediments along Raccoon Creek. The pore-sediment sample locations are shown in **Figure 7**. 'Peeper' pore

water sampling devices were utilized to collect the samples. The ‘peepers’ were used to collect interstitial (pore water) from between the solid particles of the sediment. The pore water is comprised of dissolved sediment constituents, material from the water body above, and the groundwater that flowed into it. The pore water is the main component of sediment capable of movement.

The ‘peeper’ samplers were inserted by hand into the shallow sediment along Raccoon Creek, and allowed to reach equilibration with the pore water and then removed. This sample methodology provides an exact representation of sediment pore water, as the pore water constituents diffuse across the ‘peeper’ membrane. Upon removal from the sediment, the ‘peepers’ were cleaned with high pressure water pistols. The water from the ‘peeper’ chambers was preserved and the samples were submitted to SGS for analysis of individual BTEX compounds, MTBE, TBA, and VO plus library search of fifteen highest tentatively identified compounds (+15 VO TICs) via USEPA Method 8260C, and total lead via USEPA Method 6010.

Table 10 summarizes the sediment pore water sampling results. As shown in **Table 10**, total lead concentrations exceeded GWQS, and surface water quality standards at all six sample locations. A copy of the original laboratory data package is provided in **Attachment 1**. EDDs associated with this sampling have been uploaded via the NJDEP portal.

7.3 ADDITIONAL GROUNDWATER INVESTIGATIONS

The following Sections summarize in detail additional groundwater investigations conducted at the Site since the last deliverable submittal to the NJDEP in November 2016.

7.3.1 MONITORING WELL INSTALLATIONS – AUGUST 15, 2018

On August 15, 2018, AmeriDrill, Inc. (AmeriDrill; Levittown, Pennsylvania) under the on-site direction of Antea® Group, installed two (2) intermediate monitoring wells (MW-13 and MW-14) to delineate impacts detected at MW-7. Due to space restraints in the heavily wooded area along Raccoon Creek, the monitoring wells were installed via a direct push drill platform. The wells were installed to 17-feet bgs. The well locations are shown on **Figure 2**.

The wells were constructed with 12-feet of 1-inch diameter Schedule 40 poly vinyl chloride (PVC) riser and 5-feet of pre-packed Schedule 40 PVC well screen. Standpipes were installed at each well location for protection of the monitoring wells. Copies of the well logs are provided in **Appendix A**. Copies of the well permits and well records are provided in **Appendix C**.

Following installation, the monitoring wells were professionally surveyed for horizontal/vertical location by Vargo. Copies of the Form B well certification forms are provided in **Appendix C**.

7.3.2 MONITORING WELL INSTALLATIONS – AUGUST 28, 2019

On August 28, 2019, AmeriDrill, under the on-site direction of Antea® Group, installed one (1) source area vertical delineation monitoring well (MW-16D) and one (1) intermediate delineation monitoring well (MW-15). Monitoring well MW-16D was installed via hollow-stem auger drilling techniques. Due to space restraints in the heavily wooded area along Raccoon Creek, monitoring well MW-15 was installed via a direct push drill platform. Monitoring well MW-16D was installed to 40-feet bgs, and monitoring well MW-15 was installed to 15-feet bgs. The well locations are shown on **Figure 2**.

Monitoring well MW-16D was constructed with 35-feet of 2-inch diameter Schedule 40 PVC riser and 5-feet of 0.10 slotted, Schedule 40 PVC well screen. A traffic rated manhole was installed within a 2-foot by 2-foot concrete pad at the ground surface for the protection of this monitoring well. Monitoring well MW-15 was constructed with 13-feet of 1-inch diameter Schedule 40 PVC riser and 2-feet of pre-packed Schedule 40 PVC well screen. A standpipe was installed at this well location for protection. Copies of the well logs are provided in **Appendix A**. Copies of the well permits and well records are provided in **Appendix C**.

Following installation, the monitoring wells were professionally surveyed for horizontal/vertical location by Vargo. Copies of the Form B well certification forms are provided in **Appendix C**.

7.3.3 GROUNDWATER MONITORING & SAMPLING

Fourteen (14) additional groundwater monitoring and sampling events have been conducted at the Site since the submittal of the November RIR/RAR to the NJDEP (Antea Group, 2016). These events were conducted on: October 18, 2016, April 3, 2017, November 29, 2017, June 1, 2018, August 31, 2018, October 24, 2018, January 16, 2019, April 24, 2019, July 29, 2019, October 16, 2019, January 16, 2020, April 10, 2020, July 2, 2020, and October 15, 2020. The following Sections summarize each of the sampling events in detail. As previously mentioned, historical groundwater analytical results are presented in **Table 4**.

All groundwater sampling was conducted in accordance with the FSPM (NJDEP, 1992, updated 2005, 2011). Each monitoring well was gauged for depth to water/depth to LNAPL prior to initiating purging activities. LNAPL was not detected during any of these gauging events. The groundwater gauging data for these monitoring events are summarized in **Table 11**.

Groundwater samples during each sampling event were collected utilizing dedicated disposable bailers and transferred to laboratory supplied glassware preserved with hydrochloric acid for VOC analysis and nitric acid for lead analysis. The groundwater samples were labeled under proper chain-of-custody procedures and submitted in an ice-chilled cooler to SGS for analysis.

EDDs associated with these sampling events were submitted through the NJDEP's on-line portal. Copies of the original laboratory data packages are provided in **Attachment 1**.

7.3.4 GROUNDWATER SAMPLING – OCTOBER 18, 2016

Groundwater flow during the October 18, 2016 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-1R, MW-2R, MW-3R, MW-6, MW-7, MW-8, MW-9, and MW-11. The samples were analyzed for BTEX, MTBE, TBA, and +15 VO TICs via USEPA Method 8260C and total lead via USEPA Method 6010, with the exception of the sample collected from MW-11 which was only analyzed for total lead. The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-2R and MW-8
- TBA MW-7
- Total VO TICs MW-2R, MW-3R, MW-8, and MW-9
- Total Lead MW-1R, MW-7, and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.5 GROUNDWATER SAMPLING – APRIL 3, 2017

Groundwater flow during the April 3, 2017 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-1R, MW-2R, MW-3R, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-11. The samples were analyzed for BTEX, MTBE, and TBA via USEPA Method 8260C and total lead via USEPA Method 6010, with the exception of the sample collected from MW-11 which was only analyzed for total lead.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-2R, MW-8, and MW-10
- TBA MW-7
- Total Lead MW-1R, MW-2R, MW-3R, MW-7, and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.6 GROUNDWATER SAMPLING – NOVEMBER 29, 2017

Groundwater flow during the November 29, 2017 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-1R, MW-2R, MW-3R, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-11. The samples collected from MW-1R, MW-5, and MW-11 were analyzed for total lead via USEPA Method 6010. The samples collected from MW-2R and MW-6 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C, and total lead via USEPA Method 6010. The sample collected from MW-3R was analyzed for +15 VO TICs via USEPA Method 8260C and total lead via USEPA Method 6010. The sample collected from MW-7 was analyzed for TBA via USEPA Method 8260C and total lead via USEPA Method 6010. The samples collected from MW-8 and MW-9 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-8
- TBA MW-7
- Total VO TICs MW-3R and MW-9
- Total Lead MW-3R, MW-7, and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.7 GROUNDWATER SAMPLING – JUNE 1, 2018

Groundwater flow during the June 1, 2018 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-2R, MW-3R, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-11. The samples collected from MW-5 and MW-11 were analyzed for total lead via USEPA Method 6010. The sample collected from MW-2R was analyzed for benzene and +15 VO TICs via USEPA Method 8260C, and total lead via USEPA Method 6010. The sample collected from MW-3R was analyzed for +15 VO TICs via USEPA Method 8260C and total lead via USEPA Method 6010. The sample collected from MW-6 was analyzed for benzene, TBA, and +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for MTBE and TBA via USEPA Method 8260C, and

total lead via USEPA Method 6010. The samples collected from MW-8 and MW-9 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-8
- TBA MW-7
- Total VO TICs MW-3R, MW-8, and MW-9
- Total Lead MW-2R, MW-3R, MW-5, MW-7, and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.8 GROUNDWATER SAMPLING – AUGUST 31, 2018

Groundwater flow during the August 31, 2018 sampling event was not determined as only wells MW-13 and MW-14 were gauged. Groundwater samples were collected from monitoring wells MW-13 and MW-14. The samples were analyzed for individual BTEX compounds, MTBE, TBA, and +15 VO TICs via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- TBA MW-14

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.9 GROUNDWATER SAMPLING – OCTOBER 24, 2018

Groundwater flow during the October 24, 2018 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-2R, MW-3R, MW-5, MW-6, MW-7, MW-8, MW-9, MW-11, MW-13, and MW-14. The samples collected from MW-5 and MW-11 were analyzed for total lead via USEPA Method 6010. The sample collected from MW-2R was analyzed for benzene and +15 VO TICs via USEPA Method 8260C, and total lead via USEPA Method 6010. The sample collected from MW-3R was analyzed for +15 VO TICs via USEPA Method 8260C and total lead via USEPA Method 6010. The sample collected from MW-6 was analyzed for benzene, TBA, and +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for MTBE and TBA via USEPA Method 8260C, and total lead via USEPA Method 6010. The samples collected from MW-8 and MW-9 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The samples collected from MW-13 and MW-14 were analyzed for individual BTEX compounds, +15 VO TICs, MTBE, and TBA via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-2R and MW-8
- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-2R, MW-3R, and MW-9
- Total Lead MW-3R, MW-7, and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.10 GROUNDWATER SAMPLING – JANUARY 16, 2019

Groundwater flow during the January 16, 2019 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-2R, MW-3R, MW-5, MW-6, MW-7, MW-8, MW-9, MW-10, MW-11, MW-13, and MW-14. The samples collected from MW-5 and MW-11 were analyzed for total lead via USEPA Method 6010. The sample collected from MW-2R was analyzed for benzene and +15 VO TICs via USEPA Method 8260C, and total lead via USEPA Method 6010. The sample collected from MW-3R was analyzed for +15 VO TICs via USEPA Method 8260C and total lead via USEPA Method 6010. The sample collected from MW-6 was analyzed for benzene, TBA, and +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for MTBE and TBA via USEPA Method 8260C, and total lead via USEPA Method 6010. The samples collected from MW-8, MW-9, and MW-10 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The samples collected from MW-13 and MW-14 were analyzed for individual BTEX compounds, MTBE, TBA and +15 VO TICs via USEPA Method 8260C. Of note, the samples collected for total lead analysis were analyzed via low flow sampling techniques. The low flow sampling data sheets are provided in **Appendix F**.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-2R, MW-8, and MW-10
- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-2R, MW-3R, MW-9, and MW-10
- Total Lead MW-2R, MW-3R, MW-7, and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.11 GROUNDWATER SAMPLING – APRIL 24, 2019

Groundwater flow during the April 24, 2019 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-2R, MW-3R, MW-6, MW-7, MW-8, MW-9, MW-11, MW-13, and MW-14. The sample collected from MW-11 was analyzed for total lead via USEPA Method 6010. The sample collected from MW-2R was analyzed for benzene and +15 VO TICs via USEPA Method 8260C, and total lead via USEPA Method 6010. The sample collected from MW-3R was analyzed for +15 VO TICs via USEPA Method 8260C and total lead via USEPA Method 6010. The sample collected from MW-6 was analyzed for benzene, TBA, and +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for MTBE and TBA via USEPA Method 8260C, and total lead via USEPA Method 6010. The samples collected from MW-8 and MW-9 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The samples collected from MW-13 and MW-14 were analyzed for individual BTEX compounds, +15 VO TICs, MTBE, and TBA via USEPA Method 8260C. Of note, the samples collected for total lead analysis were analyzed via low flow sampling techniques. The low flow sampling data sheets are provided in **Appendix F**.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-2R
- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-2R and MW-9
- Total Lead MW-7 and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.12 GROUNDWATER SAMPLING – JULY 29, 2019

Groundwater flow during the July 29, 2019 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-2R, MW-3R, MW-7, MW-8, MW-9, MW-11, MW-13, and MW-14. The sample collected from MW-11 was analyzed for total lead via USEPA Method 6010. The sample collected from MW-2R was analyzed for benzene and +15 VO TICs via USEPA Method 8260C, and total lead via USEPA Method 6010. The sample collected from MW-3R was analyzed for +15 VO TICs via USEPA Method 8260C and total lead via USEPA Method 6010. The sample collected from MW-7 was analyzed for MTBE and TBA via USEPA Method 8260C, and total lead via USEPA Method 6010. The samples collected from MW-8 and MW-9 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The samples collected from MW-13 and MW-14 were analyzed for individual BTEX compounds, +15 VO TICs, MTBE, and TBA via USEPA Method 8260C. Of note, the samples collected for total lead analysis were analyzed via low flow sampling techniques. The low flow sampling data sheets are provided in **Appendix F**.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-8
- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-3R, MW-8, and MW-9
- Total Lead MW-7 and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.13 GROUNDWATER SAMPLING – OCTOBER 16, 2019

Groundwater flow during the October 16, 2019 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Appendix D**. Groundwater samples were collected from monitoring wells MW-2R, MW-3R, MW-7, MW-8, MW-9, MW-11, MW-13, MW-14, MW-15, and MW-16D. The sample collected from MW-11 was analyzed for total lead via USEPA Method 6010. The samples collected from MW-2R and MW-8 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The samples collected from MW-3R and MW-9 were analyzed for +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for MTBE and TBA via USEPA Method 8260C, and total lead via USEPA Method 6010. The samples collected from MW-13, MW-14, MW-15, and MW-16D were analyzed for benzene, +15 VO TICs, MTBE, and TBA via USEPA Method 8260C. Of note, the samples collected for total lead analysis were analyzed via low flow sampling techniques. The low flow sampling data sheets are provided in **Appendix F**.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-9
- Total Lead MW-7 and MW-11

A compound distribution map associated with this sampling event is provided in **Appendix E**.

7.3.14 GROUNDWATER SAMPLING – JANUARY 16, 2020

Groundwater flow during the January 16, 2020 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Figure 8**. Groundwater samples were collected from monitoring wells MW-2R, MW-3R, MW-7, MW-8, MW-9, MW-13, MW-14, MW-15, and MW-16D. The samples collected from MW-2R and MW-8 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The samples collected from MW-3R and MW-9 were analyzed for +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for MTBE and TBA via USEPA Method 8260C. The samples collected from MW-13, MW-14, MW-15, and MW-16D were analyzed for benzene, +15 VO TICs, MTBE, and TBA via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-2R and MW-8
- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-2R, MW-8, and MW-9

A compound distribution map associated with this sampling event is provided in **Figure 9**.

7.3.15 GROUNDWATER SAMPLING – APRIL 10, 2020

Groundwater flow during the April 10, 2020 sampling event was east-southeast. A groundwater contour map associated with this sampling event is provided in **Figure 10**. Groundwater samples were collected from monitoring wells MW-2R, MW-6, MW-7, MW-8, MW-9, MW-10, and MW-14. The samples collected from MW-2R, MW-8, and MW-10 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The sample collected from MW-9 was analyzed for +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for TBA via USEPA Method 8260C. The samples collected from MW-6 and MW-14 were analyzed for benzene, +15 VO TICs, MTBE, and TBA via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-2R, MW-8, and MW-10
- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-9

A compound distribution map associated with this sampling event is provided in **Figure 11**.

7.3.16 GROUNDWATER SAMPLING – JULY 2, 2020

Shallow groundwater flow during the July 2, 2020 sampling event was east-southeast. Intermediate groundwater flow was northeast. Groundwater contour maps associated with this sampling event are provided in **Figures 12** and **13**, respectively. Groundwater samples were collected from monitoring wells MW-2R, MW-7, MW-8, MW-9, MW-10, and MW-14. The samples collected from MW-2R, MW-8, and MW-10 were analyzed for benzene and +15 VO TICs via USEPA Method 8260C. The sample collected from MW-9 was analyzed for +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for TBA via USEPA Method 8260C. The sample collected from MW-14 was analyzed for benzene, +15 VO TICs, MTBE, and TBA via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-9

A compound distribution map associated with this sampling event is provided in **Figure 14**.

7.3.17 GROUNDWATER SAMPLING – OCTOBER 15, 2020

Shallow groundwater flow during the October 15, 2020 sampling event was east-southeast. Intermediate groundwater flow was northeast. Groundwater contour map associated with this sampling event are provided in **Figures 15** and **16**, respectively. Groundwater samples were collected from monitoring wells MW-2R, MW-7, MW-8, MW-9, MW-10, and MW-14. The samples collected from MW-2R, MW-8, and MW-10 were analyzed for benzene via USEPA Method 8260C. The sample collected from MW-9 was analyzed for +15 VO TICs via USEPA Method 8260C. The sample collected from MW-7 was analyzed for TBA via USEPA Method 8260C. The sample collected from MW-14 was analyzed for +15 VO TICs, MTBE, and TBA via USEPA Method 8260C.

The groundwater analytical results for this sampling event indicated that concentrations of the following COCs exceeded the applicable GWQS at the following sample locations:

- Benzene MW-10
- MTBE MW-14
- TBA MW-7 and MW-14
- Total VO TICs MW-9

A compound distribution map associated with this sampling event is provided in **Figure 17**.

8.0 HISTORIC FILL – LEAD IN SOIL & GROUNDWATER

A review of logs for borings installed at the Site, along with observations made during the UST removal activities, identified historic fill materials present at the Site. Bricks, branches, and other debris were observed during the excavation of the unleaded gasoline USTs in May 2013, and bricks were observed at several locations behind the Site building along Racoon Creek. A review of NJDEP's GeoWeb mapping program, identified areas of mapped historic fill to the northeast of the Site, across Racoon Creek. **Figure 18** shows the area identified as historic fill proximal to the Site.

Based on multiple lines of evidence, total lead concentrations detected in groundwater are not attributable to a release from the Site, or former site operations. The lines of evidence are as follows:

- There is no concentration gradient for total lead based on a review of historical groundwater analytical results from on and off-site monitoring wells.
- Off-site monitoring well MW-11, installed upgradient of the Site, contains total lead concentrations above GWQS during all sampling events, including events conducted during low flow sampling techniques. In fact, the total lead concentration at this well location were the highest total lead concentration of any wells installed in association with the Site during 2 of the 4 sampling events conducted via low flow sampling techniques.

Lead concentrations in soil above MGWSRS are also attributable to historic fill/dredging of Raccoon Creek. This is based on the following multiple lines of evidence:

- Lead was only detected in one historical soil sample collected on-site in association with the former UST AOCs. This exceedance was at GP-11 in August 1995.
- Lead concentrations in all shallow soil samples collected from the heavily wooded area behind the Site building exceeded MGWSRS at all sample locations except SS-7 and SS-8, indicating lead impacted soils associated with historical filling along Raccoon Creek adversely affected soil quality behind the station building.
- Documented historic fill exists immediately across Raccoon Creek to the northeast.
- A retaining wall exists behind the Site (just east/southeast of MW-4), where there is an elevation drop of approximately 7-feet. This retaining wall appears to have been constructed to add fill to increase the elevation of the site property for development.

9.0 ECOLOGICAL EVALUATION CONCLUSIONS

As requested by the NJDEP, additional ecological investigations were performed at the Site (as discussed in Section 7.2). Based on data collected to date, impacts to the Raccoon Creek in association with the UST AOCs have not been observed. Targeted VOCs were not detected above SWQS or NJDEP ESC LEL's at any surface water or sediment sample location. Lead impacts to surface water and sediments have been observed, but are not associated with the Site based on the following lines of evidence:

- Raccoon Creek is tidally influenced and was a major transportation corridor to Swedesboro throughout the 18th & 19th centuries (Delaware Valley, 2004).
- The main channel of the Raccoon Creek was last dredged in 1965 (Wikipedia, 2020)
- Lead impacts to soil above MGWSRS are present (predominantly in the wooded area behind the site building) adjacent to Raccoon Creek and are associated with historic fill and/or dredging of Raccoon Creek.
- Surface water sample Location #1 (shown in **Figure 7**), was the only sample location that contained lead concentrations above SWQS during both high and low tides during the December 2015 sampling events. This sample location is located the furthest northeast of the site, and is not located hydraulically downgradient of any AOCs at the Site.
- Sediment and sediment pore water samples collected in December 2015 exhibited elevated lead concentrations regardless of where the samples were collected, including samples collected to the northeast of the AOCs at the Site.

- Soil samples collected from the heavily wooded area behind the Site building in December 2015 indicated lead concentrations above MGWSRS at 10 of the 12 sample locations. These lead detections are attributable to historic fill and/or historic dredging activities conducted at Raccoon Creek.

Based upon the above information and lines of evidence, additional ecological investigations relative to impacts associated with the Site are not warranted, nor proposed.

10.0 CEA RECALCULATION

As previously mentioned, a CEA was established for the Site on February 16, 2006. The CEA is identified as Block 30, Lot 1 in the Borough of Swedesboro, New Jersey. The duration of the CEA was 13 years. The CEA encompassed the entire Site property footprint.

The results of the groundwater quality studies performed at the Site have determined that dissolved site-related VOCs exist above NJDEP GWQS. Therefore, pursuant to current NJDEP Regulations, the CEA has been recalculated for the Site. As specified by the NJDEP, a CEA consists of the following elements:

- A written and mapped description of the area where GWQS are not met;
- An identification of the compounds of concern for which the CEA has been established; and
- An estimate of the longevity of CEA.

10.1 CEA COMPOUNDS OF CONCERN

Laboratory analytical results for the groundwater sampling events performed on July 2, 2020 and October 15, 2020 have determined that concentrations of benzene, MTBE, TBA, individual VO TICs, and total VO TICs exist above GWQS. For the purposes of establishing the extent and duration of the CEA, only MTBE and TBA were utilized for the CEA calculations at the Site, due to low concentrations of benzene and VOC TICs.

10.2 LONGEVITY AND EXTENT OF THE CEA

MTBE CEA Modeling

Generally, the sorption of organic compounds is inversely proportional to their solubility (Lyman, et al., 1992). As MTBE is highly soluble (up to 4.3% in water (Garrett et al., 1986)), it is likely that the retardation (from adsorption onto soil particles) of this compound is minimal, resulting in a rapid migration rate. Recent studies (Davidson, 1995) have indicated that no appreciable biodegradation of MTBE occurs in the subsurface. As a result, the fate and migration of MTBE is predicted using a one-dimensional advection-dispersion model.

The migration of MTBE in the subsurface is predicted utilizing the following one-dimensional advection-dispersion model developed by Sauty (1980):

$$\frac{C_x}{C_o} = \frac{1}{2} \left[\operatorname{erfc} \left(\frac{L - v_s t}{2\sqrt{D_L t}} \right) - \exp \left(\frac{v_s L}{D_L} \right) \cdot \operatorname{erfc} \left(\frac{L + v_s t}{2\sqrt{D_L t}} \right) \right]$$

Where:

- C_x = Compound concentration at distance x from contaminant source (µg/L)
- C_o = Compound concentration at source (µg/L)
- L = Distance from source (feet)
- D_L = Longitudinal dispersivity (feet) = $x/10$
- v_s = Seepage velocity (feet/day)

t = Duration of source discharge (days)

Several limitations to the above analytical model have been identified as follows:

- 1) Compound does not biodegrade;
- 2) Aquifer is isotropic and homogenous;
- 3) Groundwater flow field and effects from advection/dispersion are uniform and one-dimensional; and
- 4) Line source is constant.

During the two most-recent sampling events, MTBE was present above the NJDEP GWQS in monitoring well MW-14. The highest concentration of MTBE was detected at 212 µg/L on October 15, 2020, therefore that MTBE concentration will be utilized for modeling purposes. Based on a source duration of 5 years, the one-dimensional advection-dispersion model indicates that MTBE will reach GWQS of 70 µg/L at approximately 600-feet from MW-14. The model calculation worksheet is provided in **Appendix G**.

The time period required to achieve the MTBE CEA is calculated using the following equation:

$$t = d/v_s$$

Where:

t = Time (days)

d = CEA length (feet)

v_s = Seepage velocity (feet/day)

The predicted duration for MTBE to meet GWQS is 1,920 days or 5.26 years.

TBA CEA Modelling

The Baetsle Model is a Microsoft® Excel spreadsheet application of “Migration of Radionuclides in Porous Media” by L. H. Baetsle, 1969. The Baetsle model assumes that the source of the dissolved phase hydrocarbon was an instantaneous release or a point source. The solute transport model is designed to simulate dispersion of the migrating point source. The Baetsle Model is defined by the following probability function:

$$C(x, y, z) = \frac{M}{8(\pi)^{3/2} \sqrt{D_x D_y D_z}} \exp \left\{ -\frac{X^2}{4D_x t} - \frac{Y^2}{4D_y t} - \frac{Z^2}{4D_z t} - \lambda t \right\}$$

where:

- $C(x, y, z)$ = The concentration at distances x , y , and z from the source in micrograms per liter (µg/L);
- M = The initial concentration at time $t=0$ and distances x , y , and $z = 0$ in µg/L;
- t = Time in days;
- D_x , D_y , and D_z = Dispersion coefficients in the x , y , and z directions;
- X , Y , and Z = Distances in the x , y , and z directions from the source in feet; and
- λ = First order constituent decay constant (day^{-1}).

For the purposes of modeling, monitoring wells exhibiting dissolved phase TBA concentrations in excess of the NJDEP GWQS during the last two years of groundwater sampling were treated as individual point sources. Monitoring well MW-7 was utilized as the point source for this model.

The Baetsle Model is a two-dimensional grid, with the assumed TBA source located at the grid origin 0, 0 feet. The x-axis represents the plume centerline (directly downgradient from the source) and the y-axis is the horizontal distance in feet from (transverse to) the plume centerline. The source area was set at monitoring well MW-7 which has exhibited the highest TBA concentrations over the past 8 rounds of sampling. The Baetsle Model was constructed with the plume centerline (x-axis) paralleling the groundwater flow component from the potential source area towards the downgradient area.

The Baetsle model for TBA in monitoring well MW-7 was constructed utilizing groundwater gauging and sampling data collected during 8 sampling events from January 2019 through October 2020. Data from these sampling events were chosen due to the elevated TBA concentrations in the referenced monitoring well during routine groundwater sampling events, as applicable. The TBA model output spreadsheets are included in **Appendix G**.

The Baetsle Model uses the following parameters:

- *Hydraulic Gradient (i) (feet/foot)* – 0.033 feet/foot was chosen as the average hydraulic gradient for the Site.
- *Hydraulic Conductivity (K) (feet/day)* – The K value at the Site is 2.84 ft/day based on slug tests conducted during the remedial investigation.
- *Porosity (n) (decimal fraction)* – A porosity value of 0.3 has been estimated for calculation purposes.
- *Estimated Release Volume (gallons)* - The estimated release volume of TBA in monitoring well MW-7 was calculated from groundwater sampling data collected from January 2019 to October 2020. The cumulative mass used in the model run was 2.06 gallons of TBA.
- *Longitudinal Dispersivity (D_x) (ft)* – D_x was calculated from the Xu and Eckstein 1995 equation: $A_x = 3.28 * 0.83 * (\text{LOG}(L_p/3.28))^{2.414}$, where L_p is the estimated plume length.
- *Transverse Dispersivity (D_y) (ft)* – The default transverse dispersivity for the Baetsle Model of $0.3D_x$ was used to better calibrate the model to site-specific data.
- *Vertical Dispersivity (D_z) (ft)* - ASTM's, "Standard Guide for Risk-Based Corrective Action Applied at Petroleum Release Sites," indicates the transverse dispersivity is $0.025D_y$.
- *First-Order Decay Coefficient (λ) (1/yr)* – The Baetsle Model is designed to incorporate a first order degradation coefficient (λ). However, based on discussions with the NJDEP, a λ value should not be utilized to calculate the fate and transport of MTBE or TBA for a CEA. Therefore, λ was ignored in the Baetsle Model, and attenuation was based entirely on longitudinal, transverse, and vertical dispersion.

Based on data entered into the Baetsle model the TBA plume will travel at a concentration above the NJDEP GWQS for approximately 320-feet to the east-southeast along the plume centerline from MW-7. The maximum TBA concentration within the plume will be at or above NJDEP GWQS for approximately 3.01 years from October 15, 2020, or October 19, 2023. The model output spreadsheets are included in **Appendix G**.

CEA Summary

Based on the CEA calculations, the limits and duration of the MTBE CEA are the most extensive, and therefore the most conservative. Based on the model, MTBE is expected to migrate approximately 600-feet to the east-southeast and west of MW-14. The CEA limits are the property boundaries, with the CEA terminating at Racoon Creek.

The time period required to achieve GWQS within the above calculated CEA is 1,921 days or 5.26 years. To be conservative, the CEA duration is proposed to be extended to 10 years or October 15, 2030. The proposed CEA

limits are depicted on **Figure 19**. The revised CEA Fact Sheet Form is included under the cover letter of this RAR. A historic fill fact sheet is also included as part of this RAR submittal.

11.0 COMPLIANCE DEMONSTRATION – SOIL

The following Section demonstrates compliance with the applicable SRS for historical soil impacts detected at the Site in association with Getty's release.

9.1 SOIL COMPLIANCE

Post-remedial soil sampling conducted following the operation of the SVE system and remedial soil excavations demonstrates compliance with the applicable SRS for the Site. Unsaturated soil has been documented to comply with the applicable MTGSRS, and saturated soil complies with the applicable Residential Ingestion-Dermal / Residential Inhalation Exposure Pathway (RID/RIEP) SRS / Non-Residential Ingestion-Dermal / Non-Residential Inhalation Exposure Pathway (NRID/NRIEP) SRS.

12.0 NATURAL ATTENUATION EVALUATION

As discussed in prior sections of this RAR, an SVE system operated at the Site from July 1999 through April 2001, and limited soil excavation activities were conducted in October 2000 and May 2013. Groundwater data collected following soil excavation activities conducted in May 2013 was utilized as a basis to demonstrate the effectiveness of ongoing natural attenuation monitoring.

12.1 GROUNDWATER DELINEATION

Petroleum-related VOC groundwater impacts originated in the source area at MW-2 and MW-3 with shallow groundwater flow historically to the east-southeast. The shallow groundwater impacts are/were delineated by MW-1R, MW-4, and SVE-1 to the south and southwest, MW-11 to the northwest, and to the extent practical MW-10 to the northeast, and MW-5 and MW-6 to the east-southeast. Intermediate groundwater impacts detected at MW-7 are delineated to the south-southwest by MW-15, and north by MW-13, and to the extent practical by MW-14 along Racoon Creek. Vertical groundwater impacts are delineated on-site by MW-16D and off-site via MW-12D.

12.2 GROUNDWATER PLUME STABILITY

Site-related target compounds in groundwater above the NJDEP GWQS are limited to benzene, MTBE, TBA, individual VO TICs, and total VO TICs in monitoring wells MW-7, MW-9, MW-10, and MW-14. Site-related target compounds have not been present in any other monitoring well during at least the last two rounds of samples collected from each well, accounting for the seasonal fluctuation of the water table. As shown on the trend plots in **Appendix H**, concentrations of benzene, MTBE, TBA, and total VO TICs concentrations exhibit decreasing/stable trends at each well location since the last active remediation performed at the Site, and/or over the last 8 rounds of sampling.

12.3 STATISTICAL ANALYSIS

Per the March 2012 NJDEP Monitored Natural Attenuation (MNA) Guidance Document, a statistical evaluation of benzene concentrations over time was performed with the Mann-Kendall Test (Gilbert, 1987). The Mann-Kendall Test is a non-parametric test for linear trend analysis based on the idea that if an increasing trend exists in a data set, then the sample taken first from any randomly selected pair of measurements should on average have a lower concentration than the measurements collected at a later point.

The Mann-Kendall analysis was performed for the concentrations of benzene present in monitoring wells MW-2R, MW-8, and MW-10; MTBE at MW-14; and TBA at MW-7 and MW-14 during the eight most recent rounds of groundwater sampling completed at each well location. The Mann-Kendall output spreadsheets are included in **Appendix I**. The Mann-Kendall analysis indicates the following:

- Benzene concentrations at MW-2R and MW-8 and TBA concentrations at MW-7 and MW-14 display no trend.
- Benzene concentrations at MW-10 display decreasing trends.
- MTBE concentrations at MW-14 display increasing trends.

12.4 ISOCONCENTRATION CONTOUR MAPS VERSUS TIME

Benzene, total VO TICs, MTBE, and TBA isoconcentration contour maps have been prepared for the last 8 rounds of groundwater sampling performed on January 16, 2019, April 24, 2019, July 29, 2019, October 16, 2019, January 16, 2020, April 10, 2020, July 2, 2020, and October 15, 2020. The isoconcentration contour maps are provided in **Figures 20 through 27**, respectively. These maps confirm that the targeted COC plumes are stable or shrinking in size.

12.5 NATURAL ATTENUATION EVALUATION CONCLUSION

Based on the multiple lines of evidence, including plume stability evaluation and trend plots, the concentrations of benzene, MTBE, TBA, individual VO TICs, and total VO TICs in groundwater are demonstrated to be decreasing and/or stable over time. Based on the Soil and Ground Water Analytical Data Evaluation for Volatile Organic Contamination (NJDEP, 2009) the Site is a candidate for natural attenuation under a Groundwater Remedial Action Permit based on the following:

- Soil contamination has been fully remediated to the applicable NJDEP SRS;
- No target compounds in soil are present above the NJDEP Residential SRS;
- Soil contamination exceeding the applicable MGWSRS has been treated or removed to the extent practicable, and concentrations remaining in soil are low and limited to a small aerial extent;
- No free or residual product is present at the Site;
- Target VOCs in groundwater are fully delineated as practice by the existing monitoring well network;
- All potential receptors have been evaluated and none are impacted or could potentially be impacted by the discharge from the Site; and
- A CEA has been established for the Site.

Continued MNA monitoring of benzene, MTBE, TBA, individual VO TICs, and total VO TICs in groundwater under a Remedial Action Permit is proposed in **Section 13.0** of this RAR.

13.0 REMEDIAL ACTION COSTS AND PROPOSED GROUNDWATER PERMIT

In accordance with N.J.A.C. 7:26E-5.7(b)9 the total cost of remediation at the Site through October 2021 is \$525,751. Based on the information provided within this report, a Remedial Action Permit application is being submitted for the Site. Groundwater analytical results have indicated a stable to decreasing trend of groundwater concentrations at the Site. As part of the Remedial Action Permit, monitoring wells listed below will be sampled on an annual basis:

Monitoring Well ID	Type	Parameters Analyzed
MW-6	Sentinel	Benzene, individual and total VO TICs
MW-7	Plume Sampling	TBA
MW-8	Plume Fringe	Benzene, individual and total VO TICs
MW-9	Plume Fringe	Individual and Total VO TICs
MW-10	Plume Fringe	Benzene, individual and total VO TICs
MW-13	Sentinel	MTBE and TBA
MW-14	Plume Sampling	MTBE and TBA

Remedial Action Protectiveness / Biennial Certification Form Reports will be submitted to the NJDEP on a biennial basis.

Based on the information provided within this report, additional soil and groundwater investigations are not warranted for the Site. An AOC-Specific Limited Restricted Use Response Action Outcome (RAO) will be submitted (with a historic fill notice) under a separate cover pending approval of the Groundwater Remedial Action Permit as soil is in compliance with applicable SRS and a CEA/WRA has been established for Site groundwater.

14.0 TECHNICAL OVERVIEW

The laboratory analytical data was determined to be reliable as indicated by compliance with holding times and the ability to achieve MDLs for site-related VOCs. The MDLs for all site-related VOCs analyzed for during each of the soil and groundwater sampling events during this reporting period were below their respective SRS or GWQS.

There were no significant seasonal events which may have affected sampling in the field, or analytical results.

14.1 VARIANCES

Due to inconsistencies in regulatory language, the following variance from the TRSR has been taken.

- **N.J.A.C 7:26E-2.1**

Per the Department's direction as noted in the NJDEP Listserv entitled "[SRRA]: Correction to Technical Requirements for Site Remediation, N.J.A.C. 7:26E, Table 2-1, Footnote 3," N.J.A.C. 7:26E, Table 2-1, Footnote 3 should not have included the phrase "that are not alkanes unless otherwise specified by analytical protocol." As such, no effort was made by the laboratory to specifically differentiate aliphatics as a class of compounds from those compounds determined to be TICs.

15.0 PUBLIC NOTIFICATIONS

The latest Public Notifications were submitted to the NJDEP on September 20, 2021. The Public Notification Form and associated documentation are provided in **Appendix J**.

16.0 HEALTH & SAFETY PLAN

A site-specific health and safety plan has been prepared for this Site, and is available for review by the NJDEP upon request.

17.0 REFERENCES

Antea Group, 2016. Remedial Investigation Report/Remedial Action Report
Davidson, J.M. 1995 'Fate and Transport of MTBE – The latest data' Proceeding, Petroleum Hydrocarbons and Organic Chemicals in Ground Water: Prevention, Detection, and Remediation, Conference and Exposition, National Ground Water Association, Westerville, Ohio.
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Gilbert, 1987. Mann-Kendall Test
Lyman, W.J., Reidy, P.J., Levy, B. 1992. Mobility and Degradation of Organic Contaminants in Subsurface Environments.
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18.0 REMARKS

The recommendations contained in this report represent Antea USA, Inc.'s professional opinions based upon the currently available information and are arrived at in accordance with currently accepted professional standards. This report is based upon a specific scope of work requested by the client. The contract between Antea USA, Inc. and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Antea USA, Inc.'s client and anyone else specifically identified in writing by Antea USA, Inc. as a user of this report. Antea USA, Inc. will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Antea USA, Inc. makes no express or implied warranty as to the contents of this report.

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Date: 10/15/2021

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Date: 11/01/2021

Tables

Table 1- Historical Soil Gas Sampling Analytical Results

Table 2- Historical Soil Sample Analytical Results

Table 3- Monitoring Well Construction Summary

Table 4- Historical Groundwater Analytical Results

Table 5- Historical Surface Water Sample Analytical Data

Table 6- Historical Sediment Sample Analytical Data

Table 7- Ecological Investigation Soil Sampling Analytical Data - December 2015

Table 8- Ecological Investigation Sediment Sample Analytical Data - December 2015

Table 9- Ecological Investigation Surface Water Sample Analytical Data - December 2015

Table 10- Sediment Pore Water Sample Analytical Data - December 2015

Table 11- Historical Groundwater Elevation Data

TABLE 1

Historical Soil Gas Sampling Analytical Results

Former Getty Service Station #56955
Kings Highway & Glen Echo Avenue
Swedesboro, Gloucester County
NJDEP PI # 033695

Former Getty Service Station #56955 Kings Highway & Glen Echo Avenue Swedesboro, Gloucester County Block 30; Lot 1	NJDEP Residential Soil Gas Screening Levels	NJDEP Non-Residential Soil Gas Screening Levels	Soil Gas Results SS-1	Soil Gas Results SS-2
Chemical			5/31/13	5/31/13
Acetone (2-propanone)	1,600,000	6,800,000	2.6	47.5
Benzene	18	79	<0.27	17
Chloromethane (methyl chloride)	4,700	20,000	1.3 J	1.5 J
Cyclohexane	310,000	1,300,000	<0.79	9.6
Dichlorodifluoromethane (Freon 12)	NA	NA	2.3 J	3.1 J
Ethanol	NA	NA	20.3	232
Ethyl acetate	NA	NA	<0.83	19
Ethylbenzene	56	250	<0.35	31
4-Ethyl toluene (p-ethyl toluene)	NA	NA	<0.29	11
n-Heptane	NA	NA	<0.32	20
n-Hexane	36,000	150,000	<0.23	55.7
Methylene chloride (dichloromethane)	14,000	61,000	<0.66	2.8
Tetrachloroethene (PCE)	540	2,400	<0.81	1.0 J
Toluene	260,000	1,100,000	<0.31	156
Trichlorofluoromethane (Freon 11)	NA	NA	<0.31	2.8 J
1,2,4-Trimethylbenzene	3,100	13,000	<0.32	43
1,3,5-Trimethylbenzene	NA	NA	<0.29	14
2,2,4-Trimethylpentane	NA	NA	<0.39	140
Xylenes (o)	NA	NA	<0.33	50
Xylenes (m&p)	NA	NA	<0.56	133
Xylenes (total)	5,200	22,000	<0.33	183

Notes:

Only compounds detected at one or more sample locations above the analytical reporting limits are listed in this table.

All results are in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$).

J - Estimated value

NA - A screening level is currently not available for this chemical.

ND - Not Detected

Bolded and shaded results identify exceedances of the applicable 2021 NJDEP Soil Gas Screening Levels.

TABLE 2

HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Sample ID	Date	Sample Depth (feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	VOC TICs	TPH	Lead
B-1	10/14/1994	10-12	<0.0039	0.134	0.0629	0.318	NA	NA	1.24	NA	0.15
B-2	10/14/1994	7-9	0.00116	0.003	0.0026	0.0096	NA	NA	0.0523	NA	0.47
B-3	10/14/1994	6-8	<0.00077	0.004	0.0015	0.0103	NA	NA	ND	NA	0.13
GP-1 *	8/30/1995	5.5-6	0.504	5.71	6.76	31.63	NA	NA	45.07	NA	15.3
GP-2 *	8/30/1995	9.5-10	BMDL	BMDL	BMDL	BMDL	NA	NA	ND	NA	6.0
GP-3*	8/30/1995	9-9.5	1.31	13.2	6.29	34.76	NA	NA	75.394	NA	1.48
GP-4 *	8/30/1995	1.5-2	BMDL	BMDL	0.01	0.074	NA	NA	0.634	NA	84.5
GP-5 *	8/30/1995	3.5-4	BMDL	BMDL	BMDL	BMDL	NA	NA	14.3	NA	9.7
GP-6 *	8/30/1995	1.5-2	0.713	6.28	2.14	11.59	NA	NA	9.2	NA	12
GP-7	8/30/1995	5-5.5	0.044	0.205	0.167	0.937	NA	NA	3.012	NA	3.2
GP-8	8/30/1995	1.5-2	BMDL	BMDL	2.77	5.629	NA	NA	98.22	NA	12.9
GP-9	8/30/1995	3-3.5	BMDL	BMDL	11.2	22.0	NA	NA	342.6	NA	14.9
GP-10	8/30/1995	7-7.5	BMDL	0.213	BMDL	BMDL	NA	NA	11.295	NA	9.6
GP-11*	8/30/1995	4.5-5	4.05	1.66	BMDL	3.8	NA	NA	157.58	NA	153
GP-12	8/31/1995	4.5-5	BMDL	3.15	16.5	85.6	NA	NA	159.64	NA	9.51
GP-13	8/31/1995	5.5-6	BMDL	2.69	22.8	97	NA	NA	344.2	NA	8.58
GP-14	8/31/1995	3.5-4	BMDL	BMDL	2.5	17.54	NA	NA	40.47	NA	22.5
GP-15	8/31/1995	5.5-6	BMDL	NA	NA	NA	NA	NA	NA	72.2	5.29
GP-16	8/31/1995	9.5-10	BMDL	BMDL	BMDL	BMDL	NA	NA	ND	NA	11.4
GP-17	8/31/1995	5.5-6	BMDL	BMDL	BMDL	BMDL	NA	NA	0.522	NA	17.5
GP-18	8/31/1995	7.5-8	BMDL	0.001	BMDL	0.002	NA	NA	ND	NA	11.5
GP-19	8/31/1995	6-6.5	BMDL	BMDL	BMDL	0.166	NA	NA	21.14	NA	14.6
GP-20	8/31/1995	3.5-4	BMDL	BMDL	BMDL	BMDL	NA	NA	ND	NA	73.2
GP-21	8/31/1995	1.5-2	BMDL	BMDL	BMDL	0.009	NA	NA	1.362	NA	54.7
GP-22	8/31/1995	3.5-4	BMDL	BMDL	3.2	0.838	NA	NA	94.64	NA	39.5
2021 Migration to Ground Water SRS (MGWSRS)			0.0094	7.8	15	19	0.25	0.32	NSE	NSE	90
2021 Residential Inhalation/Ingestion-Dermal SRS			2.2	6,300	10	12,000	140	1,400	NSE	5,300	400
2021 Non-Residential Inhalation/Ingestion-Dermal SRS			11	100,000	48	190,000	650	23,000	NSE	75,000	800

Notes:

All Results Shown in Milligrams per Kilogram (mg/Kg)

VOCs - Volatile Organic Compounds

BMDL - Below Method Detection Limits

Bold values indicate concentrations above SRS/Criteria

TICS - Tentatively Identified Compounds

Italicized concentrations above standard

J - Indicates an Estimated Value

ND- Not Detected

NA - Not Analyzed

SRS- Soil Remediation Standard

* Soil sample location removed during UST Closure / Soil Excavation Activities

Unsaturated soil sample (= or <4.5 feet) analytical are compared to MGWSRS

Saturated soil sample (>4.5 feet) analytical results are compared to Residential SRS

MTBE - Methyl Tert-Butyl Ether

TBA - Tertiary Butyl Alcohol

TPH - Total Petroleum Hydrocarbons

NSE - No Standard Established

TABLE 2 - CONTINUED

HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Sample ID	Date	Sample Depth	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	VOC TICs	TPH	Lead
SB-1	9/11/1996	3.5-4	BMDL	BMDL	BMDL	BMDL	BMDL	NA	ND	NA	NA
TW-1	4/16/1999	4-4.5	<0.049	0.17	1.2	4.28	0.68	NA	85.03	NA	NA
TW-2	4/16/1999	4-4.5	<0.050	0.26	2.3	12.95	0.35	NA	102.09	NA	NA
TW-3	4/16/1999	4-4.5	0.21	0.63	8.6	3.92	0.51	NA	ND	NA	NA
TW-4	4/16/1999	4-4.5	<0.051	0.16	0.64	4.09	0.26	NA	78.78	NA	NA
PE-1	10/25/2000	6-6.5	<0.023	<0.026	<0.027	<0.040	<0.040	NA	ND	NA	2.83
PE-2	10/25/2000	6-6.5	<0.023	<0.026	<0.028	<0.041	<0.041	NA	ND	NA	12.4
B-1	3/19/2002	5.5-6	<0.0173	<0.0186	1.21	2.02	<0.0106	NA	NA	NA	NA
B-2	3/19/2002	4.5-5	<0.0177	<0.019	<0.0245	<0.0598	<0.0109	NA	NA	NA	NA
B-3 *	3/19/2002	10.5-11	<0.0172	<0.0185	<0.0238	<0.0581	<0.0106	NA	NA	NA	NA
B-4*	3/19/2002	6.5-7	0.985	1.01	7.77	39.7	3.32	NA	NA	NA	NA
GP-3R*	4/21/2005	6.5-7	NA	NA	NA	NA	5.15	NA	NA	NA	NA
SB-1	4/18/2006	6.5-7	<0.061	<0.069	<0.057	<0.063	<0.071	NA	ND	NA	9.8
SB-1	4/18/2006	9.5	<0.066	<0.074	<0.062	<0.068	<0.077	NA	ND	NA	5.5
SB-2	4/18/2006	6.5-7	<0.070	<0.080	<0.066	<0.072	<0.082	NA	ND	NA	30.9
SB-2	4/18/2006	9.5	<0.069	<0.078	<0.064	<0.071	<0.080	NA	ND	NA	6.6
SB-3	4/18/2006	6.5-7	<0.071	<0.080	<0.067	<0.073	<0.083	NA	ND	NA	31.4
SB-3	4/18/2006	9.5	<0.068	<0.077	<0.064	<0.070	<0.080	NA	ND	NA	16.0
SB-4	4/18/2006	5.0	<0.056	<0.063	<0.052	<0.057	<0.065	NA	ND	NA	7.3
SB-4	4/18/2006	11.5-12	<0.066	<0.075	<0.062	<0.068	<0.077	NA	ND	NA	5.2
SB-5	4/18/2006	5	<0.064	<0.072	<0.060	<0.066	<0.075	NA	2.35 J	NA	5.8
SB-6	4/18/2006	5	<0.074	0.0852 J	<0.070	0.152 J	<0.086	NA	ND	NA	11.2
SB-7	4/18/2006	5	<0.053	<0.060	<0.050	<0.055	<0.062	NA	ND	NA	9.6
SB-7	4/18/2006	6	<0.057	<0.065	<0.054	<0.059	<0.067	NA	ND	NA	14.5
SB-8	4/18/2006	5	<0.060	<0.067	0.12	<0.061	<0.070	NA	ND	NA	7.0
SB-9	4/18/2006	6	0.206	0.0997 J	3.13	13.5	<0.073	NA	146 J	NA	5.3
SB-10	4/18/2006	6	<0.067	<0.076	<0.063	<0.069	<0.078	NA	ND	NA	<2.4
2021 Migration to Ground Water SRS (MGWSRS)			0.0094	7.8	15	19	0.25	0.32	NSE	NSE	90
2021 Residential Inhalation/Ingestion-Dermal SRS			2.2	6,300	10	12,000	140	1,400	NSE	5,300	400
2021 Non-Residential Inhalation/Ingestion-Dermal SRS			11	100,000	48	190,000	650	23,000	NSE	75,000	800

Notes:

All Results Shown in Milligrams per Kilogram (mg/Kg)

VOCs - Volatile Organic Compounds

BMDL - Below Method Detection Limits

Bold values indicate concentrations above SRS/Criteria

TICS - Tentatively Identified Compounds

Italicized concentrations above standard

J - Indicates an Estimated Value

ND- Not Detected

NA - Not Analyzed

SRS- Soil Remediation Standard

* Soil sample location removed during UST Closure / Soil Excavation Activities

Unsaturated soil sample (= or <4.5 feet) analytical are compared to MGWSRS

Saturated soil sample (>4.5 feet) analytical results are compared to Residential SRS

MTBE - Methyl Tert-Butyl Ether

TBA - Tertiary Butyl Alcohol

TPH - Total Petroleum Hydrocarbons

NSE - No Standard Established

TABLE 2 - CONTINUED

HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Sample ID	Date	Sample Depth (feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	VOC TICs	TPH	Lead
WO-1-1	12/4/2007	5-5.5	<0.066	<0.038	<0.044	<0.024	NA	NA	ND	132	26.3
WO-1-2	12/4/2007	5-5.5	<0.100	<0.061	<0.070	<0.037	NA	NA	ND	16.6	24.7
WO-1-3	12/4/2007	5-5.5	<0.091	<0.053	<0.061	<0.033	NA	NA	ND	28.9	2.7
WO-1-4	12/4/2007	5-5.5	<0.099	<0.057	<0.066	<0.035	NA	NA	ND	22.5	3.3
WO-2-1	12/4/2007	5-5.5	<0.420	<0.240	<0.280	<0.150	NA	NA	637 J	54.2	7.4
WO-2-2	12/4/2007	5-5.5	<0.100	<0.059	<0.068	<0.036	NA	NA	34.35 J	175	19.9
WO-2-3	12/4/2007	5-5.5	<0.120	<0.067	<0.077	<0.041	NA	NA	ND	77.0	72.3
WO-2-4	12/4/2007	5-5.5	<0.110	<0.066	<0.076	<0.040	NA	NA	73.8 J	1,190	43.4
SB-1	10/20/2008	5-5.5	<0.018	0.0221 J	0.136	0.432	<0.019	NA	15.01 J	NA	NA
SB-2	10/20/2008	5-5.5	0.146	0.293	0.125 J	0.433	<0.051	NA	227 J	NA	NA
SB-3	10/20/2008	5-5.5	<0.021	<0.019	<0.024	<0.018	<0.021	NA	2.04 J	NA	NA
SB-4	10/20/2008	5-5.5	<0.022	<0.020	<0.025	<0.019	<0.022	NA	1.19 J	NA	NA
T1-1	5/29/2013	11-11.5	0.0617	0.012	0.0372	0.0692	0.0051	<0.0063	0.6912 J	NA	NA
T1-2	5/29/2013	11-11.5	<0.00016	<0.00014	<0.00036	<0.00019	0.0013 J	<0.0059	0.007 J	NA	NA
T1-3	5/29/2013	11-11.5	<0.00014	<0.00013	<0.00032	<0.00017	0.00041 J	<0.0052	ND	NA	NA
T1-4	5/29/2013	11-11.5	<0.00014	<0.00013	<0.00032	<0.00017	<0.00028	<0.0052	0.0063 J	NA	NA
T1-5	5/29/2013	11-11.5	<0.00015	0.0015	0.00088 J	0.0033	<0.00029	<0.0053	0.0011 J	NA	NA
T1-6	5/29/2013	11-11.5	<0.00015	0.0017	0.00064 J	0.0029	<0.00029	<0.0054	0.0063 J	NA	NA
T2-1	5/29/2013	11-11.5	<0.00014	0.00067 J	<0.00031	0.00069 J	0.0011 J	<0.0051	0.0202 J	NA	NA
T2-2	5/29/2013	11-11.5	0.0015	<0.00013	<0.00033	0.00052 J	0.0021	<0.0055	0.4309 J	NA	NA
T2-3	5/29/2013	11-11.5	<0.00015	<0.00014	<0.00034	<0.00018	0.00057 J	<0.0057	ND	NA	NA
P-1	5/30/2013	2-2.5	<0.00012	<0.00011	<0.00028	<0.00015	<0.00025	<0.0046	0.0194 J	NA	NA
P-2*	5/30/2013	2-2.5	0.349	22.3	69.5	486	<0.013	<0.24	304 J	NA	NA
P-3	5/30/2013	3-3.5	<0.014	<0.012	15.1	4.73	<0.027	<0.50	297 J	NA	NA
P-4	5/30/2013	3-3.5	<0.00015	<0.00014	<0.00034	<0.00018	<0.00030	<0.0056	ND	NA	NA
SW-1	7/10/2013	4-4.5	<0.00011	0.00021 J	<0.00024	<0.00013	<0.00021	<0.004	0.0059 J	NA	NA
SW-2	7/10/2013	4-4.5	<0.00015	0.00030 J	<0.00034	<0.00018	<0.00030	<0.0056	0.011 J	NA	NA
SW-3	7/10/2013	4-4.5	<0.00012	<0.00010	<0.00026	<0.00014	<0.00023	<0.0043	ND	NA	NA
SW-4	7/10/2013	4-4.5	<0.00015	0.00038 J	<0.00034	0.00037 J	<0.00030	<0.0056	0.015 J	NA	NA
B-1	7/10/2013	4.5-5	<0.00015	<0.00013	<0.00033	0.00030 J	<0.00030	<0.0055	0.011 J	NA	NA
B-1	9/19/2014	6.5-7	NA	NA	NA	NA	<0.00018	NA	NA	NA	NA
2021 Migration to Ground Water SRS (MGWSRS)			0.0094	7.8	15	19	0.25	0.32	NSE	NSE	90
2021 Residential Inhalation/Ingestion-Dermal SRS			2.2	6,300	10	12,000	140	1,400	NSE	5,300	400
2021 Non-Residential Inhalation/Ingestion-Dermal SRS			11	100,000	48	190,000	650	23,000	NSE	75,000	800

Notes:

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VOCs - Volatile Organic Compounds

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Unsaturated soil sample (= or <4.5 feet) analytical are compared to MGWSRS

Saturated soil sample (>4.5 feet) analytical results are compared to Residential SRS

MTBE - Methyl Tert-Butyl Ether

TBA - Tertiary Butyl Alcohol

TPH - Total Petroleum Hydrocarbons

NSE - No Standard Established

TABLE 2 - CONTINUED

HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Sample ID	Date	Sample Depth	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	VOC TICs	TPH	Lead
GP-9R	8/11/2021	3-3.5	NA	NA	<0.00068	<0.00068	NA	NA	NA	NA	NA
TW-1R	8/11/2021	4-4.5	<0.00045	NA	NA	NA	<0.00046	NA	NA	NA	NA
TW-2R	8/11/2021	4-4.5	<0.00052	NA	NA	NA	<0.00053	NA	NA	NA	NA
TW-3R	8/11/2021	4-4.5	<0.00044	NA	NA	NA	<0.00045	NA	NA	NA	NA
TW-4R	8/11/2021	4-4.5	0.0022	NA	NA	NA	<0.00047	NA	NA	NA	NA
P-3R	8/11/2021	3-3.5	NA	NA	<0.0013	NA	NA	NA	NA	NA	NA
2021 Migration to Ground Water SRS (MGWSRS)			0.0094	7.8	15	19	0.25	0.32	NSE	NSE	90
2021 Residential Inhalation/Ingestion-Dermal SRS			2.2	6,300	10	12,000	140	1,400	NSE	5,300	400
2021 Non-Residential Inhalation/Ingestion-Dermal SRS			11	100,000	48	190,000	650	23,000	NSE	75,000	800

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TICS - Tentatively Identified Compounds

Italicized concentrations above standard

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ND- Not Detected

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SRS- Soil Remediation Standard

* Soil sample location removed during UST Closure / Soil Excavation Activities

Unsaturated soil sample (= or <4.5 feet) analytical are compared to MGWSRS

Saturated soil sample (>4.5 feet) analytical results are compared to Residential SRS

MTBE - Methyl Tert-Butyl Ether

TBA - Tertiary Butyl Alcohol

TPH - Total Petroleum Hydrocarbons

NSE - No Standard Established

<p style="text-align: center;">TABLE 3</p> <p style="text-align: center;">MONITORING WELL CONSTRUCTION SUMMARY Former Getty Service Station #56955 1008 Kings Highway Swedesboro, Gloucester County, New Jersey</p>						
Monitoring Well ID	Date Installed	Total Well Depth (feet)	Well Diameter (inches)	Well Screen Interval (feet)	Top of Casing Elevation (feet)	Well Permit Number
MW-1**	10/14/94	15.0	4	5-15	14.15	30-10461
MW-1R	6/24/13	15.0	2	5-15	13.41	E201307796
MW-2**	10/31/95	15.0	4	5-15	15.95	30-11276
MW-2R	6/24/13	15.0	2	5-15	15.66	E201307797
MW-3*	10/31/95	15.0	4	5-15	NA	30-11277
MW-3R	4/21/05	15.0	2	3-15	15.78	3000017948
MW-4	12/27/95	15.0	4	5-15	12.68	30-11341
MW-5	12/27/95	5.0	2	0-5	5.42	30-11342
MW-6	8/28/96	6.0	2	1-6	5.42	30-11778
MW-7	6/19/01	14.0	2	12-14	5.01	30-14767
MW-8	3/3/06	15.0	2	3-15	15.93	3000018586
MW-9	3/3/06	15.0	2	3-15	15.40	3000018587
MW-10	10/21/08	7.6	2	1.6-7.6	6.52	P200800271
MW-11	3/9/09	15.0	2	2-15	15.03	P200901881
MW-12D	5/31/13	30.0	2	25-30	9.25	E201307104
MW-13	8/15/18	17.0	1	12-17	6.71	E201807785
MW-14	8/15/18	17.0	1	12-17	6.48	E201807786
MW-15	8/28/19	15.0	1	13-15	10.47	E201908774
MW-16D	8/28/19	40.0	2	35-40	15.68	E201908769
SVE-1	1/22/98	15.0	4	5-15	15.69	30-12545

Notes:

* - Monitoring well was abandoned by a Licensed Well Driller on April 26, 2005

** - Monitoring well was abandoned by a Licensed Well Driller on May 28, 2013

NA - Not Available

TABLE 4
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-1	11/1/1994	18.7	94.2	23.1	114	126	BMDL	1,891	15
	12/1/1995	45.8	38.2	21.6	80	196	240	326	3
	1/12/1996	44.0	27.0	36.0	109	92.0	BMDL	721	48
	7/12/1996	10.8	10.00	6.9	33.8	16.5	BMDL	NA	26
	10/7/1997	5.3	13.2	8.3	73.8	28.4	BMDL	339.9	NA
	10/21/1998	5.1	3.4	1.0	14.8	30.2	BMDL	99.6	NA
	10/26/1999	7.5	4.0	3.5	22.4	30.0	6.5	185.8	NA
	4/14/2000	1.4	1.3	5.3	35.6	7.8	BMDL	NA	NA
	9/22/2000	6.4	1.2	2.1	11.7	52.6	1.1 J	60.1	NA
	4/13/2001	BMDL	BMDL	1.8	27.6	19.4	BMDL	NA	NA
	10/19/2001	58.6	11.5	52.6	70.3	3,960	2,690	BMDL	NA
	4/19/2002	4.0	BMDL	BMDL	BMDL	30.8	BMDL	NA	NA
	10/4/2002	2.1	BMDL	BMDL	2.8	41.5	BMDL	242	NA
	4/7/2003	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	NA
	10/31/2003	1.7	BMDL	BMDL	2.6	52	30.4	NA	NA
	4/9/2004	1.6	BMDL	BMDL	7.5	41.4	54.2	NA	NA
	10/19/2004	2.3	0.23	BMDL	1.7	36.2	BMDL	230.8	NA
	4/27/2005	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	NA
	10/7/2005	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	NA
	4/6/2006	5.5	0.81 J	0.33 J	5.4	81.9	37.1	NA	5.3
	10/4/2006	1.7	1.4	1.8	5.5	71.8	69.1	60.7	17.5
	11/10/2007	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	5/5/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	10/20/2008	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	4/16/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	10/15/2009	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	4/28/2010	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	10/28/2010	BMDL	BMDL	BMDL	0.33 J	6.2	BMDL	BMDL	<3.0
	4/19/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	11/2/2011	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	4/10/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	10/2/2012	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
	4/11/2013	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL	LNAPL
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

All results shown in micrograms per liter (ug/L).

BMDL - Below Method Detection Limits

NA - Not Applicable.

MTBE - Methyl Tert-Butyl Ether

TBA - Tert-Butyl Alcohol

TICs - Tentatively Identified Compounds

GWQS - Groundwater Quality Standards

NSLE - No Screening Level Established

GWSL - Groundwater Screening Levels from NJDEP Vapor Intrusion Guidance, 2021

LNAPL - Light Non-Aqueous Phase Liquids consisting of waste oil

Bold values indicate concentrations above GWQS.

E - Estimated Concentration

NSE - No Standard Established

J - Indicates an estimated value.

a - Results from Run #2

TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-1R	11/2/2013	<0.28	<0.44	<0.21	0.38 J	1.4	<1.9	BMDL	102
	4/8/2014	<0.28	<0.44	<0.21	<0.19	2	<1.9	BMDL	48.2
	10/8/2014	<0.21	<0.22	<0.40	<0.20	0.55 J	<4.7	BMDL	6.5
	5/4/2015	<0.24	<0.16	<0.27	<0.17	1.5	<2.8	NA	15.5
	11/6/2015	<0.24	<0.16	<0.27	<0.17	0.51	<2.8	BMDL	43.8
	4/19/2016	<0.24	<0.16	<0.27	<0.17	0.9	<2.8	NA	4.1
	10/18/2016	<0.14	<0.23	<0.20	<0.21	0.66 J	<3.0	BMDL	19.0
	4/3/2017	<0.14	<0.23	<0.20	<0.21	0.70 J	<3.0	NA	14.4
	11/29/2017	NA	NA	NA	NA	NA	NA	NA	<3.0
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

All results shown in micrograms per liter (ug/L).

BMDL - Below Method Detection Limits

NA - Not Applicable.

MTBE - Methyl Tert-Butyl Ether

TBA - Tert-Butyl Alcohol

TICs - Tentatively Identified Compounds

GWQS - Groundwater Quality Standards

NSLE - No Screening Level Established

GWSL - Groundwater Screening Levels from NJDEP Vapor Intrusion Guidance, 2021

LNAPL - Light Non-Aqueous Phase Liquids consisting of waste oil

Bold values indicate concentrations above GWQS.

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J - Indicates an estimated value.

a - Results from Run #2

TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-2	12/1/1995	10,800	7,400	985	4,320	198,000	11,500	18,205	BMDL
	1/12/1996	5,630	4,920	778	2,990	163,000	5,900	BMDL	13
	7/12/1996	4,900	5,380	969	4,450	142,000	7,140	NA	BMDL
	3/27/1997	2,020	1,330	499	2,050	88,500	5,640	NA	NA
	6/23/1997	595	485	212	1,200	32,300	7,540	NA	NA
	10/7/1997	496	108	261	716	61,000	1,570	917	NA
	1/9/1998	283	77.7	176	270	17,700	900	NA	NA
	4/2/1998	1,091	674	1,099	4,230	8,620	3,260	NA	NA
	7/1/1998	1,280	BMDL	539	1,200	45,200	9,700	NA	NA
	10/21/1998	380	149	779	1,090	2,470	13,700	1,410	NA
	1/14/1999	4,840	752	5,680	10,800	18,800	13,600	NA	NA
	4/26/1999	437	90.1	420	688	35,300	9,090	NA	NA
	7/16/1999	524	134	634	1,110	45,900	18,800	NA	NA
	10/26/1999	66.6	7.8	35.3	62.1	2,690	5,010	194	NA
	4/14/2000	33.8	BMDL	BMDL	25.4	1,030	2,910	NA	NA
	9/22/2000	5.7	BMDL	BMDL	10.2	BMDL	<42.2	BMDL	NA
	4/13/2001	17.5	5.2	11.2	18.4	689	485 J	NA	NA
	10/19/2001	8.1	BMDL	BMDL	11	102	BMDL	226	NA
	4/19/2002	12.2	BMDL	BMDL	BMDL	1,440	BMDL	NA	NA
	10/4/2002	28.2	19.1	156	268	BMDL	326	66	NA
	4/7/2003	15.2	6.0	58.7	101	3,490	977	804	NA
	10/31/2003	28.1	15.4	105	193	3,380	2,970	NA	NA
	4/9/2004	22.1	7.5	77.7	164	2,750	3,040	NA	NA
	10/19/2004	35.0	10.0	125	199	3,630	2,670	931	NA
	4/27/2005	7.1	2.5	59.6	95.2	547a	375	NA	NA
	10/7/2005	46.1	8.2	171	301	3,750a	1,690	NA	NA
	4/6/2006	36.1	4.7 J	80.2	148	7,520a	3,410	NA	4.0
	10/4/2006	43.8	BMDL	176b	244b	2,070b	4,310b	1,129	19
	11/10/2007	10.5	1.3	40.6	56.3	373	1,180	254	<3.0
	5/5/2008	Car Parked on Top of Monitoring Well							
	10/20/2008	17.0	1.8	56.9	80.6	313	556	NA	26.7
	4/16/2009	5.1	1.1	32.9	49.3	97.7	182	NA	42.6
	10/15/2009	3.3	0.55 J	13.4	13.2	57.7	109	154.5 J	67.8
	4/28/2010	Car Parked on Top of Monitoring Well							
	10/28/2010	19.7	0.62 J	24	23.7	119	238	236 J	4.3
	4/19/2011	5.4	<0.30	5.7	5.4	51.1	69.6	NA	NA
	11/2/2011	2.7	0.39 J	4.0	5.0	11.7	12.6 J	89.2 J	8.1
	4/10/2012	0.67	<0.15	1.9	2.7	2.8	<1.9	NA	<3.0
	10/2/2012	16.5	1.4	26.5	27.2	70.4	124	281.5 J	<3.0
	4/11/2013	1.0	<0.23	2.3	2.7	3.8	<1.8	NA	19.0
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

All results shown in micrograms per liter (ug/L)

BMDL - Below Method Detection Limits

NA - Not Applicable.

TICs - Tentatively Identified Compounds

GWQS - Groundwater Quality Standards

NSLE - No Screening Level Established

LNAPL - Light Non-Aqueous Phase Liquids consisting of waste oil

GWSL - Groundwater Screening Levels from NJDEP Vapor Intrusion Guidance, 2021

Bold values indicate concentrations above GWQS

E - Estimated Concentration

NSE - No Standard Established

J - Indicates an estimated value

a - Results from Run #2

MTBE - Methyl Tert-Butyl Ether

TBA - Tert-Butyl Alcohol

TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-2R	11/2/2013	1.4	<0.44	3.0	2.6	4.6	<1.9	122.9 J	4.2
	4/8/2014	0.53	<0.44	<0.21	0.44 J	3.8	<1.9	6.2 J	8.3
	10/8/2014	1.2	<0.22	1.4	0.91 J	3.7	<4.7	35.6 J	6.4
	5/4/2015	4.1	<0.16	3.5	1.0	7.2	20.3	NA	30.1
	11/6/2015	0.32 J	<0.16	<0.27	<0.17	2.5	<2.8	BMDL	13.6
	4/19/2016	6.8	0.25	4.8	5.9	<0.24	15.2	NA	3.4
	10/18/2016	7.6	0.42 J	2.7	8	8.4	11.6	661 J	<3.0
	4/3/2017	2.5	<0.23	1.6	4.2	3.2	5.2 J	NA	6.6
	11/29/2017	0.23	NA	NA	NA	NA	NA	5.4	<3.0
	6/1/2018	<0.17	NA	NA	NA	NA	NA	ND	122
	10/24/2018	4.4	NA	NA	NA	NA	NA	590	<3.0
	1/16/2019	2.1	NA	NA	NA	NA	NA	854 J	12.6
	4/24/2019	2.0	NA	NA	NA	NA	NA	542 J	<3.0
	7/29/2019	<0.43	NA	NA	NA	NA	NA	42 J	<3.0
	10/16/2019	<0.43	NA	NA	NA	NA	NA	15.2 J	NA
	1/16/2020	3.1	NA	NA	NA	NA	NA	702 J	NA
	4/10/2020	1.1	NA	NA	NA	NA	NA	488 J	NA
	7/2/2020	<0.43	NA	NA	NA	NA	NA	213 J	NA
	10/15/2020	0.53	NA	NA	NA	NA	NA	NA	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

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BMDL - Below Method Detection Limits

NA - Not Applicable.

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TBA - Tert-Butyl Alcohol

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LNAPL - Light Non-Aqueous Phase Liquids consisting of waste oil

Bold values indicate concentrations above GWQS.

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a - Results from Run #2

TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-3	12/1/1995	530	26.5	126	110	218	830	939	BMDL
	1/12/1996	440	28.0	196	149	563	170	1,776	3.0
	7/12/1996	302	24.4	3.0	95.8	727	330	NA	2.0
	3/27/1997	260	20.3	160	119	1,975	760	NA	NA
	6/23/1997	180	16.7	29.2	147	630	BMDL	NA	NA
	10/7/1997	262	18.1	68.5	53.6	1,200	360	1,875	NA
	1/9/1998	702	24.9	301	82.1	599	BMDL	NA	NA
	4/2/1998	239	16.8	164	202	477	BMDL	NA	NA
	7/1/1998	175	13	65.3	170	843	BMDL	NA	NA
	10/21/1998	195	18.6	64.7	71.9	1,160	BMDL	1,450	NA
	1/14/1999	2,020	202	718	580	8,070	1,610	NA	NA
	10/26/1999	2.2	6.1	3.5	18.6	1,580	1,640	58.6	NA
	10/31/2003	NA	NA	NA	NA	NA	NA	NA	NA
MW-3R	4/27/2005	BMDL	BMDL	BMDL	BMDL	106	194	NA	NA
	10/7/2005	BMDL	BMDL	BMDL	BMDL	40.7	BMDL	NA	NA
	4/6/2006	BMDL	0.38 J	BMDL	0.61 J	57.7	121	NA	BMDL
	10/4/2006	BMDL	BMDL	BMDL	BMDL	7.5	29.5	99.5	14.7
	11/10/2007	BMDL	BMDL	BMDL	BMDL	1.4	BMDL	126	29.6
	5/5/2008	0.19 J	BMDL	0.29 J	0.97 J	2.6	BMDL	587	13.0
	10/20/2008	BMDL	BMDL	BMDL	BMDL	2.0	BMDL	NA	5.7
	4/24/2009	0.68 J	0.93 J	0.25 J	0.80 J	1.4 J	BMDL	203	20.5
	10/15/2009	6.6	BMDL	BMDL	0.36 J	1.0	BMDL	84.2 J	59.6
	4/28/2010	28.5 J	0.76 J	0.83 J	24.8	1.3	BMDL	NA	9.9
	10/28/2010	0.67 J	BMDL	BMDL	1.0	0.90 J	BMDL	281.3 J	<3.0
	4/19/2011	<0.23	<0.30	0.68 J	1.1	0.72 J	7.0 J	NA	NA
	11/2/2011	<0.22	0.29 J	<0.21	1.7	0.47 J	<1.9	508 J	47.7
	4/10/2012	1.1	0.30	0.30	1.4	0.44	<1.9	NA	8.8
	10/2/2012	<0.24	<0.23	<0.23	0.35 J	<0.16	<1.8	253.6 J	11.2
	11/2/2013	<0.28	<0.44	0.41 J	2.4	<0.29	<1.9	514.4 J	3.5
	4/8/2014	0.37 J	<0.44	0.33 J	1.9	<0.29	<1.9	568.8 J	34.7
	10/8/2014	<0.21	0.30 J	<0.40	1.4	0.30 J	<4.7	646 J	7.5
	5/4/2015	<0.24	0.29 J	0.38 J	1.5	0.28 J	8.0 J	NA	5.5
	11/6/2015	<0.24	0.21 J	<0.27	0.92 J	0.24	6.3 J	732 J	6.5
	4/20/2016	<0.24	<0.16	0.38	0.84	0.28	<2.8	NA	<3.0
	10/18/2016	<0.14	0.31 J	0.38 J	0.69 J	<0.34	<3.0	1,009 J	<3.0
	4/3/2017	<0.14	<0.23	<0.20	0.45 J	<0.34	3.8 J	NA	8.3
	11/29/2017	NA	NA	NA	NA	NA	NA	546	18.6
	6/1/2018	NA	NA	NA	NA	NA	NA	589	31.5
	10/24/2018	NA	NA	NA	NA	NA	NA	582 J	83
	1/16/2019	NA	NA	NA	NA	NA	NA	780 J	7.6
	4/24/2019	NA	NA	NA	NA	NA	NA	336.4 J	<3.0
	7/29/2019	NA	NA	NA	NA	NA	NA	834 J	<3.0
	10/16/2019	NA	NA	NA	NA	NA	NA	313 J	NA
	1/16/2020	NA	NA	NA	NA	NA	NA	458.9	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

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NA - Not Applicable.

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TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-4	1/12/1996	BMDL	BMDL	BMDL	BMDL	2.0	BMDL	19	1.0
	2/5/1996	28.9	1.1	BMDL	1.3	2.5	BMDL	77.3	BMDL
	4/5/1996	33.7	2.3	BMDL	3.1	21.4	BMDL	NA	40
	7/12/1996	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	3.0
	10/7/1997	BMDL	BMDL	BMDL	BMDL	4.4	BMDL	13.9	NA
	10/21/1998	BMDL	BMDL	BMDL	BMDL	2.00	BMDL	BMDL	NA
	10/26/1999	BMDL	BMDL	BMDL	BMDL	1.8	19.2	BMDL	NA
	10/31/2003	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/2006	BMDL	BMDL	BMDL	BMDL	5.9	BMDL	NA	7.9
	10/4/2006	BMDL	1.1	1.1	3.9	3.4	BMDL	BMDL	BMDL
	11/10/2007	BMDL	BMDL	BMDL	BMDL	4.2	BMDL	BMDL	31.6
	5/5/2008	BMDL	BMDL	BMDL	BMDL	2.7	BMDL	BMDL	<3.0
	10/20/2008	BMDL	BMDL	BMDL	BMDL	2.5	BMDL	NA	<3.0
	4/16/2009	BMDL	BMDL	BMDL	BMDL	2.1	BMDL	NA	8.1
	10/15/2009	BMDL	BMDL	BMDL	BMDL	1.3	BMDL	BMDL	16.6
	4/28/2010	BMDL	BMDL	BMDL	BMDL	0.58 J	BMDL	NA	6.9
	10/28/2010	BMDL	BMDL	BMDL	BMDL	0.77 J	BMDL	BMDL	5.2
	4/19/2011	<0.23	<0.30	<0.27	<0.25	<0.23	9.1 J	NA	NA
	11/2/2011	<0.22	<0.15	<0.21	<0.17	0.22 J	<1.9	BMDL	26.6
	4/10/2012	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	NA	18.2
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	<3.0
	4/11/2013	NA	NA	NA	NA	NA	NA	NA	<3.0
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

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TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-5	1/12/1996	BMDL	BMDL	BMDL	BMDL	292	BMDL	BMDL	143
	2/5/1996	BMDL	BMDL	BMDL	BMDL	223	BMDL	BMDL	5.0
	4/5/1996	3.5	BMDL	BMDL	BMDL	221	BMDL	NA	81.0
	7/12/1996	49.2	12.9	BMDL	BMDL	2,530	190	NA	BMDL
	9/11/1996	2.8	BMDL	BMDL	BMDL	572	240	NA	NA
	3/27/1997	15.7	BMDL	BMDL	BMDL	2,410	2,060	NA	NA
	6/23/1997	BMDL	BMDL	BMDL	BMDL	43	BMDL	NA	NA
	1/22/1998	51.6	BMDL	BMDL	BMDL	987	2,100	NA	NA
	4/2/1998	196	5.6	9.3	14.7	457	2,810	NA	NA
	7/1/1998	72.5	2.4	2.3	5.4	19.2	3,590	NA	NA
	10/21/1998	8.5	1.1	1.7	3.6	3.1	BMDL	51.8	NA
	1/14/1999	50.5	4.1	4.6	10.3	736	1,580	NA	NA
	4/26/1999	92.3	2.6	2.2	5.1	1,160	3,260	NA	NA
	7/16/1999	BMDL	BMDL	BMDL	BMDL	10.3	346	NA	NA
	10/26/1999	BMDL	BMDL	BMDL	1.2	55	1,530	115	NA
	4/14/2000	7.1	BMDL	BMDL	BMDL	97.3	1,120	NA	NA
	9/22/2000	BMDL	BMDL	BMDL	BMDL	BMDL	2.0 J	BMDL	NA
	4/13/2001	BMDL	0.73	BMDL	3.2	33.2	44.9	NA	NA
	10/19/2001	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA
	4/19/2002	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA
	10/4/2002	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	6	NA
	4/7/2003	BMDL	BMDL	BMDL	BMDL	23.5	405	8.2	NA
	10/31/2003	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	NA
	4/9/2004	BMDL	BMDL	BMDL	BMDL	341	819	NA	NA
	10/19/2004	BMDL	BMDL	BMDL	BMDL	0.50	13.7	BMDL	NA
	4/27/2005	BMDL	BMDL	BMDL	BMDL	27.1	662	NA	NA
	10/7/2005	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	NA
	4/6/2006	BMDL	BMDL	BMDL	BMDL	14.5	111	NA	3.8
	10/4/2006	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	77.7
	11/10/2007	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	6.6
	5/5/2008	BMDL	BMDL	BMDL	BMDL	0.36 J	BMDL	BMDL	<3.0
	10/20/2008	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	5.6
	4/16/2009	BMDL	BMDL	BMDL	BMDL	0.73 J	81.8	NA	52.4
	10/15/2009	BMDL	BMDL	BMDL	BMDL	0.34 J	BMDL	BMDL	18.0
	4/28/2010	BMDL	BMDL	BMDL	BMDL	1.6	BMDL	NA	3.2
	10/28/2010	BMDL	BMDL	BMDL	BMDL	0.75 J	BMDL	BMDL	<3.0
	4/19/2011	<0.23	<0.30	<0.27	<0.25	0.67 J	<2.0	NA	NA
	11/2/2011	<0.22	<0.15	<0.21	<0.17	1.7	66.0	BMDL	<3.0
	4/10/2012	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	NA	<6.0
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	<3.0
	4/11/2013	NA	NA	NA	NA	NA	NA	NA	7.9
	11/2/2013	NA	NA	NA	NA	NA	NA	NA	<3.0
	4/8/2014	NA	NA	NA	NA	NA	NA	NA	6.2
	10/8/2014	NA	NA	NA	NA	NA	NA	NA	<3.0
	6/1/2018	NA	NA	NA	NA	NA	NA	NA	6.8
	10/24/2018	NA	NA	NA	NA	NA	NA	NA	<3.0
	1/16/2019	NA	NA	NA	NA	NA	NA	NA	<3.0
GWQS		1	600	700	1,000	70	100	500	5
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TABLE 4 (CONTINUED)
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1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-6	9/11/1996	BMDL	BMDL	BMDL	BMDL	43.8	310	BMDL	NA
	3/27/1997	98.6	BMDL	BMDL	BMDL	55,000	13,600	NA	NA
	6/23/1997	BMDL	BMDL	BMDL	BMDL	820	620	NA	NA
	10/7/1997	BMDL	BMDL	BMDL	BMDL	134	860	BMDL	NA
	1/9/1998	4.0	BMDL	BMDL	BMDL	16,300	12,100	NA	NA
	4/2/1998	32.4	5.0	1.9	1.8	5,420	19,800	NA	NA
	7/1/1998	1.4	BMDL	BMDL	BMDL	393	13,500	NA	NA
	10/21/1998	BMDL	BMDL	BMDL	BMDL	22.9	1,820	17.1	NA
	1/14/1999	BMDL	BMDL	BMDL	BMDL	3,230	14,500	NA	NA
	4/26/1999	BMDL	BMDL	BMDL	BMDL	29,900	39,000	NA	NA
	7/16/1999	BMDL	BMDL	BMDL	BMDL	157	6,940 E	NA	NA
	10/26/1999	BMDL	BMDL	BMDL	BMDL	8.4	2,990	BMDL	NA
	4/14/2000	<5.00	BMDL	BMDL	BMDL	912	32,800	NA	NA
	9/22/2000	BMDL	BMDL	BMDL	BMDL	BMDL	518	BMDL	NA
	4/13/2001	BMDL	1.4	0.64	4.7	22.7	1,220	NA	NA
	10/19/2001	BMDL	BMDL	BMDL	BMDL	BMDL	49.9	BMDL	NA
	4/19/2002	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA
	10/4/2002	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA
	4/7/2003	BMDL	BMDL	BMDL	BMDL	12.4	918.0	BMDL	NA
	10/31/2003	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	NA
	4/9/2004	BMDL	BMDL	BMDL	BMDL	45.5	477	NA	NA
	10/19/2004	BMDL	BMDL	BMDL	BMDL	0.65	24.3	BMDL	NA
	4/27/2005	BMDL	BMDL	BMDL	BMDL	4.10	394	NA	NA
	10/7/2005	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	NA
	4/6/2006	BMDL	BMDL	BMDL	BMDL	106	1,510a	NA	9.6
	10/4/2006	BMDL	BMDL	BMDL	BMDL	0.51	BMDL	BMDL	15.7
	11/10/2007	BMDL	BMDL	BMDL	BMDL	0.53	BMDL	BMDL	17.9
	5/5/2008	BMDL	BMDL	BMDL	BMDL	1.1	402	BMDL	7.9
	10/20/2008	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	<3.0
	4/16/2009	BMDL	BMDL	BMDL	BMDL	1.6	287	NA	13.7
	10/15/2009	BMDL	BMDL	BMDL	BMDL	0.65 J	BMDL	BMDL	20.8
	4/28/2010	BMDL	BMDL	BMDL	BMDL	3.6	930	NA	<3.0
	10/28/2010	BMDL	BMDL	BMDL	BMDL	1.1	BMDL	BMDL	<3.0
	4/19/2011	<0.23	<0.30	<0.27	<0.25	4.4	992	NA	NA
	11/2/2011	<0.22	<0.15	<0.21	<0.17	1.6	303	BMDL	6.4
	4/10/2012	<0.22	<0.15	<0.21	<0.17	1.8	712	NA	<6.0
	10/2/2012	<0.24	<0.23	<0.23	<0.24	0.54 J	22.0 J	BMDL	<3.0
	4/11/2013	<0.24	<0.23	<0.23	<0.24	0.33 J	<1.8	NA	32.4
	11/2/2013	<0.28	<0.44	<0.21	<0.19	1.8	142	BMDL	7.6
	4/8/2014	<1.1	<1.8	<0.83	<0.77	1.7 J	83.6 J	BMDL	4.3
	10/8/2014	<0.21	<0.22	<0.40	<0.20	0.67 J	<4.7	BMDL	<3.0
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

All results shown in micrograms per liter (ug/L).

BMDL - Below Method Detection Limits

Bold values indicate concentrations above GWQS.

TICs - Tentatively Identified Compounds

E - Estimated Concentration

LNAPL - Light Non-Aqueous Phase Liquids consisting of waste oil

GWSL - Groundwater Screening Levels from NJDEP Vapor Intrusion Guidance, 2021

NSE - No Standard Established

J - Indicates an estimated value.

MTBE - Methyl Tert-Butyl Ether

NSLE - No Screening Level Established

GWQS - Groundwater Quality Standards

a - Results from Run #2

TBA - Tert-Butyl Alcohol

NA - Not Applicable.

TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-6 (Cont'd)	5/4/2015	<0.24	<0.16	<0.27	<0.17	1.1	43.3	NA	3.0
	11/6/2015	<0.24	<0.16	<0.27	<0.17	0.83 J	82.3	BMDL	<3.0
	4/19/2016	<0.24	<0.16	<0.27	<0.17	0.80	38.7	NA	<3.0
	10/18/2016	<0.14	<0.23	<0.20	<0.21	0.70 J	<3.0	BMDL	<3.0
	4/3/2017	<0.14	<0.23	<0.20	<0.21	0.63 J	31.8	NA	<3.0
	11/29/2017	<0.17	NA	NA	NA	NA	NA	13	5.0
	6/1/2018	<0.17	NA	NA	NA	NA	21.2	BMDL	NA
	10/24/2018	<0.43	NA	NA	NA	NA	30	BMDL	NA
	1/16/2019	<0.43	NA	NA	NA	NA	18.5	BMDL	NA
	4/24/2019	<0.43	NA	NA	NA	NA	7.8	BMDL	NA
	4/10/2020	<0.43	NA	NA	NA	<0.51	<5.8	BMDL	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

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TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-7	10/19/2001	BMDL	BMDL	BMDL	BMDL	292	90.4	BMDL	NA
	4/19/2002	BMDL	BMDL	BMDL	BMDL	240	BMDL	BMDL	NA
	10/4/2002	BMDL	BMDL	BMDL	BMDL	274	BMDL	BMDL	NA
	4/7/2003	BMDL	BMDL	BMDL	BMDL	228	BMDL	BMDL	NA
	10/31/2003	BMDL	BMDL	0.70	2.3	314	BMDL	NA	NA
	4/9/2004	BMDL	BMDL	BMDL	BMDL	263	229	NA	NA
	10/19/2004	BMDL	BMDL	BMDL	BMDL	88.4	14.7	15.0	NA
	4/27/2005	BMDL	BMDL	BMDL	BMDL	461a	152	NA	NA
	10/7/2005	BMDL	BMDL	BMDL	BMDL	382a	120	NA	NA
	4/6/2006	BMDL	BMDL	BMDL	BMDL	515a	231	NA	BMDL
	10/4/2006	BMDL	BMDL	BMDL	BMDL	309a	281	8.2	61.2
	11/10/2007	BMDL	BMDL	BMDL	BMDL	339	362	8.0	26.2
	5/5/2008	BMDL	BMDL	BMDL	BMDL	266	627	8.3	15.3
	10/20/2008	BMDL	BMDL	BMDL	BMDL	217	873	NA	26.5
	4/16/2009	BMDL	1.7	BMDL	BMDL	215	727	NA	245
	10/15/2009				Monitoring Well Under Water				
	4/28/2010	BMDL	BMDL	BMDL	BMDL	179	1,210	NA	52.2
	10/28/2010	BMDL	BMDL	BMDL	BMDL	167	1,480	BMDL	514
	4/19/2011	<0.23	<0.30	<0.27	<0.25	158	2,410a	NA	NA
	11/2/2011	<0.22	<0.15	<0.21	<0.17	120	1,530	BMDL	12.7
	4/10/2012	<0.22	<0.15	<0.21	<0.17	101	2,690	NA	5.3
	10/2/2012	<0.24	<0.23	<0.23	<0.24	84.9	1,690a	BMDL	38.0
	4/11/2013	<0.24	<0.23	<0.23	<0.24	102	2,490a	NA	18.7
	11/2/2013	<0.28	<0.44	<0.21	<0.19	45.7	1,690	BMDL	38.8
	4/8/2014	<0.28	<0.44	<0.21	<0.19	58.9	3,570a	BMDL	27.1
	10/8/2014	<0.21	<0.22	<0.40	<0.20	45.0	2,520a	BMDL	18.9
	5/4/2015	<0.24	<0.16	<0.27	<0.17	46.7	3,880a	NA	<3.0
	11/6/2015	<0.24	<0.16	<0.27	<0.17	22.9	3,600a	BMDL	9.6
	4/19/2016	<0.24	<0.16	<0.27	<0.17	25.3	4,940a	NA	<15
	10/18/2016	<0.14	<0.23	<0.20	<0.21	18.7	4,070a	BMDL	11.1
	4/3/2017	<0.14	<0.23	<0.20	<0.21	16.4	5,790a	NA	7.5
	11/29/2017	NA	NA	NA	NA	NA	3,990a	NA	14.8
	6/1/2018	NA	NA	NA	NA	14.3	5,550a	NA	22.7
	10/24/2018	NA	NA	NA	NA	12.3	5,100	NA	12.8
	1/16/2019	NA	NA	NA	NA	11.8	7,200	NA	53.8
	4/24/2019	NA	NA	NA	NA	10.2	7,410	NA	34.5
	7/29/2019	NA	NA	NA	NA	12.9	8,070	NA	22.6
	10/16/2019	NA	NA	NA	NA	12.4	7,580	NA	48.3
	1/16/2020	NA	NA	NA	NA	10.2	7,710 a	NA	NA
	4/10/2020	NA	NA	NA	NA	NA	7,550 a	NA	NA
	7/2/2020	NA	NA	NA	NA	NA	7,600	NA	NA
	10/15/2020	NA	NA	NA	NA	NA	7,310	NA	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

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TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-8	4/6/2006	13.5	2.1	1.6	3.1	5.2	21.2 J	121.4	12.5
	10/18/2006	7.4	0.64	0.48	1.9	4.3	BMDL	92.0	6.3
	11/10/2007	32.3	2.4	1.1	4.8	5.5	BMDL	404	19.9
	5/5/2008	9.2	1.1	1.3	4.8	3.2	BMDL	534	19.9
	10/20/2008	8.6	0.59 J	BMDL	0.58 J	2.0	BMDL	NA	<3.0
	4/16/2009	2.5	BMDL	BMDL	BMDL	1.1	BMDL	NA	19.8
	10/15/2009	3.9	0.43 J	0.23 J	0.52 J	1.1	BMDL	124.3 J	34.9
	4/28/2010	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	11.5
	10/28/2010	1.9	BMDL	BMDL	0.79 J	0.61 J	BMDL	36.2 J	6.3
	4/19/2011	0.67 J	<0.30	<0.27	<0.25	0.43 J	<2.0	NA	NA
	11/2/2011	3.3	0.84 J	0.51 J	1.4	0.50 J	<1.9	251	66.3
	4/10/2012	1.4	<0.15	<0.21	<0.17	<0.18	<1.9	NA	22.0
	10/2/2012	19.0	2.5	1.6	3.9	0.29 J	<1.8	528.3 J	<3.0
	4/11/2013	19.8	2.6	3.4	4.3	0.31 J	<1.8	NA	16.9
	11/2/2013	3.5	0.59 J	0.46 J	2.3	<0.29	<1.9	285.2 J	4.6
	4/8/2014	0.34 J	<0.44	0.24 J	<0.19	0.37 J	<1.9	16.3 J	9.3
	10/8/2014	5.2	1.0	0.51 J	2.1	<0.26	<4.7	449.6 J	<3.0
	5/4/2015	0.42 J	0.25 J	0.34 J	0.38 J	0.50 J	45.4	NA	3.1
	11/6/2015	4.3	0.97 J	0.61 J	1.9	0.35 J	<2.8	625 J	<3.0
	4/19/2016	3.9	0.87	0.96	1.4	0.38	<2.8	NA	<3.0
	10/8/2016	4.7	1.1	0.78 J	1.3	<0.34	<2.8	536 J	<3.0
	4/3/2017	16.5	1.9	3.2	2.6	<0.34	<3.0	NA	<3.0
	11/29/2017	2.6	NA	NA	NA	NA	NA	250.9	NA
	6/1/2018	3.0	NA	NA	NA	NA	NA	796	NA
	10/24/2018	1.4	NA	NA	NA	NA	NA	185.5 J	NA
	1/16/2019	5.4	NA	NA	NA	NA	NA	423	NA
	4/24/2019	0.78	NA	NA	NA	NA	NA	129.4 J	NA
	7/29/2019	4.2	NA	NA	NA	NA	NA	776 J	NA
	10/16/2019	0.54	NA	NA	NA	NA	NA	78.4 J	NA
	1/16/2020	7.5	NA	NA	NA	NA	NA	584 J	NA
	4/10/2020	1.7	NA	NA	NA	NA	NA	200.8 J	NA
	7/2/2020	<0.43	NA	NA	NA	NA	NA	116 J	NA
	10/15/2020	0.85	NA	NA	NA	NA	NA	NA	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

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BMDL - Below Method Detection Limits

NA - Not Applicable.

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TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-9	4/6/2006	19.6	8.8	332	1220	174	BMDL	5,680	39.3
	10/18/2006	7.9	3.1	67.0	258	121	132	1,508	3.4
	11/10/2007	4.4	1.7	18.9	62.9	88.1	116	886	6.5
	5/5/2008	5.8	4.0	91.3	320	66.6	146	1,502	23.1
	10/20/2008	3.2	1.3	12.4	40.5	73.9	145	NA	29.1
	4/16/2009	4.3	2.6	52.7	118	57	97.2	NA	20.4
	10/15/2009	3.0	1.7	39.5	90.2	55.5	115	605 J	26.6
	4/28/2010	2.7	2.0	47.7	170	51.6	79.8	NA	22.9
	10/28/2010	3.9	2.0	70.2	153	52	75.9	967 J	8.1
	4/19/2011	5.2	3.6	82.0	275	42.3	72.6	NA	NA
	11/2/2011	1.9	1.6	50.3	123	23.1	53.1	1,175 J	127
	4/10/2012	0.65	0.51	5.6	15.0	11.0	<1.9	NA	28.6
	10/2/2012	0.53	0.50 J	0.46	10.1	11.6	29.7	670 J	8.5
	4/11/2013	1.7	1.4	34.9	83.4	13.0	31.4	NA	32.0
	11/2/2013	1.2	1.1	16.5	53.5	9.5	28.7	828 J	24.5
	4/8/2014	2.4	1.9	37.0	130	9.2	27.2	973 J	23.4
	10/8/2014	1.2	0.94 J	5.2	31.8	9.8	15.9	991 J	<3.0
	5/4/2015	1.4	0.92 J	23.9	56.5	7.5	19.8	NA	8.9
	11/6/2015	0.39 J	0.33 J	2.4	4.3	5.4	15.9	539 J	7.0
	4/19/2016	2.0	1.7	52.6	161	5.4	16.0	NA	3.1
	10/18/2016	0.58	0.66 J	8.7	36.9	5.8	17.8	1,138 J	<3.0
	4/3/2017	1.0	0.83 J	10.4	36.9	4.6	<3.0	NA	<3.0
	11/29/2017	0.79	NA	NA	NA	NA	NA	1,071	NA
	6/1/2018	0.76	NA	NA	NA	NA	NA	1,152	NA
	10/24/2018	0.59	NA	NA	NA	NA	NA	1,310 J	NA
	1/16/2019	0.79	NA	NA	NA	NA	NA	1,366 J	NA
	4/24/2019	0.65	NA	NA	NA	NA	NA	1,026 J	NA
	7/29/2019	<0.43	NA	NA	NA	NA	NA	938 J	NA
	10/16/2019	NA	NA	NA	NA	NA	NA	614 J	NA
	1/16/2020	NA	NA	NA	NA	NA	NA	1,233 J	NA
	4/10/2020	NA	NA	NA	NA	NA	NA	992 J	NA
	7/2/2020	NA	NA	NA	NA	NA	NA	954 J	NA
	10/15/2020	NA	NA	NA	NA	NA	NA	1,189 J	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

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TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-10	4/24/2009	25.4	3.4	2.9	15.2	83.5	81.3	452	293
	10/15/2009	Monitoring Well Under Water							
	4/28/2010	Raccoon Creek Water Rising							
	10/28/2010	13.6	1.7	BMDL	8.3	48.7	60.8	359 J	121
	4/19/2011	14.3	2.5	3.5	15.9	45.7	<2.0	NA	NA
	11/2/2011	15.4	2.7	0.48 J	13.6	51.9	52.5	668	512
	4/10/2012	12.4	2.2	0.64 J	24.5	36.2	52.0	NA	148
	10/2/2012	5.2	0.99 J	<0.23	5.1	34.9	54.1	412	78.7
	4/11/2013	13.9	2.6	11.8	32.4	43.6	47.9	NA	413
	4/8/2014	11.8	2.4	1.1	21.3	34.8	40.2	461.3 J	2,160
	10/8/2014	7.3	1.8	<0.40	16.0	<0.26	30.8	558 J	81.5
	5/4/2015	7.9	1.8	1.0	16.6	31.8	36.7	NA	596
	11/6/2015	6.9	2.1	0.32 J	19.2	28.9	38.5	683 J	174
	4/3/2017	4.7	1.4	0.51 J	11.5	19.8	28.4	NA	NA
	1/16/2019	3.7	NA	NA	NA	NA	NA	897 J	NA
	4/10/2020	2.7	NA	NA	NA	NA	NA	380.3 J	NA
	7/2/2020	0.81	NA	NA	NA	NA	NA	378 J	NA
	10/15/2020	2.8	NA	NA	NA	NA	NA	NA	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

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Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-11	4/16/2009	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	13.8
	10/15/2009	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	23.9
	4/28/2010	Monitoring Well Paved Over							
	10/28/2010	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	11.3
	4/19/2011	<0.23	<0.30	<0.27	<0.25	<0.23	<2.0	NA	NA
	11/2/2011	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	BMDL	37.9
	4/10/2012	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	NA	12.8
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	24.4
	4/11/2013	NA	NA	NA	NA	NA	NA	NA	44.5
	11/2/2013	NA	NA	NA	NA	NA	NA	NA	11.6
	4/8/2014	NA	NA	NA	NA	NA	NA	NA	20.7
	10/8/2014	NA	NA	NA	NA	NA	NA	NA	84.9
	5/4/2015	NA	NA	NA	NA	NA	NA	NA	84.7
	11/6/2015	NA	NA	NA	NA	NA	NA	NA	26.0
	4/20/2016	NA	NA	NA	NA	NA	NA	NA	21.7
	10/18/2016	NA	NA	NA	NA	NA	NA	NA	5.8
	4/3/2017	NA	NA	NA	NA	NA	NA	NA	112
	11/29/2017	NA	NA	NA	NA	NA	NA	NA	74.5
	6/1/2018	NA	NA	NA	NA	NA	NA	NA	206
	10/24/2018	NA	NA	NA	NA	NA	NA	NA	164
	1/16/2019	NA	NA	NA	NA	NA	NA	NA	29.6
	4/24/2019	NA	NA	NA	NA	NA	NA	NA	62.5^b
	7/29/2019	NA	NA	NA	NA	NA	NA	NA	42.6
	10/16/2019	NA	NA	NA	NA	NA	NA	NA	24.9
MW-12D	11/2/2013	<0.28	<0.44	<0.21	<0.19	<0.29	<1.9	BMDL	3.5
	4/8/2014	<0.28	<0.44	<0.21	<0.19	0.33 J	<1.9	BMDL	<3.0
MW-13	8/31/2018	<0.43	<0.53	<0.60	<0.59	1.7	40.3	BMDL	NA
	10/24/2018	<0.43	<0.53	<0.60	<0.59	2.6	13.6	BMDL	NA
	1/16/2019	<0.43	<0.53	<0.60	<0.59	2.7	6.7	BMDL	NA
	4/24/2019	<0.43	<0.53	<0.60	<0.59	1.7	17.4	BMDL	NA
	7/29/2019	<0.43	NA	NA	NA	0.51 J	<5.8	BMDL	NA
	10/16/2019	<0.43	NA	NA	NA	<0.51	<5.8	BMDL	NA
	1/16/2020	<0.43	NA	NA	NA	2.0	6.4 J	BMDL	NA
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

All results shown in micrograms per liter (ug/L).

BMDL - Below Method Detection Limits

NA - Not Applicable.

MTBE - Methyl Tert-Butyl Ether

TBA - Tert-Butyl Alcohol

TICs - Tentatively Identified Compounds

LNAPL - Light Non-Aqueous Phase Liquids consisting of waste oil

GWSL - Groundwater Screening Levels from NJDEP Vapor Intrusion Guidance, 2021

Bold values indicate concentrations above GWQS.

E - Estimated Concentration

NSE - No Standard Established

J - Indicates an estimated value.

a - Results from Run #2

GWQS - Groundwater Quality Standards

NSLE - No Screening Level Established

TABLE 4 (CONTINUED)
HISTORICAL GROUNDWATER ANALYTICAL RESULTS
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Monitoring Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	TICs	Lead
MW-14	8/31/2018	<0.43	<0.53	<0.60	<0.59	33.4	182	BMDL	NA
	10/24/2018	<0.43	<0.53	<0.60	<0.59	108	177	18.7 J	NA
	1/16/2019	<0.43	<0.53	<0.60	<0.59	118	207	5.4 J	NA
	4/24/2019	<0.43	<0.53	<0.60	<0.59	120	209	BMDL	NA
	7/29/2019	<0.43	NA	NA	NA	197	266	BMDL	NA
	10/16/2019	<0.43	NA	NA	NA	179	186	BMDL	NA
	1/16/2020	<0.43	NA	NA	NA	187	175	11 J	NA
	4/10/2020	<0.43	NA	NA	NA	172	257	BMDL	NA
	7/2/2020	<0.43	NA	NA	NA	198 a	287	BMDL	NA
	10/15/2020	NA	NA	NA	NA	212	273	BMDL	NA
MW-15	10/16/2019	<0.43	NA	NA	NA	18.1	<5.8	BMDL	NA
	1/16/2020	<0.43	NA	NA	NA	20.2	<5.8	BMDL	NA
MW-16D	10/16/2019	<0.43	NA	NA	NA	2.1	<5.8	BMDL	NA
	1/16/2020	<0.43	NA	NA	NA	1.2	<5.8	BMDL	NA
SVE-1	4/2/1998	3.1	BMDL	BMDL	BMDL	BMDL	BMDL	NA	NA
	10/31/2003	NA	NA	NA	NA	NA	NA	NA	NA
	4/6/2006	BMDL	BMDL	BMDL	BMDL	3.6	BMDL	BMDL	BMDL
	10/4/2006	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL
	10/18/2006	BMDL	BMDL	BMDL	BMDL	4.4	BMDL	BMDL	5.5
	11/10/2007	BMDL	BMDL	BMDL	BMDL	1.2	BMDL	BMDL	<3.0
	5/5/2008	BMDL	BMDL	BMDL	BMDL	0.69 J	BMDL	BMDL	<3.0
	10/20/2008	BMDL	BMDL	BMDL	BMDL	0.95 J	BMDL	NA	<3.0
	4/16/2009	BMDL	BMDL	BMDL	BMDL	0.70 J	BMDL	NA	<3.0
	10/15/2009	BMDL	BMDL	BMDL	BMDL	0.76 J	BMDL	BMDL	3.1
	4/28/2010	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	NA	5.8
	10/28/2010	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	BMDL	<3.0
	4/19/2011	<0.23	<0.30	<0.27	<0.25	0.51 J	<2.0	NA	NA
	11/2/2011	<0.22	<0.15	<0.21	<0.17	0.55 J	<1.9	8.9	<3.0
	4/10/2012	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	NA	3.5
	10/2/2012	NA	NA	NA	NA	NA	NA	NA	<3.0
GWQS		1	600	700	1,000	70	100	500	5
GWSL		23	330,000	700	7,800	690	NSLE	NSLE	NSLE

NOTES:

All results shown in micrograms per liter (ug/L).

BMDL - Below Method Detection Limits

NA - Not Applicable.

MTBE - Methyl Tert-Butyl Ether

TBA - Tert-Butyl Alcohol

TICs - Tentatively Identified Compounds

GWQS - Groundwater Quality Standards

NSLE - No Screening Level Established

GWSL - Groundwater Screening Levels from NJDEP Vapor Intrusion Guidance, 2021

LNAPL - Light Non-Aqueous Phase Liquids consisting of waste oil

Bold values indicate concentrations above GWQS.

E - Estimated Concentration

NSE - No Standard Established

J - Indicates an estimated value.

a - Results from Run #2

b - Elevated sample detection limit due to sample matrix

<p style="text-align: center;">TABLE 5</p> <p style="text-align: center;">HISTORICAL SURFACE WATER SAMPLE ANALYTICAL DATA</p> <p style="text-align: center;">Former Getty Service Station #56955</p> <p style="text-align: center;">1008 Kings Highway</p> <p style="text-align: center;">Swedesboro, Gloucester County, New Jersey</p>									
Sample ID	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	Total TICs	Lead
SW-1	7/25/1997	BMDL	BMDL	BMDL	BMDL	BMDL	250	NA	NA
	10/7/1997	<0.10	<0.22	<0.19	<0.44	<0.28	470	ND	NA
	1/9/1998	<0.20	<0.08	<0.20	<0.99	<0.95	<0.100	NA	NA
	4/2/1998	<0.05	<0.03	<0.08	<0.27	<0.16	<70	NA	NA
	7/1/1998	<0.05	<0.03	<0.08	<0.27	<0.16	<70	NA	NA
	10/21/1998	<0.25	<0.59	<0.52	<1.24	3.7	<70	ND	NA
	1/14/1999	<0.15	<0.13	<0.14	<0.40	5.0	<70	NA	NA
	4/26/1999	<0.16	<0.10	<0.11	<0.34	1.30	12.6	NA	NA
	7/16/1999	<0.25	<0.35	<0.33	<0.61	<1.43	278	NA	NA
	10/26/1999	<0.16	<0.10	<0.11	<0.34	<0.72	40.6	ND	NA
	4/14/2000	<0.10	<0.22	<0.19	<0.44	<0.28	<3.01	NA	NA
	9/22/2000	<0.16	<0.10	<0.11	<0.34	<0.72	<4.22	ND	NA
	4/13/2001	<0.27	<0.26	<0.44	<0.28	<0.53	<9.92	NA	NA
	4/19/2002	<0.16	<0.17	<0.25	<0.34	<0.37	<9.01	NA	NA
	10/4/2002	<0.090	<0.070	<0.16	<0.22	<0.21	<25.0	4.36	NA
	4/7/2003	<0.19	<0.24	<0.65	<0.056	<0.77	<5.9	ND	NA
	10/31/2003	<0.19	<0.24	<0.65	<0.55	<0.77	<0.59	NA	NA
	4/9/2004	<0.19	<0.24	<0.65	<0.55	<0.77	<0.59	NA	NA
	10/19/2004	<0.33	<0.11	<0.22	<0.26	<0.41	<10	ND	NA
	4/27/2005	<0.33	<0.11	<0.22	<0.26	0.97 J	<10	NA	NA
	10/7/2005	<0.11	<0.14	<0.38	<0.18	<0.17	<8.8	NA	NA
	4/6/2006	<0.18	<0.31	<0.23	<0.25	<0.35	<9.6	ND	3.6
SW Downstream	4/6/2006	<0.18	<0.31	<0.23	<0.25	<0.35	<9.6	ND	<3.0
	11/10/2007	<0.18	<0.31	<0.23	<0.25	<0.35	<9.6	ND	3.4
	5/5/2008	<0.18	<0.31	<0.23	<0.25	<0.35	<9.6	ND	4.1
	10/20/2008	<0.12	<0.20	<0.23	<0.15	<0.16	<6.4	NA	<3.0
	4/16/2009	<0.12	<0.20	<0.23	<0.15	<0.16	<6.4	NA	7.7
	10/15/2009	<0.15	<0.19	<0.15	<0.27	<0.31	<8.8	ND	5.0
	4/28/2010	<0.15	<0.19	<0.15	<0.27	<0.31	<8.8	NA	<3.0
	10/28/2010	<0.22	<0.30	<0.27	<0.25	<0.23	<2.0	ND	<3.0
	4/19/2011	<0.23	<0.30	<0.27	<0.25	<0.23	<2.0	NA	NA
	11/2/2011	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	ND	3.7
	4/10/2012	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	NA	<3.0
	11/2/2013	<0.28	<0.44	<0.21	<0.19	<0.29	<1.9	ND	4.8
	4/8/2014	<0.28	<0.44	<0.21	<0.19	<0.29	<1.9	ND	<3.0
FW2 - ESC		114	253	14	27	51,000	355,000	NCE	5.4

NOTES:

All results shown in micrograms per liter; ug/L.

Bold values indicate an exceedance of the SWQS

NJDEP - New Jersey Department of Environmental Protection

FW2 - ESC - Most Stringent Freshwater Aquatic Ecological Screening Criteria

MTBE - Methyl Tertiary Butyl Ether

TICs - Tentatively Identified Compounds

VOCs - Volatile Organic Compounds

ND - Not Detected

BMDL - Below Method Detection Limits

NSE - No Standard Established

NCE - No Criteria Established

NA - Not Analyzed

<p style="text-align: center;">TABLE 5 (CONTINUED)</p> <p style="text-align: center;">HISTORICAL SURFACE WATER SAMPLE ANALYTICAL DATA</p> <p style="text-align: center;">Former Getty Service Station #56955</p> <p style="text-align: center;">1008 Kings Highway</p> <p style="text-align: center;">Swedesboro, Gloucester County, New Jersey</p>									
Sample ID	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	Total TICs	Lead
SW-1 (6/23/2010)	6/23/2010	<0.27	<0.24	<0.22	<0.35	<0.26	<10	ND	75.3
	10/8/2014	<0.012	<0.15	<0.093	<0.12	<0.29	<4.8	ND	<3.0
	5/4/2015	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	ND	6.4
SW-2 (6/23/2010)	6/23/2010	<0.27	<0.24	<0.22	<0.35	<0.26	<10	ND	71.6
	10/8/2014	<0.12	<0.15	<0.093	<0.12	<0.29	<4.8	ND	<3.0
	5/4/2015	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	ND	3.4
SW-3 (6/23/2010)	6/23/2010	<0.27	<0.24	<0.22	<0.35	<0.26	<10	ND	143
	10/8/2014	<0.12	<0.15	<0.093	<0.12	<0.29	<4.8	ND	4.8
	5/4/2015	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	ND	5.3
SW-4 (6/23/2010)	6/23/2010	<0.27	<0.24	<0.22	<0.35	<0.26	<10	ND	45.7
	10/8/2014	<0.12	<0.15	<0.093	<0.12	<0.29	<4.8	ND	<3.0
	5/4/2015	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	ND	91.2
SW - Discharge (4/10/2012)	4/10/2012	<0.22	<0.15	<0.21	<0.17	<0.18	<1.9	NA	3.7
SW - Discharge (10/2/2012)	10/2/2012	<0.24	<0.23	<0.23	<0.24	<0.16	<1.8	ND	<3.0
SW Downstream (10/2/2012)	10/2/2012	<0.24	<0.23	<0.23	<0.24	<0.16	<1.8	ND	3.3
SW Downstream (4/11/2013)	4/11/2013	<0.24	<0.23	<0.23	<0.24	<0.16	<1.8	NA	<3.0
FW2 - ESC		114	253	14	27	51,000	355,000	NCE	5.4

NOTES:

All results shown in micrograms per liter; ug/L.

Bold values indicate an exceedence of the SWQS

NJDEP - New Jersey Department of Environmental Protection

FW2 - ESC - Most Stringent Freshwater Aquatic Ecological Screening Criteria

MTBE - Methyl Tertiary Butyl Ether

TICs - Tentatively Identified Compounds

VOCs - Volatile Organic Compounds

ND - Not Detected

BMDL - Below Method Detection Limits

NSE - No Standard Established

NCE - No Criteria Established

NA - Not Analyzed

TABLE 6

HISTORICAL SEDIMENT SAMPLE ANALYTICAL DATA
Former Getty Service Station #56955
1008 Kings highway
Swedesboro, Gloucester County, New Jersey

Sample ID	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	Total TICs	Lead
Raccoon Creek	4/18/2006	<0.130	<0.140	<0.120	<0.130	<0.150	NA	ND	26.7
SED-01	6/23/2010	<0.00040	<0.00034	<0.00044	<0.00055	<0.00033	<0.017	ND	64.0
	10/8/2014	<0.00026	<0.00034	<0.00028	<0.00031	<0.00024	<0.0039	ND	53.7
	5/4/2015	<0.00014	<0.00021	<0.00017	<0.00028	<0.00016	<0.0027	ND	26.6
SED-02	6/23/2010	<0.00042	<0.00036	<0.00046	<0.00058	<0.00035	<0.018	ND	176
	10/8/2014	<0.00023	<0.00030	<0.00025	<0.00028	<0.00021	<0.0035	ND	7.2
	5/4/2015	<0.00013	<0.00021	<0.00016	<0.00027	<0.00015	<0.0026	ND	13.0
SED-03	6/23/2010	<0.00071	<0.00061	<0.00077	<0.00098	<0.00059	<0.030	ND	179
	10/8/2014	<0.00024	<0.00032	<0.00026	<0.00029	<0.00023	<0.0037	ND	40.8
	5/4/2015	<0.00018	<0.00028	<0.00022	<0.00037	<0.00021	<0.0036	ND	50.9
SED-04	6/23/2010	<0.00048	<0.00041	<0.00052	<0.00066	<0.00039	<0.020	ND	114
	10/8/2014	<0.00025	<0.00033	<0.00028	<0.00031	<0.00024	<0.0039	ND	76.8
	5/4/2015	<0.00019	<0.00029	<0.00023	<0.00038	<0.00021	<0.0037	ND	72.9
NJDEP ESC LEL		0.142	1.22	0.175	0.433	NLE	NLE	NLE	31

NOTES:

All results shown in milligrams per kilogram; mg/Kg.

Bold values indicate an exceedence of the NJDEP ESC Level.

NJDEP - New Jersey Department of Environmental Protection

ESC LEL - Ecological Screening Criteria Lowest Effects Level

MTBE - Methyl Tertiary Butyl Ether

TBA - Tertiary Butyl Alcohol

TICs - Tentatively Identified Compounds

VOCs - Volatile Organic Compounds

ND - Not Detected

NLE - No Level Established

TABLE 7

ECOLOGICAL INVESTIGATION SOIL SAMPLING ANALYTICAL DATA - DECEMBER 2015

Former Getty Service Station #56955

1008 Kings Highway

Swedesboro, Gloucester County, New Jersey

Sample ID	Date	Sample Depth (feet)	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	TBA	Total TICs	Lead
SS-1	12/8/2015	1.5-2	<0.00013	<0.00020	<0.00016	<0.00026	<0.00015	<0.0025	ND	114
SS-2	12/8/2015	2-2.5	<0.00013	<0.00020	<0.00016	<0.00027	0.00052 J	<0.0026	ND	109
SS-3	12/8/2015	1.5-2	<0.00014	<0.00022	<0.00018	<0.00030	<0.00016	<0.0029	ND	299
SS-4	12/8/2015	2.5-3	<0.00014	<0.00022	<0.00017	<0.00029	<0.00016	<0.0028	ND	330
SS-5	12/8/2015	3-3.5	<0.00014	<0.00022	<0.00018	<0.00030	<0.00016	<0.0029	ND	126
SS-6	12/8/2015	1.5-2	<0.00016	<0.00025	<0.00020	<0.00034	0.00030 J	<0.0033	ND	260
SS-7	12/8/2015	3.5-4	0.00037 J	0.00033 J	<0.00020	0.00049 J	<0.00019	<0.0033	ND	54.2
SS-8	12/8/2015	4-4.5	<0.00015	<0.00024	<0.00018	<0.00031	<0.00017	<0.0030	ND	55.6
SS-9	12/8/2015	0.5-1	<0.00014	<0.00021	<0.00017	<0.00028	<0.00016	<0.0027	ND	168
SS-10	12/8/2015	0.5-1	<0.00034	<0.00052	<0.00041	<0.00069	<0.00039	<0.0067	ND	373
SS-11	12/8/2015	0.5-1	<0.00025	<0.00040	<0.00031	<0.00052	<0.00029	<0.0051	ND	277
SS-12	12/8/2015	0.5-1	<0.00039	<0.00061	<0.00047	<0.00080	<0.00045	<0.0078	ND	198
2021 Migration to Ground Water SRS			0.0094	7.8	15	19	0.25	0.32	NSE	90
2021 Residential Inhalation/Ingestion-Dermal SRS			2.2	6,300	10	12,000	140	1,400	NSE	400
2021 Non-Residential Inhalation/Ingestion-Dermal SRS			11	100,000	48	190,000	650	23,000	NSE	800

Notes:

All Results Shown in Milligrams per Kilogram (mg/Kg)

BMDL - Below Method Detection Limits

Bold values indicate concentrations above SRS

SRS - Soil Remediation Standard

TBA - Tertiary Butyl Alcohol

J - Indicates an Estimated Value

ND- Not Detected

NSE - No Standard Established

MTBE - Methyl Tert-Butyl Ether

TICS - Tentatively Identified Compounds

TABLE 8

ECOLOGICAL INVESTIGATION SEDIMENT SAMPLE ANALYTICAL DATA - DECEMBER 2015

Former Getty Service Station #56955

1008 Kings Highway

Swedesboro, Gloucester County, New Jersey

Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	Total TICs	Lead
HIGH TIDE - DECEMBER 7, 2015								
Location #1	<0.00022	<0.00034	<0.00027	<0.00045	<0.00025	<0.0044	BMDL	54.0
Location #2	<0.00021	<0.00032	<0.00025	<0.00042	<0.00024	<0.0041	BMDL	75.9
Location #3	<0.00013	<0.00020	<0.00016	<0.00027	<0.00015	<0.0026	0.012 J	119
Location #4	<0.00016	<0.00025	<0.00019	<0.00033	<0.00018	<0.0032	BMDL	111
Location #5	<0.00017	<0.00027	<0.00021	<0.00036	<0.00020	<0.0035	BMDL	365
Location #6	<0.00017	<0.00026	<0.00021	<0.00035	<0.00019	<0.0034	BMDL	83.2
LOW TIDE - DECEMBER 11, 2015								
Location #1	<0.00018	<0.00027	<0.00021	<0.00036	<0.00020	<0.0035	BMDL	101
Location #2	<0.00023	<0.00035	<0.00028	<0.00047	<0.00026	<0.0045	BMDL	81.4
Location #3	<0.00014	<0.00021	<0.00017	<0.00028	<0.00016	<0.0028	BMDL	14.4
Location #4	<0.00023	<0.00036	<0.00028	<0.00047	<0.00026	<0.0046	BMDL	456
Location #5	<0.00016	<0.00026	<0.00020	<0.00034	<0.00019	<0.0033	BMDL	73.7
Location #6	<0.00017	<0.00027	<0.00021	<0.00035	<0.00020	<0.0034	BMDL	113
NJDEP ESC LEL	0.142	1.22	0.175	0.433	NLE	NLE	NLE	31

NOTES:

All results shown in milligrams per kilogram; mg/Kg.

Bold values indicate an exceedence of the NJDEP ESC LEL Standard.

NJDEP - New Jersey Department of Environmental Protection

ESC LEL - Ecological Screening Criteria Lowest Effects Level

MTBE - Methyl Tertiary Butyl Ether

TBA - Tertiary Butyl Alcohol

TICs - Tentatively Identified Compounds

VOCs - Volatile Organic Compounds

BMDL - Below Method Detection Limit

NLE - No Level Established

<p style="text-align: center;">TABLE 9</p> <p style="text-align: center;">ECOLOGICAL INVESTIGATION SURFACE WATER SAMPLE ANALYTICAL DATA - DECEMBER 2015</p> <p style="text-align: center;">Former Getty Service Station #56955</p> <p style="text-align: center;">1008 Kings Highway</p> <p style="text-align: center;">Swedesboro, Gloucester County, New Jersey</p>								
Sample ID	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	Total TICs	Lead
HIGH TIDE - DECEMBER 7, 2015								
Location #1	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	19.3
Location #2	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	<3.0
Location #3	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	<3.0
Location #4	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	<3.0
Location #5	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	88.6
Location #6	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	6.7
LOW TIDE - DECEMBER 11, 2015								
Location #1	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	12.5
Location #2	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	<3.0
Location #3	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	<3.0
Location #4	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	3.1
Location #5	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	BMDL	<3.0
Location #6	<0.10	<0.25	<0.22	<0.22	<0.12	<2.5	83 J	<3.0
SWQS	0.15	1,300	530	NSE	70	NSE	NSE	5
FW2 - ESC	114	253	14	27	51,000	355,000	NCE	5.4

NOTES:

All results shown in micrograms per liter; ug/L.

Bold values indicate an exceedence of the SWQS

NJDEP - New Jersey Department of Environmental Protection

FW2 - ESC - Most Stringent Freshwater Aquatic Ecological Screening Criteria

SWQS - Surface Water Quality Standard

MTBE - Methyl Tertiary Butyl Ether

TBA - Tertiary Butyl Alcohol

TICs - Tentatively Identified Compounds

BMDL - Below Method Detection Limits

NSE - No Standard Established

NCE - No Criteria Established

TABLE 10

SEDIMENT PORE WATER SAMPLE ANALYTICAL DATA - DECEMBER 2015
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

Sample ID	Date	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA	Total TICs	Lead
Location #1	12/11/2015	<0.24	<0.16	<0.27	<0.17	<0.24	<2.8	BMDL	32.9
Location #2	12/11/2015	<0.24	<0.16	<0.27	<0.17	<0.24	<2.8	BMDL	28.0
Location #3	12/11/2015	<0.24	<0.16	<0.27	<0.17	0.48 J	<2.8	BMDL	33.6
Location #4	12/11/2015	<0.24	<0.16	<0.27	<0.17	<0.24	<2.8	BMDL	37.9
Location #5	12/11/2015	<0.24	<0.16	<0.27	<0.17	<0.24	<2.8	BMDL	42.5
Location #6	12/11/2015	<0.24	<0.16	<0.27	<0.17	0.30 J	<2.8	BMDL	60.6
GWQS		1	600	700	1,000	70	100	500	5
SWQS		0.15	1,300	530	NSE	70	NSE	NSE	5

NOTES:

All results shown in micrograms per liter; ug/L.

Bold values indicate an exceedence of the GWQS.

NJDEP - New Jersey Department of Environmental Protection

GWQS - Groundwater Quality Standards

SWQS - Surface Water Quality Standard

MTBE - Methyl Tertiary Butyl Ether

TBA - Tertiary Butyl Alcohol

TICs - Tentatively Identified Compounds

BMDL - Below Method Detection Limits

Table 11
Historical Groundwater Elevation Data
Former Getty Service Station #56955
1008 Kings Highways
Swedesboro, Gloucester County, New Jersey

Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-1	4/27/2005	14.15	7.70	7.68	0.02	6.47	--
MW-1	10/7/2005	14.15	8.15	8.00	0.15	6.11	--
MW-1	4/6/2006	14.15	7.88	ND	ND	6.27	--
MW-1	10/4/2006	14.15	8.28	ND	ND	5.87	--
MW-1	11/10/2007	14.15	7.72	ND	ND	6.43	--
MW-1	5/5/2008	14.15	7.08	7.00	0.08	7.13	--
MW-1	10/20/2008	14.15	7.87	ND	ND	6.28	--
MW-1	4/16/2009	14.15	6.73	ND	ND	7.42	--
MW-1	4/28/2010	14.15	6.40	ND	ND	7.75	--
MW-1	10/28/2010	14.15	9.60	ND	ND	4.55	--
MW-1	4/10/2011	14.15	7.69	ND	ND	6.46	--
MW-1	4/19/2011	14.15	6.70	ND	ND	7.45	--
MW-1	11/2/2011	14.15	6.94	ND	ND	7.21	--
MW-1	4/10/2012	14.15	7.69	6.61	1.08	7.27	--
MW-1	10/2/2012	14.15	8.03	ND	ND	6.12	--
MW-1	4/11/2013	14.15	6.81	ND	ND	7.34	--
MW-1R	11/2/2013	13.41	6.53	ND	ND	6.88	--
MW-1R	4/8/2014	13.41	3.66	ND	ND	9.75	--
MW-1R	10/8/2014	13.41	5.57	ND	ND	7.84	--
MW-1R	5/4/2015	13.41	5.84	ND	ND	7.57	--
MW-1R	11/6/2015	13.41	6.52	ND	ND	6.89	--
MW-1R	4/19/2016	13.41	5.30	ND	ND	8.11	--
MW-1R	10/18/2016	13.41	6.49	ND	ND	6.92	--
MW-1R	4/3/2017	13.41	4.90	ND	ND	8.51	--
MW-1R	11/29/2017	13.41	5.86	ND	ND	7.55	--
MW-1R	6/1/2018	13.41	--	--	--	--	NL
MW-1R	8/31/2018	13.41	--	--	--	--	NL
MW-1R	10/24/2018	13.41	--	--	--	--	NL
MW-1R	1/16/2019	13.41	--	--	--	--	NL
MW-1R	4/24/2019	13.41	--	--	--	--	NL
MW-1R	7/29/2019	13.41	--	--	--	--	NL
MW-1R	10/16/2019	13.41	--	--	--	--	NL
MW-1R	1/16/2020	13.41	--	--	--	--	NL
MW-1R	4/10/2020	13.41	--	--	--	--	NL
MW-1R	7/2/2020	13.41	--	--	--	--	NL
MW-1R	10/15/2020	13.41	--	--	--	--	NL
MW-2	4/27/2005	15.95	10.35	ND	ND	5.60	--
MW-2	10/7/2005	15.95	11.00	ND	ND	4.95	--
MW-2	4/6/2006	15.95	10.43	ND	ND	5.52	--
MW-2	10/4/2006	15.95	10.46	ND	ND	5.49	--
MW-2	11/10/2007	15.95	10.87	ND	ND	5.08	--
MW-2	5/5/2008	15.95	--	--	--	--	VO
MW-2	10/20/2008	15.95	10.61	ND	ND	5.34	--

Table 11
Historical Groundwater Elevation Data
Former Getty Service Station #56955
1008 Kings Highways
Swedesboro, Gloucester County, New Jersey

Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-2	4/16/2009	15.95	10.09	ND	ND	5.86	--
MW-2	10/15/2009	15.95	10.22	ND	ND	5.73	--
MW-2	4/28/2010	15.95	--	--	--	--	WO
MW-2	10/28/2010	15.95	10.26	ND	ND	5.69	--
MW-2	4/10/2011	15.95	10.30	ND	ND	5.65	--
MW-2	4/19/2011	15.95	10.04	ND	ND	5.91	--
MW-2	11/2/2011	15.95	10.15	ND	ND	5.80	--
MW-2	4/10/2012	15.95	10.30	ND	ND	5.65	--
MW-2	10/2/2012	15.95	10.48	ND	ND	5.47	--
MW-2	4/11/2013	15.95	10.21	ND	ND	5.74	--
MW-2R	11/2/2013	15.66	10.11	ND	ND	5.55	--
MW-2R	4/8/2014	15.66	9.63	ND	ND	6.03	--
MW-2R	10/8/2014	15.66	9.93	ND	ND	5.73	--
MW-2R	5/4/2015	15.66	9.80	ND	ND	5.86	--
MW-2R	11/6/2015	15.66	9.90	ND	ND	5.76	--
MW-2R	4/19/2016	15.66	9.70	ND	ND	5.96	--
MW-2R	10/18/2016	15.66	9.92	ND	ND	5.74	--
MW-2R	4/3/2017	15.66	9.53	ND	ND	6.13	--
MW-2R	11/29/2017	15.66	9.79	ND	ND	5.87	--
MW-2R	6/1/2018	15.66	10.31	ND	ND	5.35	--
MW-2R	8/31/2018	15.66	10.09	ND	ND	5.57	--
MW-2R	10/24/2018	15.66	9.79	ND	ND	5.87	--
MW-2R	1/16/2019	15.66	9.63	ND	ND	6.03	--
MW-2R	4/24/2019	15.66	9.81	ND	ND	5.85	--
MW-2R	7/29/2019	15.66	9.95	ND	ND	5.71	--
MW-2R	10/16/2019	15.66	10.25	ND	ND	5.41	--
MW-2R	1/16/2020	15.66	9.56	ND	ND	6.10	--
MW-2R	4/10/2020	15.66	9.64	ND	ND	6.02	--
MW-2R	7/2/2020	15.66	10.11	ND	ND	5.55	--
MW-2R	10/15/2020	15.66	9.75	ND	ND	5.91	--
MW-3R	4/27/2005	15.78	7.41	ND	ND	8.37	--
MW-3R	10/7/2005	15.78	8.20	ND	ND	7.58	--
MW-3R	4/6/2006	15.78	6.15	ND	ND	9.63	--
MW-3R	10/4/2006	15.78	6.15	ND	ND	9.63	--
MW-3R	11/10/2007	15.78	5.12	ND	ND	10.66	--
MW-3R	5/5/2008	15.78	5.17	ND	ND	10.61	--
MW-3R	10/20/2008	15.78	6.25	ND	ND	9.53	--
MW-3R	4/16/2009	15.78	5.17	ND	ND	10.61	--
MW-3R	4/24/2009	15.78	5.12	ND	ND	10.66	--
MW-3R	10/15/2009	15.78	6.26	ND	ND	9.52	--
MW-3R	4/28/2010	15.78	5.17	ND	ND	10.61	--
MW-3R	10/28/2010	15.78	5.60	ND	ND	10.18	--
MW-3R	4/10/2011	15.78	5.45	ND	ND	10.33	--

Table 11
Historical Groundwater Elevation Data
Former Getty Service Station #56955
1008 Kings Highways
Swedesboro, Gloucester County, New Jersey

Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-3R	4/19/2011	15.78	4.21	ND	ND	11.57	--
MW-3R	11/2/2011	15.78	5.19	ND	ND	10.59	--
MW-3R	4/10/2012	15.78	5.45	ND	ND	10.33	--
MW-3R	10/2/2012	15.78	6.19	ND	ND	9.59	--
MW-3R	4/11/2013	15.78	5.13	ND	ND	10.65	--
MW-3R	11/2/2013	15.78	5.81	ND	ND	9.97	--
MW-3R	4/8/2014	15.78	4.55	ND	ND	11.23	--
MW-3R	10/8/2014	15.78	5.70	ND	ND	10.08	--
MW-3R	5/4/2015	15.78	5.08	ND	ND	10.70	--
MW-3R	11/6/2015	15.78	5.58	ND	ND	10.20	--
MW-3R	4/19/2016	15.78	5.10	ND	ND	10.68	--
MW-3R	10/18/2016	15.78	5.64	ND	ND	10.14	--
MW-3R	4/3/2017	15.78	4.82	ND	ND	10.96	--
MW-3R	11/29/2017	15.78	5.52	ND	ND	10.26	--
MW-3R	6/1/2018	15.78	5.11	ND	ND	10.67	--
MW-3R	8/31/2018	15.78	5.63	ND	ND	10.15	--
MW-3R	10/24/2018	15.78	5.44	ND	ND	10.34	--
MW-3R	1/16/2019	15.78	5.07	ND	ND	10.71	--
MW-3R	4/24/2019	15.78	5.06	ND	ND	10.72	--
MW-3R	7/29/2019	15.78	5.35	ND	ND	10.43	--
MW-3R	10/16/2019	15.78	6.14	ND	ND	9.64	--
MW-3R	1/16/2020	15.78	5.03	ND	ND	10.75	--
MW-3R	4/10/2020	15.78	5.01	ND	ND	10.77	--
MW-3R	7/2/2020	15.78	5.62	ND	ND	10.16	--
MW-3R	10/15/2020	15.78	5.25	ND	ND	10.53	--
MW-4	4/27/2005	12.68	6.28	ND	ND	6.40	--
MW-4	10/7/2005	12.68	6.98	ND	ND	5.70	--
MW-4	4/6/2006	12.68	6.35	ND	ND	6.33	--
MW-4	10/4/2006	12.68	6.95	ND	ND	5.73	--
MW-4	11/10/2007	12.68	6.38	ND	ND	6.30	--
MW-4	5/5/2008	12.68	6.23	ND	ND	6.45	--
MW-4	10/20/2008	12.68	6.40	ND	ND	6.28	--
MW-4	4/16/2009	12.68	5.06	ND	ND	7.62	--
MW-4	10/15/2009	12.68	6.15	ND	ND	6.53	--
MW-4	4/28/2010	12.68	5.08	ND	ND	7.60	--
MW-4	10/28/2010	12.68	5.60	ND	ND	7.08	--
MW-4	4/10/2011	12.68	5.00	ND	ND	7.68	--
MW-4	4/19/2011	12.68	4.05	ND	ND	8.63	--
MW-4	11/2/2011	12.68	4.52	ND	ND	8.16	--
MW-4	4/10/2012	12.68	5.00	ND	ND	7.68	--
MW-4	10/2/2012	12.68	6.23	ND	ND	6.45	--
MW-4	4/11/2013	12.68	5.57	ND	ND	7.11	--
MW-4	11/2/2013	12.68	5.89	ND	ND	6.79	--

Table 11
Historical Groundwater Elevation Data
Former Getty Service Station #56955
1008 Kings Highways
Swedesboro, Gloucester County, New Jersey

Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-4	4/8/2014	12.68	3.44	ND	ND	9.24	--
MW-4	10/8/2014	12.68	5.00	ND	ND	7.68	--
MW-4	5/4/2015	12.68	5.20	ND	ND	7.48	--
MW-4	11/6/2015	12.68	5.88	ND	ND	6.80	--
MW-4	4/19/2016	12.68	6.30	ND	ND	6.38	--
MW-4	10/18/2016	12.68	5.80	ND	ND	6.88	--
MW-4	4/3/2017	12.68	4.35	ND	ND	8.33	--
MW-4	11/29/2017	12.68	5.24	ND	ND	7.44	--
MW-4	6/1/2018	12.68	--	--	--	--	NG
MW-4	8/31/2018	12.68	6.03	ND	ND	6.65	--
MW-4	4/24/2019	12.68	4.79	ND	ND	7.89	--
MW-4	7/29/2019	12.68	5.35	ND	ND	7.33	--
MW-4	10/16/2019	12.68	6.38	ND	ND	6.30	--
MW-4	1/16/2020	12.68	4.53	ND	ND	8.15	--
MW-4	4/10/2020	12.68	4.50	ND	ND	8.18	--
MW-4	7/2/2020	12.68	5.76	ND	ND	6.92	--
MW-4	10/15/2020	12.68	4.97	ND	ND	7.71	--
MW-4R	10/24/2018	--	5.12	ND	ND	--	--
MW-4R	1/16/2019	--	4.49	ND	ND	--	--
MW-5	4/27/2005	5.42	2.64	ND	ND	2.78	--
MW-5	10/7/2005	5.42	4.30	ND	ND	1.12	--
MW-5	4/6/2006	5.42	3.42	ND	ND	2.00	--
MW-5	10/4/2006	5.42	3.50	ND	ND	1.92	--
MW-5	11/10/2007	5.42	3.71	ND	ND	1.71	--
MW-5	5/5/2008	5.42	3.07	ND	ND	2.35	--
MW-5	10/20/2008	5.42	2.50	ND	ND	2.92	--
MW-5	4/16/2009	5.42	2.58	ND	ND	2.84	--
MW-5	10/15/2009	5.42	3.29	ND	ND	2.13	--
MW-5	4/28/2010	5.42	2.56	ND	ND	2.86	--
MW-5	10/28/2010	5.42	3.18	ND	ND	2.24	--
MW-5	4/10/2011	5.42	2.94	ND	ND	2.48	--
MW-5	4/19/2011	5.42	2.57	ND	ND	2.85	--
MW-5	11/2/2011	5.42	2.59	ND	ND	2.83	--
MW-5	4/10/2012	5.42	2.94	ND	ND	2.48	--
MW-5	10/2/2012	5.42	3.72	ND	ND	1.70	--
MW-5	4/11/2013	5.42	2.97	ND	ND	2.45	--
MW-5	11/2/2013	5.42	3.14	ND	ND	2.28	--
MW-5	4/8/2014	5.42	2.38	ND	ND	3.04	--
MW-5	10/8/2014	5.42	2.62	ND	ND	2.80	--
MW-5	5/4/2015	5.42	2.77	ND	ND	2.65	--
MW-5	11/6/2015	5.42	3.02	ND	ND	2.40	--
MW-5	4/19/2016	5.42	2.80	ND	ND	2.62	--
MW-5	10/18/2016	5.42	2.75	ND	ND	2.67	--

Table 11
Historical Groundwater Elevation Data
Former Getty Service Station #56955
1008 Kings Highways
Swedesboro, Gloucester County, New Jersey

Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-5	4/3/2017	5.42	2.34	ND	ND	3.08	--
MW-5	11/29/2017	5.42	2.82	ND	ND	2.60	--
MW-5	6/1/2018	5.42	2.43	ND	ND	2.99	--
MW-5	8/31/2018	5.42	3.19	ND	ND	2.23	--
MW-5	10/24/2018	5.42	2.85	ND	ND	2.57	--
MW-5	1/16/2019	5.42	2.78	ND	ND	2.64	--
MW-5	4/24/2019	5.42	2.10	ND	ND	3.32	--
MW-5	7/29/2019	5.42	3.07	ND	ND	2.35	--
MW-5	10/16/2019	5.42	2.51	ND	ND	2.91	--
MW-5	1/16/2020	5.42	2.37	ND	ND	3.05	--
MW-5	4/10/2020	5.42	2.32	ND	ND	3.10	--
MW-5	7/2/2020	5.42	2.89	ND	ND	2.53	--
MW-5	10/15/2020	5.42	2.65	ND	ND	2.77	--
MW-6	4/27/2005	5.42	2.90	ND	ND	2.52	--
MW-6	10/7/2005	5.42	4.30	ND	ND	1.12	--
MW-6	4/6/2006	5.42	3.40	ND	ND	2.02	--
MW-6	10/4/2006	5.42	3.60	ND	ND	1.82	--
MW-6	11/10/2007	5.42	3.58	ND	ND	1.84	--
MW-6	5/5/2008	5.42	3.24	ND	ND	2.18	--
MW-6	10/20/2008	5.42	2.48	ND	ND	2.94	--
MW-6	4/16/2009	5.42	2.71	ND	ND	2.71	--
MW-6	10/15/2009	5.42	4.57	ND	ND	0.85	--
MW-6	4/28/2010	5.42	2.69	ND	ND	2.73	--
MW-6	10/28/2010	5.42	3.34	ND	ND	2.08	--
MW-6	4/10/2011	5.42	3.23	ND	ND	2.19	--
MW-6	4/19/2011	5.42	2.83	ND	ND	2.59	--
MW-6	11/2/2011	5.42	2.96	ND	ND	2.46	--
MW-6	4/10/2012	5.42	3.23	ND	ND	2.19	--
MW-6	10/2/2012	5.42	4.48	ND	ND	0.94	--
MW-6	4/11/2013	5.42	3.10	ND	ND	2.32	--
MW-6	11/2/2013	5.42	3.41	ND	ND	2.01	--
MW-6	4/8/2014	5.42	2.74	ND	ND	2.68	--
MW-6	10/8/2014	5.42	2.91	ND	ND	2.51	--
MW-6	5/4/2015	5.42	3.03	ND	ND	2.39	--
MW-6	11/6/2015	5.42	3.30	ND	ND	2.12	--
MW-6	4/19/2016	5.42	3.08	ND	ND	2.34	--
MW-6	10/18/2016	5.42	2.99	ND	ND	2.43	--
MW-6	4/3/2017	5.42	2.35	ND	ND	3.07	--
MW-6	11/29/2017	5.42	3.01	ND	ND	2.41	--
MW-6	6/1/2018	5.42	3.80	ND	ND	1.62	--
MW-6	8/31/2018	5.42	3.42	ND	ND	2.00	--
MW-6	10/24/2018	5.42	3.38	ND	ND	2.04	--
MW-6	1/16/2019	5.42	2.97	ND	ND	2.45	--

Table 11
Historical Groundwater Elevation Data
Former Getty Service Station #56955
1008 Kings Highways
Swedesboro, Gloucester County, New Jersey

Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-6	4/24/2019	5.42	2.68	ND	ND	2.74	--
MW-6	7/29/2019	5.42	3.49	ND	ND	1.93	--
MW-6	10/16/2019	5.42	3.04	ND	ND	2.38	--
MW-6	1/16/2020	5.42	2.77	ND	ND	2.65	--
MW-6	4/10/2020	5.42	2.77	ND	ND	2.65	--
MW-6	7/2/2020	5.42	3.30	ND	ND	2.12	--
MW-6	10/15/2020	5.42	3.10	ND	ND	2.32	--
MW-7	4/27/2005	5.01	2.48	ND	ND	2.53	--
MW-7	10/7/2005	5.01	3.80	ND	ND	1.21	--
MW-7	4/6/2006	5.01	3.36	ND	ND	1.65	--
MW-7	10/4/2006	5.01	3.00	ND	ND	2.01	--
MW-7	11/10/2007	5.01	3.07	ND	ND	1.94	--
MW-7	5/5/2008	5.01	2.79	ND	ND	2.22	--
MW-7	10/20/2008	5.01	3.32	ND	ND	1.69	--
MW-7	4/16/2009	5.01	2.77	ND	ND	2.24	--
MW-7	10/15/2009	5.01	--	--	--	--	NO
MW-7	4/28/2010	5.01	2.79	ND	ND	2.22	--
MW-7	10/28/2010	5.01	2.80	ND	ND	2.21	--
MW-7	4/10/2011	5.01	2.46	ND	ND	2.55	--
MW-7	4/19/2011	5.01	2.25	ND	ND	2.76	--
MW-7	11/2/2011	5.01	2.28	ND	ND	2.73	--
MW-7	4/10/2012	5.01	2.46	ND	ND	2.55	--
MW-7	10/2/2012	5.01	4.03	ND	ND	0.98	--
MW-7	4/11/2013	5.01	2.81	ND	ND	2.20	--
MW-7	11/2/2013	5.01	2.77	ND	ND	2.24	--
MW-7	4/8/2014	5.01	2.27	ND	ND	2.74	--
MW-7	10/8/2014	5.01	2.30	ND	ND	2.71	--
MW-7	5/4/2015	5.01	2.29	ND	ND	2.72	--
MW-7	11/6/2015	5.01	2.54	ND	ND	2.47	--
MW-7	4/19/2016	5.01	2.41	ND	ND	2.60	--
MW-7	10/18/2016	5.01	2.39	ND	ND	2.62	--
MW-7	4/3/2017	5.01	2.33	ND	ND	2.68	--
MW-7	11/29/2017	5.01	2.43	ND	ND	2.58	--
MW-7	6/1/2018	5.01	2.00	ND	ND	3.01	--
MW-7	8/31/2018	5.01	2.61	ND	ND	2.40	--
MW-7	10/24/2018	5.01	2.20	ND	ND	2.81	--
MW-7	1/16/2019	5.01	2.24	ND	ND	2.77	--
MW-7	4/24/2019	5.01	2.13	ND	ND	2.88	--
MW-7	7/29/2019	5.01	2.39	ND	ND	2.62	--
MW-7	10/16/2019	5.01	2.30	ND	ND	2.71	--
MW-7	1/16/2020	5.01	2.34	ND	ND	2.67	--
MW-7	4/10/2020	5.01	1.76	ND	ND	3.25	--
MW-7	7/2/2020	5.01	2.52	ND	ND	2.49	--

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1008 Kings Highways
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Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-7	10/15/2020	5.01	2.19	ND	ND	2.82	--
MW-8	4/6/2006	15.93	4.55	ND	ND	11.38	--
MW-8	10/4/2006	15.93	4.88	ND	ND	11.05	--
MW-8	10/18/2006	15.93	4.05	ND	ND	11.88	--
MW-8	11/10/2007	15.93	4.84	ND	ND	11.09	--
MW-8	5/5/2008	15.93	4.42	ND	ND	11.51	--
MW-8	10/20/2008	15.93	4.83	ND	ND	11.10	--
MW-8	4/16/2009	15.93	3.93	ND	ND	12.00	--
MW-8	10/15/2009	15.93	4.51	ND	ND	11.42	--
MW-8	4/28/2010	15.93	3.90	ND	ND	12.03	--
MW-8	10/28/2010	15.93	4.35	ND	ND	11.58	--
MW-8	4/10/2011	15.93	4.25	ND	ND	11.68	--
MW-8	4/19/2011	15.93	3.74	ND	ND	12.19	--
MW-8	11/2/2011	15.93	4.04	ND	ND	11.89	--
MW-8	4/10/2012	15.93	4.25	ND	ND	11.68	--
MW-8	10/2/2012	15.93	4.73	ND	ND	11.20	--
MW-8	4/11/2013	15.93	4.23	ND	ND	11.70	--
MW-8	11/2/2013	15.93	4.39	ND	ND	11.54	--
MW-8	4/8/2014	15.93	3.66	ND	ND	12.27	--
MW-8	10/8/2014	15.93	4.46	ND	ND	11.47	--
MW-8	5/4/2015	15.93	3.98	ND	ND	11.95	--
MW-8	11/6/2015	15.93	4.38	ND	ND	11.55	--
MW-8	4/19/2016	15.93	4.03	ND	ND	11.90	--
MW-8	10/18/2016	15.93	4.62	ND	ND	11.31	--
MW-8	4/3/2017	15.93	4.10	ND	ND	11.83	--
MW-8	11/29/2017	15.93	4.34	ND	ND	11.59	--
MW-8	6/1/2018	15.93	3.97	ND	ND	11.96	--
MW-8	8/31/2018	15.93	4.30	ND	ND	11.63	--
MW-8	10/24/2018	15.93	4.33	ND	ND	11.60	--
MW-8	1/16/2019	15.93	4.01	ND	ND	11.92	--
MW-8	4/24/2019	15.93	4.11	ND	ND	11.82	--
MW-8	7/29/2019	15.93	4.15	ND	ND	11.78	--
MW-8	10/16/2019	15.93	4.58	ND	ND	11.35	--
MW-8	1/16/2020	15.93	4.05	ND	ND	11.88	--
MW-8	4/10/2020	15.93	3.85	ND	ND	12.08	--
MW-8	7/2/2020	15.93	4.23	ND	ND	11.70	--
MW-8	10/15/2020	15.93	4.02	ND	ND	11.91	--
MW-9	4/6/2006	15.40	10.55	ND	ND	4.85	--
MW-9	10/4/2006	15.40	10.84	ND	ND	4.56	--
MW-9	10/18/2006	15.40	10.38	ND	ND	5.02	--
MW-9	11/10/2007	15.40	11.37	ND	ND	4.03	--
MW-9	5/5/2008	15.40	10.46	ND	ND	4.94	--
MW-9	10/20/2008	15.40	11.41	ND	ND	3.99	--

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MW-9	4/16/2009	15.40	10.46	ND	ND	4.94	--
MW-9	10/15/2009	15.40	11.16	ND	ND	4.24	--
MW-9	4/28/2010	15.40	10.44	ND	ND	4.96	--
MW-9	10/28/2010	15.40	8.68	ND	ND	6.72	--
MW-9	4/10/2011	15.40	10.25	ND	ND	5.15	--
MW-9	4/19/2011	15.40	9.68	ND	ND	5.72	--
MW-9	11/2/2011	15.40	10.09	ND	ND	5.31	--
MW-9	4/10/2012	15.40	10.25	ND	ND	5.15	--
MW-9	10/2/2012	15.40	11.48	ND	ND	3.92	--
MW-9	4/11/2013	15.40	10.23	ND	ND	5.17	--
MW-9	11/2/2013	15.40	10.27	ND	ND	5.13	--
MW-9	4/8/2014	15.40	9.62	ND	ND	5.78	--
MW-9	10/8/2014	15.40	10.72	ND	ND	4.68	--
MW-9	5/4/2015	15.40	9.92	ND	ND	5.48	--
MW-9	11/6/2015	15.40	10.53	ND	ND	4.87	--
MW-9	4/19/2016	15.40	9.85	ND	ND	5.55	--
MW-9	10/18/2016	15.40	10.65	ND	ND	4.75	--
MW-9	4/3/2017	15.40	9.75	ND	ND	5.65	--
MW-9	11/29/2017	15.40	10.27	ND	ND	5.13	--
MW-9	6/1/2018	15.40	9.96	ND	ND	5.44	--
MW-9	8/31/2018	15.40	11.19	ND	ND	4.21	--
MW-9	10/24/2018	15.40	10.20	ND	ND	5.20	--
MW-9	1/16/2019	15.40	7.89	ND	ND	7.51	--
MW-9	4/24/2019	15.40	10.11	ND	ND	5.29	--
MW-9	7/29/2019	15.40	10.84	ND	ND	4.56	--
MW-9	10/16/2019	15.40	10.96	ND	ND	4.44	--
MW-9	1/16/2020	15.40	9.83	ND	ND	5.57	--
MW-9	4/10/2020	15.40	9.69	ND	ND	5.71	--
MW-9	7/2/2020	15.40	11.06	ND	ND	4.34	--
MW-9	10/15/2020	15.40	10.06	ND	ND	5.34	--
MW-10	4/24/2009	6.52	4.06	ND	ND	2.46	--
MW-10	10/15/2009	6.52	--	--	--	--	NO
MW-10	4/28/2010	6.52	--	--	--	--	WO
MW-10	10/28/2010	6.52	4.22	ND	ND	2.30	--
MW-10	4/10/2011	6.52	4.05	ND	ND	2.47	--
MW-10	4/19/2011	6.52	3.27	ND	ND	3.25	--
MW-10	11/2/2011	6.52	3.69	ND	ND	2.83	--
MW-10	4/10/2012	6.52	4.05	ND	ND	2.47	--
MW-10	10/2/2012	6.52	5.39	ND	ND	1.13	--
MW-10	4/11/2013	6.52	3.97	ND	ND	2.55	--
MW-10	11/2/2013	6.52	--	--	--	--	WO
MW-10	4/8/2014	6.52	3.52	ND	ND	3.00	--
MW-10	10/8/2014	6.52	3.79	ND	ND	2.73	--

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		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-10	5/4/2015	6.52	3.95	ND	ND	2.57	--
MW-10	11/6/2015	6.52	3.93	ND	ND	2.59	--
MW-10	4/19/2016	6.52	4.05	ND	ND	2.47	--
MW-10	10/18/2016	6.52	3.93	ND	ND	2.59	--
MW-10	4/3/2017	6.52	3.36	ND	ND	3.16	--
MW-10	11/29/2017	6.52	3.83	ND	ND	2.69	--
MW-10	6/1/2018	6.52	3.70	ND	ND	2.82	--
MW-10	8/31/2018	6.52	--	--	--	--	Dry
MW-10	10/24/2018	6.52	4.00	ND	ND	2.52	--
MW-10	1/16/2019	6.52	3.84	ND	ND	2.68	--
MW-10	4/24/2019	6.52	--	--	--	--	WO
MW-10	7/29/2019	6.52	--	--	--	--	WO
MW-10	10/16/2019	6.52	--	--	--	--	WO
MW-10	1/16/2020	6.52	--	--	--	--	WO
MW-10	4/10/2020	6.52	3.66	ND	ND	2.86	--
MW-10	7/2/2020	6.52	4.31	ND	ND	2.21	--
MW-10	10/15/2020	6.52	3.62	ND	ND	2.90	--
MW-11	4/16/2009	15.03	3.74	ND	ND	11.29	--
MW-11	10/15/2009	15.03	4.79	ND	ND	10.24	--
MW-11	4/28/2010	15.03	--	--	--	--	WD
MW-11	10/28/2010	15.03	5.02	ND	ND	10.01	--
MW-11	4/10/2011	15.03	3.97	ND	ND	11.06	--
MW-11	4/19/2011	15.03	1.95	ND	ND	13.08	--
MW-11	11/2/2011	15.03	2.42	ND	ND	12.61	--
MW-11	4/10/2012	15.03	3.97	ND	ND	11.06	--
MW-11	10/2/2012	15.03	5.62	ND	ND	9.41	--
MW-11	4/11/2013	15.03	4.04	ND	ND	10.99	--
MW-11	11/2/2013	15.03	3.51	ND	ND	11.52	--
MW-11	4/8/2014	15.03	2.04	ND	ND	12.99	--
MW-11	10/8/2014	15.03	4.55	ND	ND	10.48	--
MW-11	5/4/2015	15.03	2.78	ND	ND	12.25	--
MW-11	11/6/2015	15.03	4.35	ND	ND	10.68	--
MW-11	4/19/2016	15.03	3.33	ND	ND	11.70	--
MW-11	10/18/2016	15.03	5.37	ND	ND	9.66	--
MW-11	4/3/2017	15.03	2.50	ND	ND	12.53	--
MW-11	11/29/2017	15.03	4.53	ND	ND	10.50	--
MW-11	6/1/2018	15.03	3.40	ND	ND	11.63	--
MW-11	8/31/2018	15.03	3.16	ND	ND	11.87	--
MW-11	10/24/2018	15.03	3.98	ND	ND	11.05	--
MW-11	1/16/2019	15.03	2.25	ND	ND	12.78	--
MW-11	4/24/2019	15.03	3.40	ND	ND	11.63	--
MW-11	7/29/2019	15.03	3.12	ND	ND	11.91	--
MW-11	10/16/2019	15.03	4.96	ND	ND	10.07	--

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Well ID	Date	GROUNDWATER ELEVATION DATA					
		TOC Elevation (ft)	Water Level Depth (ft)	LNAPL Depth (ft)	LNAPL Thickness (ft)	Water Level Elevation* (ft)	Qualifiers
MW-11	1/16/2020	15.03	4.01	ND	ND	11.02	--
MW-11	4/10/2020	15.03	3.03	ND	ND	12.00	--
MW-11	7/2/2020	15.03	4.37	ND	ND	10.66	--
MW-11	10/15/2020	15.03	4.03	ND	ND	11.00	--
MW-12D	11/2/2013	9.25	3.77	ND	ND	5.48	--
MW-12D	4/8/2014	9.25	6.06	ND	ND	3.19	--
MW-12D	10/8/2014	9.25	6.22	ND	ND	3.03	--
MW-12D	5/4/2015	9.25	5.18	ND	ND	4.07	--
MW-12D	11/6/2015	9.25	6.33	ND	ND	2.92	--
MW-12D	4/19/2016	9.25	6.08	ND	ND	3.17	--
MW-12D	10/18/2016	9.25	6.00	ND	ND	3.25	--
MW-12D	4/3/2017	9.25	5.85	ND	ND	3.40	--
MW-12D	11/29/2017	9.25	6.06	ND	ND	3.19	--
MW-12D	6/1/2018	9.25	5.66	ND	ND	3.59	--
MW-12D	8/31/2018	9.25	5.66	ND	ND	3.59	--
MW-12D	10/24/2018	9.25	5.95	ND	ND	3.30	--
MW-12D	1/16/2019	9.25	5.79	ND	ND	3.46	--
MW-12D	4/24/2019	9.25	5.71	ND	ND	3.54	--
MW-12D	7/29/2019	9.25	5.36	ND	ND	3.89	--
MW-12D	10/16/2019	9.25	6.03	ND	ND	3.22	--
MW-12D	1/16/2020	9.25	5.68	ND	ND	3.57	--
MW-12D	4/10/2020	9.25	5.43	ND	ND	3.82	--
MW-12D	7/2/2020	9.25	6.15	ND	ND	3.10	--
MW-12D	10/15/2020	9.25	5.76	ND	ND	3.49	--
MW-13	8/31/2018	6.71	4.57	ND	ND	2.14	--
MW-13	10/24/2018	6.71	4.50	ND	ND	2.21	--
MW-13	1/16/2019	6.71	4.86	ND	ND	1.85	--
MW-13	4/24/2019	6.71	3.12	ND	ND	3.59	--
MW-13	7/29/2019	6.71	4.66	ND	ND	2.05	--
MW-13	10/16/2019	6.71	4.08	ND	ND	2.63	--
MW-13	1/16/2020	6.71	3.17	ND	ND	3.54	--
MW-13	4/10/2020	6.71	3.10	ND	ND	3.61	--
MW-13	7/2/2020	6.71	4.85	ND	ND	1.86	--
MW-13	10/15/2020	6.71	4.08	ND	ND	2.63	--
MW-14	8/31/2018	6.48	4.27	ND	ND	2.21	--
MW-14	10/24/2018	6.48	4.60	ND	ND	1.88	--
MW-14	1/16/2019	6.48	4.42	ND	ND	2.06	--
MW-14	4/24/2019	6.48	4.40	ND	ND	2.08	--
MW-14	7/29/2019	6.48	4.20	ND	ND	2.28	--
MW-14	10/16/2019	6.48	4.09	ND	ND	2.39	--
MW-14	1/16/2020	6.48	4.43	ND	ND	2.05	--
MW-14	4/10/2020	6.48	3.85	ND	ND	2.63	--

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MW-14	7/2/2020	6.48	4.21	ND	ND	2.27	--
MW-14	10/15/2020	6.48	4.18	ND	ND	2.30	--
MW-15	10/16/2019	10.47	6.94	ND	ND	3.53	--
MW-15	1/16/2020	10.47	5.86	ND	ND	4.61	--
MW-15	4/10/2020	10.47	5.75	ND	ND	4.72	--
MW-15	7/2/2020	10.47	6.91	ND	ND	3.56	--
MW-15	10/15/2020	10.47	6.19	ND	ND	4.28	--
MW-16D	10/16/2019	15.68	9.67	ND	ND	6.01	--
MW-16D	1/16/2020	15.68	8.80	ND	ND	6.88	--
MW-16D	7/2/2020	15.68	9.70	ND	ND	5.98	--
MW-16D	10/15/2020	15.68	8.86	ND	ND	6.82	--
SVE-1	4/27/2005	15.69	3.82	ND	ND	11.87	--
SVE-1	10/7/2005	15.69	3.87	ND	ND	11.82	--
SVE-1	4/6/2006	15.69	4.30	ND	ND	11.39	--
SVE-1	10/4/2006	15.69	4.56	ND	ND	11.13	--
SVE-1	10/18/2006	15.69	3.53	ND	ND	12.16	--
SVE-1	11/10/2007	15.69	4.43	ND	ND	11.26	--
SVE-1	5/5/2008	15.69	4.05	ND	ND	11.64	--
SVE-1	10/20/2008	15.69	4.30	ND	ND	11.39	--
SVE-1	4/16/2009	15.69	4.05	ND	ND	11.64	--
SVE-1	10/15/2009	15.69	4.16	ND	ND	11.53	--
SVE-1	4/28/2010	15.69	4.02	ND	ND	11.67	--
SVE-1	10/28/2010	15.69	3.89	ND	ND	11.80	--
SVE-1	4/10/2011	15.69	3.94	ND	ND	11.75	--
SVE-1	4/19/2011	15.69	3.33	ND	ND	12.36	--
SVE-1	11/2/2011	15.69	3.64	ND	ND	12.05	--
SVE-1	4/10/2012	15.69	3.94	ND	ND	11.75	--
SVE-1	10/2/2012	15.69	4.43	ND	ND	11.26	--
SVE-1	4/11/2013	15.69	3.81	ND	ND	11.88	--
SVE-1	11/2/2013	15.69	--	--	--	--	NG
SVE-1	4/8/2014	15.69	--	--	--	--	NG
SVE-1	10/8/2014	15.69	--	--	--	--	NG
SVE-1	5/4/2015	15.69	--	--	--	--	NG
SVE-1	11/6/2015	15.69	--	--	--	--	NG
SVE-1	4/19/2016	15.69	--	--	--	--	NG
SVE-1	10/18/2016	15.69	--	--	--	--	NG
SVE-1	4/3/2017	15.69	--	--	--	--	NL
SVE-1	11/29/2017	15.69	--	--	--	--	NL
SVE-1	6/1/2018	15.69	--	--	--	--	NL
SVE-1	8/31/2018	15.69	--	--	--	--	NL
SVE-1	10/24/2018	15.69	--	--	--	--	NL
SVE-1	1/16/2019	15.69	--	--	--	--	NL

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SVE-1	4/24/2019	15.69	--	--	--	--	WD
SVE-1	7/29/2019	15.69	--	--	--	--	WD
SVE-1	10/16/2019	15.69	--	--	--	--	WD
SVE-1	1/16/2020	15.69	--	--	--	--	WD
SVE-1	4/10/2020	15.69	--	--	--	--	NL
SVE-1	7/2/2020	15.69	--	--	--	--	NL
SVE-1	10/15/2020	15.69	--	--	--	--	NL

Notes:

TOC - Top of Casing

ft - feet

NP - No Product

LNAPL - Light Non-Aqueous Phase Liquid

* - Corrected for LNAPL if present (assumes LNAPL specific gravity = 0.75)

-- No Information Available

Dry - Dry Well

ND - Not Detected

NG - Not Gauged

NL - Not Located

NO - Natural Obstruction

VO - Vehicle Obstruction

WD - Well Destroyed

WO - Well Obstructed

Figures

Figure 1- Site Location Map

Figure 2- Current Site Layout

Figure 3- Google Earth Image

Figure 4- Sub-Slab Soil Gas Sample Location Map

Figure 5- Historical Soil Sample Location Map

Figure 6 Historical Surface Water/Sediment Sample Location Map

Figure 7 Historical Ecological Investigation Sample Location Map

Figure 8- Groundwater Elevation Contour Map – January 16, 2020

Figure 9- Groundwater Compound Distribution Map – January 16, 2020

Figure 10- Groundwater Elevation Contour Map – April 10, 2020

Figure 11- Groundwater Compound Distribution Map – April 10, 2020

Figure 12- Groundwater Elevation Contour Map – Shallow Zone – July 2, 2020

Figure 13- Groundwater Elevation Contour Map - Intermediate Zone - July 2, 2020

Figure 14- Groundwater Compound Distribution Map – July 2, 2020

Figure 15- Groundwater Elevation Contour Map – Shallow Zone – October 15, 2020

Figure 16 - Groundwater Elevation Contour Map - Intermediate Zone - October 15, 2020

Figure 17- Groundwater Compound Distribution Map – October 15, 2020

Figure 18- Regional Historic Fill Map

Figure 19- CEA Limits (Site Plan)

Figure 20- Isoconcentration Contour Map - January 16, 2019

Figure 21- Isoconcentration Contour Map - April 24, 2019

Figure 22- Isoconcentration Contour Map - July 29, 2019

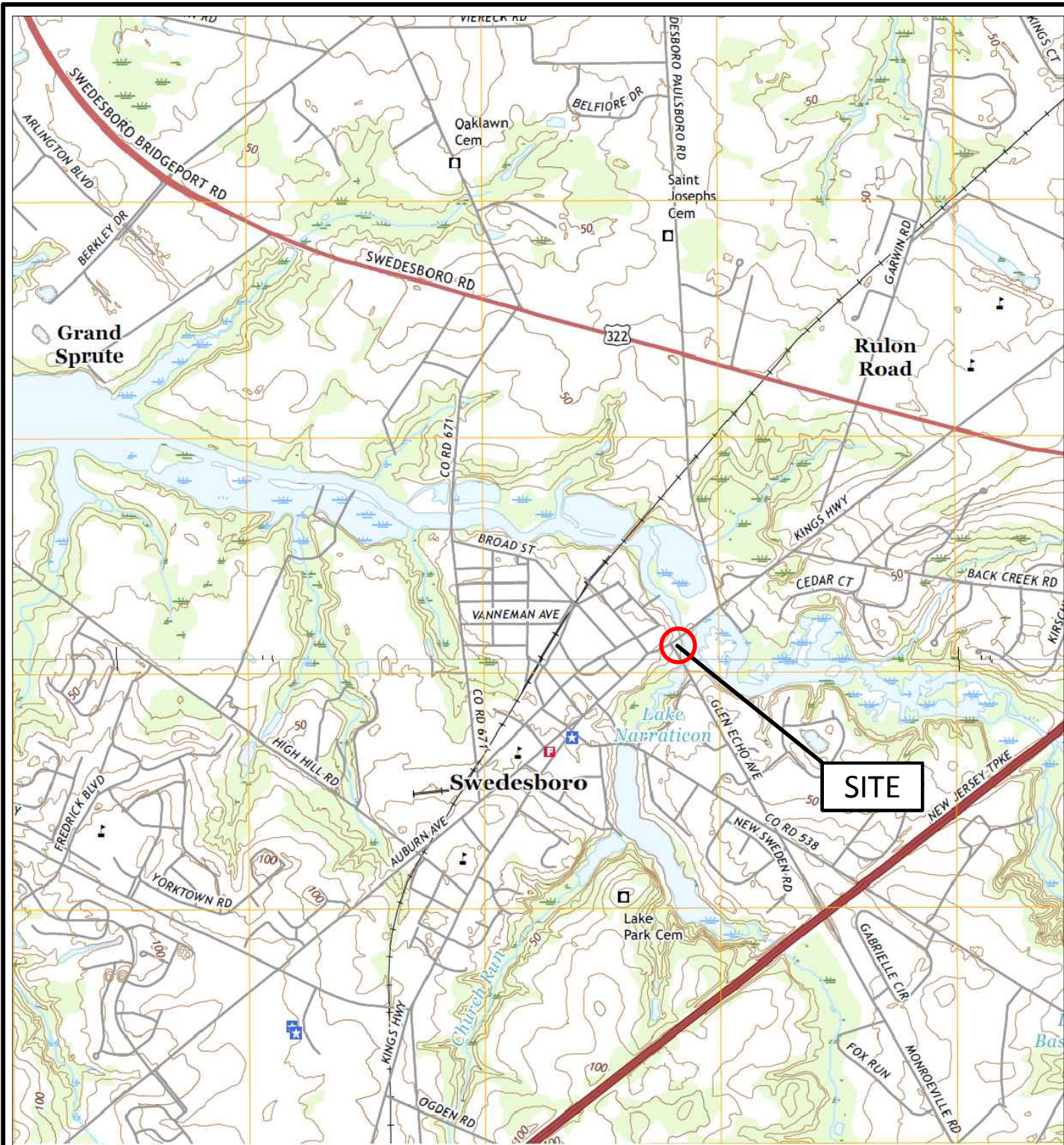
Figure 23- Isoconcentration Contour Map - October 16, 2019

Figure 24- Isoconcentration Contour Map - January 16, 2020

Figure 25- Isoconcentration Contour Map - April 10, 2020

Figure 26- Isoconcentration Contour Map - July 2, 2020

Figure 27- Isoconcentration Contour Map - October 15, 2020



QUADRANGLE LOCATION

LATITUDE 39°45'2.23" NORTH
LONGITUDE 75°18'20.36" WEST

MAP BASED ON USGS 7.5 MINUTES SERIES
BRIDGEPORT, NJ QUADRANGLE, 2016
(ALSO SHOWN, WOODSTOWN, NJ QUADRANGLE, 2016)

SCALE 1:24000

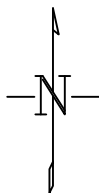


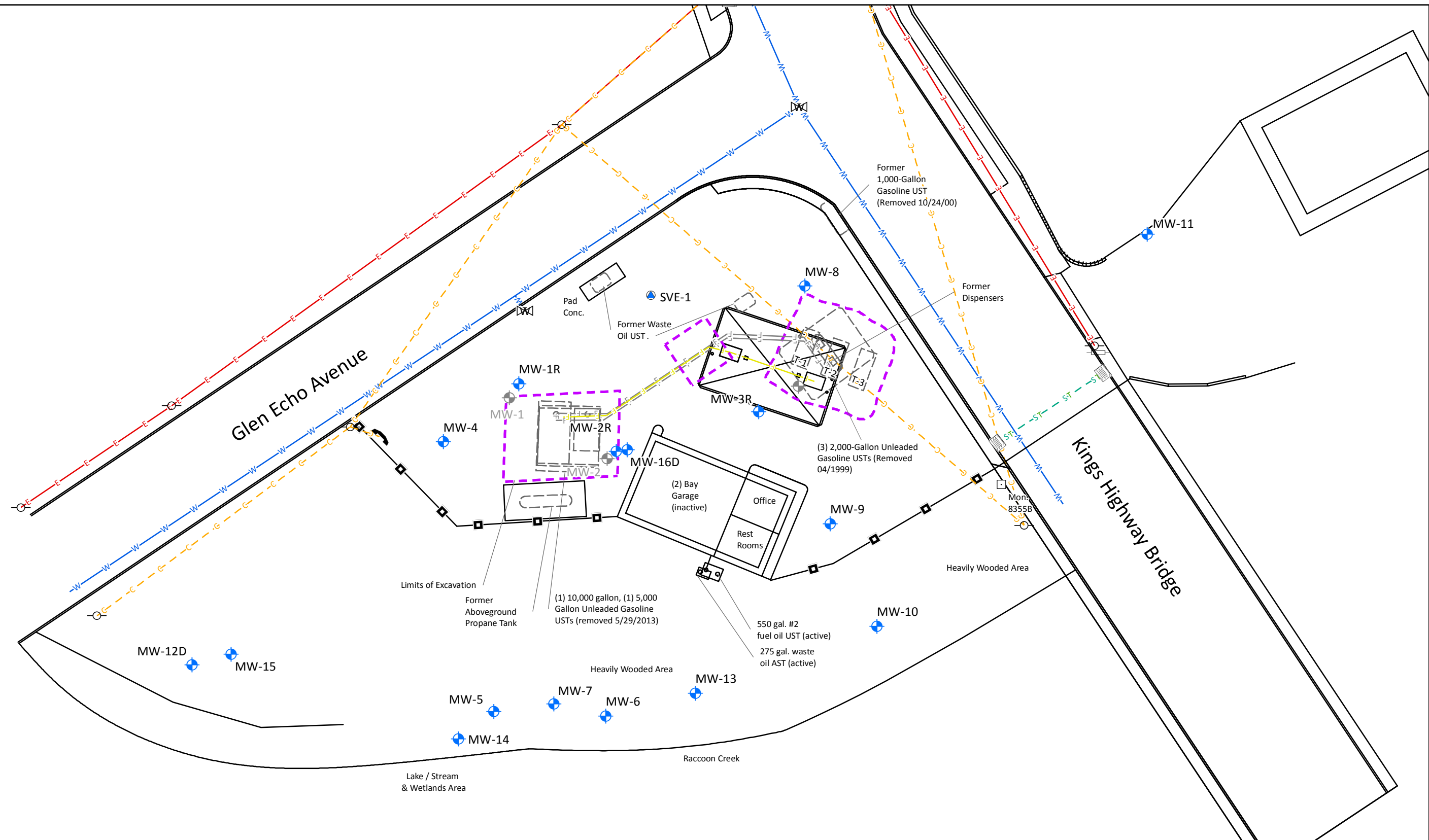
FIGURE 1

SITE LOCATION MAP

FORMER GETTY SERVICE STATION #56955
1008 KINGS HIGHWAY
SWEDESBORO, GLOUCESTER COUNTY, NEW JERSEY

PROJECT NO.: 56955	DRAWN BY: LKO
PREPARED BY: LKO	DATE: 12/28/2016
REVIEWED BY: EAK	FILE NAME: 56955_SLOC.DWG





Legend

- | | | | |
|----------------------------|--------------|-----------------------|--------------------|
| Monitoring Wells | Monument | Current Site Features | Water Line |
| Former Monitoring Well | Utility Pole | Former Site Features | Communication Line |
| Soil Vapor Extraction Well | Sign | Guard Rail | Fuel Line |
| Catch Basin | Telephone | Electric Line | Former Fuel Line |
| Fire Hydrant | Water Valve | Storm sewer Line | Excavation Limit |

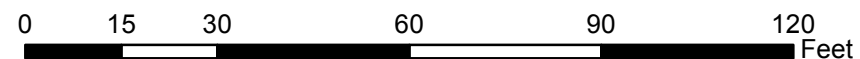


FIGURE 2

Current Site Layout
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 20GTy6955	PREPARED BY MSS	REF SCALE 1:360	
DATE 11/18/2019	REVIEWED BY CT	MAP SCALE 1 inch = 30 feet	

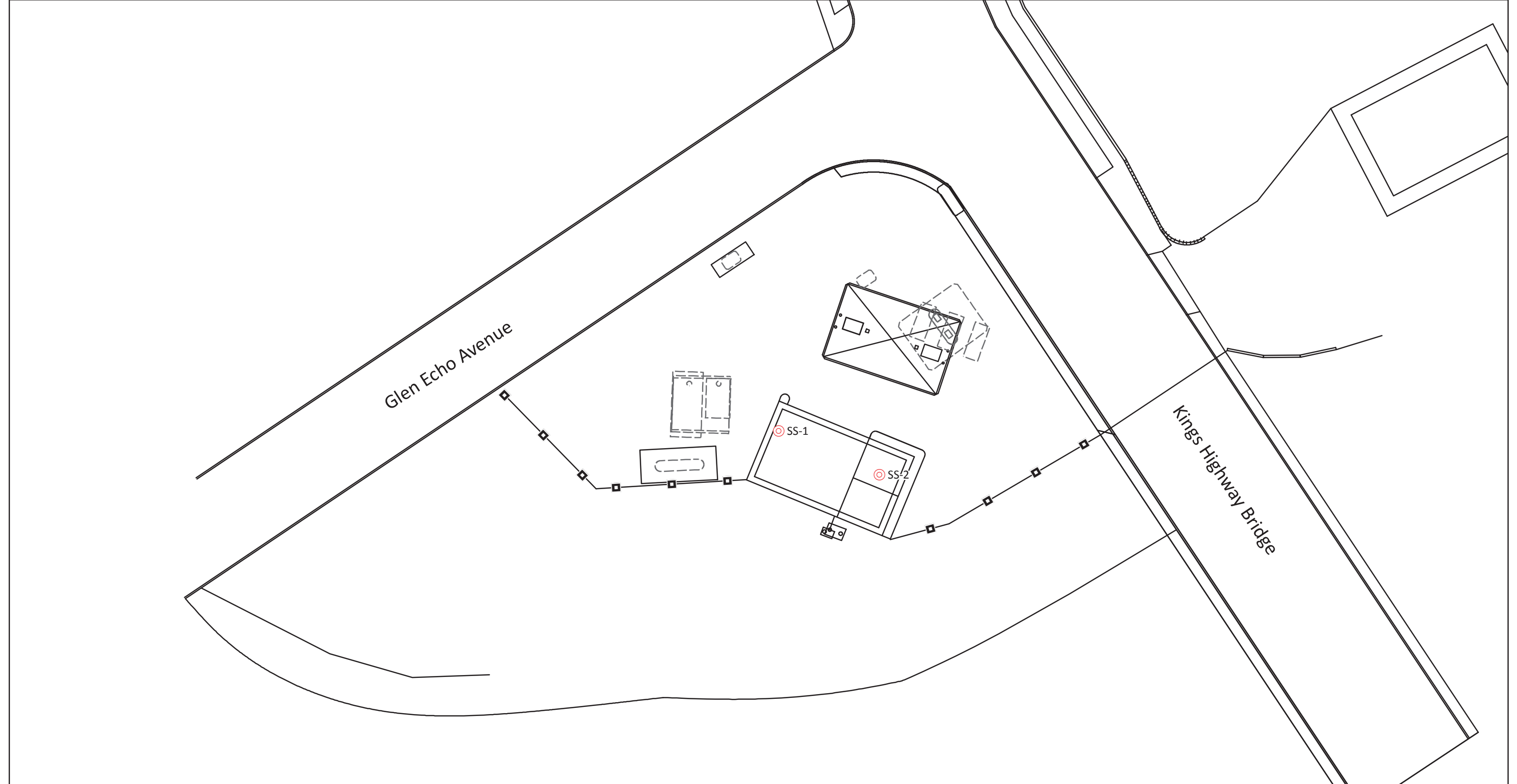


FIGURE 3
GOOGLE EARTH IMAGE

FORMER GETTY SERVICE STATION #56955
1008 KINGS HIGHWAY
SWEDESBORO, GLOUCESTER COUNTY, NEW JERSEY

PROJECT NO.: 56955	DRAWN BY: LKO
PREPARED BY: LKO	DATE: 12/29/2016
REVIEWED BY: EAK	FILE NAME: 20161229_AER_56955.DWG





- Legend**
- ⊙ Sub Slab Soil Gas Sample Location Map
 - Current Site Features
 - - - Former Site Features
 - ◻— Guard Rail

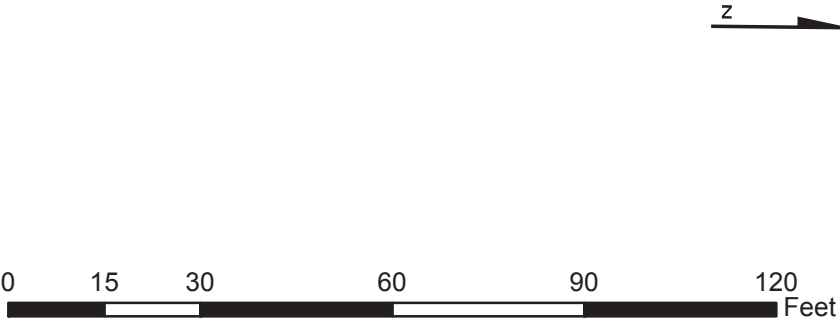


FIGURE 4

Sub-Slab Soil Gas Sample Location Map
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MB	REF SCALE 1:360
DATE 7/1/2019	REVIEWED BY CT	MAP SCALE 1 inch = 30 feet



Legend

- ▲ Soil Sample Location - November 1994

● Geoprobe Sampling Point - August 1995

◀ Hand Auger Sample Location - September 1996

▼ Post Excavation Soil Sample - April 1999

◇ UST Post Excavation Soil Sample - October 2000

● Post Remedial Soil Sample Location - April 2002

⊗ Soil Boring Location - April 2006

▼ Waste Oil Tank Soil Borings - December 2007

● Soil Boring Locations - October 2008

▲ UST Closure Post Excavation Samples - May 2013

⊗ Remedial Excavation Samples - July 2013

◻ Soil Boring Location - September 2014

● Soil Boring Location - November 2016

● Soil Sample Location- August 2021

— Current Site Features

- - - Former Site Features

— Guard Rail
- ▲ Soil Sample Location - November 1994

● Geoprobe Sampling Point - August 1995

◀ Hand Auger Sample Location - September 1996

▼ Post Excavation Soil Sample - April 1999

◇ UST Post Excavation Soil Sample - October 2000

● Post Remedial Soil Sample Location - April 2002

⊗ Soil Boring Location - April 2006

▼ Waste Oil Tank Soil Borings - December 2007

● Soil Boring Locations - October 2008

▲ UST Closure Post Excavation Samples - May 2013

⊗ Remedial Excavation Samples - July 2013

◻ Soil Boring Location - September 2014

● Soil Boring Location - November 2016

● Soil Sample Location- August 2021

— Current Site Features

- - - Former Site Features

— Guard Rail

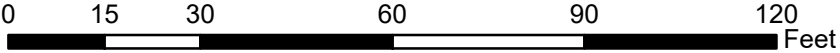

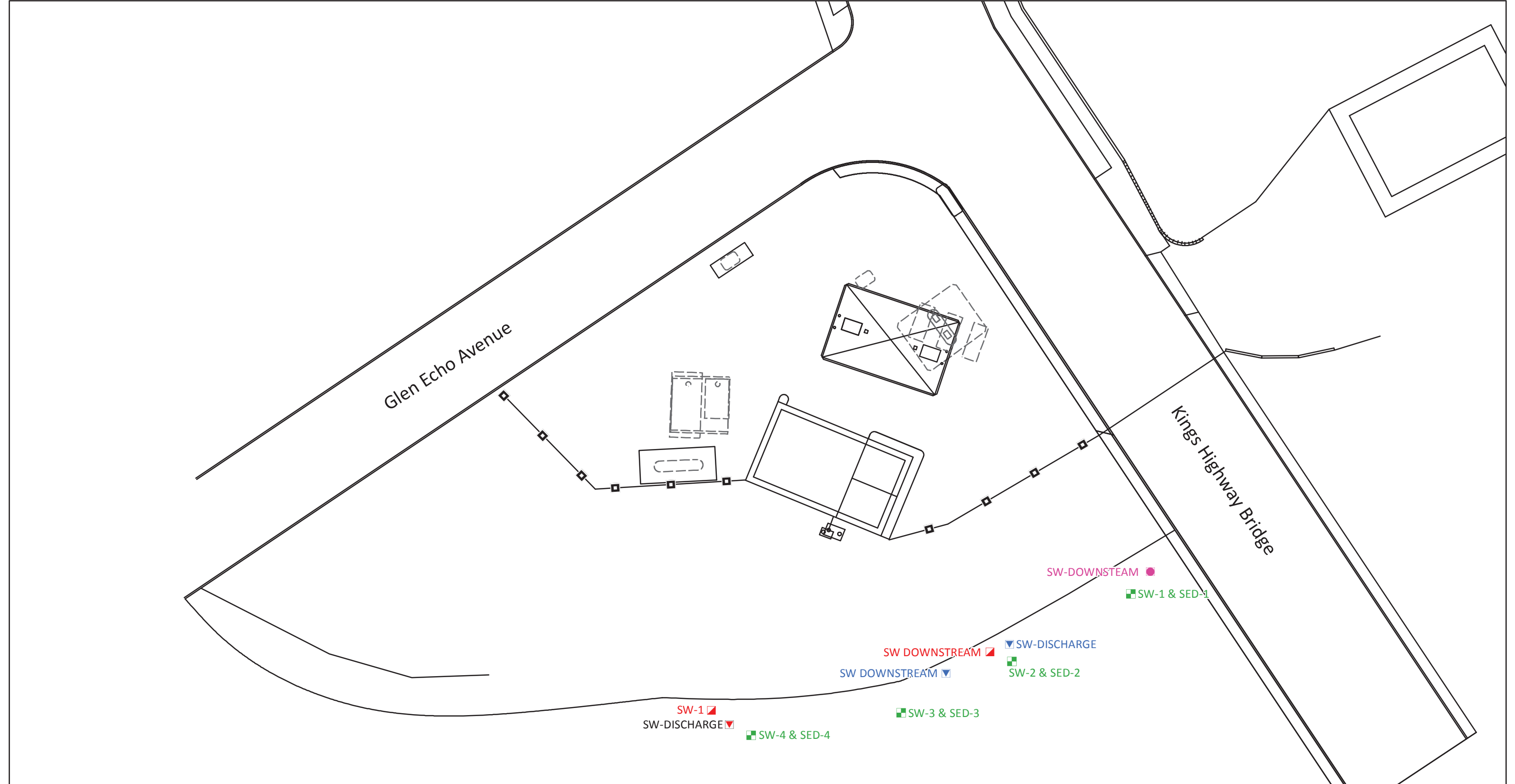


FIGURE 5

Historical Soil Sample Map
Getty Service Station #56955
Kings Highway and Glen Echo Avenue
Swedesboro, Gloucester Co., NJ

PROJECT NO. 19GET56955	PREPARED BY MB	REF SCALE 1:360	
DATE 10/5/2021	REVIEWED BY CT	MAP SCALE 1 inch = 30 feet	



Legend

- Historic SW-1, SW Downstream Surface Water Sample Locations
- Surface Water / Sediment Sample Locations - June 23, 2010
- ▼

 Surface Water Sample Location April 10, 2012
- ▼

 Surface Water Sample Locations October 2, 2012
- Surface Water Sample Location April 11, 2013
- Current Site Features
- - -

 Former Site Features
- Guard Rail

0

15

30

60

90

120


Feet

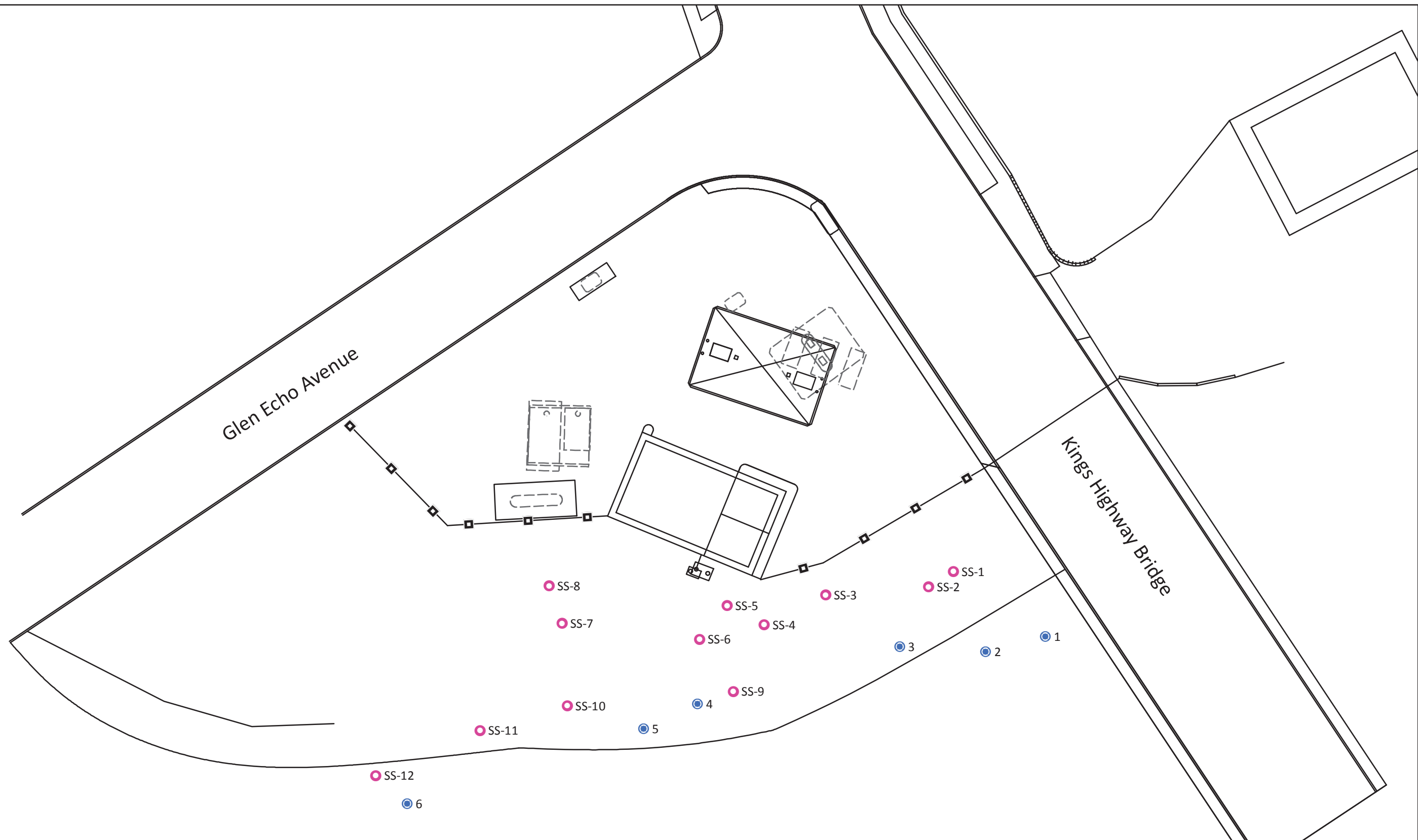
z

→

FIGURE 6

Historical Surface Water / Sediment Sample Location Map
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MB	REF SCALE 1:360	
DATE 7/1/2019	REVIEWED BY CT	MAP SCALE 1 inch = 30 feet	




Legend

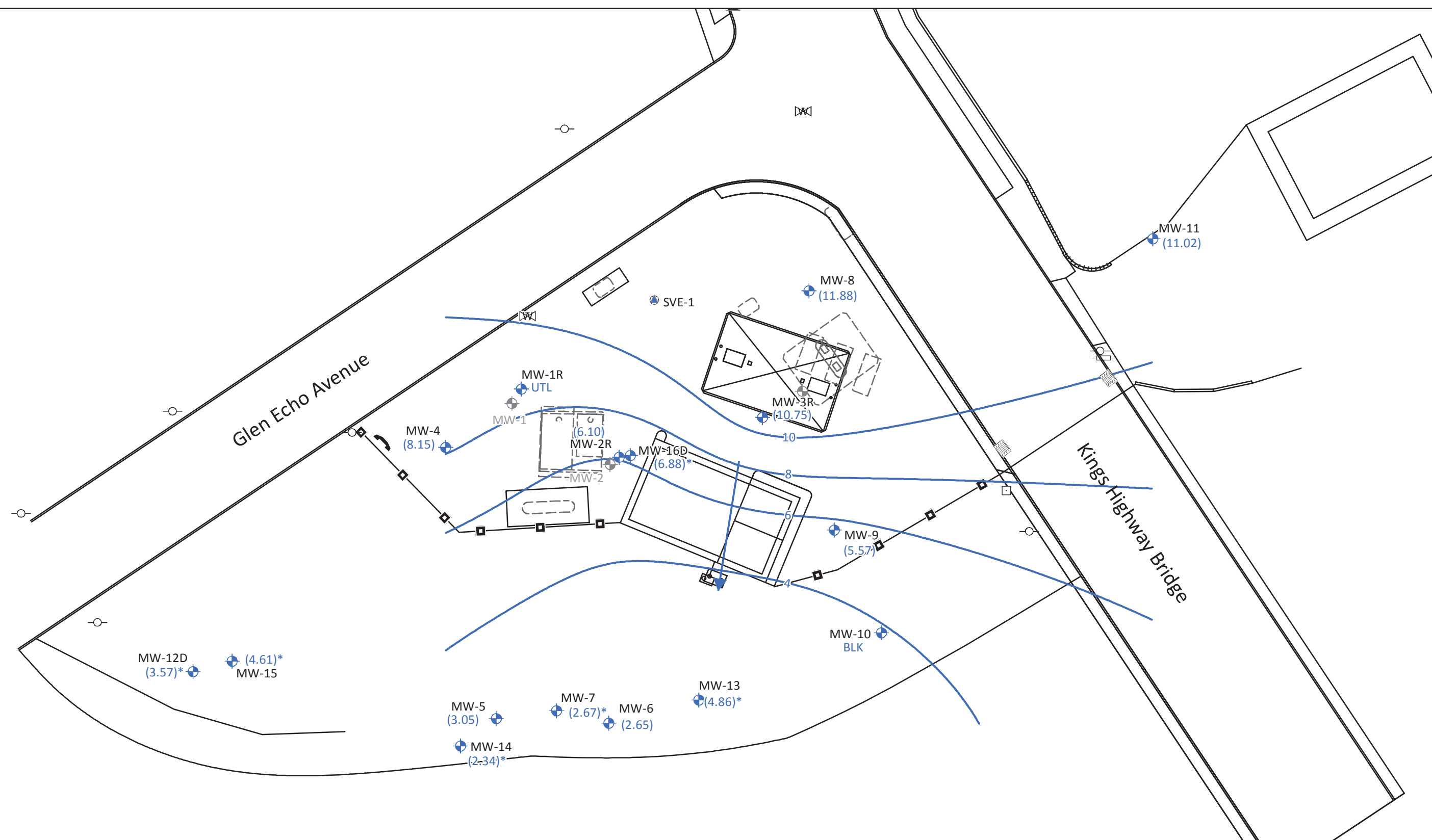
- Surface Water/Sediment/Sediment Pore Water Sample Location
- Soil Sample Location
- Current Site Features
- - - Former Site Features
- Guard Rail



FIGURE 7

Historical Ecological Investigation Sample Location Map
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MB	REF SCALE 1:360	
DATE 7/1/2019	REVIEWED BY CT	MAP SCALE 1 inch = 30 feet	



Legend

- Monitoring Well

Former Monitoring Well

Soil Vapor Extraction Well

Catch Basin

Fire Hydrant
- Monument

Utility Pole

Sign

Telephone

Water Valve
- Current Site Features

Former Site Features

Guard Rail

Groundwater Elevation Contour (ft)

Inferred Groundwater Flow Direction

Notes:
UTL - Unable to Locate
BLK - Well Blocked
* - not used in contour interpolation
(screened in deeper zone)



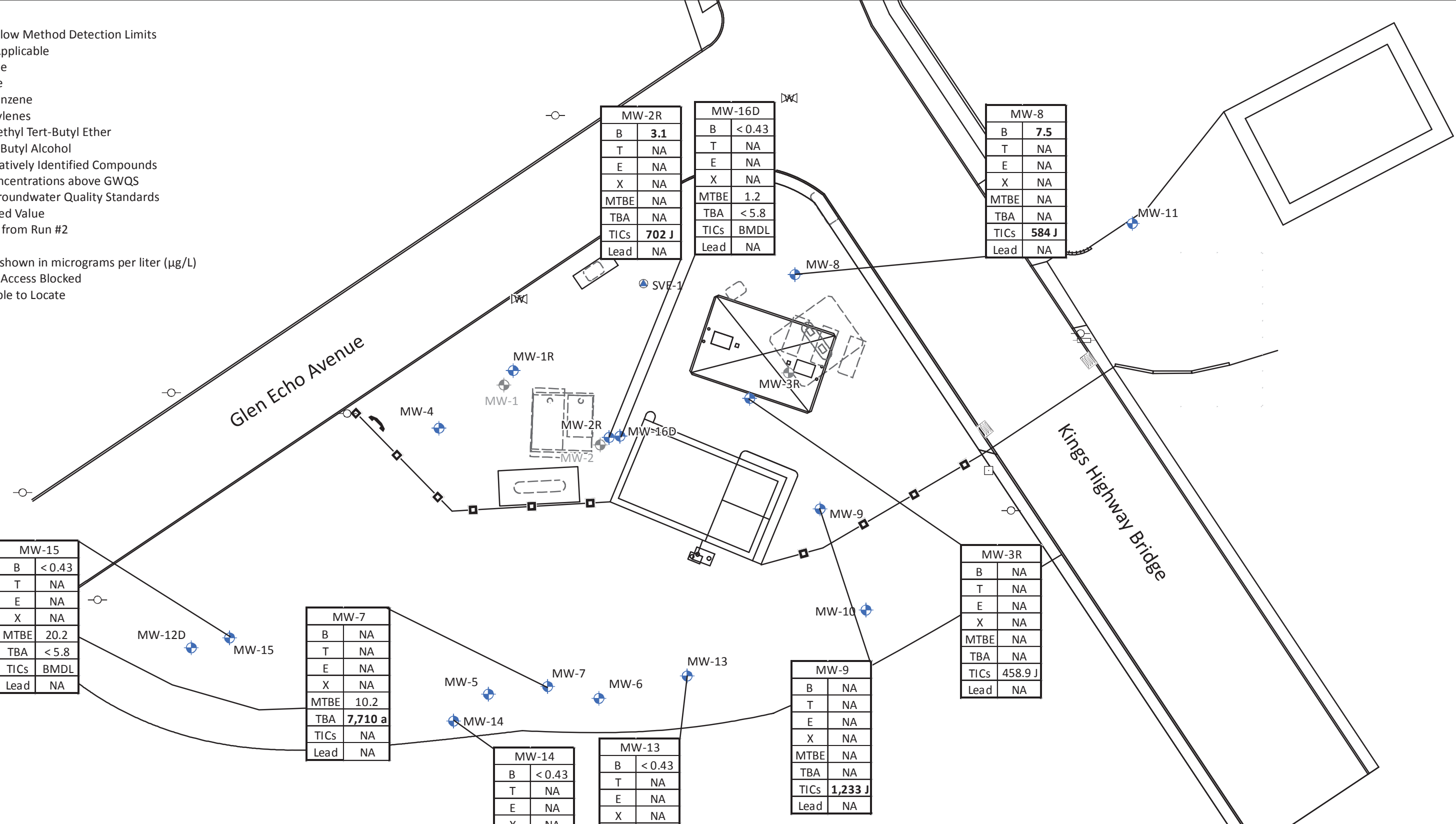
FIGURE 8

Groundwater Elevation Contour Map - January 16, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS ALR	REF SCALE 1:360
DATE 2/11/2020	REVIEWED BY JT	MAP SCALE 1 inch = 30 feet

Notes:
BMDL - Below Method Detection Limits
NA - Not Applicable
B - Benzene
T - Toluene
E - Ethylbenzene
X - Total Xylenes
MTBE - Methyl Tert-Butyl Ether
TBA - Tert-Butyl Alcohol
TICs - Tentatively Identified Compounds
Bold - concentrations above GWQS
GWQS - Groundwater Quality Standards
J - Estimated Value
a - Results from Run #2

All results shown in micrograms per liter (µg/L)
BLK - Well Access Blocked
UTL - Unable to Locate



- Legend**
- Monitoring Well
 - Former Monitoring Well
 - Soil Vapor Extraction Well
 - Catch Basin
 - Fire Hydrant
 - Monument
 - Utility Pole
 - Sign
 - Telephone
 - Water Valve
 - Current Site Features
 - Former Site Features
 - Guard Rail

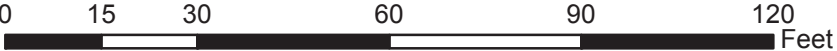
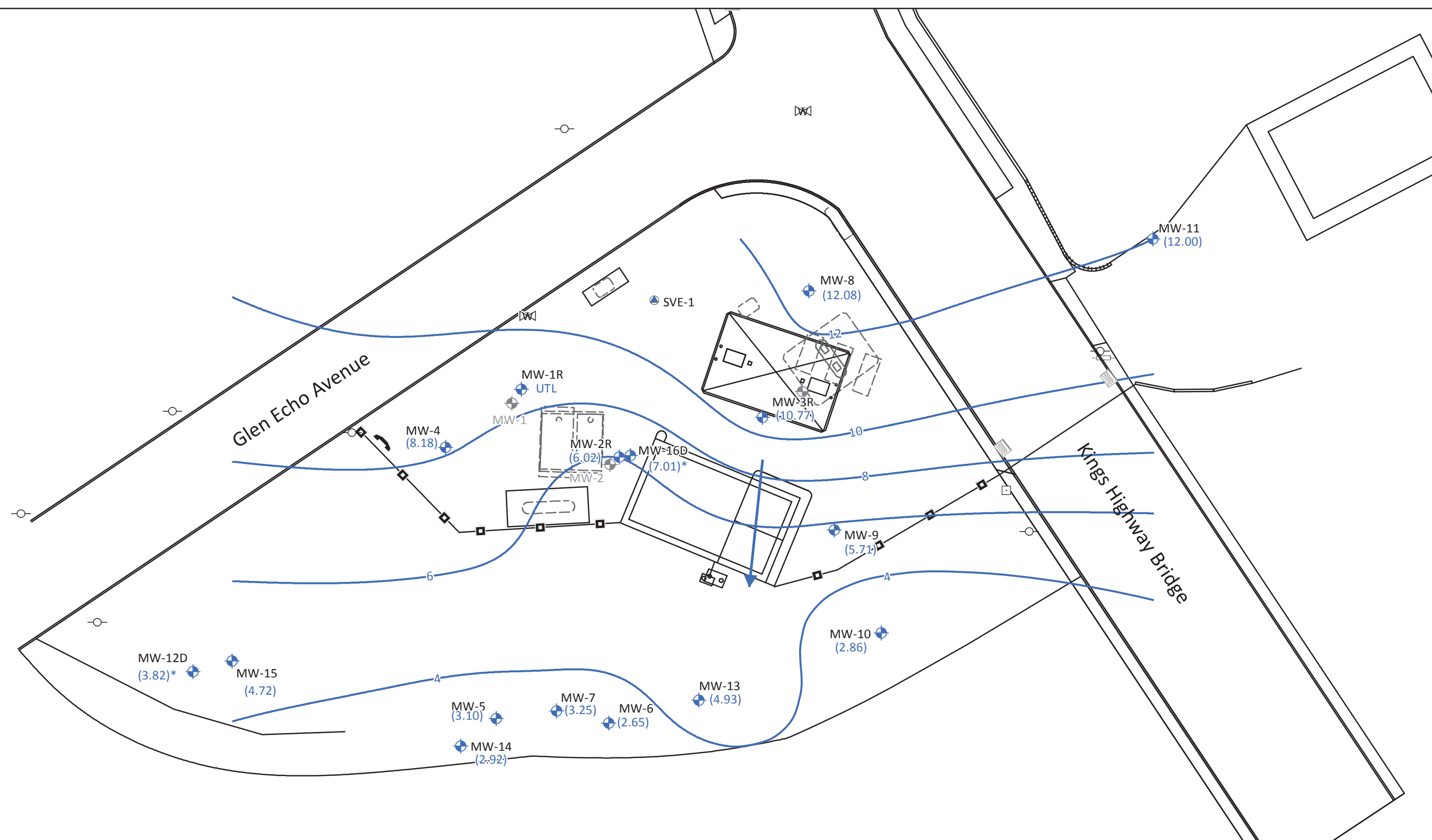


FIGURE 9

Groundwater Compound Distribution Map - January 16, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY ALR	REF SCALE 1:360
DATE 2/11/2020	REVIEWED BY JT	MAP SCALE 1 inch = 30 feet



Legend

- | | | |
|----------------------------|--------------|-------------------------------------|
| Monitoring Well | Monument | Groundwater Elevation Contour (ft) |
| Former Monitoring Well | Utility Pole | Inferred Groundwater Flow Direction |
| Soil Vapor Extraction Well | Sign | Current Site Features |
| Catch Basin | Telephone | Former Site Features |
| Fire Hydrant | Water Valve | Guard Rail |

Notes:
 UTL - Unable to Locate
 BLK - Well Blocked
 * - not used in contour interpolation
 (screened in deeper zone)



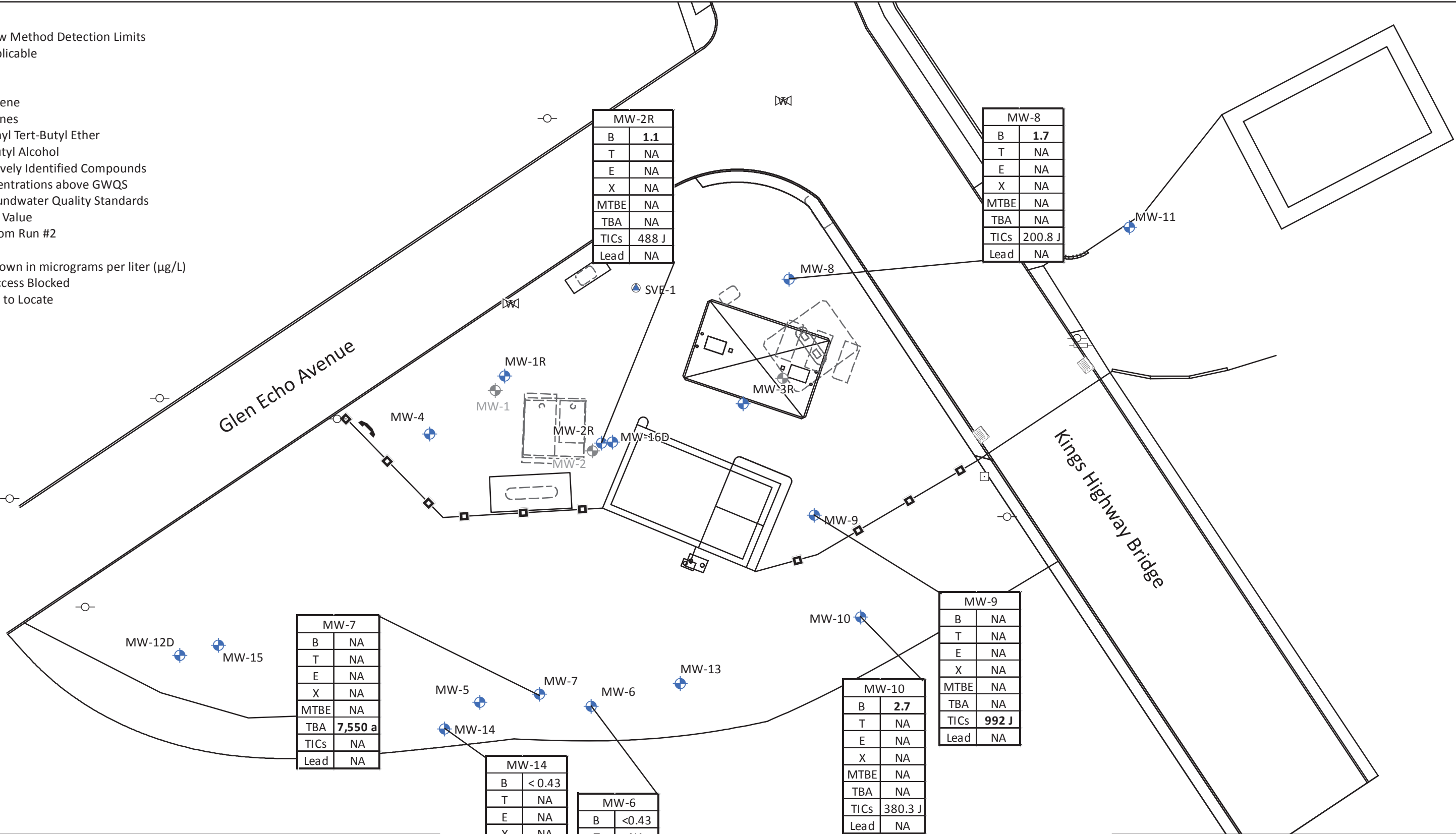
FIGURE 10

Groundwater Elevation Contour Map - April 10, 2020
 Former Getty Service Station #56955
 1008 Kings Highway
 Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MSS	REF SCALE 1:360	
DATE 5/28/2020	REVIEWED BY JT	MAP SCALE 1 inch = 30 feet	

Notes:
BMDL - Below Method Detection Limits
NA - Not Applicable
B - Benzene
T - Toluene
E - Ethylbenzene
X - Total Xylenes
MTBE - Methyl Tert-Butyl Ether
TBA - Tert-Butyl Alcohol
TICs - Tentatively Identified Compounds
Bold - concentrations above GWQS
GWQS - Groundwater Quality Standards
J - Estimated Value
a - Results from Run #2

All results shown in micrograms per liter (µg/L)
BLK - Well Access Blocked
UTL - Unable to Locate



- Legend**
- Monitoring Well
 - Former Monitoring Well
 - Soil Vapor Extraction Well
 - Catch Basin
 - Fire Hydrant
 - Monument
 - Utility Pole
 - Sign
 - Telephone
 - Water Valve
 - Current Site Features
 - Former Site Features
 - Guard Rail

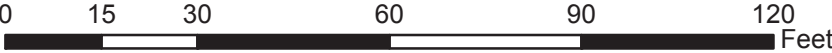
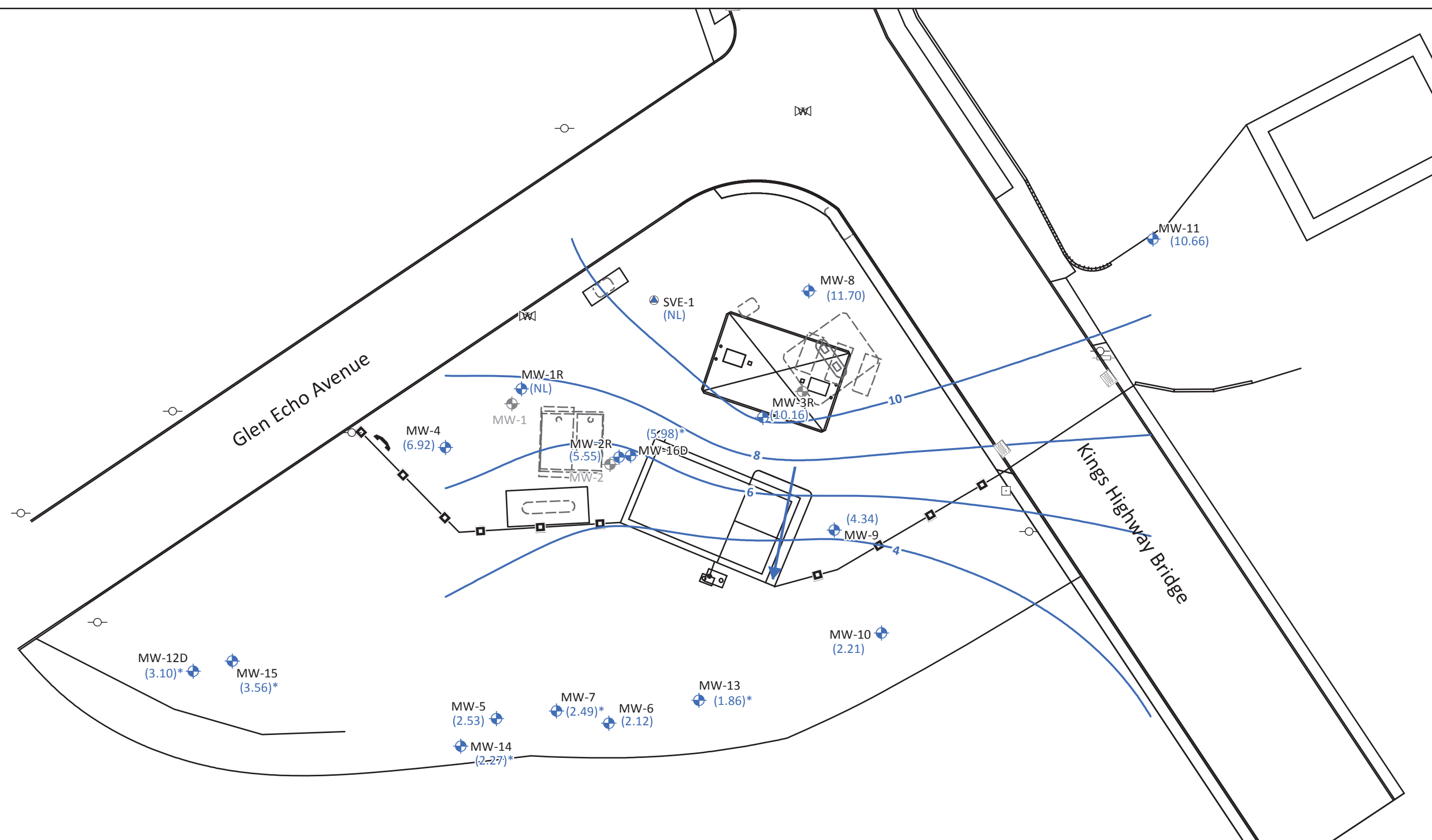


FIGURE 11

Groundwater Compound Distribution Map - April 10, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MSS	REF SCALE 1:360
DATE 5/28/2020	REVIEWED BY JT	MAP SCALE 1 inch = 30 feet



Legend

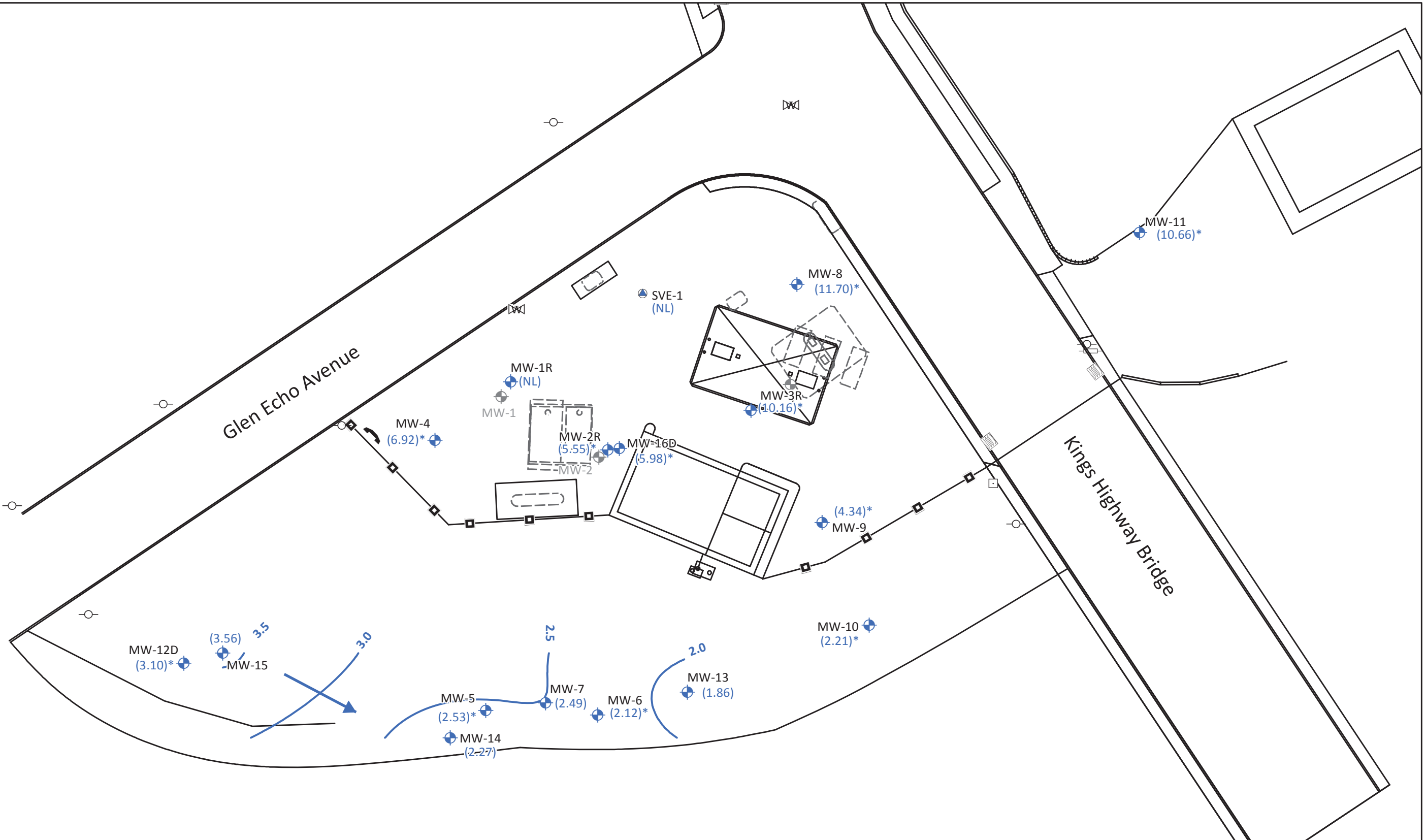
- | | | |
|----------------------------|--------------|--------------------------------------|
| Monitoring Well | Monument | Current Site Features |
| Former Monitoring Well | Utility Pole | Former Site Features |
| Soil Vapor Extraction Well | Sign | Guard Rail |
| Catch Basin | Telephone | Groundwater Elevation Contour (feet) |
| Fire Hydrant | Water Valve | Inferred Groundwater Flow Direction |

Notes:
UTL - Unable to Locate
BLK - Well Blocked
* - not used in contour interpolation
(screened in deeper zone)



FIGURE 12
Groundwater Elevation Contour Map -
Shallow Zone - July 2, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MSS/JLH	REF SCALE 1:360	
DATE 10/12/2020	REVIEWED BY JT/JC	MAP SCALE 1 inch = 30 feet	



Legend

- Monitoring Well

Former Monitoring Well

Soil Vapor Extraction Well

Catch Basin

Fire Hydrant
- Monument

Utility Pole

Sign

Telephone

Water Valve
- Current Site Features

Former Site Features

Guard Rail

Groundwater Elevation Contour (feet)

Inferred Groundwater Flow Direction

Notes:
UTL - Unable to Locate
BLK - Well Blocked
* - not used in contour interpolation
(screened in a different zone)

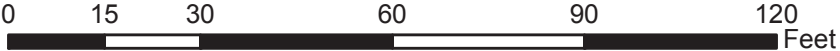
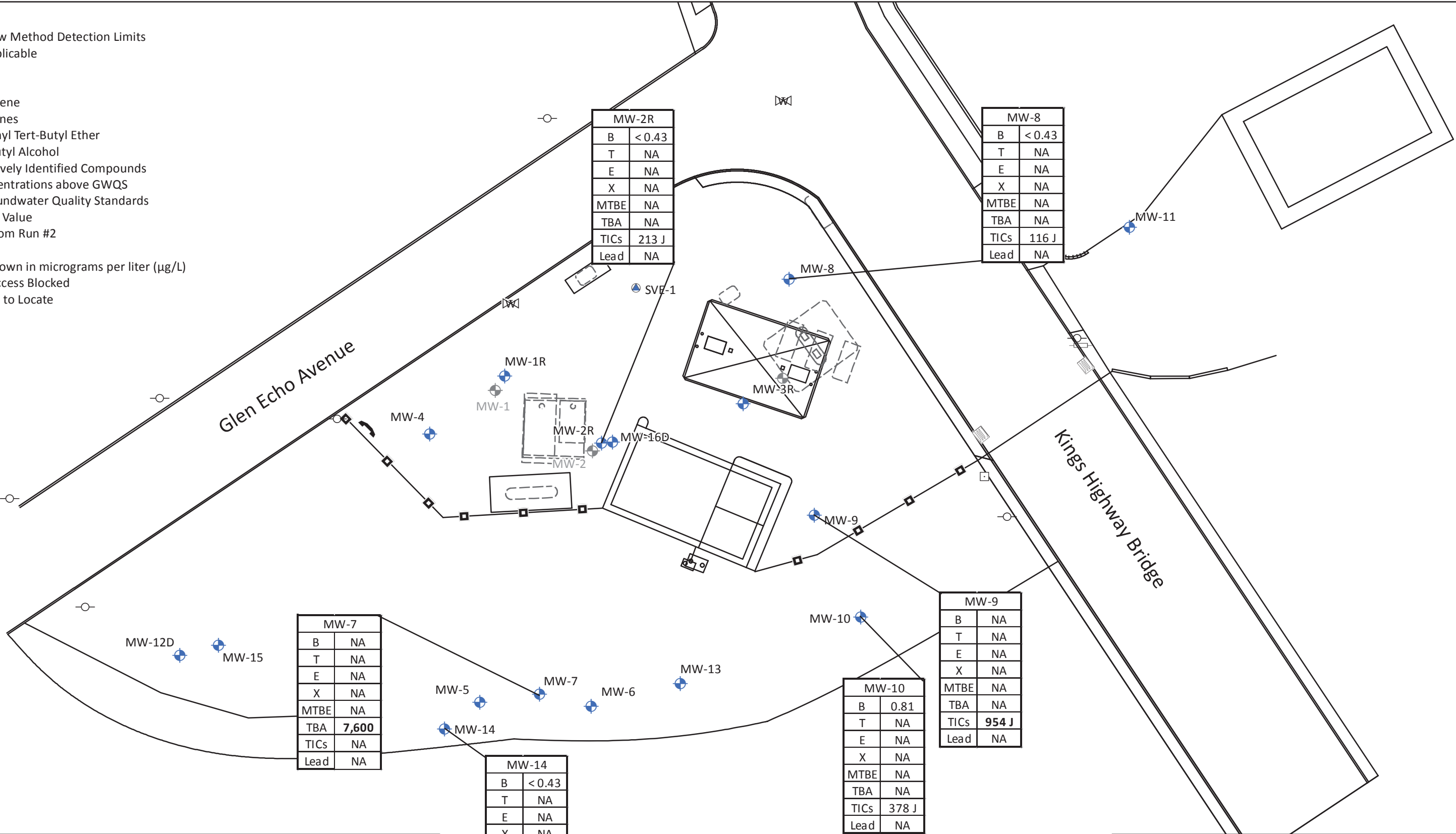


FIGURE 13
Groundwater Elevation Contour Map -
Intermediate Zone - July 2, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MSS/JLH	REF SCALE 1:360
DATE 10/12/2020	REVIEWED BY JT/JC	MAP SCALE 1 inch = 30 feet

Notes:
BMDL - Below Method Detection Limits
NA - Not Applicable
B - Benzene
T - Toluene
E - Ethylbenzene
X - Total Xylenes
MTBE - Methyl Tert-Butyl Ether
TBA - Tert-Butyl Alcohol
TICs - Tentatively Identified Compounds
Bold - concentrations above GWQS
GWQS - Groundwater Quality Standards
J - Estimated Value
a - Results from Run #2

All results shown in micrograms per liter (µg/L)
BLK - Well Access Blocked
UTL - Unable to Locate



Legend

- Monitoring Well
- Former Monitoring Well
- Soil Vapor Extraction Well
- Catch Basin
- Fire Hydrant
- Monument
- Utility Pole
- Sign
- Telephone
- Water Valve
- Current Site Features
- Former Site Features
- Guard Rail

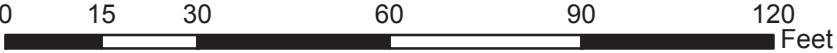
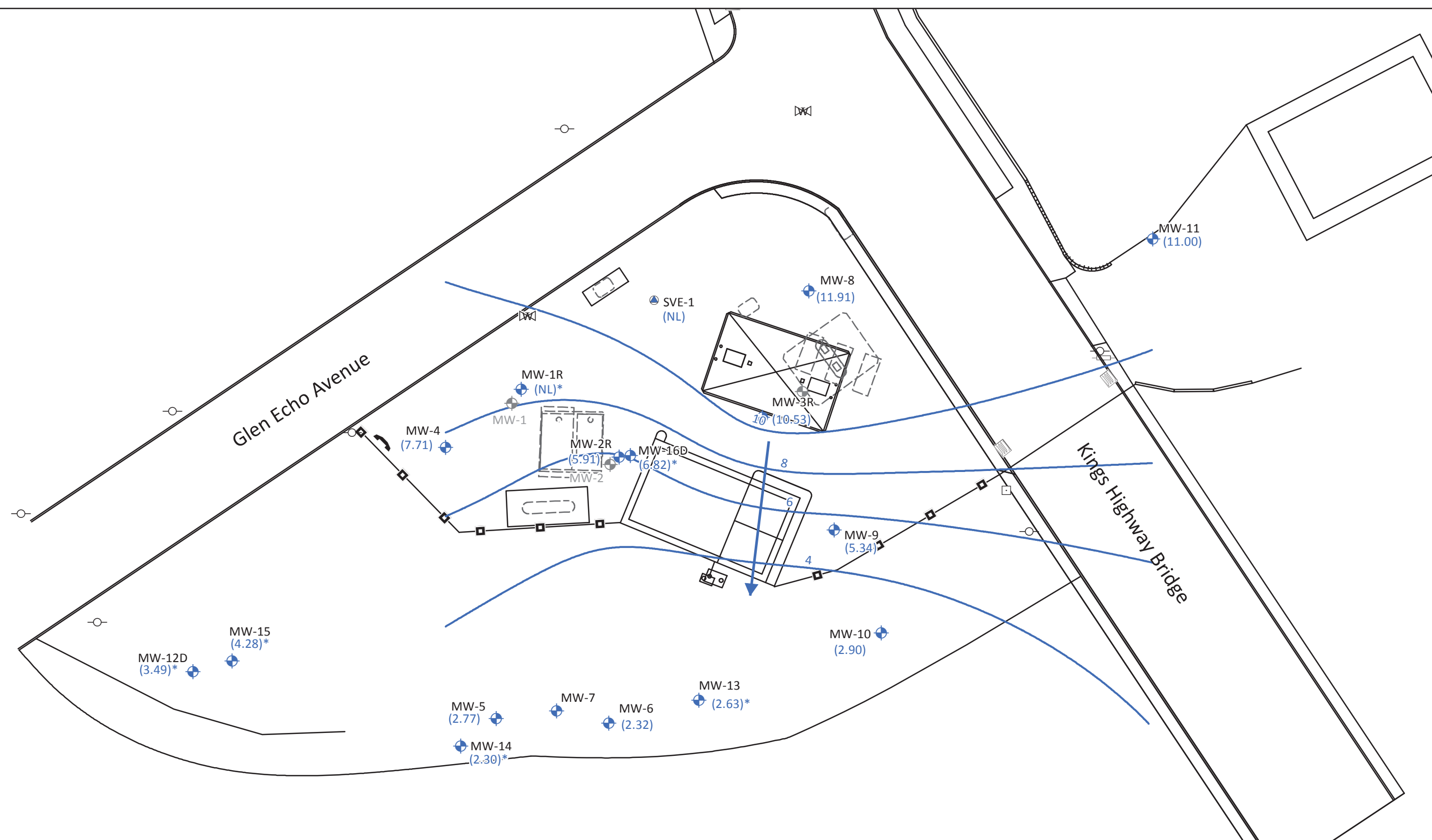


FIGURE 14

Groundwater Compound Distribution Map - July 2, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 20GTY56955	PREPARED BY MSS	REF SCALE 1:360
DATE 9/14/2020	REVIEWED BY JP	MAP SCALE 1 inch = 30 feet



Legend

- Monitoring Well

Former Monitoring Well

Soil Vapor Extraction Well

Catch Basin

Fire Hydrant
- Monument

Utility Pole

Sign

Telephone

Water Valve
- Inferred Groundwater Flow Direction

Groundwater Elevation Contour (feet)

Current Site Features

Former Site Features

Guard Rail

Notes:
UTL - Unable to Locate
BLK - Well Blocked
* - not used in contour interpolation
(screened in deeper zone)

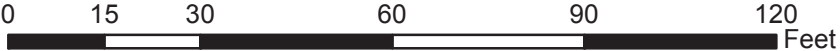
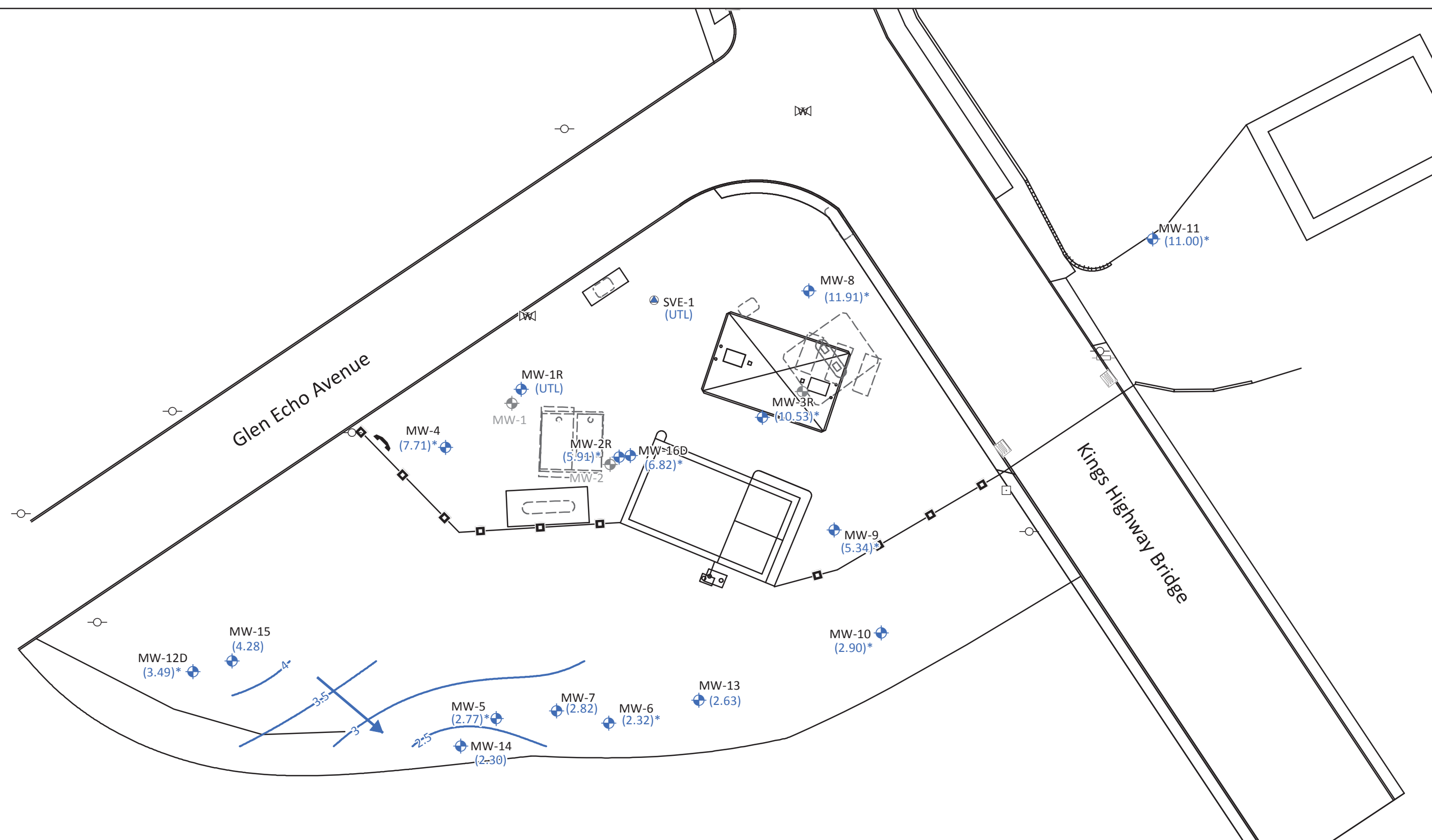


FIGURE 15

Groundwater Elevation Contour Map Shallow
Zone - October 15, 2020

Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MSS	REF SCALE 1:360
DATE 1/14/2021	REVIEWED BY JT/JC	MAP SCALE 1 inch = 30 feet



Legend

- Monitoring Well

Former Monitoring Well

Soil Vapor Extraction Well

Catch Basin

Fire Hydrant

Monument

Utility Pole

Sign

Telephone

Water Valve

Inferred Groundwater Flow Direction

Groundwater Elevation Contour (feet)

Current Site Features

Former Site Features

Guard Rail

Notes:
UTL - Unable to Locate
BLK - Well Blocked
* - not used in contour interpolation
(screened in a different zone)

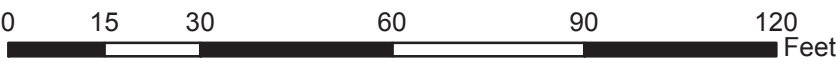
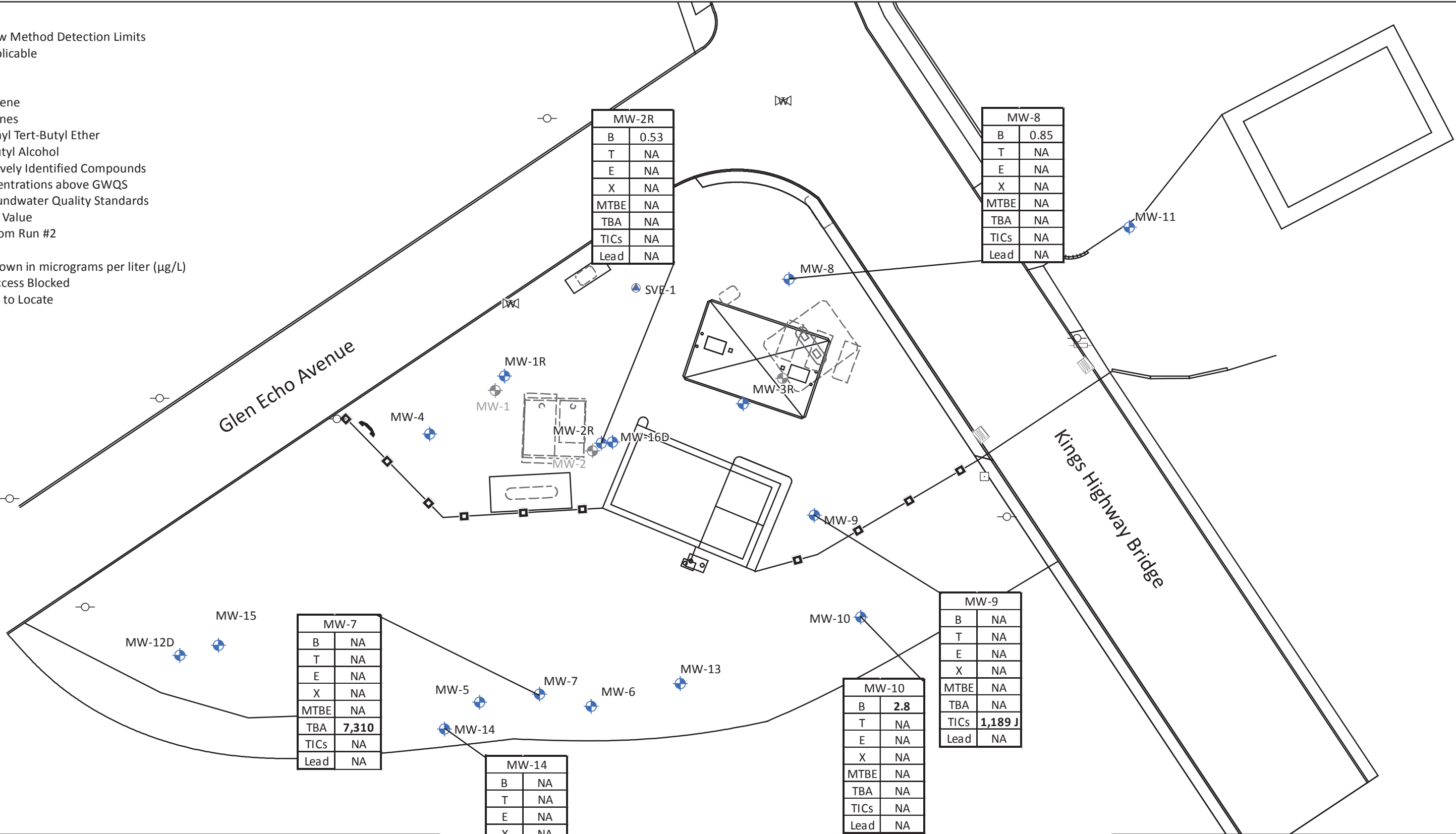


FIGURE 16
Groundwater Elevation Contour Map
Intermediate Zone - October 15, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MSS	REF SCALE 1:360	
DATE 1/14/2021	REVIEWED BY JT/JC	MAP SCALE 1 inch = 30 feet	

Notes:
BMDL - Below Method Detection Limits
NA - Not Applicable
B - Benzene
T - Toluene
E - Ethylbenzene
X - Total Xylenes
MTBE - Methyl Tert-Butyl Ether
TBA - Tert-Butyl Alcohol
TICs - Tentatively Identified Compounds
Bold - concentrations above GWQS
GWQS - Groundwater Quality Standards
J - Estimated Value
a - Results from Run #2

All results shown in micrograms per liter (µg/L)
BLK - Well Access Blocked
UTL - Unable to Locate



Legend

- Monitoring Well
- Former Monitoring Well
- Soil Vapor Extraction Well
- Catch Basin
- Fire Hydrant
- Monument
- Utility Pole
- Sign
- Telephone
- Water Valve
- Current Site Features
- Former Site Features
- Guard Rail

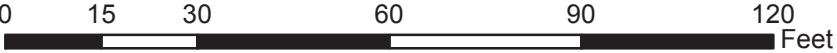


FIGURE 17

Groundwater Compound Distribution Map - October 15, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MSS	REF SCALE 1:360
DATE 1/14/2021	REVIEWED BY JT	MAP SCALE 1 inch = 30 feet



County Boundaries Quadrangles Not Mapped

Historic Fill Parcels Data (Block and Lot)

Historic Fill

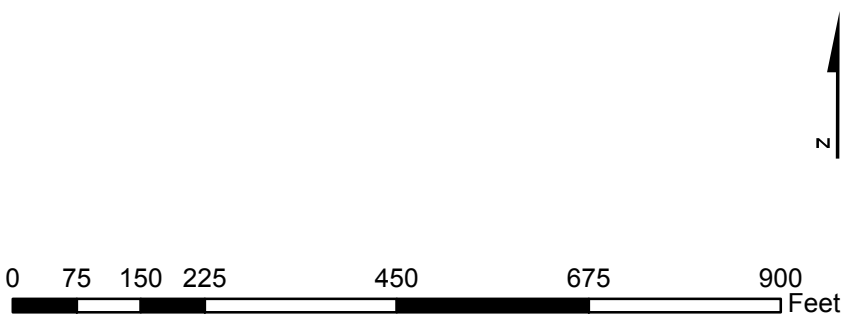

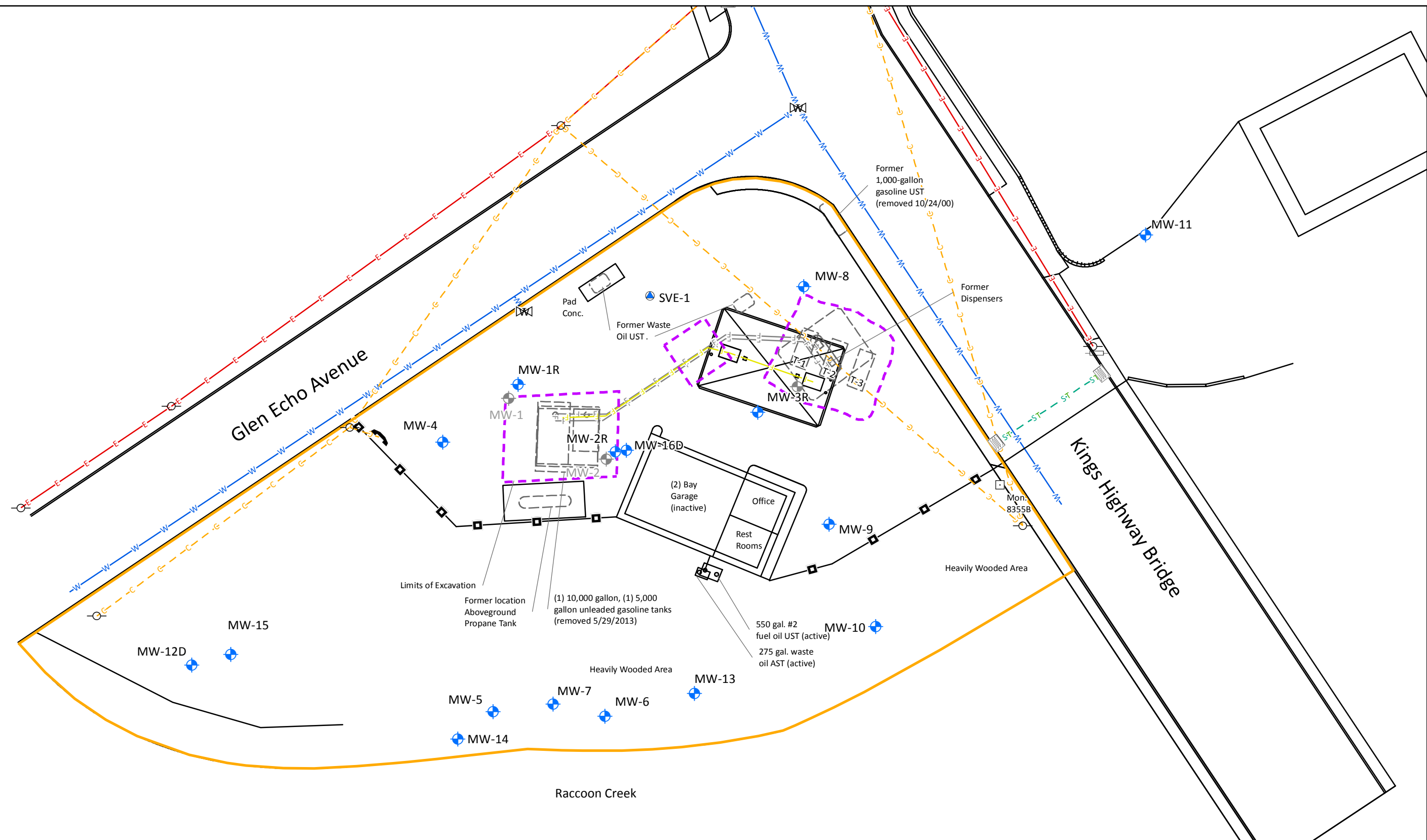


FIGURE 18
Regional Historic Fill Map
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MB	REF SCALE 1:2,700
DATE 2/26/2021	REVIEWED BY CT	MAP SCALE 1 inch = 225 feet

 anteagroup



Legend

- | | | | | |
|----------------------------|--------------|-----------------------|--------------------|------------|
| Monitoring Wells | Monument | Current Site Features | Water Line | CEA Limits |
| Former Monitoring Well | Utility Pole | Former Site Features | Communication Line | |
| Soil Vapor Extraction Well | Sign | Guard Rail | Fuel Line | |
| Catch Basin | Telephone | Electric Line | Former Fuel Line | |
| Fire Hydrant | Water Valve | Storm sewer Line | Excavation Limit | |

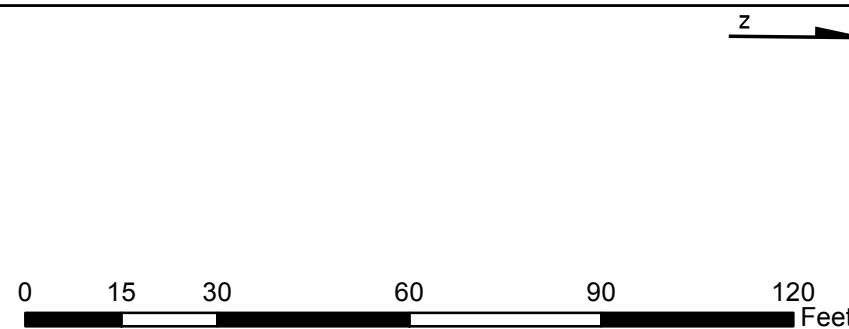
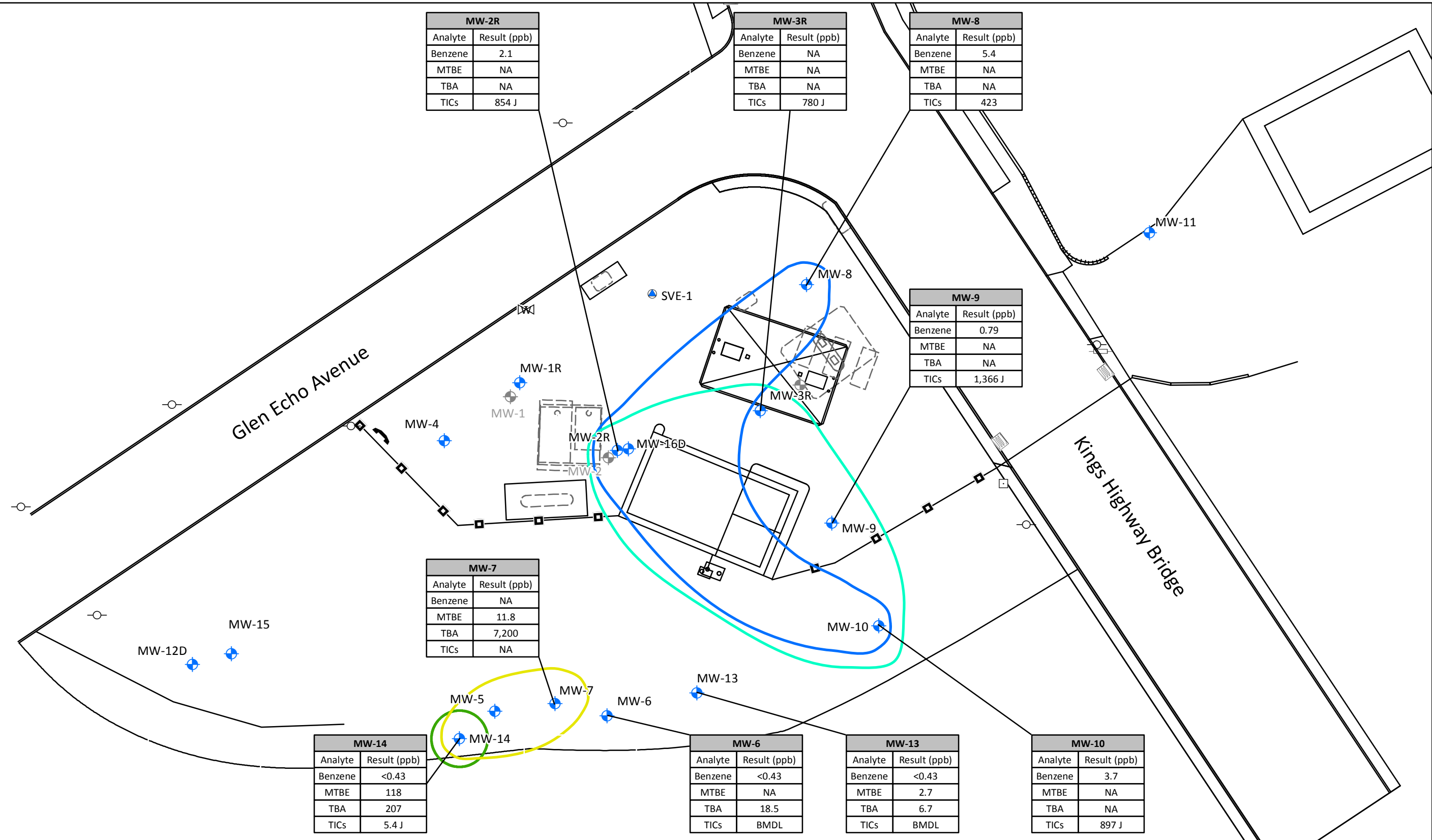


FIGURE 19

CEA Limits (Site Plan)
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	PREPARED BY MB	REF SCALE 1:360	
DATE 2/26/2021	REVIEWED BY CT	MAP SCALE 1 inch = 30 feet	



Legend

- | | | | |
|----------------------------|--------------|-----------------------|---------------------------|
| Monitoring Well | Monument | Current Site Features | Isoconcentration Contours |
| Former Monitoring Well | Utility Pole | Former Site Features | Benzene (1 ppb) |
| Soil Vapor Extraction Well | Sign | Guard Rail | MTBE (70 ppb) |
| Catch Basin | Telephone | | TBA (100 ppb) |
| Fire Hydrant | Water Valve | | TICs (500 ppb) |

Notes:
NA - Not Analyzed

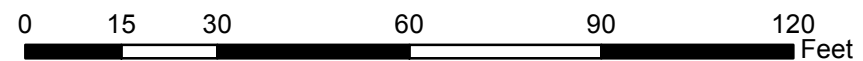
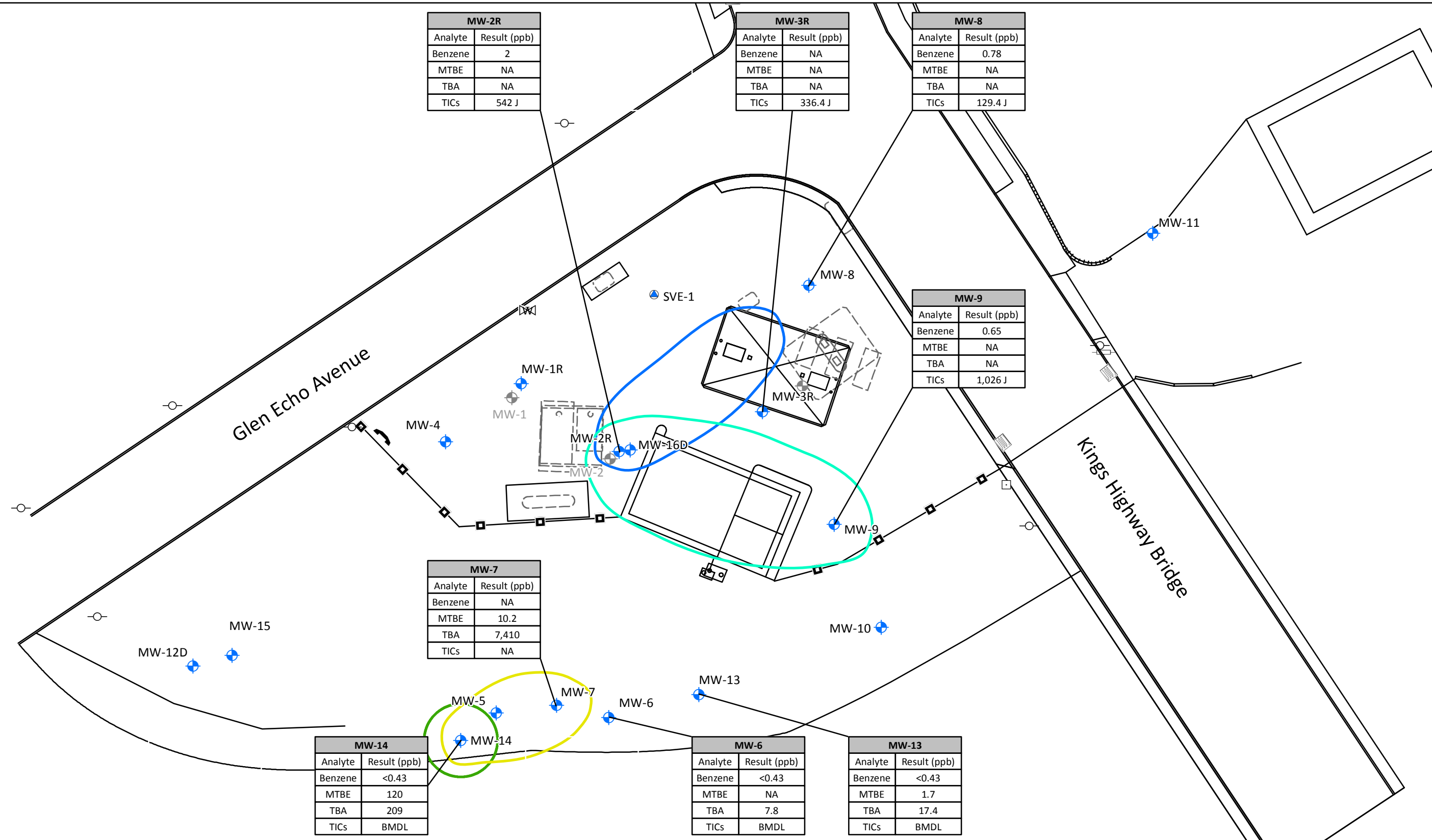


FIGURE 20

Isoconcentration Contour Map - January 16, 2019
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360	
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet	



Legend

- | | | | |
|----------------------------|--------------|-----------------------|---------------------------|
| Monitoring Well | Monument | Current Site Features | Isoconcentration Contours |
| Former Monitoring Well | Utility Pole | Former Site Features | Benzene (1 ppb) |
| Soil Vapor Extraction Well | Sign | Guard Rail | MTBE (70 ppb) |
| Catch Basin | Telephone | | TBA (100 ppb) |
| Fire Hydrant | Water Valve | | TICs (500 ppb) |

Notes:
NA - Not Analyzed

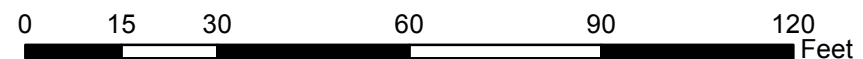
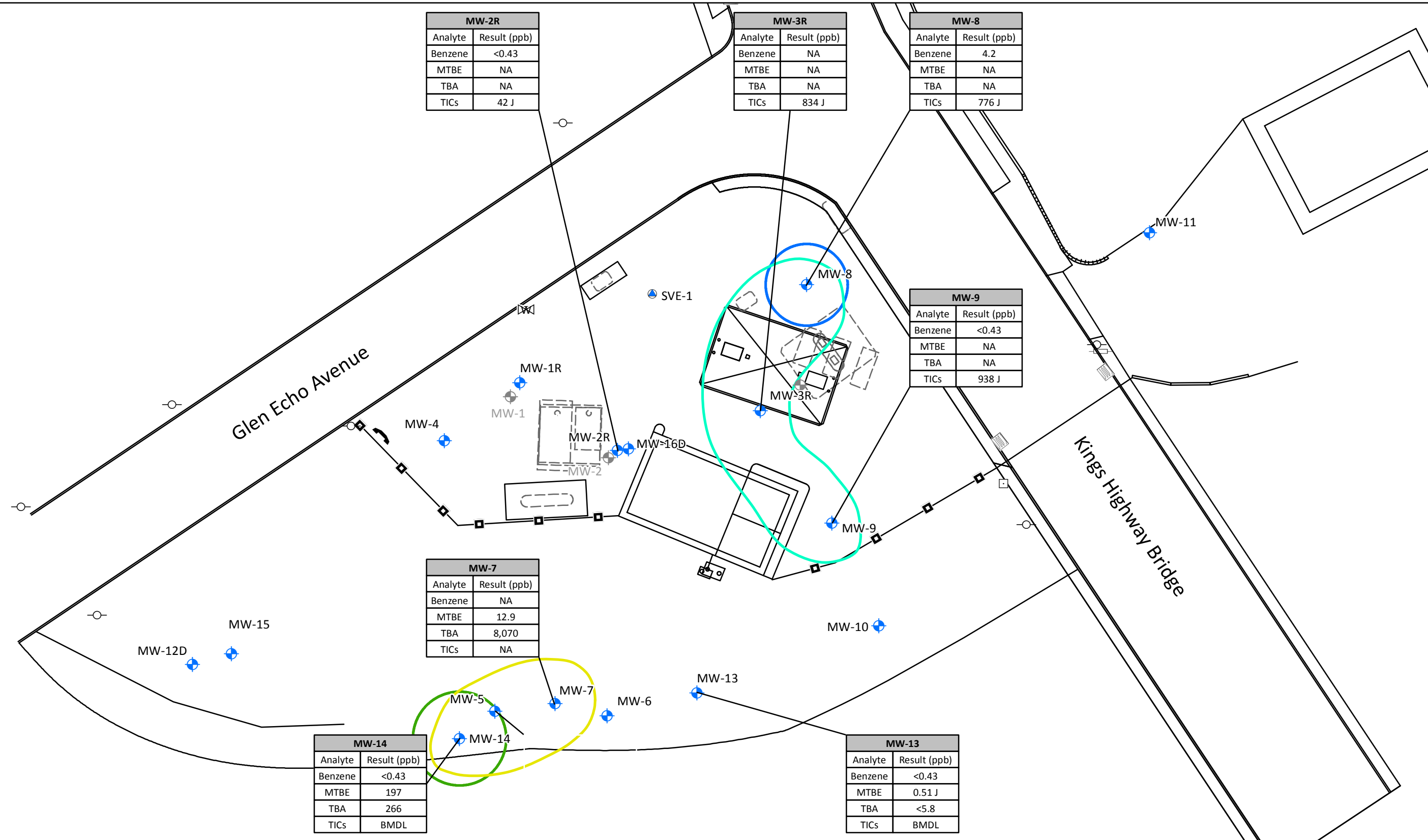


FIGURE 21

Isoconcentration Contour Map - April 24, 2019
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360	
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet	



Legend

- | | | | | | | | |
|--|----------------------------|--|--------------|--|-----------------------|--|---------------------------|
| | Monitoring Well | | Monument | | Current Site Features | | Isoconcentration Contours |
| | Former Monitoring Well | | Utility Pole | | Former Site Features | | Benzene (1 ppb) |
| | Soil Vapor Extraction Well | | Sign | | Guard Rail | | MTBE (70 ppb) |
| | Catch Basin | | Telephone | | | | TBA (100 ppb) |
| | Fire Hydrant | | Water Valve | | | | TICs (500 ppb) |

Notes:
NA - Not Analyzed

(screened in deeper zone)

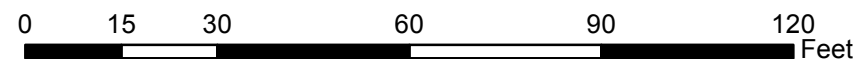
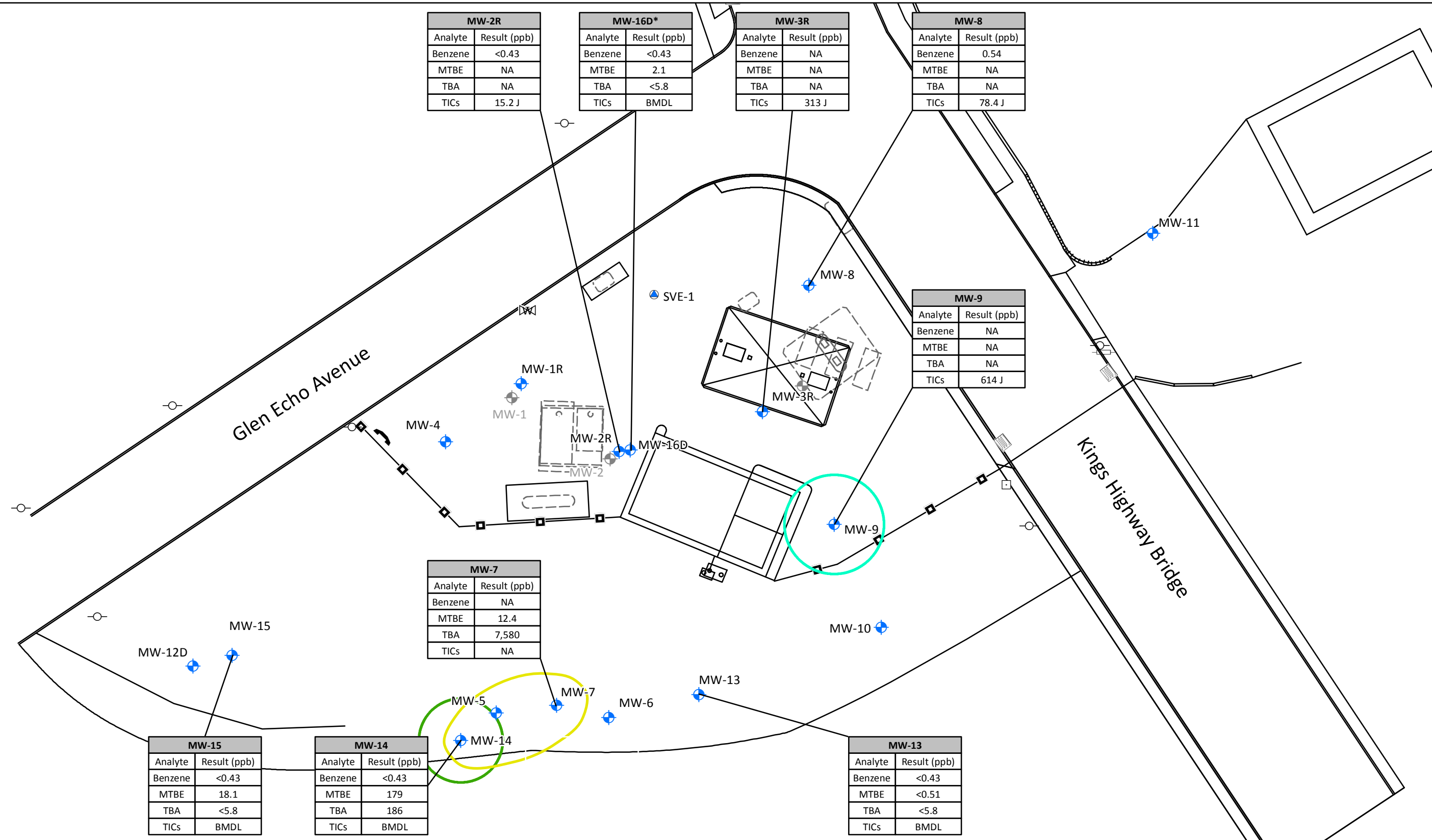


FIGURE 22

Isoconcentration Contour Map - July 29, 2019
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360	
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet	



Legend

- | | | | |
|----------------------------|--------------|-----------------------|-----------------------------|
| Monitoring Well | Monument | Current Site Features | Isoconcentration Contours |
| Former Monitoring Well | Utility Pole | Former Site Features | Benzene (1 ppb) Not Present |
| Soil Vapor Extraction Well | Sign | Guard Rail | MTBE (70 ppb) |
| Catch Basin | Telephone | | TBA (100 ppb) |
| Fire Hydrant | Water Valve | | TICs (500 ppb) |

Notes:
NA - Not

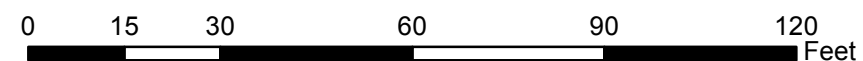
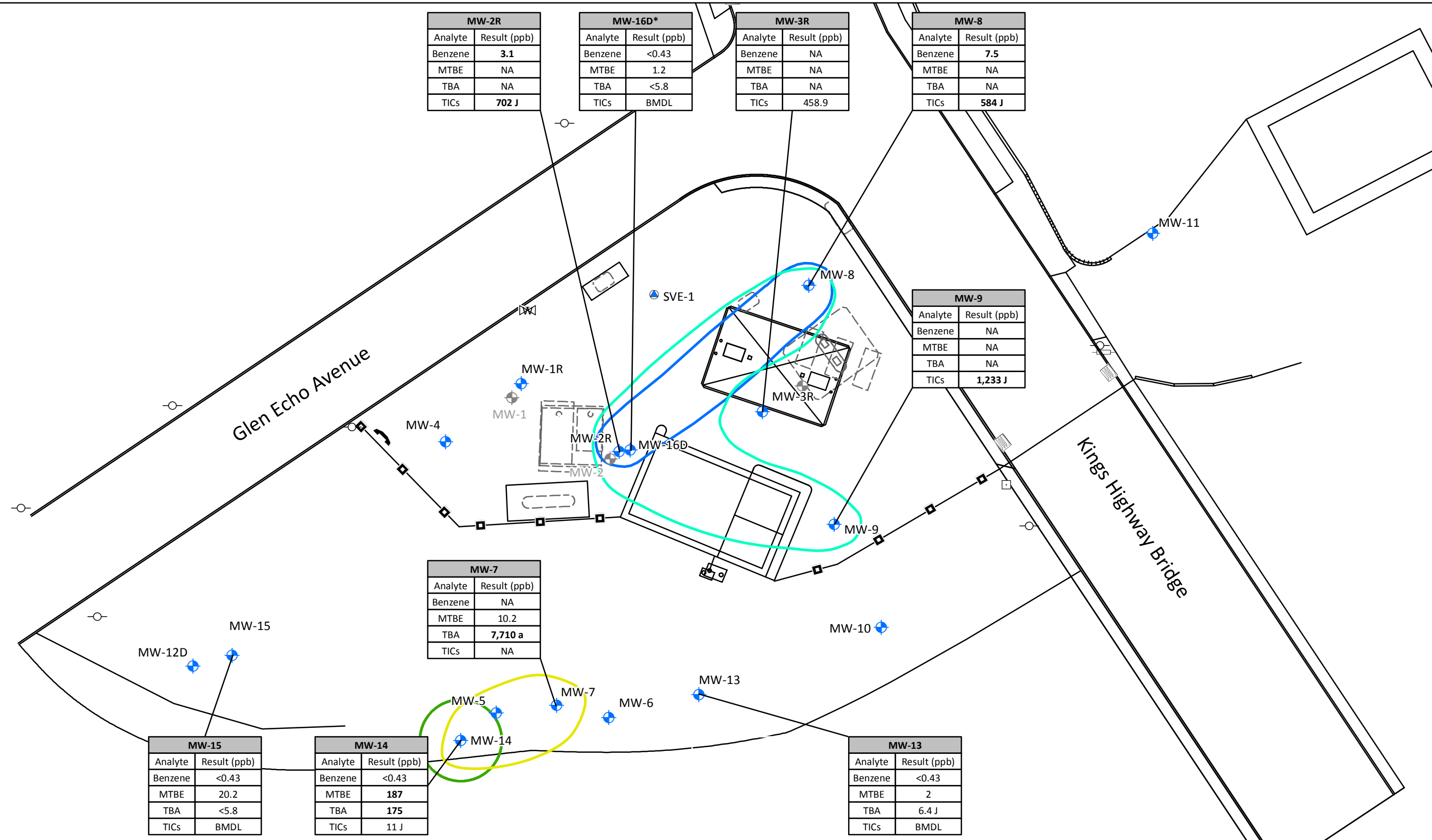


FIGURE 23

Isoconcentration Contour Map - October 16, 2019
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360	
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet	



Legend

- Monitoring Well
- Former Monitoring Well
- Soil Vapor Extraction Well
- Catch Basin
- Fire Hydrant
- Monument
- Utility Pole
- Sign
- Telephone
- Water Valve
- Current Site Features
- Former Site Features
- Guard Rail
- Isoconcentration Contours
- Benzene (1 ppb)
- MTBE (70 ppb)
- TBA (100 ppb)
- TICs (500 ppb)

Notes:
NA - Not Analyzed

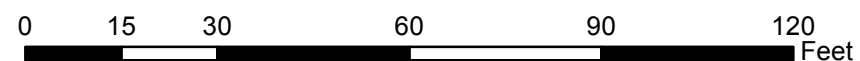
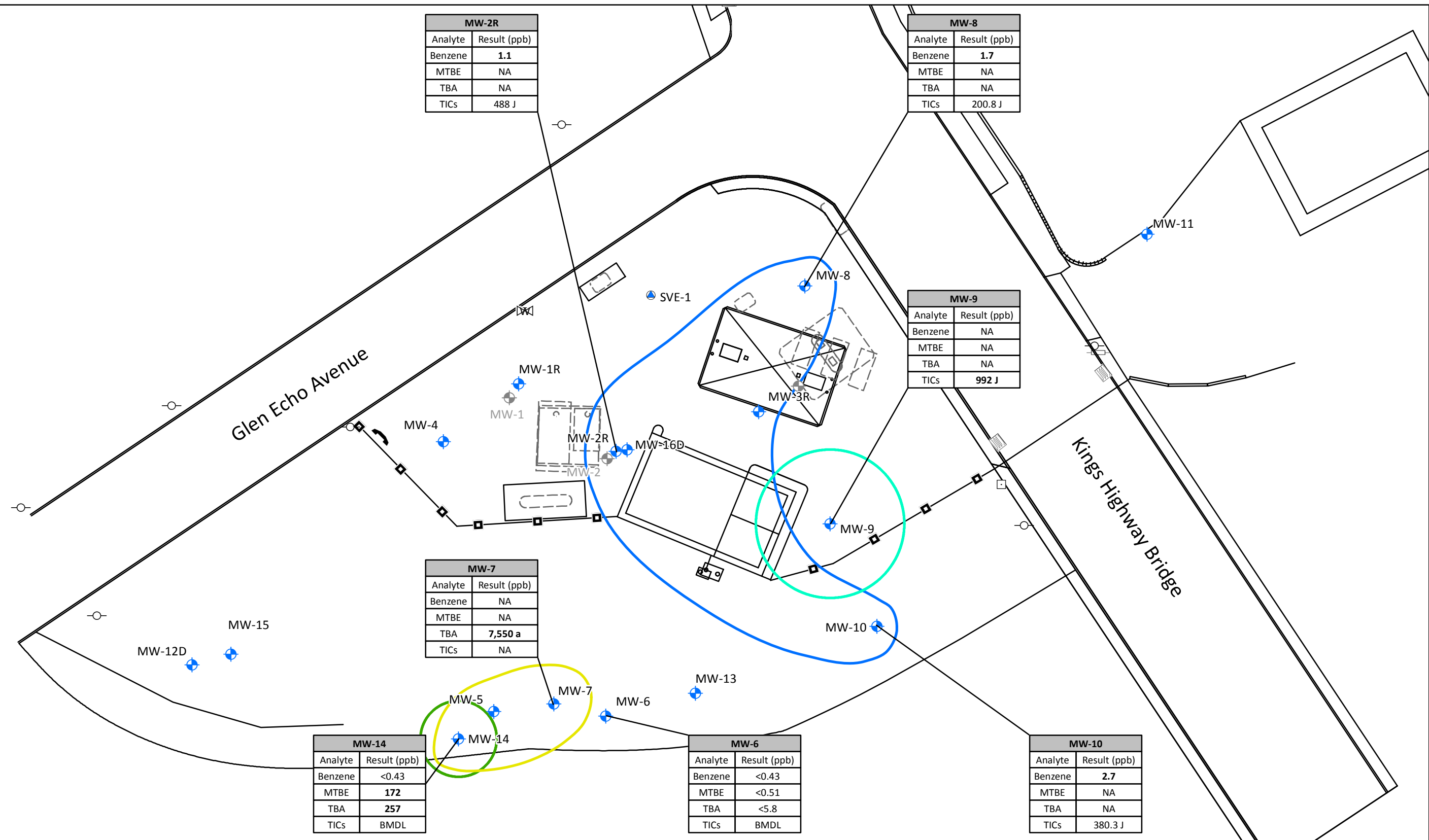


FIGURE 24

Isoconcentration Contour Map - January 16, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360	
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet	



Legend

- Monitoring Well
- Former Monitoring Well
- Soil Vapor Extraction Well
- Catch Basin
- Fire Hydrant
- Monument
- Utility Pole
- Sign
- Telephone
- Water Valve
- Current Site Features
- Former Site Features
- Guard Rail
- Benzene (1 ppb)
- MTBE (70 ppb)
- TBA (100 ppb)
- TICs (500 ppb)

Notes:
NA - Not Analyzed

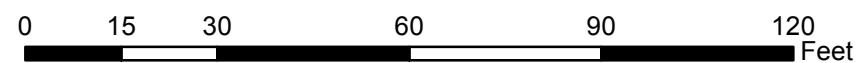
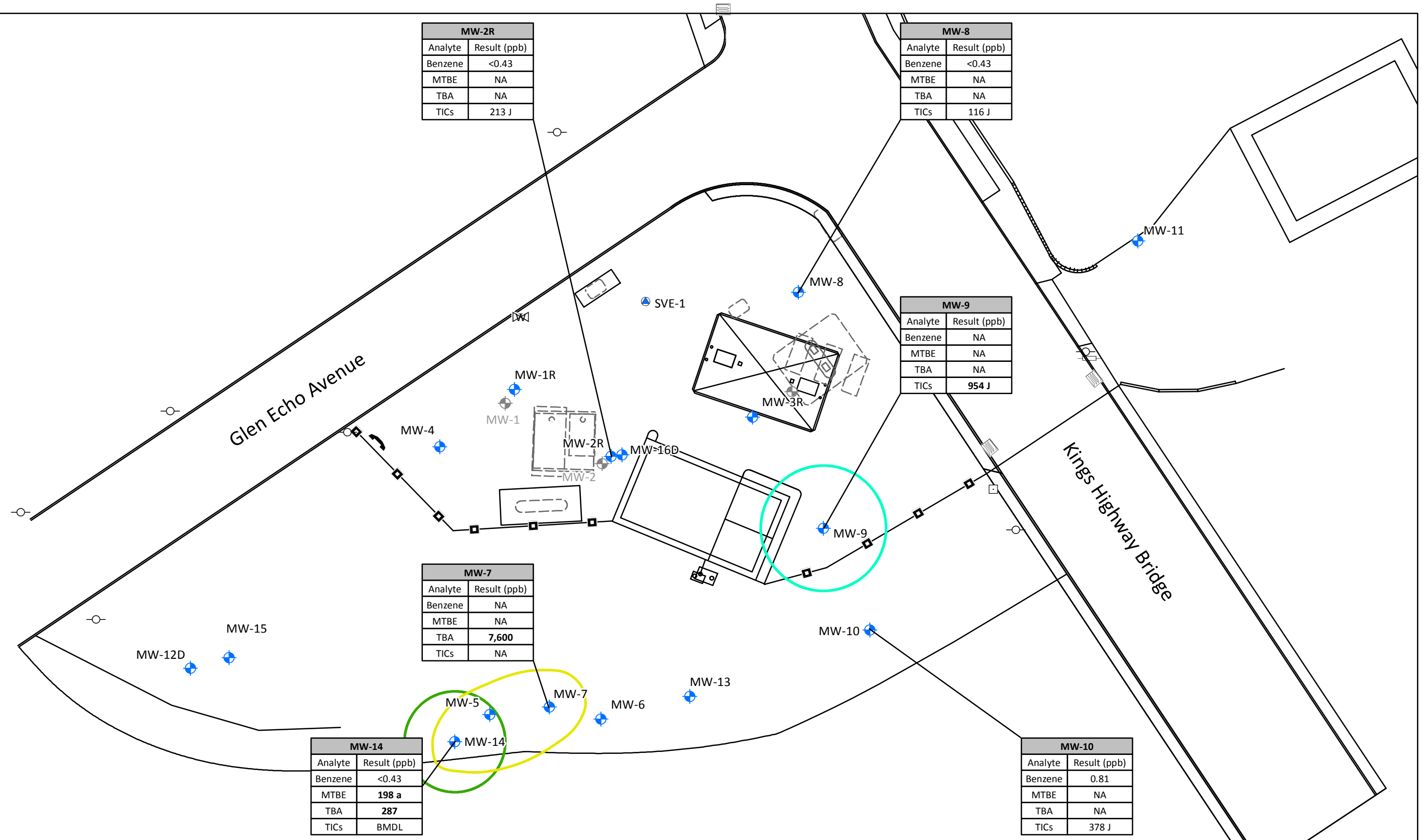


FIGURE 25

Isoconcentration Contour Map - April 10, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360	
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet	



Legend

Monitoring Well

Former Monitoring Well

Soil Vapor Extraction Well

Catch Basin

Fire Hydrant

Monument

Utility Pole

Sign

Telephone

Water Valve

Current Site Features

Former Site Features

Guard Rail

Benzene (1 ppb) Not Present

MTBE (70 ppb)

TBA (100 ppb)

TICs (500 ppb)

Notes:
NA - Not Analyzed

015306090120

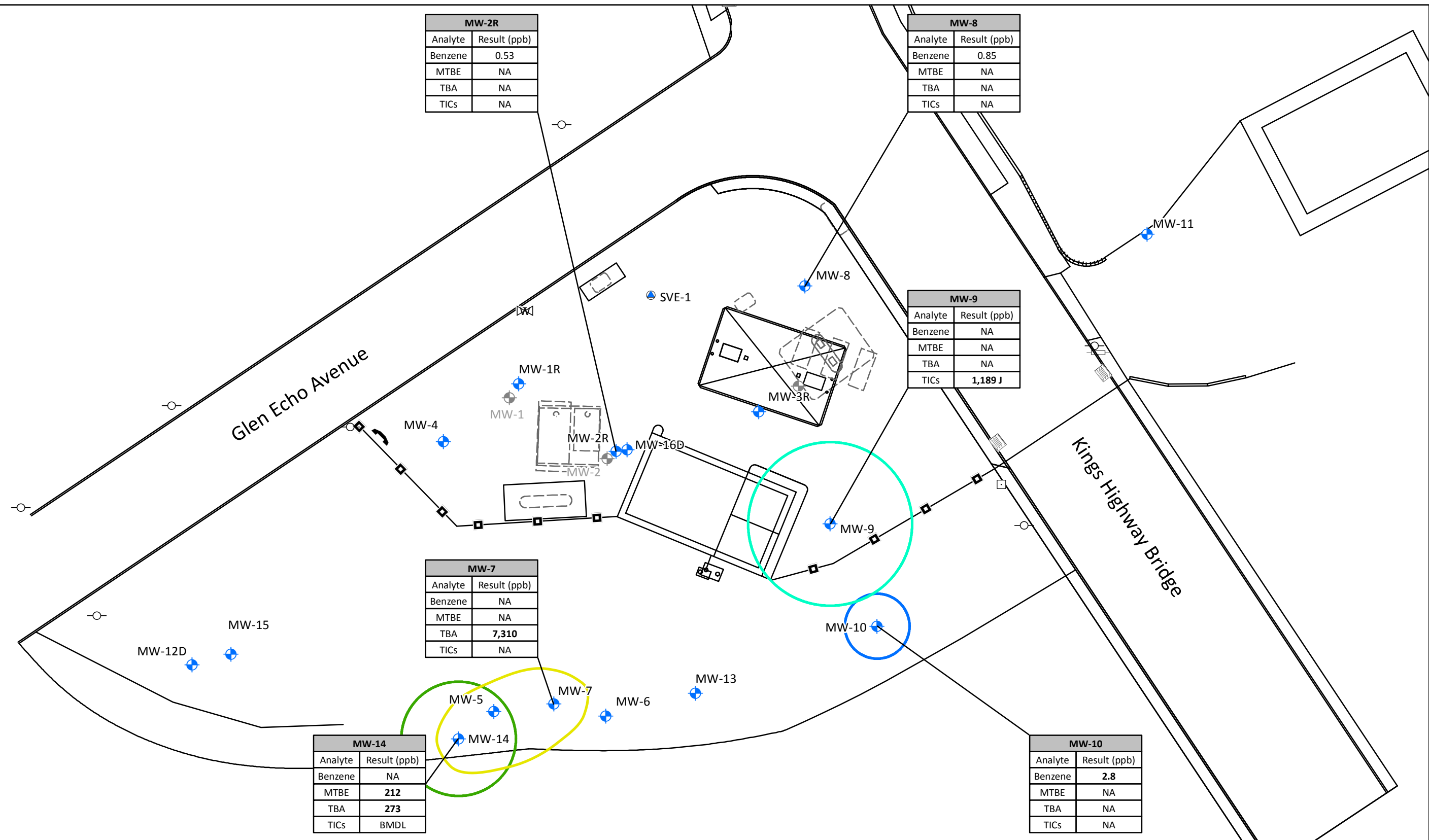
Feet

FIGURE 26

Isoconcentration Contour Map - July 2, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet

antea group



Legend

- | | | | |
|----------------------------|--------------|-----------------------|---------------------------|
| Monitoring Well | Monument | Current Site Features | Isoconcentration Contours |
| Former Monitoring Well | Utility Pole | Former Site Features | Benzene (1 ppb) |
| Soil Vapor Extraction Well | Sign | Guard Rail | MTBE (70 ppb) |
| Catch Basin | Telephone | | TBA (100 ppb) |
| Fire Hydrant | Water Valve | | TICs (500 ppb) |

Notes:
NA - Not Analyzed

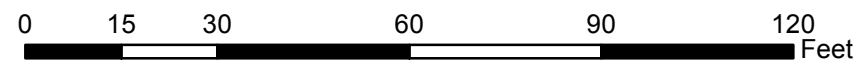


FIGURE 27

Isoconcentration Contour Map - October 15, 2020
Former Getty Service Station #56955
1008 Kings Highway
Swedesboro, Gloucester County, New Jersey

PROJECT NO. 19GET56955	MSS MB	REF SCALE 1:360	
DATE 3/2/2021	REVIEWED BY MG	MAP SCALE 1 inch = 30 feet	