



Evergreen Resources Management
2 Righter Parkway, Suite 120
Wilmington, DE 19803

July 31, 2020

Mr. C. David Brown, Ph.D., P.G
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, Pennsylvania 19401

**RE: Philadelphia Refinery Remediation Program
Groundwater Remediation Status Report, First Half 2020**

Dear Mr. Brown:

This semi-annual report summarizes Operation & Maintenance (O&M) work completed at the Philadelphia Energy Solutions Refining & Marketing LLC (PES) Philadelphia Refining Complex (Complex) and the Sunoco Partners Marketing and Terminals L.P. (SPMT) Belmont Terminal between January 1, 2020 and June 30, 2020. Detailed information regarding O&M activity is included in the attached tables for the PES Complex and Belmont Terminal as prepared by Stantec Consulting Services Inc. (Stantec). This letter summarizes the information detailed in the tables plus additional activities under the "Work Plan for Site Wide Approach under the One Cleanup Program" (Site Wide Approach) such as investigations of the various Areas of Interest (AOIs).

In compliance with the 2003 Consent Order and Agreement (CO&A) entered into between Sunoco Inc. (R&M) (Sunoco) and the Pennsylvania Department of Environmental Protection (PADEP) for the PES Complex located at 3144 Passyunk Avenue in Philadelphia, Pennsylvania, Sunoco has completed site characterization activities for all AOIs. The Complex has since entered into the Pennsylvania One Cleanup Program. On November 30, 2011, Sunoco submitted a Site Wide Approach to the PADEP and the United States Environmental Protection Agency (USEPA). The Site Wide Approach clarified the technical method beyond the CO&A and provided an anticipated schedule for future Act 2 submissions with respect to the Philadelphia Refinery remediation program. Effective December 30, 2013, Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC (Evergreen) assumed Sunoco legacy remediation liabilities with respect to the PES Complex. All remediation of Sunoco's/Atlantic's historic environmental liabilities at the PES Complex and Belmont Terminal will be managed moving forward by Evergreen. Environmental liabilities following the September 8, 2012 purchase and transfer of the Philadelphia Refinery to PES are managed by PES. On June 26, 2019, PES announced the closure of the refining complex. As of June 26, 2020, Hilco Redevelopment Partners (HRP) completed its purchase of the site. HRP plans to redevelop the site as an industrial park and has no plans to operate the site as a refinery.

Evergreen will continue to submit the required documentation and implement remedial obligations for Evergreen's remediation program. Supplemental characterization data obtained following an approved Area of Interest (AOI) Remedial Investigation Report (RIR) or Site Characterization Report (SCR) will be incorporated in a future Act 2 deliverable. Evergreen will submit a Groundwater Remediation Status Report with the O&M summary, figures, tables, and Act 2 submittal updates on an annual basis coinciding with the annual groundwater

gauging and monitoring. On the alternating six-month interval, Evergreen will submit an abbreviated Groundwater Remediation Status Report detailing the O&M summary with limited tables and without figures.

AOI 1 – Point Breeze Refinery No. 1 Tank Farm and No. 2 Tank Farm; and Belmont Terminal

Consent Order / Characterization Status

Sunoco submitted to the PADEP and the USEPA a SCR for AOI 1 dated June 30, 2005. Based on comments received by the PADEP with regard to the AOI 1 SCR, Sunoco prepared and submitted to the PADEP a revised SCR for AOI 1 dated July 17, 2006. The recommendations in the AOI 1 report were to supplement the existing remediation system along the northwestern portion of the Belmont Terminal and southeastern portion of the No. 2 Tank Farm. Sunoco has implemented these actions as detailed in previous reports. In addition, Sunoco provided the PADEP a Remedial Action Plan (RAP) for AOI 1 in January 2008. As a result of the 26th Street North Remediation System study and the S-50 Area (26th Street South) investigation, an addendum to the RAP was considered necessary. In December 2008, a RAP Addendum for AOI 1 was submitted to address the 26th Street North Remediation System data analysis and the 26th Street South investigation and subsequent remedial actions. Evergreen submitted a revised AOI 1 RIR on August 5, 2016 which was approved by the PADEP on November 1, 2016.

Evergreen conducted characterization activities at the Belmont Terminal during the reporting period including a geophysics survey. The activities were conducted to aid in providing additional characterization information to be utilized as part of future modeling efforts for the Complex.

Belmont Terminal Remediation System – Operation During the First Half of 2020

The Belmont Terminal Remediation System consists of two components including the Frontage Road System and the Loading Rack System.

On August 30, 2012, the Frontage Road System was turned off and will remain offline unless there are significant increases in light non-aqueous phase liquid (LNAPL) in the recovery wells. The recovery wells were gauged on June 2, 2020, and no LNAPL was detected.

The Loading Rack System consists of five dual-phase pumping systems (RW-4, RW-22, RW-23, RW-24, and RW-25). Each recovery well contains separate pumps controlled by density floats and conductivity probes to pump groundwater and LNAPL. Recovered groundwater is discharged to an onsite process sewer. LNAPL thicknesses are monitored, and pumps are turned on/off as needed based on recoverable LNAPL accumulations in each recovery well. The recovered LNAPL is stored in a 5,000-gallon holding tank, the contents of which are pumped out and recycled on an as needed basis. During the reporting period the pumps in RW-4, RW-24, and RW-25 were active.

The Loading Rack System was operational during the reporting period. System performance and operational status for the Loading Rack System can be found in **Appendix 1**. A total of 1,125,666 gallons of groundwater and 207 gallons of LNAPL was recovered by this system during the first half of 2020.

Shunk Street Sewer Ventilation System and Biofilter – Operation During the First Half of 2020

The system remained operational during the reporting period. Details of the Shunk Street Sewer Ventilation System and Biofilter operational status during the first half of 2020 can be found in **Appendix 1**.

26th Street North Remediation System - Operation During the First Half of 2020

The 26th Street North Remediation System was modified in 2015 to increase the overall effectiveness of the system and was restarted on October 12, 2015. The four-inch diameter recovery wells (S-180, S-181, S-182, S-183, S-184, S-185, S-186, S-187, S-188, S-189, S-190, S-191, and S-192) were replaced with six-inch diameter recovery wells. Additionally, RW-400 and RW-402 are connected to the system for a total of fifteen recovery wells.

Within each well, a QED Environmental Systems Model AP-4+T AutoPump was installed to recover groundwater and LNAPL. Each recovery well contains a two-inch diameter lateral discharge line that connects to a four-inch high density polyethylene (HDPE) trunk line, which transfers the total fluids to an onsite process sewer. The pumps utilize compressed air, which is supplied by a Kaeser rotary screw air compressor. A one-inch diameter air line runs to each recovery well and is reduced to a 3/8-inch diameter line in each well vault at the pneumatic pump.

The 26th Street North Remediation System was operational during the reporting period. Details for the 26th Street Sewer North Remediation System performance data and operational status can be found in **Appendix 1**. A total of 7,982,150 gallons of total fluids was recovered by this system during the first half of 2020.

26th Street and Packer Avenue Sewers Biofilter Remediation System – Operation During the First Half of 2020

The 26th Street and Packer Avenue Sewers Biofilter System was upgraded including replacing the compost beds, repairing the duct work, and replacing or repairing the fans. The system was restarted on June 6, 2016 for final stages of startup and system startup was completed on November 10, 2016. The system was operational during the first half of 2020. Details for the 26th Street and Packer Avenue Sewer Biofilter System performance data and operational status can be found in **Appendix 1**.

AOI 2 – Point Breeze Refinery

Consent Order / Characterization Status

The AOI 2 SCR/RIR was submitted to the PADEP and the USEPA on September 29, 2010. A revised RIR was completed in July 2017. PADEP approved the report on October 18, 2017.

Pollock Street West End Remediation System – Operation During the First Half of 2020

During October 2011, heavier than usual quantities of oil were observed within the Pollock Street sewer outfall. As a result, Sunoco completed the expansion of the existing vertical recovery well remediation system in the vicinity of the Pollock Street sewer outfall in February 2012. The system, referred to as the Pollock Street West End System, consists of a total of ten 4-inch diameter recovery wells on the east side of River Road and twenty 6-inch diameter recovery wells on the west side of River Road. Groundwater and LNAPL are removed from select recovery wells using pneumatic submersible pumps. All liquids are processed through an oil/water separator (OWS) and water is discharged to a refinery process sewer (S-10 Sump). LNAPL is recovered in a 550-gallon tank and then recycled by the PES Complex. A report describing the details of the investigation and remediation performed in response to the oil observed in the Pollock Street sewer outfall was submitted to the PADEP and the USEPA on June 29, 2012.

The Pollock Street West End Remediation System was turned off December 19, 2016 to evaluate LNAPL recharge. The system remained off during the first half of 2020.

Pollock Street Horizontal Well Remediation System – Operation During the First Half of 2020

The Pollock Street Horizontal Well Remediation System consists of HW-1, HW-2, and HW-3. HW-1 was installed in July 2004 along the north side of the Pollock Street sewer from approximately RW-103 to approximately 100 feet west of RW-101. HW-2 and HW-3 were installed from approximately RW-103 to the intersection of Pollock Street and 16th Street in the first quarter of 2006. Groundwater and LNAPL from HW-1 and HW-2 discharge directly into a Benzene National Emission Standard for Hazardous Air Pollutants (NESHAP) controlled sewer, whereas groundwater and LNAPL from HW-3 discharge directly into an onsite process sewer.

Totalizers were installed in HW-1 and HW-2 on May 25, 2013 and July 6, 2015 respectively. The estimated flow rate for HW-3 as determined by pump testing is 15.38 gallons per minute (gpm).

The Pollock Street Horizontal Well Remediation System was operational during the first half of 2020. System performance data and operational status can be found in **Appendix 1**. A total of 7,475,285 gallons of total fluids was recovered by the Pollock Street Horizontal Well Remediation System during the reporting period.

Pollock Street Sewer Outfall – Operation During the First Half of 2020

The Pollock Street Sewer outfall is checked for product accumulations or sheening. LNAPL will be handled by Evergreen contractors with spill control equipment to minimize or prevent releases to the Schuylkill River. Evergreen has continued to maintain a skimmer system located in the tide gate area. The skimmer discharges to a refinery process sewer (S-13 Sump). The skimmer will be activated if recoverable quantities of LNAPL are observed at the tide gate area. Except for the completion of preventative maintenance and equipment testing, the outfall skimmer remained off for the first half of 2020 due to the absence of recoverable oil in the outfall.

AOI 3 – Point Breeze Refinery, Impoundment Area

There are no Evergreen groundwater or LNAPL remediation systems active in this area. The AOI 3 SCR/RIR was submitted to the PADEP and the USEPA on September 27, 2010. The SCR/RIR stated that given the limited occurrence and mobility of LNAPL observed in RW-2, the former remediation system in this area will remain offline. A revised RIR for AOI 3 was submitted March 20, 2017 and approved on June 14, 2017. The disposition of remediation systems in AOI 3 will be revisited in the Site Wide Cleanup Plan.

LNAPL was identified in S-414 and significant increases in LNAPL thicknesses were observed in two wells (S-283 and S-382) during the annual sitewide gauging in June 2018. PES was notified of the observations and an underground product line was determined to have released reformat from the UDEX feed line that runs from the 860 Unit in the Point Breeze Refinery to the Girard Point Refinery. PES has installed active skimming systems located at three wells, S-283, S-382, and S-429.

AOI 4 – Point Breeze Refinery, No. 4 Tank Farm Area

Consent Order / Characterization Status

AOI 1 and AOI 4 were identified by Sunoco as the first areas of the refinery to be investigated in accordance with the Phase II Corrective Action Schedule included in the Current Conditions Report (CCR). Sunoco submitted a SCR to the PADEP and the USEPA for AOI 4 on August 24, 2006. A repackaged SCR/RIR was submitted to the agencies on October 16, 2013. A “Disapproval of Remedial Investigation Report” was received from the PADEP on January 16, 2014. A revised RIR was submitted on March 24, 2017. The revised RIR was disapproved by the PADEP in a

letter dated June 21, 2017 due to lack of offsite wells. In 2018, five additional monitoring wells (S-374, S-375, S-376, S-377, and S-378) were installed offsite adjacent to the Penrose Avenue Remediation System. Evaluation of these wells is conducted during quarterly groundwater gauging events. A geophysics survey was conducted in February 2020 to further investigate the offsite conditions. Soil and water samples as well as additional monitoring wells are currently being installed to confirm output from the geophysical survey. A RIR Addendum will be submitted in the future to summarize available offsite information.

Penrose Avenue Remediation System – Operation During the First Half of 2020

Following characterization of AOI 4, Sunoco installed a hydraulic control system on the southern border of AOI 4. This system is permitted for discharge to the Philadelphia Water Department (PWD) and by Philadelphia Air Management Services (AMS). Installation of the Penrose Avenue Remediation System was completed in December 2012. Following minor modifications to the system to facilitate water discharge monitoring in accordance with the PWD groundwater discharge permit, the system was started on March 20, 2013. LNAPL thicknesses are monitored and pumps are turned on/off as needed based on recoverable LNAPL accumulations in each recovery well. On February 21, 2018 pumps were installed in S-221, S-236, and S-237 to address LNAPL in those wells.

During this reporting period, recovery wells RW-700, RW-701, RW-702, RW-703, RW-704, S-221, S-236, and S-237 were active. On March 10, the groundwater remediation system was taken out of service pending the PWD discharge permit approval. The system remained off for the rest of the reporting period. System performance data and operational status can be found in **Appendix 1**. A total of 703,600 gallons of groundwater and 259 gallons of LNAPL were recovered by the Penrose Avenue Remediation System during the reporting period.

Additionally, the installation of an in-situ Submerged Oxygen Curtain (iSOC) was initiated during the second half of 2018. The system consists of seven oxygen injection points located in RW-706, RW-709, RW-711, RW-712, RW-713, RW-714, and RW-715 with the purpose of creating an oxygen barrier to protect offsite receptors from migrating contaminants. The iSOC system was turned off April 7, 2020 for repairs. The iSOC system will be evaluated after ongoing investigation and characterization activities.

S-30 Remediation System – Operation During the First Half of 2020

The S-30 Remediation System consists of a LNAPL pump, probe assembly, and control panel. The recovered LNAPL is stored in a 2,500-gallon holding tank, the contents of which are recycled by the PES Complex on an as needed basis. The system was operational during the first half of 2020. System performance data and operational status can be found in **Appendix 1**. A total of 75.5 gallons of LNAPL was recovered by the S-30 Remediation System during the reporting period.

AOI 5 – Girard Point Refinery, South Tank Field

Consent Order / Characterization Status

In accordance with the Site Wide Approach, a SCR/RIR/Cleanup Plan was submitted to the PADEP and the USEPA on December 13, 2011. Sunoco received a RIR/Cleanup Plan disapproval letter from the PADEP on March 15, 2012. A revised RIR was submitted on January 16, 2016 and was approved by the PADEP on May 2, 2017.

AOI 6 – Girard Point Refinery, Chemicals Processing Area

Consent Order / Characterization Status

AOI 6 was identified by Sunoco as the third area of the refinery to be investigated in accordance with the Phase II Corrective Action Schedule included in the CCR. A SCR for AOI 6 was submitted to the PADEP and the USEPA on September 29, 2006. A repackaged SCR/RIR was submitted to the agencies on September 3, 2013. PADEP issued a disapproval letter on November 27, 2013. A revised RIR was submitted on November 21, 2017 and was approved by the PADEP on February 26, 2018.

27 Pump House Area

The remediation system that existed in the area of 27 Pump House was turned off September 20, 2010 due to absence of recoverable LNAPL. Passive remediation began on October 10, 2010 with the installation of absorbent socks in wells B-124, B-132, B-137, B-139, B-142, B-143, and B-147. Based on limited recoverable LNAPL in the proximal wells, passive remediation was discontinued on January 26, 2015 and the equipment was subsequently removed. Due to continued presence of elevated benzene concentrations in soil and groundwater in this area, remediation alternatives are being evaluated.

Mobile Solar Powered LNAPL Recovery System

A solar powered LNAPL pump was operated at B-124 to evaluate the LNAPL recovery potential. A total of 9.9 gallons of LNAPL were recovered by the B-124 during the reporting period.

AOI 7 – Girard Point Refinery, Fuels Processing Area

Consent Order / Characterization Status

In accordance with the Site Wide Approach, a repackaged AOI 7 SCR/RIR was submitted to the PADEP and the USEPA on February 29, 2012. A RIR Addendum was submitted to the agencies on September 19, 2013. On December 18, 2013, Sunoco received comments on the RIR Addendum from the PADEP. These comments were addressed in the revised RIR that was submitted June 9, 2017. The RIR was approved in correspondence dated August 30, 2017.

3 Separator Remediation System – Operation During the First Half of 2020

On July 12, 2011, Sunoco reported a hydrocarbon sheen on the Schuylkill River to the National Response Center. The sheen was directly adjacent to the Girard Point Refinery No. 3 Separator. In response to the sheen on the river, Sunoco investigated the source of hydrocarbons to the river through the installation of monitoring wells and exploratory excavation around a process sewer junction box associated with the 137 Crude Unit and the No. 3 Separator. The monitoring wells demonstrated measurable oil on the water table and the exploratory excavation revealed integrity issues with the junction box. The junction box and associated bulkhead penetration were sealed with concrete.

Construction of a ten recovery well hydraulic control system was completed on August 23, 2012 and included RW-801, RW-802, RW-803, RW-804, RW-805, RW-806, RW-807, RW-808, RW-809, and RW-810. Groundwater and LNAPL are extracted using pneumatic submersible pumps and total fluids pass through an OWS. Water is discharged to an onsite process sewer. LNAPL is recovered in a 1,100-gallon holding tank and recycled by the PES Complex. In 2013, PES assumed primary responsibility for the 3 Separator System due to newer PES releases from the sewer system, which connects the 137 Crude Unit to the No. 4 Separator, in the vicinity of the No. 3 Separator.

The 3 Separator Remediation System was operational during the first half of 2020. System operation details and performance data for the system can be found in **Appendix 1**. A total of 1,323,000 gallons of groundwater and 46.5 gallons of LNAPL were recovered by the 3 Separator Remediation System during the first half of 2020.

AOI 8 – Point Breeze Refinery, North Yard

Consent Order / Characterization Status

A SCR was submitted to the PADEP on September 30, 2008. A repackaged SCR/RIR incorporating the PADEP's comments was submitted to the PADEP and the USEPA on January 31, 2012. Comments from the PADEP on the SCR/RIR were received by email on July 7, 2012. A revised RIR dated December 21, 2017 was submitted to the PADEP. PADEP issued an approval letter on March 22, 2018.

Northern/Verizon Area

Maiden Lane Remediation System

The northern boundary of AOI 8 near the South District Work Center of Verizon Pennsylvania, LLC (Verizon SDWC) property was evaluated for offsite impacts and system installation. A test well (N-157) was installed in 2017 and a well performance test was conducted to evaluate the feasibility of LNAPL recovery as a remedial option near the adjacent Verizon SDWC property. During the second half of 2019, a horizontal well (HW-4) was installed in this area along the refinery property boundary for the purpose of groundwater and LNAPL recovery. A total fluids groundwater remediation system has been installed and is expected to be operational in the second half of 2020. All liquids will be processed through an OWS. Groundwater will be discharged to a PWD sewer and LNAPL will be stored in a 550-gallon tank for future recycling.

PGW Border Remediation System – Operation During the First Half of 2020

The PGW Border Remediation System was replaced during the reporting period. Evergreen installed 30 new recovery wells and new remediation system equipment which allow groundwater and LNAPL recovery along the PGW border in the area of the former remediation system. The PGW Border Remediation System began operation in February 2020 and was operational during the reporting period. All liquids are processed through an OWS and water is discharged to a refinery process sewer. LNAPL is recovered in a 550-gallon tank and then recycled by the PES Complex. A total of 1,556,706 gallons of groundwater and 1,927 gallons of LNAPL were recovered by the PGW Border Remediation System during the reporting period.

Jackson Street Sewer Remediation System – Operation During the First Half of 2020

The Jackson Street Sewer Remediation System consists of two components, an inactive total fluids system with submersible pumps that formerly recovered groundwater and LNAPL (Jackson Street System) and a vapor suppression water curtain installed in the Jackson Street Sewer Remediation System (Jackson Street Water Curtain).

Due to limited LNAPL presence, the Jackson Street System is offline and equipment subsequently removed. The Jackson Street System will remain off unless there are significant increases in LNAPL in the proximal wells.

The Jackson Street Water Curtain was operational during the first half of 2020 and is monitored weekly. Vapor readings are collected at the water curtain and at the intercepting chamber along 26th Street. System data and operational status for the first half of 2020 is included in **Appendix 1**.

Evergreen will continue to operate the Jackson Street Water Curtain and report performance information in semi-annual Philadelphia Refinery Groundwater Remediation Status Reports. Details regarding plans to maintain this vapor mitigation system will be included in a future Act 2 deliverable. No other vapor intrusion assessment activities are recommended for AOI 8.

Sunoco agreed at a July 30, 2009 meeting to sample the air in the sewer onsite and offsite following notification from the PADEP of a neighborhood (28th and McKean Streets) complaint. No complaints regarding sewer odors were received during the first half of 2020.

AOI 9 – Schuylkill River Tank Farm

There are no groundwater or LNAPL remediation systems operational in AOI 9. A SCR was submitted to the PADEP and the USEPA on October 30, 2009. A revised RIR was submitted to the agencies in December 2015. The RIR was denied and a RIR Addendum to address the deficiencies was submitted on February 8, 2017. On April 18, 2018 the PADEP disapproved the RIR Addendum due to lack of offsite wells. Evergreen has obtained information from existing offsite wells, and five additional wells (S-146SRTF, S-147SRTF, S-148SRTF, S-149SRTF, and S-150SRTF) were installed in October 2018 along Essington Avenue, west of the Schuylkill River Tank Farm, to evaluate offsite groundwater conditions. A RIR Addendum will be submitted in the future to summarize available offsite information.

AOI 10 – Point Breeze Refinery, West Yard

There are no groundwater or LNAPL remediation systems operational in AOI 10. A SCR/RIR was submitted to the PADEP and the USEPA on June 29, 2011. Approval of the RIR was received from the PADEP on January 6, 2012. An ecological assessment was conducted in 2015 and 2016 and an Ecological Risk Assessment Report was submitted in June 2016, which was approved on November 10, 2016.

A Solid Waste Management Unit (SWMU) closure letter which addressed past disposal areas located in AOI 10 and AOI 8 (SWMU 1 and SWMU 2, respectively) was submitted to the USEPA on February 16, 2016. On November 29, 2016, the USEPA issued a response letter approving no further investigation or remediation required for SWMU 2 and denying the no further action request for SWMU 1. Evergreen collected additional information in 2017 to address the USEPA letter as well as the 2016 PADEP comments on the 2011 SCR/RIR and the Ecological Risk Assessment Report. A follow-up SWMU closure letter will be submitted to address SWMU 1 along with all other SWMUs previously identified at the facility to request concurrence that no further investigation is required, and acknowledge if any SWMUs require continued long-term stewardship.

AOI 11 – Lower Aquifer

The SCR/RIR was submitted to the PADEP and the USEPA on September 12, 2011. Sunoco received comments to the report by email on December 9, 2011. A Final Report was submitted to the agencies on June 21, 2013 which included activities to address the SCR/RIR disapproval. Sunoco received a “Disapproval of Final Report” from the

PADEP dated September 26, 2013. Subsequent collection and reporting of characterization information from the lower aquifer wells across the facility has been incorporated into the other AOI RI Reports submitted to date.

Groundwater Monitoring

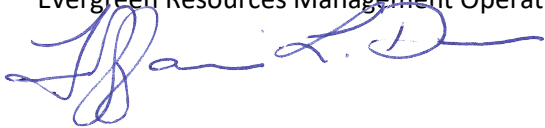
The current monitoring program consists of groundwater and LNAPL gauging and sampling of select monitoring wells. The wells are generally selected to monitor LNAPL thicknesses and determine hydraulic effects of targeted remediation systems. Sitewide well gauging events are also conducted to identify the presence of LNAPL and determine groundwater flow patterns. Annual sitewide groundwater sampling has historically been performed in the second quarter in conjunction with annual sitewide gauging; however, this year the monitoring program was postponed pending the completion of characterization activities and change of facility ownership. The groundwater sampling schedule will be flexible depending on the fate of the facility and remediation goals.

Liquid level measurements collected during the first quarter of 2020 are provided in **Table 1**. The second quarter 2020 liquid level measurements are provided in **Table 2**. Monitoring wells that were observed to demonstrate a change in LNAPL thickness is presented in **Table 3**. The LNAPL thicknesses in these wells will be tracked to determine if changes are due to natural conditions such as seasonal groundwater fluctuation or other factors.

Please contact me at (302) 477-1305 or tldoerr@evergreenresmgt.com with any questions or comments.

Best Regards,

Evergreen Resources Management Operations



Tiffani L. Doerr, P.G.
Project Manager

Enclosures:

Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – Apparent LNAPL Thickness Map, June 2020

Figure 4 – Water-Table Groundwater Elevation Map, June 2020

Figure 5 – Lower Aquifer Groundwater Elevation Map, June 2020

Table 1 – First Quarter 2002 Gauging Data

Table 2 – Sitewide Annual 2020 Gauging Data

Table 3 – Comparison of Gauging Data for Select Wells

Appendix 1 – Remediation System Recovery Data

cc: Mr. Paul Gotthold
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Philadelphia, Pennsylvania 19103-2029

Mr. Nicholas Maliha, PE
Philadelphia Water Department
1101 Market Street, ARAMARK Tower, 4th Floor
Philadelphia, Pennsylvania 19107

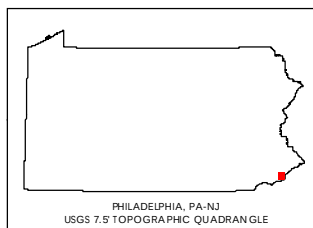
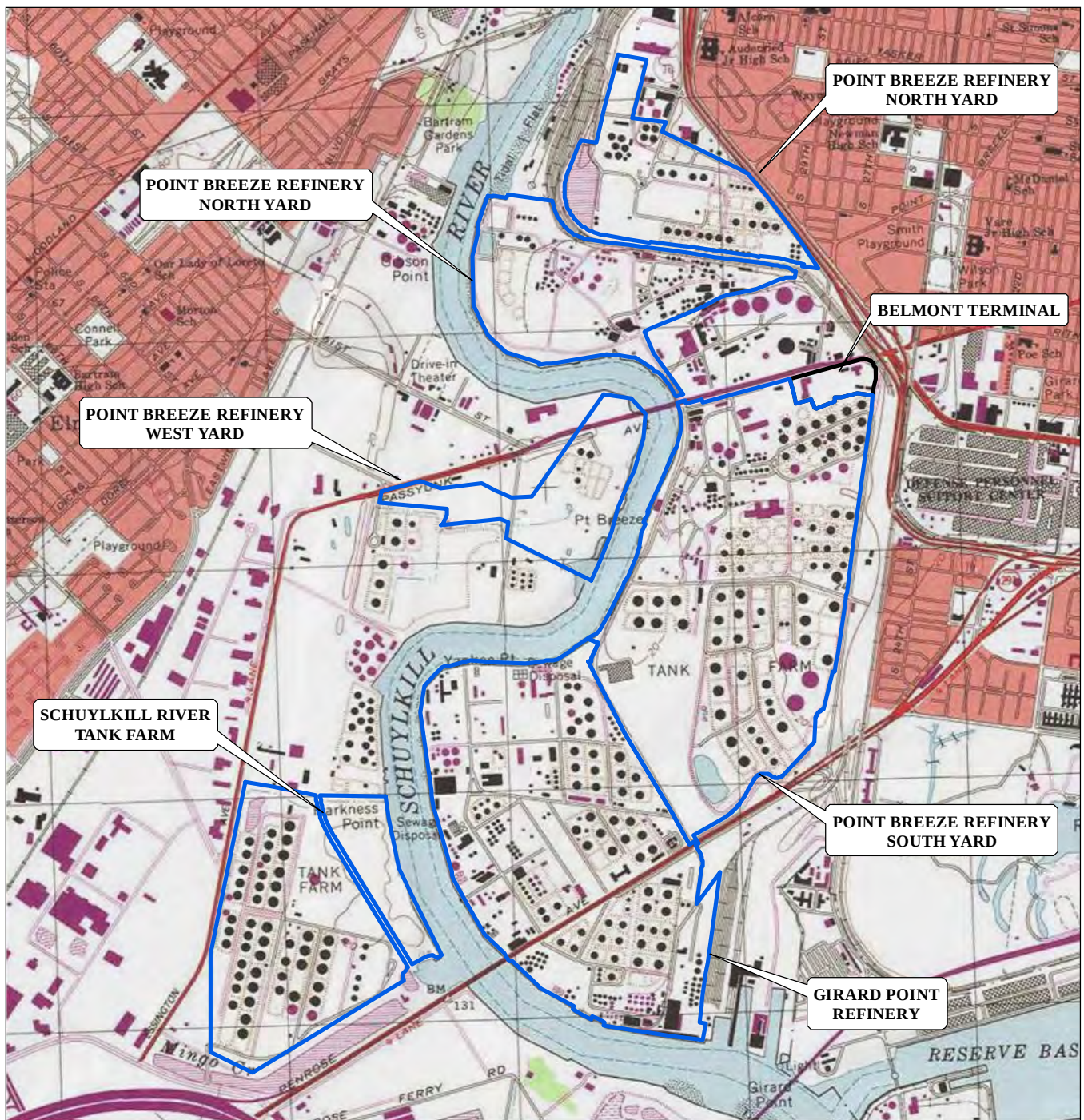
Mr. Charles D. Barksdale, Jr. PE
PES Refining & Marketing, LLC
3144 West Passyunk Avenue
Philadelphia, Pennsylvania 19145

Julianna B. Connolly, LSP
Green Ladder Environmental, LLC
39 Burroughs Street
Jamaica Plain, MA 02130

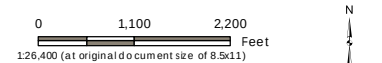
Mr. Andrew Bradley
Stantec Consulting Services Inc.
1060 Andrew Drive, Suite 140
West Chester, Pennsylvania 19380

File: ENFOS

FIGURES



Legend
 PHILADELPHIA REFINING COMPLEX
 BELMONT TERMINAL



Project Location: City of Philadelphia, Philadelphia County, Pennsylvania
 Prepared by GWC on 7/14/2020
 Technical Review by JLM on 7/16/2020
 Independent Review by AJB on 7/16/2020

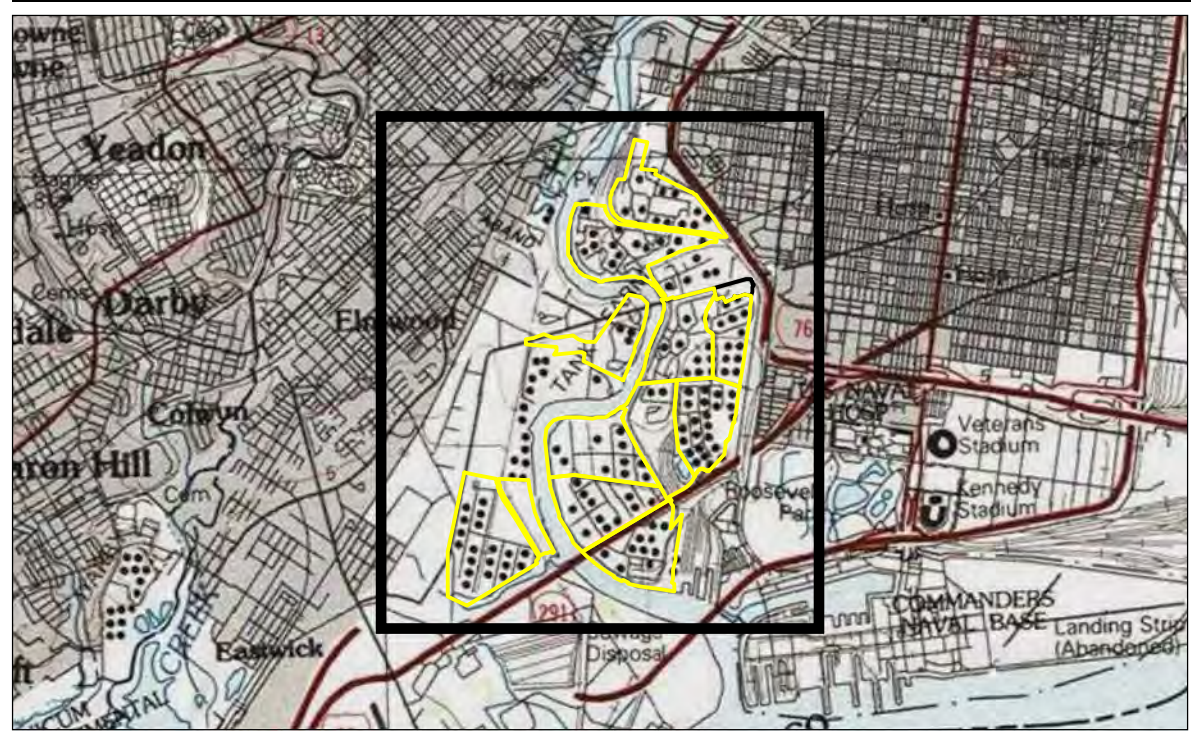
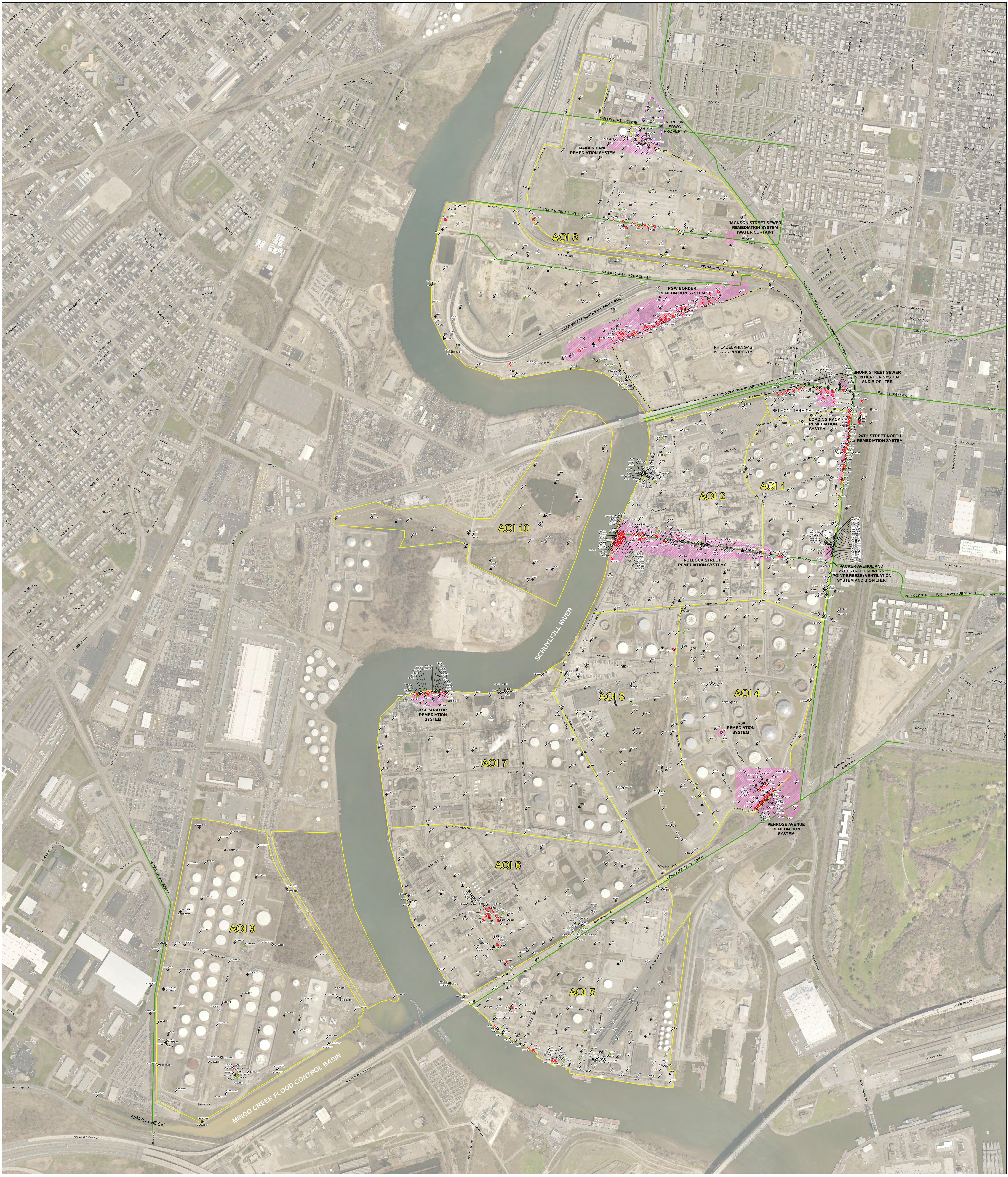
Client/Project: PHILADELPHIA REFINERY OPERATIONS, A SERIES OF EVERGREEN RESOURCES GROUP, LLC
 PHILADELPHIA REFINING COMPLEX
 3144 PASSYUNK AVENUE, PHILADELPHIA, PA 19145

Figure No.
 1

Title
 SITE LOCATION MAP

- Notes**
1. Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
 2. Sources: Stantec, USGS
 3. Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed

Disclaimer: Stantec assumes no responsibility for data supplied in electronic format. The recipient accepts full responsibility for verifying the accuracy and completeness of the data. The recipient releases Stantec, its officers, employees, consultants and agents, from any and all claims arising in any way from the content or provision of the data.



Notes
1. Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
2. Source: Santee
3. Aerial & Topo Source: Copyright© 2013 National Geographic Society, i-cubed
Pictometry International Corp, Philadelphia Imagery 2018 downloaded from
Pennsylvania Spatial Data Access (PASDA)

- Legend**
- MONITORING WELL
 - RECOVERY WELL
 - DAMAGED MONITORING WELL
 - DESTROYED MONITORING WELL
 - PIEZOMETER
 - UNABLE TO ACCESS OR UNABLE TO LOCATE
 - APPROXIMATE LOCATION OF PHILADELPHIA WATER DEPARTMENT SEWER
 - REMEDATION SYSTEMS DESIGNATED AS CURRENTLY ACTIVE
 - AREA OF INTEREST (AOI)
 - BELMONT TERMINAL
 - PHILADELPHIA GAS WORKS (PGW) PASSYUNK FACILITY PROPERTY BOUNDARY
 - VERIZON SOUTH DISTRICT WORK CENTER (SDWC) PROPERTY

0 400 800 Feet
14,800 (At original document size of 36x48)

Figure No.
2

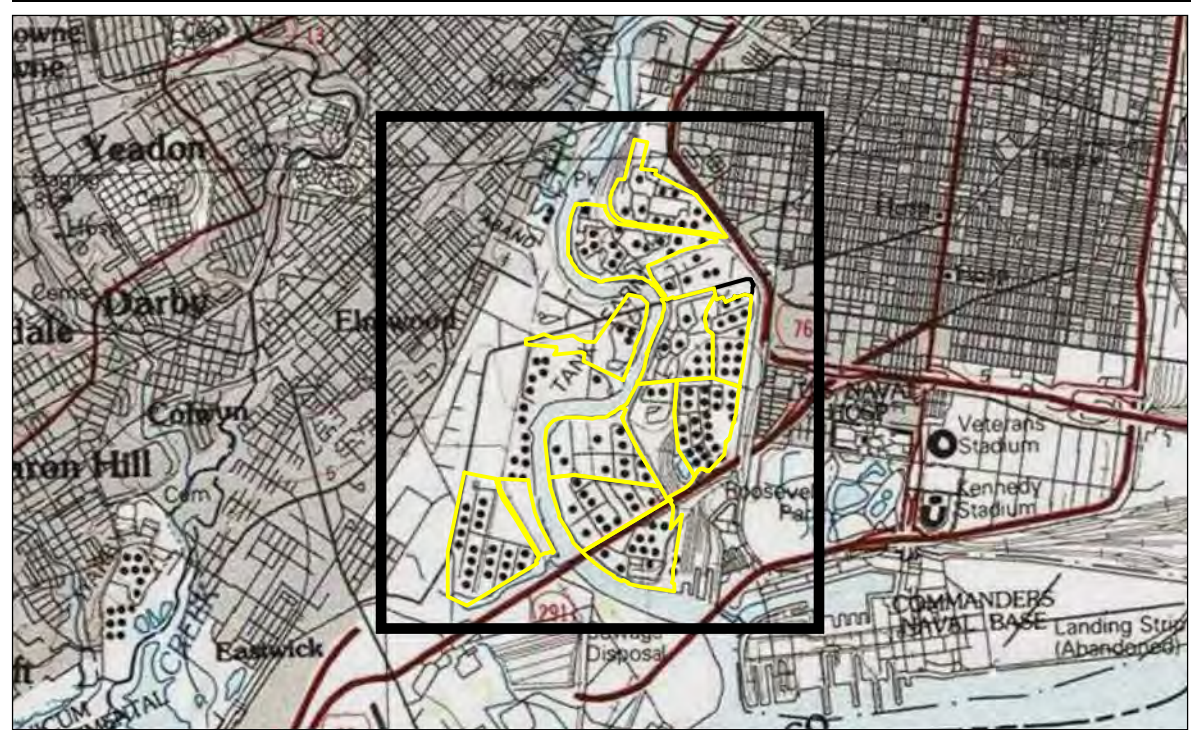
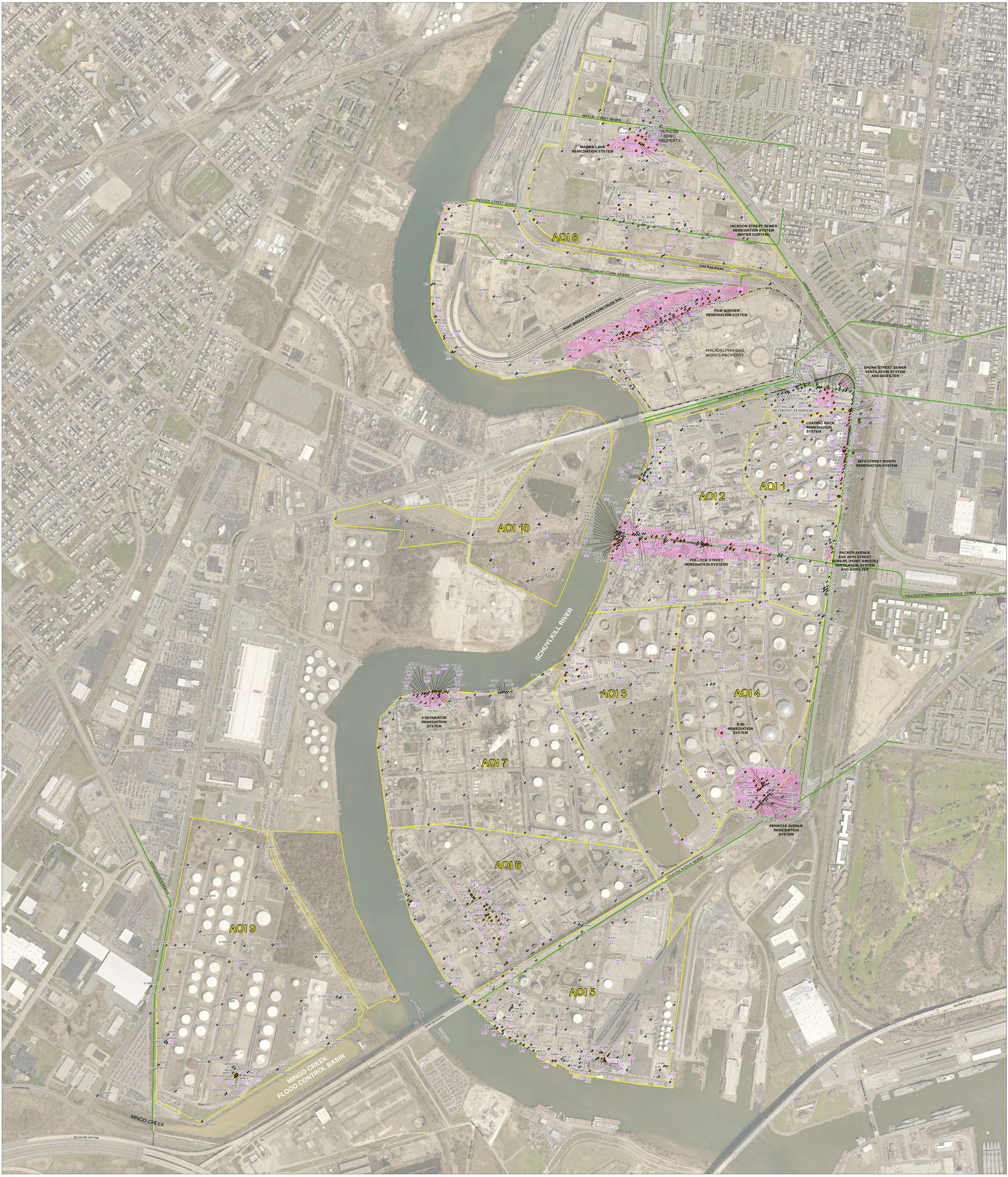
Title
SITE PLAN

Client/Project
PHILADELPHIA REFINERY OPERATIONS, A SERIES OF
EVERGREEN RESOURCES GROUP, LLC
PHILADELPHIA REFINING COMPLEX
3144 PASSYUNK AVENUE, PHILADELPHIA, PA 19145

Project Location
City of Philadelphia, Pennsylvania
Prepared by GWC on 7/14/2020
Technical Review by JLM on 7/16/2020
Independent Review by ASB on 7/16/2020

213402429





- Notes**
1. Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
North American Vertical Datum of 1988 (NAVD 88)
 2. Source: Stantec
 3. Callouts denote product thickness measured in feet using an interface probe.
 4. Measurements from wells gauged during the June 2020 synoptic event are provided. Wells not measured during the event include but are not limited to: damaged wells, destroyed wells, inaccessible wells, wells with pumps, and wells that were gauged but dry.
 5. Aerial & Topo Copyright© 2013 National Geographic Society, i-Cubed
Pictometry International Corp. Philadelphia imagery 2018 downloaded from Pennsylvania Spatial Data Access (PASDA)

- Legend**
- WELL – LIGHT NON-AQUEOUS PHASE LIQUID (LNAPL) OBSERVED
 - WELL – LNAPL NOT OBSERVED
 - WELL – NOT MEASURED (SEE NOTE 4)
 - APPROXIMATE LOCATION OF PHILADELPHIA WATER DEPARTMENT SEWER
 - REMEDATION SYSTEMS DESIGNATED AS CURRENTLY ACTIVE
 - AREA OF INTEREST (AOI)
 - BELMONT TERMINAL
 - PHILADELPHIA GAS WORKS (PGW) PASSYUNK FACILITY PROPERTY BOUNDARY
 - VERIZON SOUTH DISTRICT WORK CENTER (SDWC) PROPERTY
 - 1.12 APPARENT LNAPL THICKNESS (FEET)
 - <0.01 SHEEN

0 400 800 Feet
1:4,800 (At original document size of 36x48)

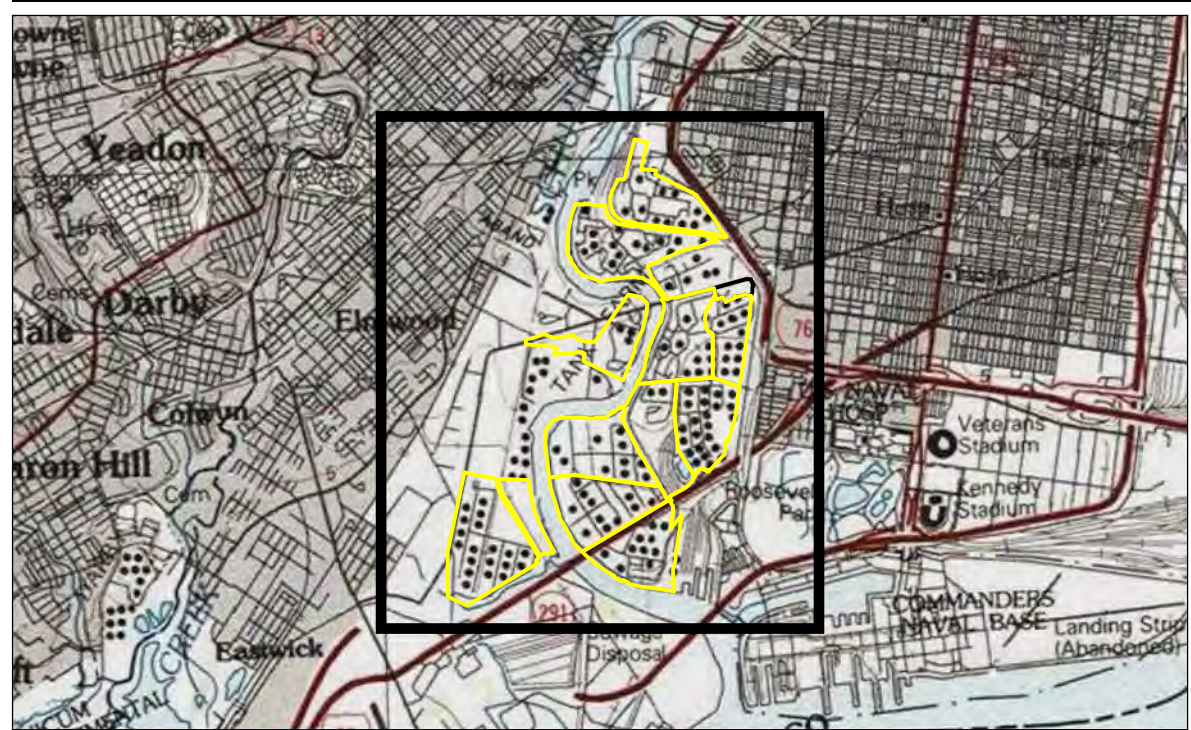


Figure No.
3
Title
**APPARENT LNAPL THICKNESS MAP
JUNE 2020**

Client/Project
PHILADELPHIA REFINERY OPERATIONS, A SERIES OF
EVERGREEN RESOURCES GROUP, LLC
PHILADELPHIA REFINING COMPLEX
3144 PASSYUNK AVENUE, PHILADELPHIA, PA 19145

Project Location
City of Philadelphia, Philadelphia County, Pennsylvania
213402429
Prepared by GWC on 7/14/2020
Technical Review by JLM on 7/16/2020
Independent Review by AJS on 7/16/2020





Notes

1. Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet, North American Vertical Datum of 1988 (NAVD 88)
2. Source: Stantec
3. Callouts denote corrected groundwater elevation in feet. Depth to groundwater was measured in each well to the nearest one-hundredth of a foot using an interface probe. PDS Complex groundwater remediation systems were in operation during well gauging.
4. Groundwater elevation data was interpolated using block kriging with a linear variogram model in Surfer.
5. Wells not measured during the June 2020 event are not displayed and include (but not limited to) damaged wells, destroyed wells, inaccessible wells, wells with pumps, and wells that were plugged but dry.
6. Wells gauged during June 2020 but not utilized for water-table contouring include those containing measurable light, non-aqueous phase liquid, well screened across a Resuspended perched aquifer, wells intersecting more than one water-bearing unit, wells with fouled screens, a subset of the remediation system wells, and wells excluded from contouring in recent Remedial Investigation Reports. Wells not used for contouring are not displayed.
7. Contour interval = 1 foot
8. Aerial & Topo Copyright © 2013 National Geographic Society, Inc. reprinted by permission of National Geographic Society
9. Recovery International Corp. Philadelphia Imagery 2018 downloaded from Pennsylvania Spatial Data Access (PASDA)

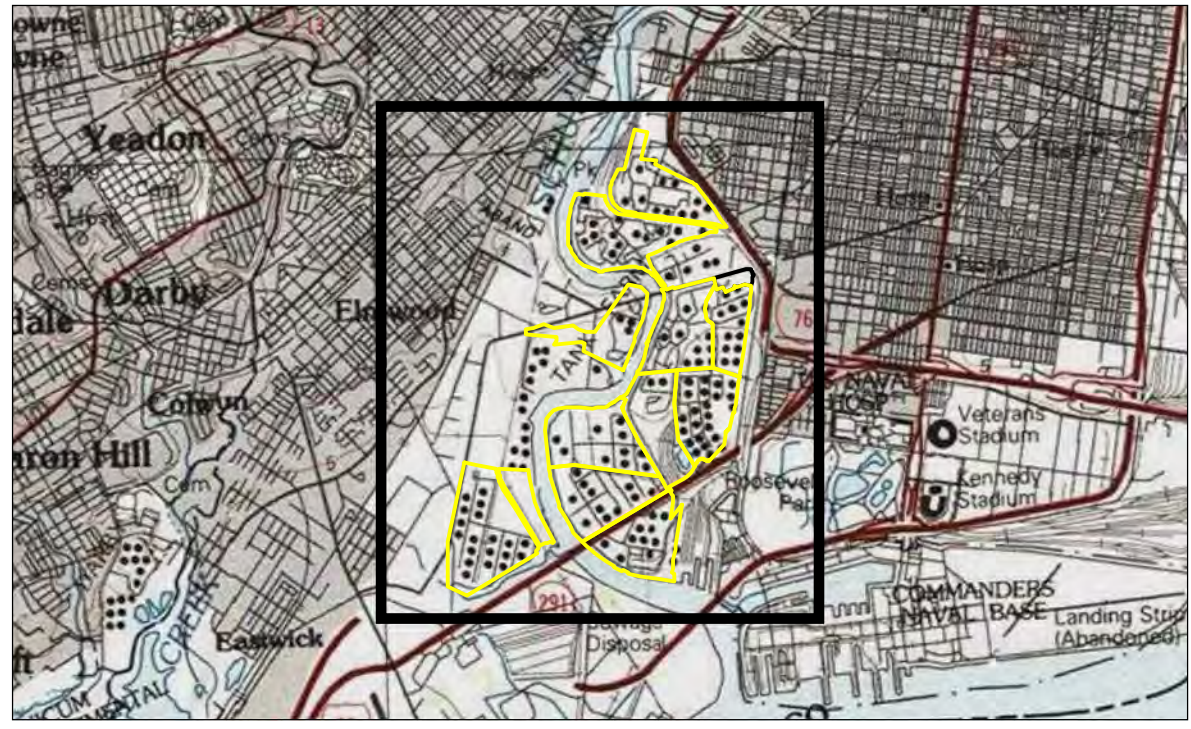
Legend

- ♦ WATER-TABLE MONITORING WELL
- RECOVERY WELL
- PIEZOMETER
- WATER-TABLE ELEVATION CONTOUR (FEET NAVD 88)
- APPROXIMATE LOCATION OF PHILADELPHIA WATER DEPARTMENT SEWER
- LIMITS OF WATER-TABLE WELL CONTROL
- AREA OF INTEREST (AOI)
- BELMONT TERMINAL
- VERIZON SOUTH DISTRICT WORK CENTER (SDWC) PROPERTY
- PHILADELPHIA GAS WORKS (PGW) PASSYUNK FACILITY PROPERTY BOUNDARY
- 4.62 WATER-TABLE ELEVATION (FEET NAVD 88)

0 400 800 Feet
14,800 (At original document size of 36x48)

Figure No.
4
Title
WATER-TABLE
GROUNDWATER ELEVATION MAP
JUNE 2020
Client/Project
PHILADELPHIA REFINERY OPERATIONS, A SERIES OF
EVERGREEN RESOURCES GROUP, LLC
PHILADELPHIA REFINING COMPLEX
3144 PASSYUNK AVENUE, PHILADELPHIA, PA 19145
Project Location
City of Philadelphia,
Philadelphia County,
Pennsylvania
Prepared by GWC on 7/14/2020
Technical Review by JAK on 7/20/2020
Independent Review by ASB on 7/24/2020





Notes

1. Coordinate System: NAD 1983 StatePlane Pennsylvania South FIPS 3702 Feet
2. Source: Stantec
3. Contours denote corrected groundwater elevation in feet. Depth to groundwater was measured in each well to the nearest one-hundredth of a foot using an interface probe.
4. Groundwater elevation data was interpolated using block kriging with a linear variogram model in Surfer.
5. Contour Interval = 1 foot
6. Aerial & Topo Copyright: © 2013 National Geographic Society, Inc. cubed
7. Photomosaic International Corp. Philadelphia imagery 2018 downloaded from Pennsylvania Spatial Data Access (PASDA)

- Legend**
- LOWER AQUIFER MONITORING WELL
 - GROUNDWATER ELEVATION CONTOUR (FEET NAVD 88)
 - APPROXIMATE LOCATION OF PHILADELPHIA WATER DEPARTMENT SEWER
 - LIMITS OF LOWER AQUIFER WELL CONTROL
 - AREA OF INTEREST (AOI)
 - BELMONT TERMINAL
 - VERIZON SOUTH DISTRICT WORK CENTER (SDWC) PROPERTY
 - PHILADELPHIA GAS WORKS (PGW) PASSYUNK FACILITY PROPERTY BOUNDARY
 - 114 GROUNDWATER ELEVATION (FEET NAVD 88)

0 400 800 Feet
14,800 (At original document size of 36x48)



Figure No.
5
Title
**LOWER AQUIFER
GROUNDWATER ELEVATION MAP
JUNE 2020**

Client/Project
PHILADELPHIA REFINERY OPERATIONS, A SERIES OF
EVERGREEN RESOURCES GROUP, LLC
PHILADELPHIA REFINING COMPLEX
3144 PASSYUNK AVENUE, PHILADELPHIA, PA 19145

Project Location
City of Philadelphia,
Philadelphia County,
Pennsylvania

213402429
Prepared by GWC on 7/14/2020
Technical Review by JAK on 7/17/2020
Independent Review by ASB on 7/24/2020



TABLES

Table 1
First Quarter 2020 Gauging Data
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 1	RW-402	2-Mar-20	---	18.14	---	3.57	Static	
AOI 1	S-180	2-Mar-20	---	19.68	---	2.52	Static	
AOI 1	S-181	2-Mar-20	---	21.25	---	1.61	Static	
AOI 1	S-182	2-Mar-20	---	21.51	---	1.49	Static	
AOI 1	S-183	2-Mar-20	---	21.55	---	1.93	Static	
AOI 1	S-184	2-Mar-20	---	19.49	---	3.99	Static	
AOI 1	S-185	2-Mar-20	---	15.94	---	7.94	Static	
AOI 1	S-186	2-Mar-20	---	22.30	---	2.06	Pumping	
AOI 1	S-187	2-Mar-20	---	21.65	---	2.86	Static	
AOI 1	S-188	2-Mar-20	---	22.38	---	2.44	Static	
AOI 1	S-189	2-Mar-20	---	24.10	---	1.69	Static	
AOI 1	S-190	2-Mar-20	---	23.82	---	1.75	Static	
AOI 1	S-191	2-Mar-20	---	22.57	---	3.26	Static	
AOI 1	S-192	2-Mar-20	---	23.74	---	2.28	Static	
AOI 1	S-203	3-Jan-20	27.99	28.90	0.91	3.86	Static	
AOI 2	RW-103	16-Jan-20	18.84	18.89	0.05	1.16	Static	
AOI 2	RW-104	2-Mar-20	---	7.63	---	1.33	Static	
AOI 2	RW-105	2-Mar-20	---	9.25	---	-0.57	Static	
AOI 2	RW-106	2-Mar-20	---	8.22	---	1.08	Static	
AOI 2	RW-107	2-Mar-20	---	9.68	---	0.87	Static	
AOI 2	RW-113	2-Mar-20	---	9.89	---	0.34	Static	
AOI 2	RW-114	2-Mar-20	---	12.59	---	0.42	Static	
AOI 2	RW-115	2-Mar-20	---	9.77	---	0.43	Static	
AOI 2	RW-116	2-Mar-20	---	10.22	---	0.59	Static	
AOI 2	RW-117	2-Mar-20	9.12	9.33	0.21	0.63	Static	
AOI 2	RW-118	2-Mar-20	---	11.07	---	0.75	Static	
AOI 2	RW-119	2-Mar-20	---	12.25	---	0.60	Static	
AOI 2	RW-120	2-Mar-20	---	13.08	---	0.50	Static	
AOI 2	RW-121	2-Mar-20	---	14.74	---	0.56	Static	
AOI 2	RW-122	2-Mar-20	---	9.52	---	0.72	Static	
AOI 2	RW-123	2-Mar-20	---	9.22	---	0.75	Static	
AOI 2	RW-124	2-Mar-20	---	8.32	---	0.84	Static	
AOI 2	RW-125	2-Mar-20	---	13.92	---	0.35	Static	
AOI 2	RW-126	2-Mar-20	---	8.13	---	1.10	Static	
AOI 2	RW-127	2-Mar-20	---	13.44	---	0.46	Static	
AOI 2	RW-128	2-Mar-20	8.52	10.03	1.51	-0.29	Static	
AOI 2	RW-129	2-Mar-20	---	9.53	---	0.30	Static	
AOI 2	S-142	3-Jan-20	20.92	21.02	0.10	-1.09	Static	
AOI 2	S-174	16-Jan-20	9.88	10.03	0.15	9.72	Static	
AOI 2	S-175	3-Jan-20	18.07	18.46	0.39	1.91	Static	
AOI 2	S-254	3-Jan-20	20.08	20.23	0.15	0.78	Static	
AOI 2	S-304	3-Jan-20	14.40	14.78	0.38	9.74	Static	
AOI 2	S-313	2-Mar-20	---	20.13	---	0.77	Static	
AOI 2	S-315	2-Mar-20	---	20.67	---	-0.20	Static	
AOI 2	S-316	2-Mar-20	---	20.19	---	0.71	Static	
AOI 2	S-317	16-Jan-20	19.43	19.43	<0.01	NA	Static	
AOI 2	S-360	3-Jan-20	19.43	19.65	0.22	4.32	Static	
AOI 2	S-406	2-Mar-20	---	11.48	---	0.72	Static	
AOI 2	S-420	2-Mar-20	---	6.63	---	2.63	Static	
AOI 2	S-423	3-Jan-20	26.75	27.17	0.42	4.64	Static	
AOI 2	S-64	2-Mar-20	---	7.73	---	2.83	Static	
AOI 2	S-65	2-Mar-20	11.19	11.34	0.15	-0.59	Static	
AOI 2	S-93	2-Mar-20	17.00	18.19	1.19	1.09	Static	
AOI 4	RW-700	2-Mar-20	---	19.00	---	-0.99	Pumping	
AOI 4	RW-701	2-Mar-20	---	20.80	---	-2.53	Pumping	
AOI 4	RW-702	2-Mar-20	---	21.90	---	-0.95	Pumping	
AOI 4	RW-703	2-Mar-20	---	18.80	---	1.82	Pumping	
AOI 4	RW-704	2-Mar-20	---	21.75	---	-1.52	Pumping	
AOI 4	RW-705	2-Mar-20	---	14.78	---	1.14	Static	
AOI 4	RW-706	2-Mar-20	---	14.76	---	1.13	Static	
AOI 4	RW-707	2-Mar-20	---	15.31	---	0.98	Static	

Table 1
First Quarter 2020 Gauging Data
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 4	RW-708	2-Mar-20	---	14.52	---	0.97	Static	
AOI 4	RW-709	2-Mar-20	---	14.30	---	1.00	Static	
AOI 4	RW-710	2-Mar-20	---	15.16	---	0.72	Static	
AOI 4	RW-711	2-Mar-20	---	14.50	---	0.99	Static	
AOI 4	RW-712	2-Mar-20	---	14.61	---	0.95	Static	
AOI 4	RW-713	2-Mar-20	---	15.08	---	-0.06	Static	
AOI 4	RW-714	2-Mar-20	---	13.91	---	1.30	Static	
AOI 4	RW-715	2-Mar-20	---	14.27	---	1.10	Static	
AOI 4	RW-716	2-Mar-20	---	14.49	---	1.06	Static	
AOI 4	RW-717	2-Mar-20	---	14.48	---	1.13	Static	
AOI 4	S-221	2-Mar-20	---	21.50	---	1.50	Pumping	
AOI 4	S-236	2-Mar-20	---	25.45	---	-2.48	Pumping	
AOI 4	S-237	2-Mar-20	---	21.30	---	1.52	Pumping	
AOI 4	S-240	3-Jan-20	22.86	24.25	1.39	0.85	Static	
AOI 4	S-30	3-Mar-20	21.94	22.70	0.76	1.09	Pumping	
AOI 5	RWBH-2	3-Jan-20	3.93	6.87	2.94	-0.09	Static	
AOI 5	SW-1	3-Jan-20	7.60	8.78	1.18	2.05	Static	
AOI 6	B-133D	3-Jan-20	---	10.64	---	-2.04	Static	
AOI 6	B-148	3-Jan-20	5.54	6.12	0.58	1.61	Static	
AOI 6	B-176	20-Feb-20	---	12.94	---	NM	Static	
AOI 6	B-177	20-Feb-20	---	5.80	---	NM	Static	
AOI 6	B-178	19-Feb-20	---	5.20	---	NM	Static	
AOI 6	B-179	19-Feb-20	---	5.48	---	NM	Static	
AOI 7	C-148	3-Jan-20	12.67	12.79	0.12	-3.35	Static	
AOI 7	RW-801	3-Mar-20	---	17.30	---	-11.03	Pumping	
AOI 7	RW-802	3-Mar-20	---	19.45	---	-13.75	Pumping	
AOI 7	RW-803	3-Mar-20	---	20.50	---	-14.72	Pumping	
AOI 7	RW-804	3-Mar-20	---	20.10	---	-14.32	Pumping	
AOI 7	RW-805	3-Mar-20	---	17.35	---	-11.60	Pumping	
AOI 7	RW-806	3-Mar-20	---	20.60	---	-15.19	Pumping	
AOI 7	RW-807	3-Mar-20	---	18.00	---	-11.16	Pumping	
AOI 7	RW-808	3-Mar-20	---	18.15	---	-12.07	Pumping	
AOI 7	RW-809	3-Mar-20	---	19.70	---	-13.15	Pumping	
AOI 7	RW-810	3-Mar-20	---	13.00	---	-6.56	Pumping	
AOI 8	N-10	13-Feb-20	---	3.28	---	16.66	Static	
AOI 8	N-11	13-Feb-20	---	18.02	---	11.72	Static	
AOI 8	N-127	17-Feb-20	18.48	24.56	6.08	14.23	Static	
AOI 8	N-129	3-Jan-20	18.89	19.61	0.72	9.94	Static	
AOI 8	N-151	3-Jan-20	18.48	19.03	0.55	9.10	Static	
AOI 8	N-158	17-Feb-20	20.54	25.04	4.50	10.17	Static	
AOI 8	N-159	17-Feb-20	21.04	26.19	5.15	9.55	Static	
AOI 8	N-160	18-Feb-20	---	17.71	---	8.50	Static	
AOI 8	N-161	20-Feb-20	27.86	28.05	0.19	8.49	Static	
AOI 8	N-162	18-Feb-20	---	22.43	---	10.04	Static	
AOI 8	N-163	21-Feb-20	---	18.62	---	8.61	Static	
AOI 8	N-24	13-Feb-20	---	8.21	---	9.52	Static	
AOI 8	N-47	17-Feb-20	---	18.70	---	13.22	Static	
AOI 8	N-48	17-Feb-20	21.30	22.44	1.14	9.84	Static	
AOI 8	N-5	13-Feb-20	---	8.50	---	17.46	Static	
AOI 8	N-51	17-Feb-20	---	19.28	---	12.57	Static	
AOI 8	N-69	13-Feb-20	---	14.67	---	8.53	Static	

Table 1
First Quarter 2020 Gauging Data
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 8	N-70	13-Feb-20	---	14.31	---	7.86	Static	
AOI 8	N-77	13-Feb-20	---	5.80	---	12.81	Static	
AOI 8	N-83	13-Feb-20	---	14.98	---	6.47	Static	
AOI 8	N-89	13-Feb-20	---	13.85	---	9.56	Static	
AOI 8	RW-201	17-Feb-20	22.85	22.93	0.08	9.13	Static	
AOI 8	RW-202	10-Feb-20	---	21.53	---	7.98	Static	
AOI 8	RW-203	10-Feb-20	22.51	22.90	0.39	8.55	Static	
AOI 8	RW-204	10-Feb-20	20.00	20.95	0.95	8.47	Static	
AOI 8	RW-205	10-Feb-20	19.30	20.73	1.43	10.24	Static	
AOI 8	RW-206	10-Feb-20	19.84	22.90	3.06	10.76	Pumping	
AOI 8	RW-207	10-Feb-20	---	20.96	---	8.85	Pumping	
AOI 8	RW-208	10-Feb-20	---	20.68	---	8.85	Pumping	
AOI 8	RW-209	10-Feb-20	20.17	21.18	1.01	8.86	Pumping	
AOI 8	RW-210	10-Feb-20	19.90	20.90	1.00	8.90	Pumping	
AOI 8	RW-211	10-Feb-20	---	19.81	---	9.07	Pumping	
AOI 8	RW-212	10-Feb-20	19.68	19.68	<0.01	9.20	Pumping	
AOI 8	RW-213	10-Feb-20	---	19.10	---	9.26	Pumping	
AOI 8	RW-214	10-Feb-20	---	19.97	---	9.19	Pumping	
AOI 8	RW-215	10-Feb-20	---	19.53	---	9.22	Pumping	
AOI 8	RW-216	10-Feb-20	---	18.80	---	9.42	Pumping	
AOI 8	RW-217	10-Feb-20	---	18.91	---	9.19	Pumping	
AOI 8	RW-218	10-Feb-20	18.61	18.61	<0.01	9.41	Pumping	
AOI 8	RW-219	10-Feb-20	---	17.48	---	9.94	Pumping	
AOI 8	RW-220	10-Feb-20	---	18.27	---	9.23	Pumping	
AOI 8	RW-221	10-Feb-20	---	14.71	---	12.93	Pumping	
AOI 8	RW-222	10-Feb-20	16.30	17.28	0.98	10.82	Pumping	
AOI 8	RW-223	10-Feb-20	---	20.85	---	8.67	Pumping	
AOI 8	RW-224	10-Feb-20	---	21.10	---	9.06	Pumping	
AOI 8	RW-225	10-Feb-20	19.91	22.39	2.48	7.55	Pumping	
AOI 8	RW-226	10-Feb-20	---	18.56	---	9.01	Pumping	
AOI 8	RW-227	10-Feb-20	---	18.10	---	9.08	Pumping	
AOI 8	RW-228	17-Feb-20	---	16.88	---	10.27	Pumping	
AOI 8	RW-229	10-Feb-20	---	18.41	---	9.49	Pumping	
AOI 8	RW-230	10-Feb-20	---	17.60	---	10.42	Pumping	
AOI 8	RW-231	10-Feb-20	---	16.15	---	10.68	Pumping	
AOI 8	RW-232	10-Feb-20	---	11.62	---	10.41	Pumping	
AOI 8	RW-233	10-Feb-20	---	3.19	---	17.89	Pumping	
AOI 8	RW-234	10-Feb-20	---	17.21	---	11.43	Pumping	
AOI 8	RW-235	10-Feb-20	16.65	16.65	<0.01	11.44	Pumping	
AOI 8	RW-236	10-Feb-20	15.15	16.15	1.00	11.06	Pumping	
AOI 8	RW-300	13-Feb-20	14.63	15.18	0.55	6.92	Static	
BELMONT	RW-22	21-Feb-20	---	22.89	---	4.14	Static	
BELMONT	RW-23	21-Feb-20	23.04	23.06	0.02	4.09	Static	
BELMONT	RW-24	21-Feb-20	22.91	22.91	<0.01	4.27	Static	
BELMONT	RW-25	21-Feb-20	27.16	27.16	<0.01	3.00	Pumping	
BELMONT	RW-4	21-Feb-20	26.32	26.41	0.09	4.11	Pumping	

Notes:

For product thickness <0.01 ft, the corrected groundwater elevation was calculated using 0.01 foot.

AOI = Area of Interest

LNAPL = Light non-aqueous phase liquid

ft = Feet

btoc = Below top of casing

NAVD 88 = North American Vertical Datum of 1988

--- = LNAPL not present

NM = Field reading not measured and/or corrected groundwater elevation not calculated due to lack of surveyed reference elevation or well was dry or presence of down-well pump.

Table 2
Sitewide Annual 2020 Gauging Data
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 1	ARCO-1	02-Jun-20	---	26.74	---	0.21	Static	
AOI 1	ARCO-1D	02-Jun-20	---	26.65	---	0.41	Static	
AOI 1	ARCO-2	02-Jun-20	---	25.87	---	0.13	Static	
AOI 1	ARCO-3	02-Jun-20	---	24.54	---	-0.23	Static	
AOI 1	MWELL-28	02-Jun-20	---	21.12	---	0.53	Static	
AOI 1	MWELL-29	02-Jun-20	---	22.50	---	-0.28	Static	
AOI 1	MWELL-30	02-Jun-20	---	26.42	---	-0.29	Static	
AOI 1	MWELL-31	02-Jun-20	---	25.81	---	0.11	Static	
AOI 1	PZ-401	02-Jun-20	20.74	20.75	0.01	2.98	Static	
AOI 1	PZ-402	02-Jun-20	20.56	21.15	0.59	2.71	Static	
AOI 1	PZ-403	02-Jun-20	24.80	24.81	0.01	-0.39	Static	
AOI 1	PZ-404	02-Jun-20	---	26.50	---	-0.49	Static	
AOI 1	RW-110	02-Jun-20	---	16.71	---	0.96	Static	
AOI 1	RW-111	02-Jun-20	---	16.81	---	0.91	Static	
AOI 1	RW-112	02-Jun-20	---	16.72	---	0.89	Static	
AOI 1	RW-401	02-Jun-20	21.68	22.04	0.36	3.02	Static	
AOI 1	RW-402	02-Jun-20	---	22.50	---	-0.79	Pumping	
AOI 1	RW-403	02-Jun-20	---	21.50	---	2.63	Static	
AOI 1	RW-404	02-Jun-20	---	22.58	---	1.16	Static	
AOI 1	RW-405	02-Jun-20	24.70	24.84	0.14	-0.61	Static	
AOI 1	RW-406	02-Jun-20	23.78	24.48	0.70	4.67	Static	
AOI 1	S-41	02-Jun-20	---	25.75	---	0.00	Static	
AOI 1	S-42I	02-Jun-20	---	25.15	---	-1.59	Static	
AOI 1	S-43	02-Jun-20	---	23.81	---	-0.59	Static	
AOI 1	S-44	02-Jun-20	---	25.16	---	-1.82	Static	
AOI 1	S-45	02-Jun-20	NM	NM	NM	NM	Static	dry at 19.73 ft btoc
AOI 1	S-46	02-Jun-20	---	27.51	---	-4.95	Static	
AOI 1	S-46D	02-Jun-20	---	15.46	---	0.25	Static	
AOI 1	S-47I	02-Jun-20	---	27.19	---	-4.98	Static	
AOI 1	S-50	02-Jun-20	---	22.56	---	-0.13	Static	
AOI 1	S-51	02-Jun-20	---	22.33	---	0.21	Static	
AOI 1	S-52	02-Jun-20	---	22.90	---	0.64	Static	
AOI 1	S-77	02-Jun-20	9.12	12.57	3.45	20.93	Static	
AOI 1	S-77P	02-Jun-20	---	29.14	---	3.90	Static	
AOI 1	S-78	02-Jun-20	---	26.85	---	4.08	Static	
AOI 1	S-79	02-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 1	S-79P	02-Jun-20	NA	NA	NA	NA	Static	damaged - obstructed at 15.20 ft btoc
AOI 1	S-80	02-Jun-20	---	28.28	---	3.85	Static	
AOI 1	S-80D	02-Jun-20	---	29.21	---	2.53	Static	
AOI 1	S-82	02-Jun-20	23.80	23.98	0.18	3.45	Static	
AOI 1	S-83	02-Jun-20	20.42	20.80	0.38	2.84	Static	
AOI 1	S-84	02-Jun-20	NM	NM	NM	NM	Static	
AOI 1	S-84P	02-Jun-20	---	17.30	---	5.96	Static	
AOI 1	S-85	02-Jun-20	---	23.91	---	1.22	Static	
AOI 1	S-86	02-Jun-20	26.27	26.28	0.01	0.78	Static	
AOI 1	S-87I	02-Jun-20	---	24.73	---	1.14	Static	
AOI 1	S-88	02-Jun-20	---	24.64	---	-0.54	Static	
AOI 1	S-88A	02-Jun-20	---	23.91	---	-0.11	Static	
AOI 1	S-89	02-Jun-20	26.49	26.51	0.02	-0.50	Static	
AOI 1	S-95	02-Jun-20	---	22.25	---	0.74	Static	
AOI 1	S-98	02-Jun-20	23.81	23.81	<0.01	5.00	Static	
AOI 1	S-99	02-Jun-20	---	25.09	---	0.31	Static	
AOI 1	S-100	02-Jun-20	23.64	23.65	0.01	3.31	Static	
AOI 1	S-101	02-Jun-20	---	47.43	---	1.69	Static	
AOI 1	S-116	02-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 1	S-117	02-Jun-20	---	17.16	---	1.25	Static	
AOI 1	S-118	02-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 1	S-125	02-Jun-20	23.00	23.08	0.08	2.97	Static	
AOI 1	S-126	02-Jun-20	15.70	16.28	0.58	12.71	Static	
AOI 1	S-127	02-Jun-20	---	16.34	---	0.76	Static	
AOI 1	S-161	02-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 1	S-162	02-Jun-20	---	17.23	---	0.83	Static	
AOI 1	S-164	02-Jun-20	---	15.58	---	1.12	Static	
AOI 1	S-171	02-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 1	S-179	02-Jun-20	---	19.07	---	5.46	Static	
AOI 1	S-180	02-Jun-20	---	19.32	---	2.88	Pumping	
AOI 1	S-181	02-Jun-20	---	20.04	---	2.82	Pumping	
AOI 1	S-182	02-Jun-20	---	21.58	---	1.42	Pumping	
AOI 1	S-183	02-Jun-20	---	26.13	---	-2.65	Pumping	
AOI 1	S-184	02-Jun-20	---	20.31	---	3.17	Pumping	
AOI 1	S-185	02-Jun-20	---	26.46	---	-2.58	Pumping	
AOI 1	S-186	02-Jun-20	---	22.00	---	2.36	Pumping	
AOI 1	S-187	02-Jun-20	22.88	23.02	0.14	1.60	Pumping	
AOI 1	S-188	02-Jun-20	---	26.40	---	-1.58	Pumping	
AOI 1	S-189	02-Jun-20	---	24.77	---	1.02	Pumping	
AOI 1	S-190	02-Jun-20	24.99	25.00	0.01	0.58	Pumping	
AOI 1	S-191	02-Jun-20	---	25.80	---	0.03	Pumping	

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AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 1	S-192	02-Jun-20	---	24.80	---	1.22	Pumping	
AOI 1	S-193	02-Jun-20	---	24.66	---	3.44	Static	
AOI 1	S-194	02-Jun-20	---	27.33	---	3.71	Static	
AOI 1	S-196	02-Jun-20	---	46.12	---	3.93	Static	
AOI 1	S-197	02-Jun-20	---	42.63	---	7.15	Static	
AOI 1	S-198	02-Jun-20	25.56	27.04	1.48	3.46	Static	
AOI 1	S-199	02-Jun-20	25.33	26.72	1.39	3.57	Static	
AOI 1	S-200	02-Jun-20	25.45	25.46	0.01	3.61	Static	
AOI 1	S-201	02-Jun-20	24.25	25.47	1.22	3.44	Static	
AOI 1	S-202	02-Jun-20	---	28.85	---	3.76	Static	
AOI 1	S-203	02-Jun-20	28.32	28.80	0.48	3.61	Static	
AOI 1	S-205	02-Jun-20	17.71	17.71	<0.01	10.47	Static	
AOI 1	S-206	02-Jun-20	---	27.92	---	3.86	Static	
AOI 1	S-207	02-Jun-20	---	14.35	---	12.85	Static	
AOI 1	S-208	02-Jun-20	---	19.37	---	1.49	Static	
AOI 1	S-209	02-Jun-20	---	26.06	---	0.92	Static	
AOI 1	S-210	02-Jun-20	---	23.74	---	-0.05	Static	
AOI 1	S-211	02-Jun-20	---	14.00	---	1.25	Static	
AOI 1	S-212	02-Jun-20	NA	NA	NA	NA	Static	damaged, casing broken. Well filled in with sand
AOI 1	S-213	02-Jun-20	---	14.22	---	0.99	Static	
AOI 1	S-214	02-Jun-20	---	19.03	---	0.81	Static	
AOI 1	S-215	02-Jun-20	NA	NA	NA	NA	Static	damaged - obstruction at 1 ft btoc. Possible bend in pipe
AOI 1	S-226	02-Jun-20	---	20.74	---	1.34	Static	
AOI 1	S-227	02-Jun-20	---	22.36	---	-0.57	Static	
AOI 1	S-228	02-Jun-20	---	21.68	---	-0.50	Static	
AOI 1	S-230	02-Jun-20	---	20.25	---	-0.06	Static	
AOI 1	S-231	02-Jun-20	---	21.05	---	-1.11	Static	
AOI 1	S-232	02-Jun-20	---	20.78	---	-0.47	Static	
AOI 1	S-255	02-Jun-20	---	22.58	---	-0.67	Static	
AOI 1	S-256	02-Jun-20	---	21.75	---	-0.34	Static	
AOI 1	S-257	02-Jun-20	---	22.97	---	0.30	Static	
AOI 1	S-258	02-Jun-20	---	23.93	---	-1.13	Static	
AOI 1	S-259	02-Jun-20	---	24.53	---	-1.97	Static	
AOI 1	S-260	02-Jun-20	---	22.95	---	-1.25	Static	
AOI 1	S-261	02-Jun-20	---	24.61	---	2.80	Static	
AOI 1	S-262	02-Jun-20	---	18.42	---	1.02	Static	
AOI 1	S-263	02-Jun-20	---	16.07	---	0.71	Static	
AOI 1	S-264D	02-Jun-20	---	25.97	---	0.66	Static	
AOI 1	S-265	02-Jun-20	---	15.68	---	15.50	Static	
AOI 1	S-266	02-Jun-20	NA	NA	NA	NA	Static	buried under pile of concrete debris
AOI 1	S-267	02-Jun-20	---	23.70	---	9.17	Static	
AOI 1	S-268	02-Jun-20	---	27.49	---	3.96	Static	
AOI 1	S-269	02-Jun-20	---	20.16	---	2.40	Static	
AOI 1	S-270	02-Jun-20	---	21.57	---	1.56	Static	
AOI 1	S-271	02-Jun-20	---	25.20	---	3.28	Static	
AOI 1	S-272	02-Jun-20	---	24.90	---	3.46	Static	
AOI 1	S-273	02-Jun-20	---	24.28	---	3.47	Static	
AOI 1	S-274	02-Jun-20	---	24.33	---	3.04	Static	
AOI 1	S-275	02-Jun-20	---	23.60	---	2.97	Static	
AOI 1	S-276	02-Jun-20	23.41	24.26	0.85	3.01	Static	
AOI 1	S-277	02-Jun-20	22.70	23.33	0.63	2.87	Static	
AOI 1	S-312	02-Jun-20	---	6.27	---	11.61	Static	
AOI 1	S-388D	02-Jun-20	---	25.26	---	0.93	Static	
AOI 1	S-389D	02-Jun-20	---	25.15	---	1.15	Static	
AOI 1	S-390D	02-Jun-20	---	25.48	---	1.00	Static	
AOI 1	S-391D	02-Jun-20	---	28.96	---	2.50	Static	
AOI 1	S-392D	02-Jun-20	---	19.31	---	0.66	Static	
AOI 1	S-396	02-Jun-20	---	25.00	---	1.19	Static	
AOI 1	S-397	02-Jun-20	---	25.47	---	1.13	Static	
AOI 1	S-398	02-Jun-20	---	24.73	---	0.83	Static	
AOI 1	S-399	02-Jun-20	---	19.51	---	0.65	Static	
AOI 1	S-400	02-Jun-20	---	29.40	---	2.29	Static	
AOI 1	S-401	02-Jun-20	---	29.55	---	2.21	Static	
AOI 1	S-402	02-Jun-20	29.45	29.64	0.19	3.96	Static	
AOI 1	S-403	02-Jun-20	23.99	24.30	0.31	2.78	Static	
AOI 1	S-404	02-Jun-20	15.07	15.14	0.07	13.43	Static	
AOI 1	S-405	02-Jun-20	22.68	22.74	0.06	3.44	Static	
AOI 1	S-417	02-Jun-20	---	27.36	---	4.92	Static	
AOI 1	S-418	02-Jun-20	---	17.29	---	0.00	Static	
AOI 1	S-419	02-Jun-20	---	15.12	---	0.90	Static	
AOI 2	C-HEADER	03-Jun-20	---	12.66	---	7.95	Static	
AOI 2	PGW-MW-8D	04-Jun-20	---	32.18	---	2.93	Static	
AOI 2	PGW-MW-8S	02-Jun-20	---	30.65	---	4.43	Static	
AOI 2	PGW-MW-9D	04-Jun-20	---	30.38	---	2.05	Static	
AOI 2	PZ-100	03-Jun-20	---	16.02	---	2.05	Static	
AOI 2	PZ-101	03-Jun-20	---	11.49	---	5.68	Static	
AOI 2	RW-100	03-Jun-20	19.25	19.28	0.03	1.47	Static	

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AOI 2	RW-101	02-Jun-20	18.99	19.12	0.13	0.76	Static	
AOI 2	RW-102	03-Jun-20	18.84	18.87	0.03	-1.37	Static	
AOI 2	RW-103	03-Jun-20	18.61	18.62	0.01	1.40	Static	
AOI 2	RW-104	02-Jun-20	---	5.86	---	3.10	Static	
AOI 2	RW-105	02-Jun-20	---	8.65	---	0.03	Static	
AOI 2	RW-106	02-Jun-20	8.02	8.03	0.01	1.28	Static	
AOI 2	RW-107	02-Jun-20	9.25	9.29	0.04	1.29	Static	
AOI 2	RW-108	02-Jun-20	---	7.13	---	2.77	Static	
AOI 2	RW-109	02-Jun-20	---	7.72	---	2.13	Static	
AOI 2	RW-113	02-Jun-20	---	9.24	---	0.99	Static	
AOI 2	RW-114	02-Jun-20	---	11.97	---	1.04	Static	
AOI 2	RW-115	02-Jun-20	---	9.07	---	1.13	Static	
AOI 2	RW-116	02-Jun-20	---	9.55	---	1.26	Static	
AOI 2	RW-117	02-Jun-20	8.43	8.70	0.27	1.32	Static	
AOI 2	RW-118	02-Jun-20	---	10.53	---	1.29	Static	
AOI 2	RW-119	02-Jun-20	11.57	11.59	0.02	1.28	Static	
AOI 2	RW-120	02-Jun-20	---	12.41	---	1.17	Static	
AOI 2	RW-121	02-Jun-20	---	14.02	---	1.28	Static	
AOI 2	RW-122	02-Jun-20	---	8.59	---	1.65	Static	
AOI 2	RW-123	02-Jun-20	---	8.92	---	1.05	Static	
AOI 2	RW-124	02-Jun-20	---	7.78	---	1.38	Static	
AOI 2	RW-125	02-Jun-20	---	13.23	---	1.04	Static	
AOI 2	RW-126	02-Jun-20	---	7.62	---	1.61	Static	
AOI 2	RW-127	02-Jun-20	---	12.71	---	1.19	Static	
AOI 2	RW-128	02-Jun-20	7.79	7.81	0.02	0.64	Static	
AOI 2	RW-129	02-Jun-20	---	9.12	---	0.71	Static	
AOI 2	RW-600	02-Jun-20	NA	NA	NA	NA	Static	blockage at 4.04 ft btoc
AOI 2	RW-601	02-Jun-20	---	9.53	---	2.15	Static	
AOI 2	S-48	03-Jun-20	19.86	19.95	0.09	1.40	Static	
AOI 2	S-53	03-Jun-20	---	18.84	---	2.84	Static	
AOI 2	S-54	03-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 2	S-61	03-Jun-20	16.51	16.81	0.30	1.71	Static	
AOI 2	S-62	03-Jun-20	---	19.39	---	1.99	Static	
AOI 2	S-63	02-Jun-20	19.67	19.95	0.28	1.56	Static	
AOI 2	S-64	02-Jun-20	---	7.15	---	3.41	Static	
AOI 2	S-65	02-Jun-20	---	8.70	---	1.92	Static	
AOI 2	S-70	02-Jun-20	NA	NA	NA	NA	Static	damaged - filled with gravel
AOI 2	S-71	02-Jun-20	---	21.39	---	2.65	Static	
AOI 2	S-72	02-Jun-20	---	27.05	---	4.01	Static	
AOI 2	S-72D	02-Jun-20	---	32.03	---	2.48	Static	
AOI 2	S-73	03-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 2	S-91	03-Jun-20	---	19.26	---	3.87	Static	
AOI 2	S-92	03-Jun-20	10.64	10.65	0.01	9.43	Static	
AOI 2	S-93	02-Jun-20	16.83	17.01	0.18	1.40	Static	
AOI 2	S-105	02-Jun-20	---	10.27	---	2.26	Static	
AOI 2	S-106	02-Jun-20	---	9.52	---	1.84	Static	
AOI 2	S-107	02-Jun-20	---	9.77	---	2.54	Static	
AOI 2	S-108	02-Jun-20	---	7.42	---	3.30	Static	
AOI 2	S-110	02-Jun-20	---	15.41	---	10.26	Static	
AOI 2	S-130	03-Jun-20	18.62	18.63	0.01	3.86	Static	
AOI 2	S-131	03-Jun-20	---	18.84	---	-0.08	Static	
AOI 2	S-132	03-Jun-20	---	18.47	---	2.56	Static	
AOI 2	S-133	03-Jun-20	---	19.71	---	2.31	Static	
AOI 2	S-134	03-Jun-20	---	19.05	---	2.98	Static	
AOI 2	S-135	03-Jun-20	21.46	21.57	0.11	1.71	Static	
AOI 2	S-136	03-Jun-20	---	18.14	---	2.45	Static	
AOI 2	S-137	03-Jun-20	---	17.11	---	2.93	Static	
AOI 2	S-139	03-Jun-20	---	19.45	---	2.01	Static	
AOI 2	S-141	03-Jun-20	---	20.04	---	1.88	Static	
AOI 2	S-142	03-Jun-20	---	20.51	---	-0.67	Static	
AOI 2	S-143	02-Jun-20	NA	NA	NA	NA	Static	blockage at 9 ft btoc
AOI 2	S-145	04-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 2	S-149	04-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 2	S-150	04-Jun-20	NM	NM	NM	NM	Static	dry at 17.59 ft btoc
AOI 2	S-153	02-Jun-20	---	8.82	---	0.99	Static	
AOI 2	S-154	02-Jun-20	---	8.01	---	2.61	Static	
AOI 2	S-156	03-Jun-20	---	18.65	---	2.19	Static	
AOI 2	S-157	03-Jun-20	---	17.46	---	2.48	Static	
AOI 2	S-159	03-Jun-20	17.04	17.05	0.01	1.83	Static	
AOI 2	S-165	03-Jun-20	---	16.77	---	1.34	Static	
AOI 2	S-166	03-Jun-20	---	16.13	---	2.10	Static	
AOI 2	S-174	03-Jun-20	9.69	9.75	0.06	9.92	Static	
AOI 2	S-175	03-Jun-20	17.18	18.81	1.63	2.63	Static	
AOI 2	S-176	04-Jun-20	---	10.21	---	9.92	Static	
AOI 2	S-177	04-Jun-20	NA	NA	NA	NA	Static	unable to access - area flooded
AOI 2	S-178	04-Jun-20	NA	NA	NA	NA	Static	unable to access - area flooded
AOI 2	S-246A	02-Jun-20	---	10.67	---	1.09	Static	

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AOI 2	S-247	02-Jun-20	---	11.07	---	1.02	Static	
AOI 2	S-248	02-Jun-20	---	9.86	---	0.94	Static	
AOI 2	S-249	02-Jun-20	---	10.91	---	1.70	Static	
AOI 2	S-251	02-Jun-20	---	17.84	---	1.43	Static	
AOI 2	S-252	02-Jun-20	---	17.55	---	1.74	Static	
AOI 2	S-253	02-Jun-20	---	19.29	---	1.54	Static	
AOI 2	S-254	02-Jun-20	19.92	20.09	0.17	0.94	Static	
AOI 2	S-292	02-Jun-20	NM	NM	NM	NM	Static	dry at 19.42 ft btoc
AOI 2	S-294	04-Jun-20	---	29.94	---	4.53	Static	
AOI 2	S-294D	04-Jun-20	---	31.81	---	2.87	Static	
AOI 2	S-295	04-Jun-20	---	22.46	---	10.28	Static	
AOI 2	S-297	02-Jun-20	NA	NA	NA	NA	Static	well damaged and cannot be read
AOI 2	S-298	02-Jun-20	15.65	16.05	0.40	11.25	Static	
AOI 2	S-299	02-Jun-20	---	21.78	---	2.22	Static	
AOI 2	S-300	04-Jun-20	---	22.45	---	2.83	Static	
AOI 2	S-301	04-Jun-20	---	16.61	---	3.80	Static	
AOI 2	S-302	02-Jun-20	22.38	22.44	0.06	1.56	Static	
AOI 2	S-302D	02-Jun-20	---	23.33	---	1.27	Static	
AOI 2	S-303	03-Jun-20	20.34	20.69	0.35	2.21	Static	
AOI 2	S-304	03-Jun-20	13.15	13.65	0.50	10.98	Static	
AOI 2	S-305	03-Jun-20	---	18.52	---	1.21	Static	
AOI 2	S-305D	03-Jun-20	---	19.82	---	0.66	Static	
AOI 2	S-306	02-Jun-20	---	21.19	---	1.28	Static	
AOI 2	S-307	04-Jun-20	---	16.53	---	2.04	Static	
AOI 2	S-308	04-Jun-20	---	23.09	---	5.02	Static	
AOI 2	S-309	04-Jun-20	---	16.37	---	3.36	Static	
AOI 2	S-310	04-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 2	S-311	03-Jun-20	22.91	23.26	0.35	3.17	Static	
AOI 2	S-313	02-Jun-20	---	19.27	---	1.63	Static	
AOI 2	S-314	02-Jun-20	---	19.42	---	1.28	Static	
AOI 2	S-315	02-Jun-20	---	19.67	---	0.80	Static	
AOI 2	S-316	02-Jun-20	---	17.88	---	3.02	Static	
AOI 2	S-317	02-Jun-20	---	19.95	---	0.24	Static	
AOI 2	S-318	02-Jun-20	---	22.73	---	1.02	Static	
AOI 2	S-328	04-Jun-20	---	19.85	---	2.12	Static	
AOI 2	S-333	02-Jun-20	---	11.63	---	2.10	Static	
AOI 2	S-335	02-Jun-20	---	7.11	---	2.99	Static	damaged
AOI 2	S-336	02-Jun-20	---	9.59	---	1.93	Static	
AOI 2	S-337	02-Jun-20	10.23	10.25	0.02	1.98	Static	
AOI 2	S-338	02-Jun-20	12.91	14.03	1.12	2.37	Static	
AOI 2	S-346	03-Jun-20	18.13	18.29	0.16	1.34	Static	
AOI 2	S-347	03-Jun-20	17.79	18.16	0.37	1.29	Static	
AOI 2	S-348	03-Jun-20	15.64	15.78	0.14	3.93	Static	
AOI 2	S-349	03-Jun-20	16.62	16.89	0.27	1.96	Static	
AOI 2	S-350	02-Jun-20	---	27.18	---	4.30	Static	
AOI 2	S-351	02-Jun-20	---	31.07	---	4.17	Static	
AOI 2	S-354	02-Jun-20	---	25.09	---	2.94	Static	
AOI 2	S-355	02-Jun-20	---	27.61	---	3.21	Static	
AOI 2	S-357	02-Jun-20	24.24	24.59	0.35	3.83	Static	
AOI 2	S-359	04-Jun-20	17.48	17.49	0.01	2.79	Static	
AOI 2	S-360	04-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 2	S-361	03-Jun-20	---	22.44	---	3.93	Static	
AOI 2	S-362	03-Jun-20	NA	NA	NA	NA	Static	blocked at 4.15 ft btoc
AOI 2	S-363	04-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 2	S-406	02-Jun-20	10.70	10.71	0.01	1.49	Static	
AOI 2	S-420	02-Jun-20	---	6.64	---	2.62	Static	
AOI 2	S-422	02-Jun-20	---	14.51	---	2.06	Static	
AOI 2	S-423	02-Jun-20	27.01	27.51	0.50	4.36	Static	
AOI 2	S-425	02-Jun-20	---	8.81	---	2.99	Static	
AOI 2	S-426	02-Jun-20	---	6.69	---	4.91	Static	
AOI 2	S-427	02-Jun-20	---	6.64	---	5.32	Static	
AOI 2	SD-1	02-Jun-20	---	7.74	---	11.76	Static	
AOI 3	BF-88	05-Jun-20	---	9.43	---	1.18	Static	
AOI 3	BF-90	05-Jun-20	---	1.55	---	5.94	Static	
AOI 3	BF-90D	05-Jun-20	---	9.96	---	-0.19	Static	
AOI 3	BF-99	05-Jun-20	---	10.62	---	0.34	Static	
AOI 3	BF-100	05-Jun-20	---	12.28	---	0.08	Static	
AOI 3	BF-101	05-Jun-20	---	15.55	---	-8.68	Static	
AOI 3	BF-103R	05-Jun-20	13.99	15.20	1.21	0.23	Static	
AOI 3	BF-104	05-Jun-20	---	5.55	---	6.19	Static	
AOI 3	BF-105	05-Jun-20	---	10.71	---	1.20	Static	
AOI 3	BF-106	05-Jun-20	---	13.41	---	0.21	Static	
AOI 3	BF-107	05-Jun-20	---	12.05	---	0.31	Static	
AOI 3	BF-108	05-Jun-20	---	11.25	---	-0.27	Static	
AOI 3	RW-2	05-Jun-20	11.16	11.56	0.40	0.05	Static	
AOI 3	S-1	05-Jun-20	---	4.28	---	4.47	Static	
AOI 3	S-2	05-Jun-20	---	4.03	---	3.18	Static	

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AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 3	S-3	05-Jun-20	---	7.67	---	3.13	Static	
AOI 3	S-5	05-Jun-20	2.33	2.34	0.01	3.49	Static	
AOI 3	S-6	05-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 3	S-7	05-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 3	S-8	05-Jun-20	---	7.46	---	-1.04	Static	
AOI 3	S-9	05-Jun-20	---	3.16	---	3.42	Static	
AOI 3	S-10	05-Jun-20	---	4.38	---	1.69	Static	
AOI 3	S-11	05-Jun-20	---	3.02	---	3.36	Static	
AOI 3	S-12	05-Jun-20	---	5.07	---	1.16	Static	
AOI 3	S-13	05-Jun-20	---	7.39	---	-1.03	Static	
AOI 3	S-14	05-Jun-20	---	2.74	---	3.00	Static	
AOI 3	S-15	05-Jun-20	NA	NA	NA	NA	Static	damaged and blocked with sediment
AOI 3	S-16	05-Jun-20	---	22.32	---	1.36	Static	
AOI 3	S-17	05-Jun-20	---	15.43	---	1.26	Static	
AOI 3	S-18	05-Jun-20	---	3.53	---	19.96	Static	
AOI 3	S-19	05-Jun-20	---	1.09	---	17.51	Static	damaged-blockage at 1.14 ft btoc
AOI 3	S-20	05-Jun-20	---	18.97	---	1.29	Static	
AOI 3	S-21	05-Jun-20	---	11.44	---	11.29	Static	
AOI 3	S-22	05-Jun-20	---	19.54	---	-0.88	Static	
AOI 3	S-23	05-Jun-20	---	18.78	---	1.50	Static	
AOI 3	S-24	05-Jun-20	NA	NA	NA	NA	Static	unable to access
AOI 3	S-25	05-Jun-20	NM	NM	NM	NM	Static	dry at 7.88 ft btoc
AOI 3	S-59	05-Jun-20	---	9.01	---	3.48	Static	
AOI 3	S-60	05-Jun-20	11.42	11.47	0.05	0.83	Static	
AOI 3	S-66	05-Jun-20	NM	NM	NM	NM	Static	dry at 26.04 ft btoc
AOI 3	S-68	05-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 3	S-69	05-Jun-20	NA	NA	NA	NA	Static	damaged
AOI 3	S-69D	05-Jun-20	---	11.57	---	-0.22	Static	
AOI 3	S-112	05-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 3	S-113	05-Jun-20	11.94	12.35	0.41	0.66	Static	
AOI 3	S-280	05-Jun-20	---	25.30	---	1.22	Static	
AOI 3	S-280D	05-Jun-20	---	25.61	---	0.27	Static	
AOI 3	S-281	05-Jun-20	---	13.78	---	0.58	Static	
AOI 3	S-283	05-Jun-20	11.03	11.57	0.54	-0.03	Static	
AOI 3	S-284	05-Jun-20	---	4.42	---	5.10	Static	
AOI 3	S-284D	05-Jun-20	---	11.92	---	0.10	Static	
AOI 3	S-285	05-Jun-20	11.20	12.59	1.39	3.86	Static	
AOI 3	S-288	05-Jun-20	---	15.55	---	3.54	Static	
AOI 3	S-290	05-Jun-20	---	9.12	---	2.57	Static	
AOI 3	S-291	05-Jun-20	---	7.83	---	4.16	Static	
AOI 3	S-372	05-Jun-20	---	13.37	---	6.36	Static	
AOI 3	S-382	05-Jun-20	17.33	18.25	0.92	2.74	Static	
AOI 3	S-383	05-Jun-20	---	11.65	---	0.53	Static	
AOI 3	S-384	05-Jun-20	---	15.99	---	0.52	Static	
AOI 3	S-385	05-Jun-20	---	12.09	---	0.82	Static	
AOI 3	S-386	05-Jun-20	---	12.93	---	0.82	Static	
AOI 3	S-387	05-Jun-20	---	4.33	---	2.78	Static	
AOI 3	S-407	05-Jun-20	---	13.29	---	0.72	Static	
AOI 3	S-409	05-Jun-20	---	2.31	---	19.98	Static	
AOI 3	S-410	05-Jun-20	11.29	12.02	0.73	10.93	Static	
AOI 3	S-411	05-Jun-20	---	25.10	---	1.57	Static	
AOI 3	S-412	05-Jun-20	---	12.70	---	0.41	Static	
AOI 3	S-413	05-Jun-20	---	17.35	---	0.56	Static	
AOI 3	S-414	05-Jun-20	21.80	23.30	1.50	0.32	Static	
AOI 3	S-428	05-Jun-20	---	10.49	---	0.35	Static	
AOI 3	S-429	05-Jun-20	20.56	21.49	0.93	0.39	Static	
AOI 3	S-430	05-Jun-20	12.29	12.52	0.23	0.74	Static	
AOI 3	S-431	05-Jun-20	16.79	17.43	0.64	0.55	Static	
AOI 3	S-432	05-Jun-20	21.42	22.59	1.17	0.27	Static	
AOI 3	S-433	05-Jun-20	---	11.47	---	0.21	Static	
AOI 3	S-434	05-Jun-20	---	12.77	---	0.33	Static	
AOI 3	S-435	05-Jun-20	---	14.83	---	0.32	Static	
AOI 3	S-436	05-Jun-20	---	13.59	---	0.31	Static	
AOI 3	S-437	05-Jun-20	20.16	21.99	1.83	0.21	Static	
AOI 3	S-438	05-Jun-20	20.57	21.90	1.33	0.32	Static	
AOI 3	S-439	05-Jun-20	23.09	24.68	1.59	-0.96	Static	
AOI 4	MW-1	03-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 4	MW-2	03-Jun-20	NM	NM	NM	NM	Static	
AOI 4	RW-700	04-Jun-20	---	16.93	---	1.08	Static	
AOI 4	RW-701	04-Jun-20	---	17.17	---	1.10	Static	
AOI 4	RW-702	04-Jun-20	---	13.87	---	7.09	Static	
AOI 4	RW-703	04-Jun-20	19.81	19.83	0.02	0.80	Static	
AOI 4	RW-704	04-Jun-20	---	19.61	---	0.62	Static	
AOI 4	RW-705	04-Jun-20	---	11.23	---	4.69	Static	
AOI 4	RW-706	04-Jun-20	---	14.81	---	1.08	Static	
AOI 4	RW-707	04-Jun-20	---	15.17	---	1.12	Static	
AOI 4	RW-708	04-Jun-20	---	14.38	---	1.11	Static	

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AOI 4	RW-709	04-Jun-20	---	14.18	---	1.12	Static	
AOI 4	RW-710	04-Jun-20	---	15.02	---	0.86	Static	
AOI 4	RW-711	04-Jun-20	---	14.35	---	1.14	Static	
AOI 4	RW-712	04-Jun-20	---	14.47	---	1.09	Static	
AOI 4	RW-713	04-Jun-20	---	13.89	---	1.13	Static	
AOI 4	RW-714	04-Jun-20	---	14.06	---	1.15	Static	
AOI 4	RW-715	04-Jun-20	---	14.25	---	1.12	Static	
AOI 4	RW-716	03-Jun-20	---	14.23	---	1.32	Static	
AOI 4	RW-717	03-Jun-20	---	14.19	---	1.42	Static	
AOI 4	S-26	03-Jun-20	---	19.42	---	1.34	Static	
AOI 4	S-27	03-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 4	S-28	03-Jun-20	NM	NM	NM	NM	Static	dry at 19.60 ft btoc
AOI 4	S-29	03-Jun-20	20.60	22.72	2.12	2.41	Static	
AOI 4	S-30	03-Jun-20	21.90	22.35	0.45	1.17	Static	
AOI 4	S-32	03-Jun-20	---	23.11	---	1.09	Static	
AOI 4	S-34	03-Jun-20	---	20.04	---	0.85	Static	
AOI 4	S-35	03-Jun-20	---	20.17	---	0.77	Static	
AOI 4	S-36	03-Jun-20	---	22.92	---	1.31	Static	
AOI 4	S-38	03-Jun-20	---	17.62	---	1.33	Static	
AOI 4	S-38D	03-Jun-20	---	17.94	---	-0.24	Static	
AOI 4	S-38D2	03-Jun-20	---	18.56	---	-0.37	Static	
AOI 4	S-39	03-Jun-20	---	21.49	---	1.39	Static	
AOI 4	S-39D	03-Jun-20	---	24.42	---	0.09	Static	
AOI 4	S-40	03-Jun-20	---	23.76	---	0.70	Static	
AOI 4	S-56	03-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 4	S-57	03-Jun-20	---	11.63	---	0.87	Static	
AOI 4	S-58	04-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 4	S-59D	03-Jun-20	---	16.33	---	0.80	Static	
AOI 4	S-67	04-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 4	S-96	03-Jun-20	18.76	18.77	0.01	1.01	Static	
AOI 4	S-97	03-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 4	S-102	03-Jun-20	---	17.28	---	0.94	Static	
AOI 4	S-103	03-Jun-20	---	24.83	---	1.28	Static	
AOI 4	S-104	03-Jun-20	15.44	21.37	5.93	2.41	Static	
AOI 4	S-111	03-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 4	S-115	03-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 4	S-119	03-Jun-20	---	25.68	---	0.92	Static	
AOI 4	S-119D	03-Jun-20	---	24.52	---	0.58	Static	
AOI 4	S-120	03-Jun-20	---	18.45	---	1.37	Static	
AOI 4	S-121	03-Jun-20	NA	NA	NA	NA	Static	blockage at 2.75 ft btoc
AOI 4	S-122	03-Jun-20	---	24.33	---	1.38	Static	
AOI 4	S-123	03-Jun-20	---	20.83	---	1.30	Static	
AOI 4	S-124	04-Jun-20	---	22.08	---	1.12	Static	
AOI 4	S-216	03-Jun-20	---	14.52	---	1.24	Static	
AOI 4	S-217	03-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 4	S-218	03-Jun-20	---	24.32	---	1.42	Static	
AOI 4	S-218D	03-Jun-20	---	24.22	---	0.30	Static	
AOI 4	S-219	03-Jun-20	---	21.71	---	1.38	Static	
AOI 4	S-220	03-Jun-20	19.38	19.45	0.07	1.42	Static	
AOI 4	S-221	04-Jun-20	21.80	21.80	<0.01	1.21	Static	
AOI 4	S-222	03-Jun-20	---	14.79	---	1.50	Static	
AOI 4	S-223	04-Jun-20	---	14.67	---	1.21	Static	
AOI 4	S-224	04-Jun-20	---	14.77	---	1.26	Static	
AOI 4	S-225	03-Jun-20	---	16.61	---	-1.62	Static	
AOI 4	S-229	03-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 4	S-233	04-Jun-20	19.86	20.15	0.29	4.46	Static	
AOI 4	S-234	04-Jun-20	---	19.99	---	1.24	Static	
AOI 4	S-235	04-Jun-20	21.95	21.95	<0.01	1.18	Static	
AOI 4	S-236	04-Jun-20	21.87	21.88	0.01	1.10	Static	
AOI 4	S-237	04-Jun-20	21.68	21.68	<0.01	1.14	Static	
AOI 4	S-238	04-Jun-20	---	21.78	---	1.14	Static	
AOI 4	S-239	04-Jun-20	---	14.59	---	1.23	Static	
AOI 4	S-240	04-Jun-20	22.65	23.53	0.88	1.12	Static	
AOI 4	S-241	04-Jun-20	24.79	26.51	1.72	1.11	Static	
AOI 4	S-242	04-Jun-20	---	20.69	---	1.20	Static	
AOI 4	S-243	04-Jun-20	---	14.37	---	1.37	Static	
AOI 4	S-244	04-Jun-20	---	27.10	---	-5.16	Static	
AOI 4	S-245	04-Jun-20	---	20.81	---	1.40	Static	
AOI 4	S-246	04-Jun-20	---	19.67	---	1.89	Static	
AOI 4	S-278	03-Jun-20	---	19.71	---	1.32	Static	
AOI 4	S-279	04-Jun-20	24.86	25.33	0.47	1.47	Static	
AOI 4	S-282	03-Jun-20	20.02	20.58	0.56	0.66	Static	
AOI 4	S-329	03-Jun-20	---	19.82	---	1.10	Static	
AOI 4	S-364	03-Jun-20	NA	NA	NA	NA	Static	blockage at 4.84 ft btoc
AOI 4	S-365	03-Jun-20	20.20	20.38	0.18	0.68	Static	
AOI 4	S-366	03-Jun-20	---	21.40	---	0.86	Static	
AOI 4	S-367	03-Jun-20	---	14.96	---	1.06	Static	

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AOI 4	S-368	03-Jun-20	16.65	16.72	0.07	1.36	Static	
AOI 4	S-369	03-Jun-20	---	29.29	---	0.13	Static	
AOI 4	S-370	04-Jun-20	---	11.35	---	0.71	Static	
AOI 4	S-371	03-Jun-20	---	19.99	---	2.06	Static	
AOI 4	S-373	03-Jun-20	19.71	19.74	0.03	1.06	Static	
AOI 4	S-374	04-Jun-20	---	14.50	---	1.13	Static	
AOI 4	S-375	04-Jun-20	---	14.86	---	1.10	Static	
AOI 4	S-376	04-Jun-20	14.30	15.05	0.75	1.25	Static	
AOI 4	S-377	04-Jun-20	---	11.49	---	1.48	Static	damaged, PVC casing damaged at top
AOI 4	S-378	04-Jun-20	---	10.86	---	1.13	Static	
AOI 4	S-379	03-Jun-20	---	24.80	---	0.85	Static	
AOI 4	S-380	03-Jun-20	---	20.14	---	1.18	Static	
AOI 4	S-381	03-Jun-20	---	24.74	---	1.12	Static	
AOI 4	S-408	03-Jun-20	---	14.44	---	1.44	Static	
AOI 4	S-415	03-Jun-20	---	18.27	---	0.96	Static	
AOI 4	S-416	03-Jun-20	---	11.78	---	7.40	Static	
AOI 4	S-421	03-Jun-20	NM	NM	NM	NM	Static	
AOI 5	A-2	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-3	09-Jun-20	---	5.79	---	2.45	Static	
AOI 5	A-4	09-Jun-20	---	3.20	---	2.84	Static	
AOI 5	A-5	10-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 5	A-6	09-Jun-20	---	3.35	---	3.39	Static	
AOI 5	A-7	09-Jun-20	4.10	4.48	0.38	2.58	Static	
AOI 5	A-8	10-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-9	10-Jun-20	---	3.17	---	2.63	Static	
AOI 5	A-10	10-Jun-20	---	3.36	---	4.92	Static	
AOI 5	A-11	10-Jun-20	---	4.58	---	3.19	Static	
AOI 5	A-12	10-Jun-20	---	5.07	---	2.50	Static	
AOI 5	A-15	10-Jun-20	---	0.77	---	4.34	Static	
AOI 5	A-19D	09-Jun-20	---	12.85	---	-2.21	Static	
AOI 5	A-20	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-21	09-Jun-20	2.15	2.17	0.02	6.01	Static	
AOI 5	A-21D	09-Jun-20	---	16.25	---	-5.00	Static	
AOI 5	A-22	09-Jun-20	5.75	5.76	0.01	2.20	Static	
AOI 5	A-23	09-Jun-20	---	3.54	---	2.77	Static	
AOI 5	A-24	09-Jun-20	---	1.95	---	3.58	Static	
AOI 5	A-25	09-Jun-20	---	7.44	---	1.36	Static	
AOI 5	A-26	09-Jun-20	---	4.48	---	4.17	Static	
AOI 5	A-27	09-Jun-20	---	6.20	---	3.81	Static	
AOI 5	A-28	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-29	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-30	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-39	10-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 5	A-40	09-Jun-20	---	3.53	---	2.19	Static	
AOI 5	A-41	09-Jun-20	---	3.44	---	2.19	Static	
AOI 5	A-42	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-43	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-44	09-Jun-20	---	7.44	---	2.57	Static	
AOI 5	A-45	09-Jun-20	---	3.48	---	0.94	Static	
AOI 5	A-46	10-Jun-20	---	8.43	---	2.39	Static	
AOI 5	A-47	10-Jun-20	---	2.88	---	2.02	Static	
AOI 5	A-48	10-Jun-20	---	3.99	---	2.46	Static	
AOI 5	A-49	10-Jun-20	---	3.24	---	3.96	Static	
AOI 5	A-50	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-51	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-91	10-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-118	09-Jun-20	---	2.31	---	5.99	Static	
AOI 5	A-122	10-Jun-20	---	4.72	---	2.72	Static	
AOI 5	A-133	10-Jun-20	---	6.65	---	6.37	Static	
AOI 5	A-134	09-Jun-20	---	6.34	---	2.80	Static	
AOI 5	A-135	09-Jun-20	---	7.59	---	3.17	Static	
AOI 5	A-136	10-Jun-20	5.72	5.72	<0.01	2.99	Static	
AOI 5	A-137	09-Jun-20	---	3.83	---	1.97	Static	
AOI 5	A-138	10-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-139	09-Jun-20	---	4.12	---	2.87	Static	
AOI 5	A-140	09-Jun-20	---	3.63	---	6.26	Static	
AOI 5	A-141	10-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-142	09-Jun-20	---	4.04	---	1.36	Static	
AOI 5	A-143	09-Jun-20	---	6.92	---	2.58	Static	
AOI 5	A-146	09-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 5	A-147	09-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 5	A-148	09-Jun-20	---	2.12	---	5.89	Static	
AOI 5	A-149	09-Jun-20	---	3.30	---	5.19	Static	
AOI 5	A-150	10-Jun-20	NA	NA	NA	NA	Static	damaged-broken off 1 foot below grade
AOI 5	A-151	10-Jun-20	---	4.32	---	3.17	Static	
AOI 5	A-152	09-Jun-20	---	0.00	---	1.72	Static	
AOI 5	A-153	09-Jun-20	NA	NA	NA	NA	Static	unable to locate

Table 2
 Sitewide Annual 2020 Gauging Data
 Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 5	A-154	09-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 5	A-155	09-Jun-20	4.96	4.99	0.03	3.43	Static	
AOI 5	A-156	09-Jun-20	---	5.17	---	3.71	Static	
AOI 5	A-157	09-Jun-20	---	4.64	---	3.98	Static	
AOI 5	A-158	09-Jun-20	---	4.52	---	1.62	Static	
AOI 5	A-161	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-162	09-Jun-20	NA	NA	NA	NA	Static	damaged
AOI 5	A-163	09-Jun-20	---	6.04	---	4.45	Static	
AOI 5	A-164	09-Jun-20	---	4.82	---	4.09	Static	
AOI 5	A-166	10-Jun-20	---	8.00	---	3.28	Static	
AOI 5	A-167	09-Jun-20	---	4.98	---	4.48	Static	
AOI 5	A-168	09-Jun-20	---	6.05	---	4.64	Static	
AOI 5	A-169	09-Jun-20	---	4.33	---	4.29	Static	
AOI 5	A-170	10-Jun-20	---	2.55	---	2.08	Static	
AOI 5	A-171	10-Jun-20	---	4.55	---	3.09	Static	
AOI 5	A-172	10-Jun-20	---	4.29	---	2.03	Static	
AOI 5	A-173	10-Jun-20	3.46	3.97	0.51	1.25	Static	
AOI 5	A-174	09-Jun-20	---	4.58	---	3.44	Static	
AOI 5	A-175	09-Jun-20	---	3.69	---	0.96	Static	
AOI 5	A-176	09-Jun-20	3.99	4.01	0.02	0.50	Static	
AOI 5	A-177	09-Jun-20	2.82	3.00	0.18	1.42	Static	
AOI 5	A-178	09-Jun-20	3.36	4.09	0.73	0.99	Static	
AOI 5	A-179	09-Jun-20	3.09	5.09	2.00	5.20	Static	
AOI 5	A-180	09-Jun-20	---	4.98	---		Static	
AOI 5	A-181	10-Jun-20	---	3.27	---	3.25	Static	
AOI 5	A-182	10-Jun-20	---	4.75	---	2.15	Static	
AOI 5	A-183	10-Jun-20	NA	NA	NA	NA	Static	viscous LNAPL - unable to measure thickness
AOI 5	A-184	09-Jun-20	5.41	6.65	1.24	4.08	Static	
AOI 5	A-185	10-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	A-186	10-Jun-20	---	5.08	---	3.18	Static	
AOI 5	A-187	09-Jun-20	---	4.76	---	4.64	Static	
AOI 5	A-188	09-Jun-20	7.39	7.69	0.30	4.06	Static	
AOI 5	A-189	09-Jun-20	---	4.49	---	4.02	Static	
AOI 5	PZ-1	10-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 5	PZ-2	09-Jun-20	---	4.84	---	6.04	Static	
AOI 5	PZ-3	09-Jun-20	---	7.04	---	3.49	Static	
AOI 5	RW-6S	09-Jun-20	---	4.52	---	3.70	Static	
AOI 5	RWBH-1	10-Jun-20	3.95	4.19	0.24	1.36	Static	
AOI 5	RWBH-2	10-Jun-20	1.89	4.70	2.81	1.96	Static	
AOI 5	SW-1	10-Jun-20	7.17	8.63	1.46	2.46	Static	
AOI 5	SW-2	10-Jun-20	---	6.08	---	3.86	Static	
AOI 5	SW-3	10-Jun-20	---	6.75	---	3.22	Static	
AOI 5	SW-4	10-Jun-20	3.78	4.37	0.59	3.32	Static	
AOI 5	SW-5	10-Jun-20	NA	NA	NA	NA	Static	viscous LNAPL - unable to measure thickness
AOI 5	SWR-1	10-Jun-20	---	4.58	---	3.70	Static	
AOI 5	SWR-2	10-Jun-20	---	7.62	---	2.44	Static	
AOI 5	SWR-3	10-Jun-20	---	7.36	---	3.25	Static	
AOI 5	WP-8	10-Jun-20	---	5.34	---	1.65	Static	
AOI 5	WP-9	10-Jun-20	---	1.47	---	7.10	Static	
AOI 5	WP9-7	09-Jun-20	---	2.52	---	3.83	NA	destroyed
AOI 5	WP9-8	09-Jun-20	4.67	5.97	1.30	4.08	Static	
AOI 5	WP-14	10-Jun-20	---	7.18	---	1.94	Static	
AOI 5	WP16-3	09-Jun-20	---	7.08	---	3.99	Static	
AOI 5	WP-A	09-Jun-20	---	3.42	---	6.18	Static	
AOI 5	WP-B	09-Jun-20	6.11	6.26	0.15	3.96	Static	
AOI 5	WP-C	09-Jun-20	---	3.19	---	3.34	Static	
AOI 5	WP-D	09-Jun-20	---	4.77	---	3.49	Static	
AOI 5	WP-E	09-Jun-20	---	3.56	---	3.79	Static	
AOI 6	B-39	08-Jun-20	1.36	1.37	0.01	4.12	Static	
AOI 6	B-41	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 6	B-43	08-Jun-20	---	2.07	---	5.14	Static	
AOI 6	B-45	08-Jun-20	---	0.52	---	4.58	Static	
AOI 6	B-46	08-Jun-20	---	1.08	---	6.95	Static	
AOI 6	B-47	08-Jun-20	3.03	3.15	0.12	5.27	Static	
AOI 6	B-48	08-Jun-20	---	0.08	---	6.42	Static	
AOI 6	B-48D	08-Jun-20	---	10.93	---	-1.51	Static	
AOI 6	B-92	08-Jun-20	---	5.55	---	4.68	Static	
AOI 6	B-94	08-Jun-20	---	6.95	---	3.40	Static	
AOI 6	B-95	08-Jun-20	---	4.01	---	4.86	Static	
AOI 6	B-115	08-Jun-20	---	3.20	---	4.30	Static	
AOI 6	B-116	08-Jun-20	---	5.31	---	2.98	Static	
AOI 6	B-117	08-Jun-20	---	7.94	---	1.71	Static	
AOI 6	B-123	08-Jun-20	---	4.07	---	6.69	Static	
AOI 6	B-124	08-Jun-20	4.94	6.44	1.50	3.75	Static	
AOI 6	B-125	08-Jun-20	---	4.60	---	3.91	Static	
AOI 6	B-126	08-Jun-20	---	4.92	---	3.59	Static	
AOI 6	B-129	08-Jun-20	5.58	6.65	1.07	2.30	Static	

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AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 6	B-130	08-Jun-20	4.00	4.55	0.55	5.65	Static	
AOI 6	B-131	08-Jun-20	---	4.84	---	3.88	Static	
AOI 6	B-132	08-Jun-20	4.77	4.98	0.21	2.07	Static	
AOI 6	B-132D	08-Jun-20	---	16.51	---	-6.20	Static	
AOI 6	B-133	08-Jun-20	---	4.90	---	2.43	Static	
AOI 6	B-133D	08-Jun-20	---	10.58	---	-1.98	Static	
AOI 6	B-134	08-Jun-20	4.85	4.87	0.02	1.67	Static	
AOI 6	B-134D	08-Jun-20	---	11.00	---	-2.88	Static	
AOI 6	B-135	08-Jun-20	5.12	5.22	0.10	1.25	Static	
AOI 6	B-136	08-Jun-20	---	4.33	---	4.82	Static	
AOI 6	B-137	08-Jun-20	4.09	6.33	2.24	4.34	Static	
AOI 6	B-138	08-Jun-20	4.14	4.35	0.21	5.16	Static	
AOI 6	B-139	08-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 6	B-141	08-Jun-20	---	1.73	---	6.96	Static	well damaged - broken off at grade
AOI 6	B-142	08-Jun-20	6.71	7.53	0.82	2.92	Static	
AOI 6	B-143	08-Jun-20	4.37	5.31	0.94	4.48	Static	
AOI 6	B-144	08-Jun-20	4.68	5.20	0.52	4.27	Static	
AOI 6	B-145	08-Jun-20	---	4.34	---	5.47	Static	
AOI 6	B-147	08-Jun-20	5.60	5.82	0.22	3.27	Static	
AOI 6	B-148	08-Jun-20	5.42	6.25	0.83	1.70	Static	
AOI 6	B-149	08-Jun-20	2.73	2.89	0.16	4.99	Static	
AOI 6	B-150	08-Jun-20	2.78	5.20	2.42	4.74	Static	
AOI 6	B-151	08-Jun-20	---	3.61	---	4.13	Static	
AOI 6	B-152	08-Jun-20	---	0.73	---	4.31	Static	
AOI 6	B-153	08-Jun-20	---	1.58	---	4.79	Static	
AOI 6	B-154	08-Jun-20	---	1.75	---	6.93	Static	
AOI 6	B-155	08-Jun-20	---	5.07	---	3.47	Static	
AOI 6	B-156	08-Jun-20	5.52	5.53	0.01	3.34	Static	
AOI 6	B-157	08-Jun-20	---	1.41	---	3.51	Static	
AOI 6	B-158	08-Jun-20	---	1.43	---	6.78	Static	
AOI 6	B-159	08-Jun-20	NA	NA	NA	NA	Static	abandoned
AOI 6	B-160	08-Jun-20	---	4.05	---	4.48	Static	
AOI 6	B-161	08-Jun-20	4.51	4.77	0.26	3.74	Static	
AOI 6	B-162	08-Jun-20	---	2.73	---	4.86	Static	
AOI 6	B-163	08-Jun-20	---	1.42	---	6.03	Static	
AOI 6	B-164	08-Jun-20	---	5.35	---	3.47	Static	
AOI 6	B-165	08-Jun-20	---	2.54	---	3.25	Static	
AOI 6	B-166	08-Jun-20	---	2.99	---	4.48	Static	
AOI 6	B-167	08-Jun-20	---	3.54	---	3.19	Static	
AOI 6	B-168	08-Jun-20	---	1.62	---	4.84	Static	
AOI 6	B-169	08-Jun-20	---	0.58	---	5.54	Static	
AOI 6	B-170	08-Jun-20	---	1.01	---	5.47	Static	
AOI 6	B-171	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 6	B-172	08-Jun-20	---	4.49	---	3.52	Static	
AOI 6	B-173	08-Jun-20	---	4.71	---	3.47	Static	
AOI 6	B-174	08-Jun-20	---	3.19	---	5.11	Static	
AOI 6	B-175	08-Jun-20	4.20	7.84	3.64	3.86	Static	
AOI 6	B-177	08-Jun-20	---	5.28	---	4.55	Static	
AOI 6	B-178	08-Jun-20	---	4.78	---	4.92	Static	
AOI 6	B-179	08-Jun-20	---	5.09	---	4.37	Static	
AOI 6	PZ-132A	08-Jun-20	---	5.97	---	4.18	Static	
AOI 6	PZ-132B	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 6	PZ-134A	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 6	PZ-134B	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 6	PZ-135A	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 6	PZ-135B	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 6	RW-9	08-Jun-20	4.89	5.97	1.08	3.67	Static	
AOI 6	SUMP-1	08-Jun-20	5.10	5.25	0.15	5.58	Static	
AOI 6	U-1	08-Jun-20	NA	NA	NA	NA	Static	damaged casing broken off
AOI 6	U-2	08-Jun-20	---	7.14	---	2.25	Static	
AOI 6	U-3	08-Jun-20	5.57	7.88	2.31	3.79	Static	
AOI 6	U-4	08-Jun-20	---	4.09	---	5.13	Static	
AOI 6	U-5	08-Jun-20	---	8.89	---	0.90	Static	
AOI 6	URS-1	08-Jun-20	---	5.44	---	4.58	Static	
AOI 6	URS-2	08-Jun-20	---	3.83	---	4.06	Static	
AOI 6	URS-3	08-Jun-20	3.89	3.91	0.02	3.71	Static	
AOI 6	URS-4	08-Jun-20	---	8.67	---	1.27	Static	
AOI 6	URS-5	08-Jun-20	---	5.01	---	2.93	Static	
AOI 6	WP9-3	08-Jun-20	---	2.23	---	3.93	Static	
AOI 6	WP9-4	08-Jun-20	---	5.23	---	3.81	Static	
AOI 6	WPM-2	08-Jun-20	---	3.60	---	3.87	Static	
AOI 6	WPM-3	08-Jun-20	---	3.33	---	4.70	Static	
AOI 6	WPM-11	08-Jun-20	---	1.12	---	5.39	Static	
AOI 6,7	C-134D	04-Jun-20	---	11.03	---	-1.63	Static	
AOI 7	C-49	05-Jun-20	---	4.78	---	4.80	Static	
AOI 7	C-50	04-Jun-20	---	11.51	---	1.26	Static	
AOI 7	C-51	04-Jun-20	---	5.71	---	3.55	Static	

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AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 7	C-52	05-Jun-20	---	4.69	---	2.94	Static	
AOI 7	C-53A	05-Jun-20	---	3.99	---	5.48	Static	
AOI 7	C-54	05-Jun-20	---	1.13	---	5.48	Static	
AOI 7	C-55	04-Jun-20	---	5.11	---	4.30	Static	
AOI 7	C-56	04-Jun-20	---	3.21	---	7.51	Static	
AOI 7	C-57	04-Jun-20	---	4.43	---	4.07	Static	
AOI 7	C-58	04-Jun-20	---	2.51	---	4.91	Static	
AOI 7	C-60	04-Jun-20	---	3.60	---	3.84	Static	
AOI 7	C-61	05-Jun-20	---	2.54	---	5.39	Static	
AOI 7	C-62	05-Jun-20	---	4.77	---	6.63	Static	
AOI 7	C-63	05-Jun-20	---	5.59	---	1.82	Static	
AOI 7	C-64	05-Jun-20	6.15	6.16	0.01	1.99	Static	
AOI 7	C-65	04-Jun-20	---	6.78	---	4.06	Static	
AOI 7	C-96	04-Jun-20	---	6.77	---	6.11	Static	
AOI 7	C-97	05-Jun-20	NM	NM	NM	NM	Static	dry at 17.85 ft btoc
AOI 7	C-98	05-Jun-20	---	5.43	---	5.12	Static	
AOI 7	C-104	05-Jun-20	---	5.05	---	4.48	Static	
AOI 7	C-105	05-Jun-20	3.55	3.56	0.01	5.62	Static	
AOI 7	C-106	05-Jun-20	7.85	8.80	0.95	3.62	Static	
AOI 7	C-108	05-Jun-20	---	4.31	---	3.96	Static	
AOI 7	C-109	04-Jun-20	---	4.25	---	5.75	Static	
AOI 7	C-110	04-Jun-20	---	5.92	---	6.66	Static	
AOI 7	C-111	04-Jun-20	---	5.57	---	6.60	Static	
AOI 7	C-112	05-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 7	C-113	04-Jun-20	---	4.65	---	7.00	Static	
AOI 7	C-114	04-Jun-20	---	4.82	---	6.14	Static	
AOI 7	C-127	05-Jun-20	---	8.70	---	1.10	Static	
AOI 7	C-129	05-Jun-20	---	4.33	---	4.61	Static	
AOI 7	C-129D	05-Jun-20	---	8.95	---	0.24	Static	
AOI 7	C-130	04-Jun-20	---	4.82	---	7.16	Static	
AOI 7	C-131	04-Jun-20	---	3.81	---	6.33	Static	
AOI 7	C-132	04-Jun-20	---	4.49	---	5.48	Static	
AOI 7	C-133	04-Jun-20	---	3.12	---	4.61	Static	
AOI 7	C-136	05-Jun-20	---	4.14	---	4.71	Static	
AOI 7	C-138	04-Jun-20	---	3.44	---	3.51	Static	
AOI 7	C-139	05-Jun-20	---	2.59	---	4.73	Static	
AOI 7	C-140	04-Jun-20	---	0.97	---	6.58	Static	
AOI 7	C-142	05-Jun-20	---	7.71	---	3.64	Static	
AOI 7	C-143	05-Jun-20	10.73	10.74	0.01	-4.28	Static	
AOI 7	C-144D	05-Jun-20	---	13.02	---	-4.06	Static	
AOI 7	C-145	05-Jun-20	---	5.82	---	1.10	Static	
AOI 7	C-146	05-Jun-20	---	12.13	---	-5.39	Static	
AOI 7	C-147	05-Jun-20	10.61	10.66	0.05	-3.74	Static	
AOI 7	C-148	05-Jun-20	9.12	9.30	0.18	0.19	Static	
AOI 7	C-150	05-Jun-20	12.75	13.22	0.47	-4.63	Static	
AOI 7	C-151	05-Jun-20	---	13.82	---	-5.91	Static	
AOI 7	C-152	05-Jun-20	10.61	10.62	0.01	-1.23	Static	
AOI 7	C-153	05-Jun-20	16.22	16.23	0.01	-7.95	Static	
AOI 7	C-154	05-Jun-20	---	11.96	---	-4.07	Static	
AOI 7	C-155	05-Jun-20	---	7.45	---	1.72	Static	
AOI 7	C-156	05-Jun-20	---	3.26	---	3.46	Static	
AOI 7	C-157	05-Jun-20	---	2.82	---	3.76	Static	
AOI 7	C-158	05-Jun-20	---	2.56	---	4.07	Static	
AOI 7	C-159	05-Jun-20	---	2.73	---	4.06	Static	
AOI 7	C-160	05-Jun-20	NM	NM	NM	NM	Static	dry at 9.85 ft btoc
AOI 7	C-161	05-Jun-20	11.22	11.23	0.01	-2.15	Static	
AOI 7	C-162	05-Jun-20	---	11.08	---	-2.58	Static	
AOI 7	C-163	05-Jun-20	---	3.60	---	3.28	Static	
AOI 7	C-164	05-Jun-20	---	2.79	---	4.04	Static	
AOI 7	C-165	05-Jun-20	---	4.41	---	4.05	Static	
AOI 7	C-166	05-Jun-20	---	3.91	---	3.08	Static	
AOI 7	C-167	05-Jun-20	NA	NA	NA	NA	Static	unable to locate - under stone
AOI 7	C-168	05-Jun-20	---	5.68	---	1.73	Static	
AOI 7	C-169	05-Jun-20	8.00	8.42	0.42	-1.09	Static	
AOI 7	C-170	05-Jun-20	---	1.75	---	9.74	Static	
AOI 7	C-171	05-Jun-20	---	1.44	---	8.92	Static	
AOI 7	C-172	04-Jun-20	---	3.15	---	2.76	Static	
AOI 7	C-173	04-Jun-20	NM	NM	NM	NM	Static	
AOI 7	C-174	04-Jun-20	---	7.61	---	3.88	Static	
AOI 7	RW-801	05-Jun-20	---	18.01	---	-11.74	Pumping	
AOI 7	RW-802	05-Jun-20	---	19.57	---	-13.87	Pumping	
AOI 7	RW-803	05-Jun-20	---	21.46	---	-15.68	Pumping	
AOI 7	RW-804	05-Jun-20	---	19.95	---	-14.17	Pumping	
AOI 7	RW-805	05-Jun-20	---	18.03	---	-12.28	Pumping	
AOI 7	RW-806	05-Jun-20	---	20.60	---	-15.19	Pumping	
AOI 7	RW-807	05-Jun-20	---	18.35	---	-11.51	Pumping	
AOI 7	RW-808	05-Jun-20	---	18.13	---	-12.05	Pumping	

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AOI 7	RW-809	05-Jun-20	---	17.44	---	-10.89	Pumping	
AOI 7	RW-810	05-Jun-20	---	16.52	---	-10.08	Pumping	
AOI 7	WP14-2	05-Jun-20	---	10.04	---	-2.13	Static	
AOI 8	N-1	08-Jun-20	---	12.18	---	10.09	Static	
AOI 8	N-2	08-Jun-20	---	18.37	---	7.96	Static	
AOI 8	N-3	08-Jun-20	---	17.30	---	9.36	Static	
AOI 8	N-4	08-Jun-20	---	18.33	---	8.03	Static	
AOI 8	N-5	08-Jun-20	---	9.69	---	16.27	Static	
AOI 8	N-6	08-Jun-20	---	11.19	---	19.86	Static	
AOI 8	N-8	09-Jun-20	---	26.13	---	11.48	Static	
AOI 8	N-9	09-Jun-20	---	32.21	---	3.69	Static	
AOI 8	N-10	08-Jun-20	---	4.88	---	15.06	Static	
AOI 8	N-11	08-Jun-20	---	18.48	---	11.26	Static	
AOI 8	N-12	08-Jun-20	---	16.00	---	10.99	Static	
AOI 8	N-13	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 8	N-14	08-Jun-20	21.01	21.02	0.01	10.98	Static	
AOI 8	N-15	08-Jun-20	---	20.83	---	8.52	Static	
AOI 8	N-16	08-Jun-20	---	21.72	---	11.26	Static	
AOI 8	N-17	08-Jun-20	---	23.15	---	11.27	Static	
AOI 8	N-18	08-Jun-20	---	21.77	---	11.13	Static	
AOI 8	N-19	08-Jun-20	---	29.41	---	3.37	Static	
AOI 8	N-20	08-Jun-20	---	17.37	---	11.02	Static	
AOI 8	N-21	08-Jun-20	---	22.66	---	5.35	Static	
AOI 8	N-24	08-Jun-20	---	9.41	---	8.32	Static	
AOI 8	N-25	08-Jun-20	3.90	3.90	<0.01	14.89	Static	
AOI 8	N-26	08-Jun-20	---	8.14	---	13.58	Static	
AOI 8	N-27	08-Jun-20	---	19.80	---	2.92	Static	
AOI 8	N-29	08-Jun-20	---	26.42	---	10.02	Static	
AOI 8	N-30	08-Jun-20	---	32.83	---	3.47	Static	
AOI 8	N-31	08-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 8	N-32	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 8	N-33	09-Jun-20	---	10.39	---	3.58	Static	
AOI 8	N-34	09-Jun-20	---	3.88	---	7.08	Static	
AOI 8	N-35	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 8	N-36	09-Jun-20	---	5.21	---	6.66	Static	
AOI 8	N-37	09-Jun-20	---	12.18	---	6.04	Static	
AOI 8	N-38	08-Jun-20	---	7.40	---	2.69	Static	
AOI 8	N-38D	08-Jun-20	---	9.66	---	0.77	Static	
AOI 8	N-39	09-Jun-20	NA	NA	NA	NA	Static	blocked at 1.69 ft btoc
AOI 8	N-40	09-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 8	N-42	09-Jun-20	---	7.13	---	7.77	Static	
AOI 8	N-45	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 8	N-46D	08-Jun-20	---	29.21	---	2.77	Static	
AOI 8	N-47	08-Jun-20	19.90	20.34	0.44	11.97	Static	
AOI 8	N-48	08-Jun-20	22.34	23.52	1.18	8.80	Static	
AOI 8	N-49	09-Jun-20	24.93	26.60	1.67	8.60	Static	
AOI 8	N-50D	08-Jun-20	---	25.95	---	7.20	Static	
AOI 8	N-51	08-Jun-20	22.89	24.80	1.91	8.77	Static	
AOI 8	N-55	09-Jun-20	---	4.44	---	5.84	Static	
AOI 8	N-56	09-Jun-20	---	7.03	---	6.34	Static	
AOI 8	N-57	08-Jun-20	---	4.71	---	6.20	Static	
AOI 8	N-58	08-Jun-20	---	3.31	---	5.92	Static	
AOI 8	N-59	08-Jun-20	4.09	4.11	0.02	2.86	Static	
AOI 8	N-61	08-Jun-20	---	3.34	---	5.57	Static	
AOI 8	N-64	08-Jun-20	---	4.71	---	4.07	Static	
AOI 8	N-67	08-Jun-20	---	3.07	---	15.09	Static	
AOI 8	N-68	08-Jun-20	11.24	11.25	0.01	12.96	Static	
AOI 8	N-69	08-Jun-20	---	13.04	---	10.16	Static	
AOI 8	N-70	08-Jun-20	---	14.72	---	7.45	Static	
AOI 8	N-72	08-Jun-20	---	9.67	---	3.00	Static	
AOI 8	N-73	08-Jun-20	---	7.69	---	1.21	Static	
AOI 8	N-74	08-Jun-20	5.48	5.51	0.03	2.68	Static	
AOI 8	N-75	08-Jun-20	---	7.13	---	0.72	Static	
AOI 8	N-77	08-Jun-20	---	6.25	---	12.36	Static	
AOI 8	N-79	08-Jun-20	NA	NA	NA	NA	Static	damaged and filled with sediment
AOI 8	N-81	08-Jun-20	18.87	18.88	0.01	10.39	Static	
AOI 8	N-82	08-Jun-20	23.00	23.02	0.02	10.49	Static	
AOI 8	N-83	08-Jun-20	---	15.29	---	6.16	Static	
AOI 8	N-84	08-Jun-20	---	14.63	---	11.25	Static	
AOI 8	N-85	08-Jun-20	---	13.92	---	11.37	Static	
AOI 8	N-86	08-Jun-20	---	15.09	---	10.75	Static	
AOI 8	N-87	08-Jun-20	---	15.49	---	10.77	Static	
AOI 8	N-89	08-Jun-20	---	14.33	---	9.08	Static	
AOI 8	N-90	08-Jun-20	---	12.90	---	12.81	Static	
AOI 8	N-91	08-Jun-20	NA	NA	NA	NA	Static	could not locate-surrounded by water
AOI 8	N-92	08-Jun-20	---	7.73	---	13.13	Static	
AOI 8	N-93	08-Jun-20	---	14.91	---	10.18	Static	

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AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 8	N-94	08-Jun-20	---	6.03	---	14.33	Static	
AOI 8	N-97	08-Jun-20	---	13.85	---	9.11	Static	
AOI 8	N-98	08-Jun-20	---	23.59	---	10.94	Static	
AOI 8	N-99	09-Jun-20	---	19.10	---	9.16	Static	
AOI 8	N-100	08-Jun-20	---	17.79	---	9.22	Static	
AOI 8	N-101	08-Jun-20	---	16.08	---	11.07	Static	
AOI 8	N-102	08-Jun-20	22.14	22.16	0.02	11.07	Static	
AOI 8	N-103	08-Jun-20	17.25	17.25	<0.01	10.88	Static	
AOI 8	N-104	08-Jun-20	---	16.70	---	10.94	Static	
AOI 8	N-105	08-Jun-20	---	17.26	---	10.85	Static	
AOI 8	N-106	08-Jun-20	---	8.30	---	14.73	Static	
AOI 8	N-107	08-Jun-20	15.14	15.22	0.08	11.22	Static	
AOI 8	N-108	08-Jun-20	10.50	10.50	<0.01	12.01	Static	
AOI 8	N-109	09-Jun-20	---	11.81	---	6.61	Static	
AOI 8	N-111	08-Jun-20	---	6.18	---	4.58	Static	
AOI 8	N-112	09-Jun-20	9.29	11.81	2.52	6.24	Static	
AOI 8	N-113	09-Jun-20	7.25	10.56	3.31	6.62	Static	
AOI 8	N-114	09-Jun-20	---	7.92	---	6.45	Static	
AOI 8	N-115	09-Jun-20	---	7.67	---	7.66	Static	
AOI 8	N-116	09-Jun-20	4.08	7.23	3.15	6.87	Static	
AOI 8	N-118	08-Jun-20	---	14.37	---	8.81	Static	
AOI 8	N-120	08-Jun-20	NA	NA	NA	NA	Static	unable to locate - possibly under rubble
AOI 8	N-122	09-Jun-20	---	8.39	---	8.66	Static	
AOI 8	N-124	09-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 8	N-125	08-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 8	N-127	09-Jun-20	24.53	25.33	0.80	8.82	Static	
AOI 8	N-129	10-Jun-20	19.35	20.38	1.03	9.44	Static	
AOI 8	N-130	08-Jun-20	20.63	21.48	0.85	10.79	Static	
AOI 8	N-131	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 8	N-132	09-Jun-20	---	2.62	---	8.49	Static	
AOI 8	N-133	08-Jun-20	---	3.24	---	6.12	Static	
AOI 8	N-134	08-Jun-20	---	17.56	---	9.93	Static	
AOI 8	N-135	09-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 8	N-137	08-Jun-20	17.58	17.60	0.02	8.01	Static	
AOI 8	N-138	08-Jun-20	27.29	27.75	0.46	7.91	Static	
AOI 8	N-139	08-Jun-20	27.04	27.05	0.01	7.96	Static	
AOI 8	N-140	08-Jun-20	---	17.04	---	9.70	Static	
AOI 8	N-141	08-Jun-20	---	13.86	---	10.53	Static	
AOI 8	N-142	08-Jun-20	26.61	27.41	0.80	7.82	Static	
AOI 8	N-143	08-Jun-20	---	22.82	---	10.20	Static	
AOI 8	N-144	08-Jun-20	---	26.12	---	8.16	Static	
AOI 8	N-145	08-Jun-20	18.19	18.20	0.01	7.80	Static	
AOI 8	N-146	08-Jun-20	17.80	17.85	0.05	8.51	Static	
AOI 8	N-147D	09-Jun-20	---	11.12	---	4.10	Static	
AOI 8	N-148D	08-Jun-20	---	29.34	---	2.64	Static	
AOI 8	N-149D	08-Jun-20	---	11.42	---	-1.13	Static	
AOI 8	N-150	08-Jun-20	---	6.05	---	4.15	Static	
AOI 8	N-151	08-Jun-20	18.80	20.29	1.49	10.23	Static	
AOI 8	N-152	08-Jun-20	---	10.71	---	10.15	Static	
AOI 8	N-153	08-Jun-20	---	27.74	---	7.97	Static	
AOI 8	N-154	08-Jun-20	---	9.74	---	17.79	Static	
AOI 8	N-155	08-Jun-20	---	26.43	---	7.84	Static	
AOI 8	N-156	08-Jun-20	---	19.02	---	-8.51	Static	
AOI 8	N-157	08-Jun-20	27.59	28.03	0.44	7.86	Static	
AOI 8	N-158	09-Jun-20	20.44	28.05	7.61	9.96	Static	
AOI 8	N-159	09-Jun-20	21.34	28.35	7.01	9.05	Static	
AOI 8	N-160	09-Jun-20	---	17.88	---	8.33	Static	
AOI 8	N-161	09-Jun-20	28.41	28.77	0.36	7.91	Static	
AOI 8	N-162	09-Jun-20	---	22.58	---	9.89	Static	
AOI 8	N-163	09-Jun-20	---	18.97	---	8.26	Static	
AOI 8	N-503	08-Jun-20	8.67	9.29	0.62	3.68	Static	
AOI 8	N-504	08-Jun-20	8.92	9.90	0.98	3.30	Static	
AOI 8	P-28	08-Jun-20	NM	NM	NM	NM	Static	
AOI 8	PGW-MW-5	09-Jun-20	---	27.36	---	6.72	Static	
AOI 8	PGW-MW-6	09-Jun-20	---	9.70	---	-1.69	Static	
AOI 8	PGW-MW-7	08-Jun-20	16.31	16.57	0.26	6.72	Static	
AOI 8	PGW-MW-8	08-Jun-20	---	24.87	---	6.72	Static	
AOI 8	PGW-MW-9	08-Jun-20	---	25.78	---	6.63	Static	
AOI 8	PGW-MW-20	08-Jun-20	---	5.22	---	8.94	Static	
AOI 8	PGW-MW-21	09-Jun-20	---	5.22	---	7.73	Static	
AOI 8	PGW-MW-24	08-Jun-20	NM	NM	NM	NM	Static	
AOI 8	PZ-201	08-Jun-20	---	22.39	---	9.89	Static	
AOI 8	PZ-202	08-Jun-20	---	21.99	---	11.40	Static	
AOI 8	PZ-203	08-Jun-20	---	20.26	---	13.85	Static	
AOI 8	PZ-204	08-Jun-20	20.38	21.93	1.55	8.35	Static	viscous LNAPL - unable to confirm thickness
AOI 8	PZ-300	08-Jun-20	---	15.73	---	11.04	Static	
AOI 8	PZ-500	09-Jun-20	NA	NA	NA	NA	Static	abandoned

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AOI 8	PZ-501	08-Jun-20	---	3.47	---	5.53	Static	
AOI 8	PZ-502	08-Jun-20	2.14	3.72	1.58	5.65	Static	
AOI 8	PZ-503	08-Jun-20	---	3.27	---	5.42	Static	
AOI 8	PZ-504	08-Jun-20	---	2.31	---	5.32	Static	
AOI 8	PZ-505	08-Jun-20	---	3.08	---	5.38	Static	
AOI 8	PZ-506	08-Jun-20	NA	NA	NA	NA	NA	destroyed
AOI 8	PZ-507	08-Jun-20	---	8.06	---	4.62	Static	
AOI 8	RW-200	08-Jun-20	---	6.04	---	5.98	Static	
AOI 8	RW-201	08-Jun-20	23.29	23.34	0.05	8.69	Static	
AOI 8	RW-202	08-Jun-20	---	21.98	---	7.53	Static	
AOI 8	RW-203	08-Jun-20	23.25	23.26	0.01	7.85	Static	
AOI 8	RW-204	08-Jun-20	20.48	21.05	0.57	8.61	Static	
AOI 8	RW-205	08-Jun-20	19.75	21.10	1.35	9.80	Static	
AOI 8	RW-206	08-Jun-20	---	22.90	---	6.12	Pumping	
AOI 8	RW-207	08-Jun-20	24.93	24.94	0.01	4.88	Pumping	
AOI 8	RW-208	08-Jun-20	24.52	24.53	0.01	5.01	Pumping	
AOI 8	RW-209	08-Jun-20	23.26	23.26	<0.01	5.88	Pumping	
AOI 8	RW-210	08-Jun-20	23.88	23.89	0.01	5.02	Pumping	
AOI 8	RW-211	08-Jun-20	22.39	22.40	0.01	6.49	Pumping	
AOI 8	RW-212	08-Jun-20	22.00	22.01	0.01	6.87	Pumping	
AOI 8	RW-213	08-Jun-20	21.54	21.55	0.01	6.82	Pumping	
AOI 8	RW-214	08-Jun-20	---	22.90	---	6.26	Pumping	
AOI 8	RW-215	08-Jun-20	---	22.63	---	6.12	Pumping	
AOI 8	RW-216	08-Jun-20	---	21.59	---	6.63	Pumping	
AOI 8	RW-217	08-Jun-20	---	22.46	---	5.64	Pumping	
AOI 8	RW-218	08-Jun-20	---	22.42	---	5.60	Pumping	
AOI 8	RW-219	08-Jun-20	---	20.71	---	6.71	Pumping	
AOI 8	RW-220	08-Jun-20	---	19.70	---	7.80	Pumping	
AOI 8	RW-221	08-Jun-20	19.89	19.99	0.10	7.74	Pumping	
AOI 8	RW-222	08-Jun-20	---	19.40	---	8.70	Pumping	
AOI 8	RW-223	08-Jun-20	---	8.28	---	21.24	Pumping	
AOI 8	RW-224	08-Jun-20	---	18.66	---	11.50	Pumping	
AOI 8	RW-225	08-Jun-20	---	24.06	---	5.88	Pumping	
AOI 8	RW-226	08-Jun-20	---	25.04	---	2.53	Pumping	
AOI 8	RW-227	08-Jun-20	---	24.75	---	2.43	Pumping	
AOI 8	RW-228	08-Jun-20	---	19.82	---	7.33	Pumping	
AOI 8	RW-229	08-Jun-20	---	19.89	---	8.01	Pumping	
AOI 8	RW-230	08-Jun-20	---	18.94	---	9.08	Pumping	
AOI 8	RW-231	08-Jun-20	---	19.94	---	6.89	Pumping	
AOI 8	RW-232	08-Jun-20	---	20.13	---	1.90	Pumping	
AOI 8	RW-233	08-Jun-20	19.25	19.26	0.01	1.83	Pumping	
AOI 8	RW-234	08-Jun-20	---	17.63	---	11.01	Pumping	
AOI 8	RW-235	08-Jun-20	---	16.33	---	11.76	Pumping	
AOI 8	RW-236	08-Jun-20	---	8.77	---	18.44	Pumping	
AOI 8	RW-300	08-Jun-20	14.76	14.95	0.19	6.85	Static	
AOI 8	RW-301	08-Jun-20	---	12.14	---	10.27	Static	
AOI 8	RW-302	08-Jun-20	---	13.48	---	10.61	Static	
AOI 8	RW-303	08-Jun-20	---	14.10	---	10.88	Static	
AOI 8	RW-304	08-Jun-20	---	14.91	---	10.37	Static	
AOI 8	RW-305	08-Jun-20	---	14.90	---	10.37	Static	
AOI 8	RW-306	08-Jun-20	13.06	13.07	0.01	10.52	Static	
AOI 8	RW-307	08-Jun-20	---	14.73	---	8.53	Static	
AOI 8	RW-308	08-Jun-20	---	16.77	---	8.84	Static	
AOI 8	RW-309	08-Jun-20	---	15.60	---	9.63	Static	
AOI 8	RW-500	08-Jun-20	---	1.94	---	5.62	Static	
AOI 8	RW-501	08-Jun-20	---	5.01	---	4.78	Static	
AOI 8	RW-502	08-Jun-20	8.76	8.78	0.02	3.71	Static	
AOI 8	V-MW-1	08-Jun-20	---	21.88	---	10.65	Static	
AOI 8	V-MW-2	08-Jun-20	25.67	25.68	0.01	7.93	Static	
AOI 8	V-MW-3	08-Jun-20	---	24.66	---	7.99	Static	
AOI 8	V-MW-4	08-Jun-20	---	26.49	---	8.42	Static	
AOI 8	V-MW-5	08-Jun-20	25.66	25.67	0.01	7.94	Static	
AOI 8	V-MW-6	08-Jun-20	---	26.40	---	8.05	Static	
AOI 8	V-MW-7	08-Jun-20	25.59	25.60	0.01	7.98	Static	
AOI 8	V-MW-8	08-Jun-20	---	25.52	---	8.11	Static	
AOI 8	V-MW-9	08-Jun-20	---	24.89	---	8.19	Static	
AOI 8	V-MW-10	08-Jun-20	---	26.27	---	8.21	Static	
AOI 8	V-MW-11	08-Jun-20	---	26.83	---	8.37	Static	
AOI 8	V-MW-12	08-Jun-20	---	26.71	---	8.86	Static	
AOI 8	V-MW-16	08-Jun-20	---	31.01	---	8.53	Static	
AOI 9	MW-1SRTF	05-Jun-20	2.61	5.33	2.72	4.25	Static	
AOI 9	MW-2SRTF	05-Jun-20	3.28	3.31	0.03	4.04	Static	
AOI 9	MW-3SRTF	05-Jun-20	3.12	3.12	<0.01	3.88	Static	
AOI 9	RW-A	05-Jun-20	NA	NA	NA	NA	Static	flooded to top of casing
AOI 9	RW-B	05-Jun-20	3.33	3.84	0.51	3.94	Static	
AOI 9	RW-B5	05-Jun-20	---	3.70	---	4.14	Static	
AOI 9	S-74D1SRTF	05-Jun-20	---	20.90	---	-8.15	Static	

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AOI 9	S-74D2SRTF	05-Jun-20	---	15.40	---	-2.36	Static	
AOI 9	S-74SRTF	05-Jun-20	---	7.84	---	6.70	Static	
AOI 9	S-75SRTF	05-Jun-20	---	4.17	---	7.36	Static	
AOI 9	S-76DSRTF	05-Jun-20	---	16.74	---	-8.19	Static	
AOI 9	S-76SRTF	05-Jun-20	---	5.85	---	1.08	Static	
AOI 9	S-77SRTF	05-Jun-20	---	12.14	---	-7.79	Static	
AOI 9	S-78SRTF	05-Jun-20	---	9.91	---	-8.41	Static	
AOI 9	S-79SRTF	05-Jun-20	---	0.65	---	1.19	Static	
AOI 9	S-80SRTF	05-Jun-20	---	3.02	---	-0.45	Static	
AOI 9	S-81SRTF	05-Jun-20	---	9.21	---	-7.75	Static	
AOI 9	S-82SRTF	05-Jun-20	---	1.16	---	-0.05	Static	
AOI 9	S-83SRTF	05-Jun-20	---	1.43	---	0.95	Static	
AOI 9	S-104SRTF	05-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 9	S-105SRTF	05-Jun-20	---	3.78	---	-1.83	Static	
AOI 9	S-106DSRTF	05-Jun-20	---	18.43	---	-8.97	Static	
AOI 9	S-106SRTF	05-Jun-20	---	5.93	---	4.09	Static	
AOI 9	S-107SRTF	05-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 9	S-108SRTF	05-Jun-20	---	3.70	---	0.61	Static	
AOI 9	S-109SRTF	05-Jun-20	---	2.53	---	-0.18	Static	
AOI 9	S-110DSRTF	05-Jun-20	---	10.88	---	-8.21	Static	
AOI 9	S-110SRTF	05-Jun-20	---	6.27	---	-2.78	Static	
AOI 9	S-111SRTF	05-Jun-20	---	8.59	---	-7.81	Static	
AOI 9	S-112SRTF	05-Jun-20	---	10.09	---	-8.58	Static	
AOI 9	S-113SRTF	05-Jun-20	---	11.13	---	-8.11	Static	
AOI 9	S-114SRTF	05-Jun-20	---	10.65	---	-8.49	Static	
AOI 9	S-115DSRTF	05-Jun-20	---	11.04	---	-8.34	Static	
AOI 9	S-115SRTF	05-Jun-20	---	11.39	---	-8.64	Static	
AOI 9	S-116SRTF	05-Jun-20	---	9.50	---	-8.63	Static	
AOI 9	S-117SRTF	05-Jun-20	---	8.14	---	-5.27	Static	
AOI 9	S-118DSRTF	05-Jun-20	---	12.05	---	-8.79	Static	
AOI 9	S-118SRTF	05-Jun-20	---	10.89	---	-7.26	Static	
AOI 9	S-119SRTF	05-Jun-20	---	3.41	---	-1.06	Static	
AOI 9	S-120DSRTF	05-Jun-20	---	21.29	---	-8.92	Static	
AOI 9	S-120SRTF	05-Jun-20	---	8.83	---	3.24	Static	
AOI 9	S-121SRTF	05-Jun-20	---	5.61	---	-4.60	Static	
AOI 9	S-122SRTF	05-Jun-20	8.85	9.93	1.08	-6.62	Static	
AOI 9	S-123SRTF	05-Jun-20	---	9.76	---	-7.35	Static	
AOI 9	S-124SRTF	05-Jun-20	---	6.53	---	1.35	Static	
AOI 9	S-125SRTF	05-Jun-20	---	4.92	---	2.26	Static	
AOI 9	S-126SRTF	05-Jun-20	---	7.08	---	4.75	Static	
AOI 9	S-127SRTF	05-Jun-20	---	8.09	---	4.04	Static	
AOI 9	S-128SRTF	05-Jun-20	---	9.73	---	3.58	Static	
AOI 9	S-129SRTF	05-Jun-20	---	7.04	---	4.31	Static	
AOI 9	S-130SRTF	05-Jun-20	---	7.44	---	3.10	Static	
AOI 9	S-131SRTF	05-Jun-20	---	3.29	---	5.52	Static	
AOI 9	S-132SRTF	05-Jun-20	---	6.32	---	2.38	Static	
AOI 9	S-133SRTF	05-Jun-20	---	2.80	---	1.88	Static	
AOI 9	S-134SRTF	05-Jun-20	---	7.27	---	2.91	Static	
AOI 9	S-135SRTF	05-Jun-20	---	10.20	---	-7.22	Static	
AOI 9	S-136SRTF	05-Jun-20	---	5.10	---	0.18	Static	
AOI 9	S-137SRTF	05-Jun-20	---	19.25	---	-9.29	Static	
AOI 9	S-138SRTF	05-Jun-20	---	18.44	---	-8.45	Static	
AOI 9	S-139SRTF	05-Jun-20	---	17.94	---	-7.89	Static	
AOI 9	S-140SRTF	05-Jun-20	---	3.51	---	6.96	Static	
AOI 9	S-141SRTF	05-Jun-20	---	20.24	---	-9.78	Static	
AOI 9	S-142SRTF	05-Jun-20	---	16.96	---	-10.02	Static	
AOI 9	S-143SRTF	05-Jun-20	---	16.01	---	-9.24	Static	
AOI 9	S-144SRTF	05-Jun-20	---	8.53	---	-8.01	Static	
AOI 9	S-145SRTF	05-Jun-20	---	9.57	---	-8.35	Static	
AOI 9	S-146SRTF	05-Jun-20	---	25.41	---	-8.73	Static	
AOI 9	S-147SRTF	05-Jun-20	---	23.47	---	-8.34	Static	
AOI 9	S-148SRTF	05-Jun-20	---	21.32	---	-8.55	Static	
AOI 9	S-149SRTF	05-Jun-20	---	21.75	---	-8.29	Static	
AOI 9	S-150SRTF	05-Jun-20	---	15.79	---	-9.39	Static	
AOI 9	S-740 SRTF	05-Jun-20	---	7.80	---	NM	Static	
AOI 9	WPA-1	05-Jun-20	---	5.02	---	-2.29	Static	
AOI 9	WPA-2	05-Jun-20	---	5.55	---	-2.86	Static	
AOI 9	WPA-3	05-Jun-20	---	5.82	---	-2.57	Static	
AOI 9	WPA-5	05-Jun-20	---	6.13	---	-3.65	Static	
AOI 9	WPB-2	05-Jun-20	---	7.43	---	3.87	Static	
AOI 9	WPB-3	05-Jun-20	3.05	3.14	0.09	4.09	Static	
AOI 9	WPB-4	05-Jun-20	NA	NA	NA	NA	Static	damaged and casing blocked at 1.82 ft btoc
AOI 9	WPB-5	05-Jun-20	---	8.67	---	3.65	Static	
AOI 10	W-1	10-Jun-20	6.10	6.49	0.39	3.48	Static	
AOI 10	W-1D	10-Jun-20	---	10.89	---	-0.16	Static	
AOI 10	W-2	10-Jun-20	---	14.78	---	4.67	Static	
AOI 10	W-5	10-Jun-20	---	2.97	---	4.76	Static	

Table 2
 Sitewide Annual 2020 Gauging Data
 Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
AOI 10	W-6	10-Jun-20	---	0.65	---	6.84	Static	
AOI 10	W-8	10-Jun-20	3.49	4.39	0.90	4.91	Static	
AOI 10	W-9	10-Jun-20	---	10.06	---	-0.77	Static	
AOI 10	W-10	10-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 10	W-11	10-Jun-20	---	4.80	---	3.26	Static	
AOI 10	W-12	10-Jun-20	---	4.85	---	2.25	Static	
AOI 10	W-13	10-Jun-20	---	8.18	---	-1.53	Static	
AOI 10	W-14	10-Jun-20	---	3.29	---	3.97	Static	
AOI 10	W-15	10-Jun-20	---	2.99	---	5.79	Static	
AOI 10	W-16	10-Jun-20	---	2.74	---	3.90	Static	
AOI 10	W-17	10-Jun-20	---	3.64	---	3.58	Static	
AOI 10	W-18	10-Jun-20	NA	NA	NA	NA	Static	unable to locate
AOI 10	W-19	10-Jun-20	---	11.53	---	-1.47	Static	
AOI 10	W-20	10-Jun-20	---	3.78	---	6.33	Static	
AOI 10	W-22	10-Jun-20	---	1.49	---	4.95	Static	
AOI 10	W-23	10-Jun-20	---	2.52	---	5.03	Static	
AOI 10	W-24	10-Jun-20	NA	NA	NA	NA	Static	unable to access - area flooded
AOI 10	W-25	10-Jun-20	---	5.96	---	4.19	Static	
AOI 10	W-26	10-Jun-20	---	12.25	---	-2.27	Static	
AOI 10	W-27	10-Jun-20	---	10.03	---	0.83	Static	
AOI 10	W-28	10-Jun-20	---	3.71	---	4.90	Static	
AOI 10	W-29	10-Jun-20	---	6.98	---	4.84	Static	
AOI 10	W-30	10-Jun-20	---	3.96	---	4.69	Static	
AOI 10	W-31	10-Jun-20	4.05	5.26	1.21	4.16	Static	
AOI 10	W-32	10-Jun-20	9.12	9.16	0.04	5.71	Static	
AOI 10	W-32D	10-Jun-20	---	15.66	---	-0.96	Static	
AOI 10	W-33	10-Jun-20	---	11.81	---	5.26	Static	
AOI 10	W-34	10-Jun-20	---	7.96	---	6.18	Static	
BELMONT	MW-26	02-Jun-20	23.05	23.37	0.32	3.62	Static	
BELMONT	MW-27	02-Jun-20	24.85	25.96	1.11	3.58	Static	
BELMONT	MW-28	02-Jun-20	25.17	25.23	0.06	3.60	Static	
BELMONT	MW-29	02-Jun-20	25.70	26.03	0.33	3.19	Static	
BELMONT	MW-30	02-Jun-20	---	27.32	---	4.38	Static	
BELMONT	MW-31	02-Jun-20	---	25.59	---	4.97	Static	
BELMONT	MW-32	02-Jun-20	---	25.31	---	3.83	Static	
BELMONT	MW-33	02-Jun-20	---	25.96	---	4.03	Static	
BELMONT	MW-35	02-Jun-20	---	27.19	---	3.45	Static	
BELMONT	MW-36	02-Jun-20	---	28.19	---	4.38	Static	
BELMONT	MW-37	02-Jun-20	---	27.60	---	4.32	Static	
BELMONT	MW-38	02-Jun-20	---	23.88	---	3.74	Static	
BELMONT	MW-39	02-Jun-20	---	23.82	---	3.73	Static	
BELMONT	MW-40	02-Jun-20	24.24	24.54	0.30	3.58	Static	
BELMONT	MW-41	02-Jun-20	23.70	23.70	<0.01	3.66	Static	
BELMONT	MW-43	02-Jun-20	---	26.57	---	4.04	Static	
BELMONT	MW-44	02-Jun-20	25.83	25.84	0.01	3.47	Static	
BELMONT	OW-2	02-Jun-20	---	27.53	---	4.14	Static	
BELMONT	OW-12	02-Jun-20	---	26.25	---	3.97	Static	
BELMONT	OW-13	02-Jun-20	---	28.16	---	4.04	Static	
BELMONT	OW-14	02-Jun-20	---	28.29	---	3.92	Static	
BELMONT	OW-16	02-Jun-20	---	26.60	---	4.78	Static	
BELMONT	OW-17	02-Jun-20	---	26.39	---	3.60	Static	
BELMONT	OW-18	02-Jun-20	---	26.61	---	4.23	Static	
BELMONT	OW-19	02-Jun-20	25.37	25.37	<0.01	5.64	Static	
BELMONT	OW-20	02-Jun-20	---	27.86	---	4.01	Static	
BELMONT	PZ-400	02-Jun-20	---	24.62	---	3.48	Static	
BELMONT	RW-1	02-Jun-20	---	25.72	---	3.83	Static	
BELMONT	RW-4	02-Jun-20	27.73	27.74	0.01	2.72	Pumping	
BELMONT	RW-6	02-Jun-20	---	27.08	---	3.98	Static	
BELMONT	RW-7	02-Jun-20	---	24.26	---	3.95	Static	
BELMONT	RW-15	02-Jun-20	---	26.03	---	4.02	Static	
BELMONT	RW-21	02-Jun-20	25.26	25.27	0.01	3.60	Static	
BELMONT	RW-22	02-Jun-20	---	23.10	---	3.93	Static	
BELMONT	RW-23	02-Jun-20	23.32	23.71	0.39	3.72	Static	
BELMONT	RW-24	02-Jun-20	24.13	24.43	0.30	2.97	Pumping	
BELMONT	RW-25	02-Jun-20	---	29.11	---	1.04	Pumping	
BELMONT	RW-26	02-Jun-20	---	25.78	---	3.43	Static	
BELMONT	RW-27	02-Jun-20	---	26.35	---	3.36	Static	
BELMONT	RW-28	02-Jun-20	---	25.83	---	3.91	Static	
BELMONT	RW-29	02-Jun-20	---	25.96	---	3.48	Static	
BELMONT	RW-30	02-Jun-20	---	25.74	---	3.65	Static	
BELMONT	RW-31	02-Jun-20	---	25.72	---	3.66	Static	
BELMONT	RW-32	02-Jun-20	---	23.13	---	5.92	Static	
BELMONT	RW-400	02-Jun-20	---	26.71	---	1.48	Pumping	
BELMONT	S-74	02-Jun-20	---	26.29	---	-13.93	Static	
BELMONT	S-75	02-Jun-20	27.70	27.71	0.01	3.53	Static	
BELMONT	S-76	02-Jun-20	27.37	27.53	0.16	3.64	Static	
BELMONT	S-330	02-Jun-20	---	25.76	---	4.09	Static	

Table 2
Sitewide Annual 2020 Gauging Data
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (feet btoc)	Depth to Water (feet btoc)	Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation (ft NAVD 88)	Static or Pumping	Comments
BELMONT	S-331	02-Jun-20	---	26.01	---	5.27	Static	
BELMONT	S-332	02-Jun-20	---	26.41	---	3.84	Static	
BELMONT	S-393D	02-Jun-20	---	29.34	---	2.72	Static	
BELMONT	S-394	02-Jun-20	---	29.64	---	2.48	Static	
BELMONT	S-395	02-Jun-20	---	28.01	---	4.21	Static	
BELMONT	TW-3	02-Jun-20	---	28.14	---	3.97	Static	
BELMONT	TW-5	02-Jun-20	---	27.92	---	4.15	Static	
BELMONT	TW-8	02-Jun-20	---	26.25	---	3.89	Static	
BELMONT	TW-9	02-Jun-20	---	28.09	---	4.01	Static	
BELMONT	TW-10	02-Jun-20	NA	NA	NA	NA	Static	well vault damaged-no access
BELMONT	TW-11	02-Jun-20	---	28.54	---	3.86	Static	

Notes:

For product thickness <0.01 ft, the corrected groundwater elevation was calculated using 0.01 foot.

AOI = Area of Interest

LNAPL = Light non-aqueous phase liquid

ft = Feet

btoc = Below top of casing

NAVD 88 = North American Vertical Datum of 1988

--- = LNAPL not present

NM = Field reading not measured and/or corrected groundwater elevation not calculated due to lack of surveyed reference elevation or well was dry or presence of down-well pump.

NA = Not Accessible, Not Applicable, or Not Available

Table 3
Comparison of Gauging Data for Select Wells
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	First Half 2019 LNAPL Thickness (feet)	Second Half 2019 LNAPL Thickness (feet)	June 2020 LNAPL Thickness (feet)
AOI 1	PZ-402	0.08	0.20	0.59
AOI 1	S-126	0.31	1.72	1.55
AOI 1	S-200	--	---	0.01
AOI 1	S-203	2.34	1.33	0.57
AOI 1	S-405	1.07	0.19	0.06
AOI 1	S-77	3.00	0.02	3.45
AOI 1	S-82	<0.01	---	0.18
AOI 2	S-135	1.73	1.45	0.11
AOI 2	S-303	0.16	0.44	0.35
AOI 2	S-304	0.46	0.38	0.38
AOI 2	S-338	0.55	0.54	1.11
AOI 2	S-357	2.05	0.05	0.35
AOI 3	RW-2*	0.02	0.03	0.40
AOI 4	S-104	8.02	6.01	5.93
AOI 4	S-240	0.69	1.52	0.88
AOI 4	S-376	---	0.02	0.75
AOI 6	B-144*	0.01	<0.01	0.52
AOI 6	B-156*	---	---	0.01
AOI 6	U-3*	1.43	0.96	2.31
AOI 6	WP9-4*	0.50	<0.01	---
AOI 7	C-105*	---	---	0.01
AOI 7	C-148*	---	0.12	0.18
AOI 7	C-161*	1.59	1.12	0.01
AOI 8	N-105*	---	<0.01	---
AOI 8	N-115*	---	0.03	---
AOI 8	N-129*	0.71	0.72	1.03
AOI 8	N-138*	0.06	0.21	0.46
AOI 8	N-142*	---	---	0.80
AOI 8	N-157*	---	---	0.44
AOI 8	N-158**	NM	NM	7.61
AOI 8	N-159**	NM	NM	7.01
AOI 8	N-161**	NM	NM	0.36
AOI 8	N-36*	---	0.01	---
AOI 8	N-504*	0.03	0.28	0.98
AOI 8	PZ-201*	0.01	1.94	---
AOI 8	PZ-202*	0.10	0.69	---
AOI 8	RW-203*	0.02	0.15	0.01
AOI 8	RW-206*	2.35	4.08	---
AOI 8	RW-207**	NM	NM	0.01
AOI 8	RW-221**	NM	NM	0.10
AOI 9	MW-2SRTF*	0.29	0.42	0.03
AOI 9	MW-3SRTF*	0.81	0.47	0.01
AOI 9	RW-B5*	---	0.15	---

Notes:

For product thickness <0.01 ft, the corrected groundwater elevation was calculated using 0.01 foot.

AOI = Area of Interest

LNAPL = Light non-aqueous phase liquid

--- = LNAPL not present

NM = Field reading not measured

* well added this reporting period

** newly installed well (North Yard)

APPENDIX 1

Remediation System Recovery Data

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Groundwater and LNAPL Recovery Systems Operational Data
Belmont Terminal
Loading Rack Remediation System
First Half 2020

Date	Total Flow (gallons)	Period Total Flow (gallons)	Average Flow Rate (gpm)	LNAPL Recovered in Period (gallons)	Total LNAPL Recovered (gallons)
13-Jan-20	104,258,425	66,916	3.32	4.9	255,216
24-Jan-20	104,258,865	440	0.03	0.0	255,216
31-Jan-20	104,258,865	0	0.00	5.0	255,221
7-Feb-20	104,305,166	46,301	4.59	0.0	255,221
14-Feb-20	104,329,060	23,894	2.37	0.0	255,221
21-Feb-20	104,349,401	20,341	2.02	0.0	255,221
28-Feb-20	104,365,775	16,374	1.62	0.0	255,221
13-Mar-20	104,365,908	133	0.01	15.1	255,236
17-Mar-20	104,446,388	80,480	13.97	15.4	255,251
26-Mar-20	104,490,532	44,144	3.41	15.6	255,267
3-Apr-20	104,573,188	82,656	7.18	0.0	255,267
9-Apr-20	104,648,421	75,233	8.71	0.0	255,267
16-Apr-20	104,732,265	83,844	8.32	26.5	255,293
24-Apr-20	104,818,954	86,689	7.53	30.0	255,323
30-Apr-20	104,880,541	61,587	7.13	22.3	255,346
6-May-20	104,948,584	68,043	7.88	0.0	255,346
15-May-20	105,041,136	92,552	7.14	25.7	255,371
19-May-20	105,073,179	32,043	5.56	17.3	255,389
27-May-20	105,138,825	65,646	5.70	0.0	255,389
2-Jun-20	105,183,330	44,505	5.15	5.8	255,394
11-Jun-20	105,240,920	57,590	4.44	11.7	255,406
19-Jun-20	105,286,809	45,889	3.98	11.8	255,418
25-Jun-20	105,317,175	30,366	3.51	0.0	255,418

Notes:

gpm: gallons per minute

LNAPL: Light Non-Aqueous Phase Liquid

The Belmont Terminal Remediation System consists of the Loading Rack system (RW-4 and RW-21 through RW-25) and the Frontage Road system (RW-15 and RW-26 through RW-32). Both systems have a dedicated totalizer.

On August 30, 2012, the Frontage Road system was turned off and remained off for the reporting period. The system will remain offline unless there is a significant increase of LNAPL in the recovery wells. The recovery wells were routinely gauged, and no product was detected during the reporting period.

The Loading Rack system was operational during the reporting period with the following exceptions:

From January 24 to January 31, the system was taken out of service while repairs were made to the system manifold.

On March 13, the system was operational, however, due to inadequate flow rate to engage flow meter, no recovery was recorded.

On March 17, the system flow meter was replaced. Recovery during this period was estimated using the average recovery during 2019 and 2020. Additionally, RW-4 was removed from operation due to a damaged discharge line. On March 27, the RW-4 pump was repaired and returned to service.

On April 30, a pump was installed in RW-23 for groundwater and LNAPL recovery.

On May 15 and May 19, the pump in RW-24 was inoperable. The pump was cleaned and returned to service.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
 AOI 1: Shunk Street Sewer Ventilation System and Biofilter
 Organic Vapor Concentrations
 First Half 2020

Date	Flow Rate (CFM)	Sewer Air PID (ppm)	Total Flow PID (ppm)	Treatment Cell Effluent PID (ppm)			Treatment Cell Media Temperature (°F)		
				Cell #1	Cell #2	Cell #3	Cell #1	Cell #2	Cell #3
13-Jan-20	3,600	2.0	2.0	0	0	0	54	54	54
24-Jan-20	3,200	2.0	2.0	0	0	0	50	50	50
30-Jan-20	3,200	0.0	0.0	0	0	0	56	56	56
7-Feb-20	3,200	0.0	0.0	0	0	0	56	56	56
14-Feb-20	2,400	0.0	0.0	0	0	0	56	56	56
21-Feb-20	2,400	0.0	0.0	0	0	0	56	56	56
27-Feb-20	2,400	0.0	0.0	0	0	0	56	56	56
6-Mar-20	2,400	0.0	0.0	0	0	0	58	58	58
13-Mar-20	2,600	0.0	0.0	0	0	0	70	70	70
17-Mar-20	2,400	0.0	0.0	0	0	0	56	56	56
26-Mar-20	2,400	1.0	1.0	0	0	0	68	68	68
3-Apr-20	2,500	2.0	2.0	0	0	0	64	64	64
9-Apr-20	2,500	2.0	2.0	0	0	0	65	65	65
16-Apr-20	2,500	1.0	1.0	0	0	0	64	64	64
24-Apr-20	2,600	1.0	1.0	0	0	0	58	58	58
30-Apr-20	2,550	1.0	1.0	0	0	0	66	66	66
6-May-20	2,550	1.0	1.0	0	0	0	62	62	62
14-May-20	3,600	1.0	1.0	0	0	0	72	72	72
19-May-20	3,600	1.0	1.0	0	0	0	70	70	70
27-May-20	3,600	2.0	2.0	0	0	0	78	78	78
2-Jun-20	3,600	1.0	1.0	0	0	0	72	72	72
11-Jun-20	3,600	1.0	1.0	0	0	0	74	74	74
19-Jun-20	3,600	2.0	2.0	0	0	0	74	74	74
25-Jun-20	3,600	1.0	1.0	0	0	0	74	74	74
25-Jun-20	3,600	1.0	1.0	0	0	0	74	74	74

Notes:

CFM: cubic feet per minute

ppm: parts per million

°F: Degrees Fahrenheit

Vapor concentrations are collected using a MultiRAE Lite Photoionization Detector (PID).

The Sewer Air reading is collected from the Shunk Street sewer air stream only.

The air stripper was taken offline June 17, 2004; therefore, the Total Flow is equal to the Sewer Air reading.

The system was operational for the reporting period with the following exceptions:

On January 30, the system blower separated from the effluent piping. Repairs were made to the blower and the system was returned to service.

On April 23, blower #3 was turned off and blower #1 was brought into service.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Total Fluids Recovery System Operational Data
AOI 1: 26th Street North Remediation System
First Half 2020

Date	Total Flow (gallons)	Period Total Flow (gallons)	Calculated System Flow Rate (gpm)
9-Jan-20	119,585,858	437,184	30.36
17-Jan-20	119,935,606	349,747	30.36
24-Jan-20	120,392,028	456,422	45.28
31-Jan-20	120,722,047	330,019	32.74
7-Feb-20	121,022,431	300,384	29.80
11-Feb-20	121,128,300	105,869	18.38
21-Feb-20	121,392,972	264,672	18.38
28-Feb-20	121,842,137	449,165	44.56
6-Mar-20	122,048,374	206,237	20.46
13-Mar-20	122,461,553	413,179	40.99
20-Mar-20	122,851,951	390,398	38.73
25-Mar-20	123,028,207	176,256	24.48
2-Apr-20	123,498,454	470,246	40.82
9-Apr-20	123,931,390	432,936	42.95
16-Apr-20	124,190,345	258,955	25.69
23-Apr-20	124,410,492	220,147	21.84
27-Apr-20	124,544,815	134,323	23.32
8-May-20	125,048,369	503,554	31.79
15-May-20	125,331,314	282,946	28.07
21-May-20	125,574,358	243,043	28.13
28-May-20	125,860,025	285,667	28.34
1-Jun-20	126,006,329	146,304	25.40
11-Jun-20	126,422,489	416,160	28.90
16-Jun-20	126,681,833	259,344	36.02
26-Jun-20	127,130,825	448,992	31.18

Notes:

gpm: gallons per minute

LNAPL: Light Non-Aqueous Phase Liquid

gpm: gallons per minute

The Total Flow includes historical totals from former recovery wells RW-400 through RW-406 including 9,149 gallons of LNAPL. The system discharges directly to a process sewer; therefore, the volume of recoverable LNAPL cannot be quantified.

The 26th Street North Remediation system consists of 20 total fluids recovery wells [15 active wells onsite along 26th Street (S-180, S-181, S-182, S-183, S-184, S-185, S-186, S-187, S-188, S-189, S-190, S-191, S-192, RW-400, & RW-402) and five inactive wells offsite on CSX property (S-193, S-194, S-265, S-267, & S-268)]. The offsite wells on the CSX property have not been activated. The system discharges directly to a process sewer; therefore, the volume of recoverable LNAPL cannot be quantified.

The system was operational for the reporting period with the following exceptions:

S-182 and S-192 pumps were removed for cleaning and were not in service at the beginning of the reporting period. On February 11, the pumps were reinstalled in S-182 and S-192 and returned to service.

On February 21, the flow rate was not collected because the system flow valves were frozen upon arrival. The flow rate collected on February 11 was used during this period.

On February 28, the pumps in RW-402, S180, S-183, and S-190 were inoperable. RW-402, S-183, and S-190 were cleaned and returned to service.

On March 6, the pump in S180 was repaired and returned to service. The pumps in S-191 and S-192 were inoperable. S-191 and S-192 pumps were cleaned and returned to service.

On March 13, the pumps in S-186, S-191, and S-192 were inoperable. S-186, S-191, and S-192 pumps were cleaned and returned to service.

On March 25, the pump in S-186 was inoperable. S-186 pump was cleaned and returned to service.

On April 16, the pumps in S-187 and S-191 were inoperable. These pumps were removed for maintenance.

On April 23, the pump in RW-400 was inoperable. This pump was removed for maintenance.

On April 30, the pump was reinstalled in RW-400 and returned to service.

On May 8, the pumps in S-180, S-184, and S-185 were inoperable. S-185 pump was replaced, S-180 and S-184 were cleaned, and all pumps, including S-187 and S-191, were returned to service.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
AOI 1: 26th Street & Packer Avenue Sewers Biofilter Remediation System
Organic Vapor Concentrations

First Half 2020

Date	Biofilter Influent			Biofilter Effluent							
	Packer Ave. (ppm)	26 th Street (ppm)	ST-1 (Combined Influent) (ppm)	Cell-1N	Cell-1S	Cell-2N	Cell-2S	Cell-3N	Cell-3S	Cell-4N	Cell-4S
1/9/2020	1.1	6.0	6	0.0	0.0	0.0	0.0	NA	NA	NA	NA
1/16/2020	3.0	0.0	4	0.0	0.0	0.0	0.0	NA	NA	NA	NA
1/23/2020	6.0	4.0	5	0.0	0.0	0.0	0.0	NA	NA	NA	NA
1/29/2020	4.0	1.0	4	0.0	0.0	0.0	0.0	NA	NA	NA	NA
2/6/2020	3.0	3.0	3	0.0	0.0	0.0	0.0	NA	NA	NA	NA
2/12/2020	7.0	3.0	4	0.0	0.0	0.0	0.0	NA	NA	NA	NA
2/20/2020	4.0	1.0	5	0.0	0.0	0.0	0.0	NA	NA	NA	NA
2/28/2020	10.0	1.0	11	0.0	0.0	0.0	0.0	NA	NA	NA	NA
3/6/2020	6.0	1.0	4	0.0	0.0	0.0	0.0	NA	NA	NA	NA
3/13/2020	3.0	0.0	3	0.0	0.0	0.0	0.0	NA	NA	NA	NA
3/20/2020	3.0	0.0	3	0.0	0.0	0.0	0.0	NA	NA	NA	NA
3/24/2020	1.0	1.0	2	0.0	0.0	0.0	0.0	NA	NA	NA	NA
4/2/2020	0.0	0.0	3	0.0	0.0	0.0	0.0	NA	NA	NA	NA
4/7/2020	0.0	0.0	1	0.0	0.0	0.0	0.0	NA	NA	NA	NA
4/15/2020	1.0	1.0	1	0.0	0.0	0.0	0.0	NA	NA	NA	NA
4/23/2020	4.0	4.0	3	0.0	0.0	0.0	0.0	NA	NA	NA	NA
4/28/2020	3.0	3.0	3	0.0	0.0	0.0	0.0	NA	NA	NA	NA
5/5/2020	2.0	2.0	3	0.0	0.0	0.0	0.0	NA	NA	NA	NA
5/13/2020	5.0	5.0	4	0.0	0.0	0.0	0.0	NA	NA	NA	NA
5/20/2020	1.0	2.0	2	0.0	0.0	0.0	0.0	NA	NA	NA	NA
5/27/2020	1.0	2.0	2	0.0	0.0	0.0	0.0	NA	NA	NA	NA
6/1/2020	1.0	1.0	1	0.0	0.0	0.0	0.0	NA	NA	NA	NA
6/11/2020	2.0	1.0	2	0.0	0.0	0.0	0.0	NA	NA	NA	NA
6/16/2020	0.0	1.0	1	0.0	0.0	0.0	0.0	NA	NA	NA	NA
6/24/2020	0.0	0.0	2	0.0	0.0	0.0	0.0	NA	NA	NA	NA
6/24/2020	0.0	0.0	2	0.0	0.0	0.0	0.0	NA	NA	NA	NA

Notes:

ppm: parts per million

NA: Not applicable

Vapor concentrations are collected using a MultiRAE Lite Photoionization Detector (PID).

The system was operational for the reporting period.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
AOI 1: 26th Street & Packer Avenue Sewers Biofilter Remediation System
pH Data
First Half 2020

Date	Leachate pH	Biofilter Bed - Soil pH			
		Cell 1	Cell 2	Cell 3	Cell 4
23-Jan-20	7.06	6.93	7.07	NM	NM
20-Feb-20	6.93	6.87	7.01	NM	NM
26-Mar-20	6.77	NM	NM	NM	NM
28-Apr-20	7.07	NM	NM	NM	NM
27-May-20	6.86	6.63	6.70	NM	NM
24-Jun-20	6.79	NM	NM	NM	NM

Notes:

Media pH readings are collected on a quarterly basis.

NM: not measured

Cells 3 and 4 were shut off June 18, 2010 and remained off for the reporting period as they are not currently needed for vapor treatment.

The system was operational during the reporting period.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Total Fluids Recovery System Operational Data
AOI 2: Pollock Street Horizontal Wells
First Half 2020

Actual Dates in Period	Reporting Period	Days in Period	HW-1 Water Recovered During Period (gallons)	HW-2 Water Recovered During Period (gallons)	HW-3 Water Recovered During Period (gallons)	Total Fluids Extracted During Period (gallons)	Total Fluids Extracted (gallons)	*LNAPL Recovered During Period (gallons)*
1/1/2020 - 1/27/2020	Jan 2020	28	435,500	59,651	620,122	1,115,273	126,142,202	NA
1/28/2020 - 2/26/2020	Feb 2020	30	452,000	260,307	664,416	1,376,723	127,518,925	NA
2/27/2020 - 3/23/2020	Mar 2020	26	400,600	234,497	575,827	1,210,924	128,729,849	NA
3/24/2020 - 4/27/2020	Apr 2020	35	549,100	305,810	775,152	1,630,062	130,359,911	NA
4/28/2020 - 5/26/2020	May 2020	29	434,400	218,480	642,269	1,295,149	131,655,060	NA
5/27/2020 - 6/22/2020	Jun 2020	27	63,800	185,380	597,974	847,154	132,502,214	NA

Notes:

LNAPL: Light Non-Aqueous Phase Liquid

NA: Not Applicable

* The system discharges directly to a process sewer; therefore, the volume of recoverable LNAPL cannot be quantified.

Pump tests were performed in March 2011 for the horizontal wells so that recovered volumes could be estimated based on flow rates and system up-time, beginning in the second quarter of 2011. A second pump test was completed following the installation of a new pump at HW-1 on May 13, 2013. The HW-1 flow rate was estimated at 10 gallons per minute (gpm), HW-2 at 3.73 gpm, and HW-3 at 15.38 gpm. Beginning May 25, 2013, HW-1 flow is measured and reported by a totalizer. HW-2 flow is measured and reported by a totalizer as of July 6, 2015.

The system was operational during the reporting period with the following exceptions:

On November 5, 2019, the pump for HW-2 was removed for repairs. On January 14, 2020, the pump for HW-2 was reinstalled and returned to service, however, the flow meter was removed for repairs. On January 27, the HW-2 flow meter was repaired and reinstalled. HW-2 recovery between January 14 and January 27 was estimated using the average recovery during 2019.

On May 12, the HW-2 flow meter was repaired and reinstalled.

On June 1, HW-1 was inoperable due to a motor malfunction. HW-1 was taken out of service for maintenance and remained off through the end of the reporting period.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Groundwater and LNAPL Recovery System Operational Data
AOI 4: Penrose Avenue Remediation System
First Half 2020

Date	Period Total Flow (gallons)	Total Flow (gallons)	Average Daily Flow (gpd)	LNAPL Recovered in Period (gallons)	Total LNAPL Recovered (gallons)
09-Jan-20	113,000	23,822,080	11,300	111.0	7100.6
16-Jan-20	69,200	23,891,280	9,886	37.4	7138.0
22-Jan-20	10,400	23,901,680	1,733	0.0	7138.0
29-Jan-20	46,000	23,947,680	6,571	24.8	7162.8
05-Feb-20	93,600	24,041,280	13,371	30.7	7193.5
12-Feb-20	86,100	24,127,380	12,300	0.0	7193.5
20-Feb-20	66,500	24,193,880	8,313	0.0	7193.5
24-Feb-20	53,700	24,247,580	13,425	0.4	7193.9
02-Mar-20	73,600	24,321,180	10,514	21.6	7215.5
13-Mar-20	91,500	24,412,680	8,318	18.6	7234.1
18-Mar-20	0	24,412,680	0	14.5	7248.6
25-Mar-20	0	24,412,680	0	0.0	7248.6
01-Apr-20	0	24,412,680	0	0.0	7248.6
07-Apr-20	0	24,412,680	0	0.0	7248.6
15-Apr-20	0	24,412,680	0	0.0	7248.6
21-Apr-20	0	24,412,680	0	0.0	7248.6
28-Apr-20	0	24,412,680	0	0.0	7248.6
05-May-20	0	24,412,680	0	0.0	7248.6
13-May-20	0	24,412,680	0	0.0	7248.6
20-May-20	0	24,412,680	0	0.0	7248.6
26-May-20	0	24,412,680	0	0.0	7248.6
01-Jun-20	0	24,412,680	0	0.0	7248.6
12-Jun-20	0	24,412,680	0	0.0	7248.6
16-Jun-20	0	24,412,680	0	0.0	7248.6
24-Jun-20	0	24,412,680	0	0.0	7248.6
29-Jun-20	0	24,412,680	0	0.0	7248.6

Notes:

gpd: gallons per day

LNAPL: Light Non-Aqueous Phase Liquid

The Penrose Avenue Remediation System consisting of 18 recovery wells (RW-700 through RW-717) was started on March 20, 2013. On February 21, 2018, pumps were installed in S-221, S-236, and S-237 to address LNAPL in those wells. Groundwater and LNAPL are extracted using pneumatic pumps, and total fluids pass through an oil/water separator (OWS). The groundwater is discharged to the Philadelphia Water Department (PWD) sanitary sewer system along Penrose Avenue, and LNAPL is recovered in a 550-gallon storage tank.

The system was operational during the reporting period with the following exceptions:

On January 22 and January 29, the system was not operational due to high level alarm on the OWS. The system was reset and returned to service.

On February 5, the system was taken out of the service while the OWS, settling tank, and effluent tank were cleaned. The system was returned to service after the cleaning.

On March 10, the groundwater remediation system was taken out of service pending Philadelphia Water Department (PWD) discharge permit approval. The system remained off for the report period.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
LNAPL Recovery System Operational Data
AOI 4: S-30 Remediation System
First Half 2020

Date	S-30	
	LNAPL Recovered in Period (gallons)	Total LNAPL Recovered (gallons)
9-Jan-20	0.0	40,184
16-Jan-20	2.2	40,186
23-Jan-20	0.0	40,186
29-Jan-20	1.6	40,188
6-Feb-20	3.5	40,191
12-Feb-20	0.0	40,191
20-Feb-20	8.4	40,200
24-Feb-20	10.9	40,211
3-Mar-20	3.2	40,214
18-Mar-20	16.4	40,230
24-Mar-20	0.0	40,230
30-Mar-20	0.0	40,230
7-Apr-20	3.6	40,234
14-Apr-20	0.0	40,234
21-Apr-20	0.0	40,234
28-Apr-20	5.1	40,239
5-May-20	3.3	40,242
13-May-20	0.0	40,242
20-May-20	0.0	40,242
26-May-20	8.4	40,251
1-Jun-20	0.0	40,251
12-Jun-20	5.7	40,256
16-Jun-20	0.0	40,256
24-Jun-20	3.2	40,259

NOTES:

LNAPL: Light Non-Aqueous Phase Liquid

The reported volume recovered for total fluids accounts for the historical recovery for the S-30 Remediation System.

There is no groundwater recovery at S-30; it is a product skimming system only.

During the reporting period the S-30 Remediation System was operational with the following exceptions:

On January 29, the system recovered water. The pump was removed and troubleshooting of the float assembly was conducted. The pump was reinstalled and returned to service.

On February 6, the system was taken out of service due to recent recovery of water. Troubleshooting was conducted on the pump; however, the system remained off to allow for LNAPL recovery. The skimming pump was operated manually on an as needed basis to recover LNAPL during the remainder of the reporting period.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Recovery System Operational Data
AOI 7: 3 Separator Remediation System
First Half 2020

Date	Total Flow (gallons)	Period Total Flow (gallons)	Calculated System Flow Rate (gpm)	LNAPL Recovered in Period (gallons)	Total LNAPL Recovered (gallons)
9-Jan-20	25,837,078	64,600	4.49	1.8	113,927.8
17-Jan-20	25,858,678	21,600	1.88	0.0	113,927.8
22-Jan-20	25,901,778	43,100	5.99	0.0	113,927.8
27-Jan-20	25,922,278	20,500	2.85	1.4	113,929.2
4-Feb-20	26,023,678	101,400	8.80	5.5	113,934.7
13-Feb-20	26,135,078	111,400	8.60	0.0	113,934.7
20-Feb-20	26,197,878	62,800	6.23	0.0	113,934.7
24-Feb-20	26,244,778	46,900	8.14	0.0	113,934.7
3-Mar-20	26,275,078	30,300	2.63	0.0	113,934.7
12-Mar-20	26,341,278	66,200	5.11	0.0	113,934.7
18-Mar-20	26,382,078	40,800	4.72	0.0	113,934.7
24-Mar-20	26,427,078	45,000	5.21	1.9	113,936.5
30-Mar-20	26,475,278	48,200	5.58	0.0	113,936.5
6-Apr-20	26,517,878	42,600	4.23	34.6	113,971.1
15-Apr-20	26,564,678	46,800	3.61	0.0	113,971.1
20-Apr-20	26,589,678	25,000	3.47	0.0	113,971.1
27-Apr-20	26,613,178	23,500	2.33	0.0	113,971.1
4-May-20	26,644,278	31,100	3.09	1.4	113,972.5
12-May-20	26,680,478	36,200	3.14	0.0	113,972.5
18-May-20	26,707,578	27,100	3.14	0.0	113,972.5
26-May-20	26,819,178	111,600	9.69	0.0	113,972.5
1-Jun-20	26,879,078	59,900	6.93	0.0	113,972.5
8-Jun-20	26,942,778	63,700	6.32	0.0	113,972.5
15-Jun-20	26,998,778	56,000	5.56	0.0	113,972.5
23-Jun-20	27,054,978	56,200	4.88	0.0	113,972.5
29-Jun-20	27,095,478	40,500	4.69	0.0	113,972.5

Notes:

gpm: gallons per minute

LNAPL: Light Non-Aqueous Phase Liquid

The 3 Separator Remediation System is a hydraulic control system constructed of ten recovery wells (RW-801 through RW-810) which was started on August 23, 2012. Groundwater and LNAPL are extracted using pneumatic submersible pumps, and total fluids pass through an oil/water separator (OWS). Water is discharged to an onsite process sewer, and LNAPL is recovered in a tank and recycled by the PES Complex.

The system was operational for the reporting period with the following exceptions:

From January 9 through February 20, RW-810 was not operational. The pump was returned to service on February 24.

On April 6, the pumps in RW-803 and RW-804 were inoperable. The pumps were cleaned and returned to service.

On May 18, the pumps in RW-801 and RW-810 were inoperable. Troubleshooting was conducted and the pumps were returned to service.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
 AOI 8: Jackson Street Water Curtain
 First Half 2020

Date	PID readings (ppm)			Comments
	Blower	Water Curtain	Interceptor Chamber	
09-Jan-20	NA	0.0	0.0	
16-Jan-20	NA	0.0	0.0	
24-Jan-20	NA	0.0	0.0	
31-Jan-20	NA	0.0	0.0	
07-Feb-20	NA	0.0	0.0	
14-Feb-20	NA	0.0	0.0	
20-Feb-20	NA	0.0	0.0	
27-Feb-20	NA	0.0	0.0	
05-Mar-20	NA	0.0	0.0	
12-Mar-20	NA	0.0	0.0	
19-Mar-20	NA	0.0	0.0	
26-Mar-20	NA	0.0	0.0	
02-Apr-20	NA	0.0	0.0	
09-Apr-20	NA	0.0	0.0	
16-Apr-20	NA	0.0	0.0	
23-Apr-20	NA	0.0	0.0	
30-Apr-20	NA	0.0	0.0	
07-May-20	NA	0.0	0.0	
14-May-20	NA	0.0	0.0	
21-May-20	NA	0.0	0.0	
27-May-20	NA	0.0	0.0	
03-Jun-20	NA	0.0	0.0	
10-Jun-20	NA	0.0	0.0	
17-Jun-20	NA	0.0	0.0	
22-Jun-20	NA	0.0	0.0	
29-Jun-20	NA	0.0	0.0	

NOTES:

PID: Photoionization detector

ppm: parts per million

NA: Not Available (PID readings are not collected at the blower.)

Vapor concentrations are collected using a MultiRAE Lite PID.

The totalizer was removed on December 11, 2009.

The system was operational for the reporting period.

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Groundwater and LNAPL Recovery System Operational Data
AOI 8: PGW Border Remediation System
First Half 2020

Date	Period Total Flow (gallons)	Total Flow (gallons)	LNAPL Recovered in Period (gallons)	Total LNAPL Recovered (gallons)
20-Feb-20	0	0	0.0	0.0
21-Feb-20	9,266	9,266	0.0	0.0
24-Feb-20	56,612	65,878	0.0	0.0
25-Feb-20	7,868	73,746	0.0	0.0
26-Feb-20	14,364	88,110	0.0	0.0
27-Feb-20	10,379	98,489	0.4	0.4
28-Feb-20	7,932	106,421	0.0	0.4
19-Mar-20	17,417	123,838	22.7	23.1
20-Mar-20	19,418	143,256	0.0	23.1
23-Mar-20	46,002	189,258	0.0	23.1
24-Mar-20	18,253	207,511	23.9	47.0
25-Mar-20	15,227	222,738	5.3	52.3
26-Mar-20	18,376	241,114	2.8	55.1
27-Mar-20	16,903	258,017	2.7	57.8
30-Mar-20	61,263	319,280	69.0	126.8
31-Mar-20	17,157	336,437	13.8	140.6
01-Apr-20	16,907	353,344	21.3	161.9
02-Apr-20	17,144	370,488	21.9	183.8
03-Apr-20	13,356	383,844	26.0	209.8
07-Apr-20	65,713	449,557	53.2	263.0
09-Apr-20	33,794	483,351	34.5	297.5
10-Apr-20	15,867	499,218	11.6	309.1
13-Apr-20	58,328	557,546	131.9	441.0
15-Apr-20	38,199	595,745	8.3	449.3
17-Apr-20	33,616	629,361	44.0	493.3
24-Apr-20	116,630	745,991	206.8	700.1
27-Apr-20	47,990	793,981	159.5	859.6
04-May-20	106,064	900,045	191.1	1050.7
08-May-20	56,153	956,198	75.7	1126.4
11-May-20	39,093	995,291	61.4	1187.8
14-May-20	NA	NA	101.7	1289.5
15-May-20	49,765	1,045,056	23.1	1312.6
18-May-20	39,510	1,084,566	61.3	1373.9
22-May-20	47,710	1,132,276	84.7	1458.6
26-May-20	55,870	1,188,146	90.0	1548.6
29-May-20	40,570	1,228,716	65.3	1613.9
01-Jun-20	35,500	1,264,216	0.0	1613.9
05-Jun-20	54,800	1,319,016	0.0	1613.9
08-Jun-20	32,890	1,351,906	23.1	1637.0
12-Jun-20	40,750	1,392,656	77.1	1714.1

Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Groundwater and LNAPL Recovery System Operational Data
AOI 8: PGW Border Remediation System
First Half 2020

Date	Period Total Flow (gallons)	Total Flow (gallons)	LNAPL Recovered in Period (gallons)	Total LNAPL Recovered (gallons)
15-Jun-20	28,510	1,421,166	47.5	1761.6
22-Jun-20	69,270	1,490,436	92.3	1853.9
26-Jun-20	39,160	1,529,596	42.2	1896.1
29-Jun-20	27,110	1,556,706	30.7	1926.8

Note:

NA: Not available

LNAPL: Light Non-Aqueous Phase Liquid

The PGW Border Remediation System consisting of 31 recovery wells was started on February 20, 2020. Groundwater and LNAPL are extracted using pneumatic pumps, and total fluids pass through an oil/water separator (OWS). The groundwater is discharged to a facility process sewer and LNAPL is recovered in a 550-gallon storage tank.

During the reporting period, the newly installed PGW Border Remediation System was started. The system was operational with minimal down time to allow for testing and system configuration changes.