



Evergreen Resources Management
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January 29, 2016

Mr. David Brown
Pennsylvania Department of Environmental Protection
2 East Main Street
Norristown, Pennsylvania 19401

**RE: Philadelphia Refinery Complex Remediation Program
Groundwater Remediation Status Report, Second Half 2015**

Dear Mr. Brown:

Enclosed for your review is a semi-annual summary report for Operation & Maintenance (O&M) work completed at the Philadelphia Energy Solutions Refining & Marketing, LLC (PES) Philadelphia Refinery and the Sunoco Logistics Belmont Terminal between July 1 and December 31, 2015. Information regarding O&M activity is included in the attached tables for the Philadelphia Refinery Complex as prepared by Stantec Consulting Services Inc. (Stantec). This letter summarizes the information detailed in the tables plus additional activities under the 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 Philadelphia Refinery property located at 3144 Passyunk Avenue in Philadelphia, Pennsylvania, Sunoco has completed site characterization activities for all 11 AOIs. This facility has since been entered into the Pennsylvania One Cleanup Program. On November 30, 2011, Sunoco submitted a "Work Plan for Site Wide Approach under the One Cleanup Program" (Site Wide Approach) to the PADEP and the United States Environmental Protection Agency (USEPA). The Site Wide Approach clarifies the technical approach beyond the CO&A and provides an anticipated schedule for future Act 2 submissions with respect to the Philadelphia Refinery Complex remediation program. Effective December 30, 2013, "Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC" (Evergreen) assumed Sunoco/Atlantic's legacy remediation liabilities with respect to the Philadelphia Refinery Complex. All remediation of Sunoco/Atlantic's historic environmental liabilities at the Philadelphia Refinery Complex will be managed moving forward by Evergreen. Status and anticipated dates of forthcoming Remedial Investigation Report (RIR) submittals will be updated in the semi-annual Groundwater Remediation Status Reports. This particular status report will include an updated schedule for submittals under Act 2 within each AOI section.

On September 8, 2012, Sunoco conveyed the Philadelphia Refinery Complex to PES. As part of that transaction, Sunoco retained responsibility for remediation activities for environmental conditions existing at the time of the transfer. Accordingly, Evergreen will continue to submit the required documentation and implement the required remedial obligations. Moving forward, Evergreen will submit a report with the O&M summary, Act 2 submittal updates, figures, and tables on an annual basis coinciding with the annual groundwater gauging and monitoring.

On the alternating six month interval, Evergreen will submit an abbreviated letter report detailing the O&M summary without figures and limited tables. This approach was agreed upon by the PADEP in a conversation between David Brown and Jim Oppenheim in July 2015.

AOI 1 – Belmont Terminal / No. 1 Tank Farm / No. 2 Tank Farm

Consent Order / Characterization Status

Sunoco submitted to the PADEP and the USEPA a Site Characterization Report (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 quarterly 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 recovery 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 recovery system data analysis and the 26th Street South investigation and subsequent remedial actions. Evergreen intends to submit a revised RIR for AOI 1 in early 2016.

Belmont Terminal – Operation During the Second Half of 2015

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 August 6, 2015 and November 16, 2015, and no LNAPL was detected.

The Loading Rack system consists of six dual-phase pumping systems (RW-4, RW-21, 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 checked weekly, 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 recycled by the refinery on an as needed basis.

A total of 3,700,099 gallons of groundwater and 1,390 gallons of LNAPL were recovered by this system during the second half of 2015. System performance data for the Loading Rack System can be found in **Table 1**.

Shunk Street Sewer Ventilation System and Biofilter – Operation During the Second Half of 2015

The biofilter was operational for the reporting period with the exception of electrical upgrades performed between November 25 and December 4. Details of the Shunk Street Sewer Ventilation System and Biofilter operational status during the second half of 2015 can be found in **Table 1**.

26th Street Sewer Area – System Performance and Operation During the Second Half of 2015

26th Street North:

Sunoco has conducted a performance assessment of the 26th Street North recovery system to better determine the effectiveness of remediation in this area. In general, Sunoco believes that the reporting of groundwater and LNAPL recovery provides limited indication of system performance, and should be supplemented with measurements related to maintaining water-table drawdown and inducing a hydraulic gradient towards collection points. It was concluded in the AOI 1 RAP Addendum that the extent of LNAPL has not changed significantly;

however, LNAPL thickness appears to have decreased over time, indicating stability of LNAPL along the 26th Street North area.

The 26th Street Sewer Area system was modified during the second half of 2015 to increase the overall effectiveness of the system. All of 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.

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 operate off 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 pumps.

The 26th Street Sewer Area system was started on October 12. A total of 1,841,645 gallons of total fluids were recovered by this system during the second half of 2015. System performance data for the 26th Street Sewer Area system can be found in **Table 1**.

26th Street South:

A comprehensive groundwater investigation was conducted in the S-50 area. This data and proposed remedial action was included in the AOI 1 RAP Addendum. To minimize the migration of soluble phase contaminants, a biologically active aerobic barrier utilizing oxygen injection was recommended for the area. A thirty-point oxygen injection system was installed in 2009 to accomplish this barrier.

Due to the presence of LNAPL within the capture zone, the 26th Street South oxygen injection system was shut off on August 22, 2014. The system remained off for the second half of 2015. The conceptualization of a recovery system will be evaluated in the AOI 1 Cleanup Plan.

26th Street and Packer Avenue Sewer Biofilters – Operation During the Second Half of 2015

The 26th Street and Packer Avenue Sewers Biofilter system was taken offline on September 30 for upgrades. Upgrades to the biofilter, including replacing the compost beds, repairing the duct work and replacing or repairing the fans, are expected to be completed by the second quarter of 2016.

AOI 2 – Point Breeze Processing Area

Consent Order / Characterization Status

The AOI 2 SCR/RIR was submitted to the PADEP and the USEPA on September 29, 2010. A revised RIR will be completed by the end of 2016.

Pollock Street West End System – Operation During the Second Half of 2015

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.

Water is discharged to an onsite process sewer (S-10 Sump), and LNAPL is recovered in a series of two 550-gallon tanks and then recycled by the refinery. 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.

A total of 192,000 gallons of groundwater and 805 gallons of LNAPL were recovered by this system during the second half of 2015. System performance data for the Pollock Street West End system can be found in **Table 1**.

Pollock Street Vertical Well System – Operation During the Second Half of 2015

The Pollock Street Vertical Well system consists of RW-101, RW-102, and RW-103. All other vertical wells were previously turned off or incorporated into the Pollock Street West End system. On April 4, 2013 the vertical recovery wells were turned off for main discharge line cleaning and the installation of a new pump at horizontal well HW-1. Subsequently, HW-1 maintained adequate drawdown; therefore, the Pollock Street Vertical Well system is no longer needed. The recovery equipment was removed from RW-101, RW-102, and RW-103 on August 2, 2013.

Pollock Street Horizontal Well System – Operation During the Second Half of 2015

The Pollock Street Horizontal Well 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 discharges directly into a Benzene National Emission Standard for Hazardous Air Pollutants (NESHAP) controlled sewer whereas groundwater and LNAPL from HW-3 discharges 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 for the second half of 2015 is 15.38 gallons per minute (gpm).

A total of 8,275,154 gallons of total fluids were recovered by this system during the reporting period. System performance data for the Pollock Street Horizontal Well system can be found in **Table 1**.

Pollock Street Sewer Outfall – Operation During the Second Half of 2015

The Pollock Street sewer outfall is checked by PES personnel and all findings are recorded. This practice will continue and any identified LNAPL will be handled with spill control equipment to minimize or prevent releases to the Schuylkill River. Evergreen has continued to maintain boom and sorbent sweeps around the tide gate area. Outfall cleaning, including the changing of sorbents and removal of any fugitive LNAPL from the outfall, occurs a minimum of twice per week. The skimmer discharges to a onsite process sewer (S-13 Sump).

The outfall skimmer remained off for the second half of 2015 due to the lack of recoverable oil in the outfall.

Short Pier – Operation During the Second Half of 2015

There was no evidence of LNAPL migration to the Schuylkill River during the reporting period. Unless evidence of LNAPL migration to the river occurs, the system will remain offline.

AOI 3 – Impoundment Area

There are no groundwater or LNAPL recovery 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 recovery system will remain offline. The disposition of remediation systems in AOI 3 will be revisited in the Cleanup Plan. A revised RIR for AOI 3 will be completed by the second quarter of 2016.

AOI 4 – 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 will be completed by the end of 2016.

Penrose Avenue Remediation System – Operation During the Second Half of 2015

Following characterization of AOI 4, Sunoco recommended the installation of a hydraulic control system on the southern border of AOI 4. This system is permitted for discharge by the Philadelphia Water Department (PWD) and Philadelphia Air Management Services (AMS). Installation of the 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.

A total of 1,864,990 gallons of groundwater and 267 gallons of LNAPL was recovered by this system during the reporting period. System performance data for the Penrose Avenue Remediation system can be found in **Table 1**.

S-30 and S-36 LNAPL Recovery Systems – Operation During the Second Half of 2015

Due to the absence of recoverable LNAPL in the recovery wells, Evergreen recommends that S-30, S-34, S-35, and S-36 remain offline.

AOI 5 – Girard Point South Tank Field

Consent Order / Characterization Status

In accordance with the Site Wide Approach, a repackaged Site Characterization Report/Remedial Investigation Report/Cleanup Plan (SCR/RIR/Cleanup Plan) was submitted to the PADEP and the USEPA on December 13, 2011. Sunoco received a Remedial Investigation Report/Cleanup Plan Disapproval from the PADEP on March 15, 2012. A revised RIR will be completed in early 2016.

9 Berth – Operation During the Second Half of 2015

The system was taken offline in January 2009 and remains offline due to limited presence of LNAPL.

AOI 6 – Girard Point 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. A “Disapproval of Remedial Investigation Report/Disapproval of Site Characterization Report” was received on November 27, 2013. A revised RIR will be completed by the end of 2016.

27 Pump House – Operation During the Second Half of 2015

The 27 Pump House Total Fluids Recovery system was turned off on 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.

AOI 7 – Girard Point 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 will be addressed in the revised RIR expected to be completed by the end of 2016.

No. 3 Separator / Bulkhead Area – Operation During the Second Half of 2015

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 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. Groundwater and LNAPL are extracted using pneumatic submersible pumps, and total fluids pass through an oil/water separator. Water is discharged to an onsite process sewer, and LNAPL is recovered in a 1,100-gallon holding tank and recycled by the refinery.

A total of 1,456,300 gallons of groundwater and 4,459 gallons of LNAPL were recovered by the system during the second half of 2015. System performance data for the No. 3 Separator system can be found in **Table 1**.

AOI 8 – Point Breeze 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 on AOI 8 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 will be completed by the end of second quarter 2017 based on the abovementioned PADEP comments.

PGW Border Recovery System – Operation During the Second Half of 2015

The PGW Recovery system is offline. The system is being evaluated for upgrades in 2016.

Jackson Street Sewer Area – Operation During the Second Half of 2015

The Jackson Street Sewer Area system is offline. Due to limited LNAPL presence in the area, the system will remain off unless there are significant increases in LNAPL in the proximal wells. The Jackson Street combined sewer overflow outfall ("CSO") is checked once per shift by PES refinery personnel for a sheen or the presence of LNAPL. There has been no evidence of sheening to the Schuylkill River throughout the second half of 2015.

Jackson Street Sewer Water Curtain – Operation During the Second Half of 2015

The Jackson Street Sewer Water Curtain was operational during the second half of 2015. Due to reliability issues, the flow meter for the water curtain was taken out of service in December 2009. Water flow rate is irrelevant to system operation.

Sunoco agreed at the 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 second half of 2015.

North Yard Bulkhead Area and No. 3 Tank Farm Separator – Operation During the Second Half of 2015

The system was taken offline due to limited LNAPL presence in the area. The system will remain off unless there are significant increases in LNAPL in the proximal wells.

Verizon Border Interim Remedial Actions – Second Half of 2015

Due to impacted groundwater and LNAPL identified at the Verizon South District Work Site (Verizon Site), located at 1851 South 34th Street, Philadelphia, Pennsylvania, the PADEP requested the implementation of interim remedial action in, and adjacent to, the Philadelphia Refinery Complex.

On December 18, 2015, Stantec performed LNAPL recovery via vacuum truck and/or hand-bailing at wells located in AOI 8, adjacent to the Verizon Site. LNAPL was recovered from wells N-137, N-138, N-139, N-142, N-144, N-145, and N-146. Passive absorbent socks were placed in all of the wells except N-146 immediately following LNAPL recovery; an absorbent sock was placed in N-146 on January 28, 2016 upon completion of the LNAPL bail-down test. The recovered groundwater and LNAPL was transported by vacuum truck within the facility for recycling. Approximately 2.65 gallons of LNAPL were recovered and recycled during this event.

The passive absorbent socks will continue to be monitored at least monthly and replaced as necessary for ongoing LNAPL recovery. Additional remedial actions are in the planning process and Evergreen is awaiting a signed access agreement from Verizon in order to perform investigative and remedial work on the Verizon Site as needed.

AOI 9 – Schuylkill River Tank Farm

There are no groundwater or LNAPL recovery systems operational in the area. An SCR was submitted to the PADEP and the USEPA on October 30, 2009. A revised RIR was submitted to the agencies in December 2015.

AOI 10 – West Yard

There are no groundwater or LNAPL recovery systems operational in the area. 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 will be completed in 2016.

AOI 11 – Deep 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. The Final Report was submitted to the agencies on June 21, 2013. Sunoco received a “Disapproval of Final Report” from the PADEP dated September 26, 2013.

Passyunk Avenue Sewer

The Passyunk Avenue Sewer CSO is checked by PES personnel once per shift at low tide and findings are recorded. LNAPL was not observed at the Schuylkill River outfall during the second half of 2015.

Groundwater Monitoring

The current monitoring program consists of quarterly groundwater and LNAPL gauging of select wells, annual groundwater and LNAPL gauging of site-wide wells, and annual groundwater sampling of select perimeter monitoring wells. During the first, third and fourth quarters, select wells are gauged to monitor LNAPL thickness and determine hydraulic effects of targeted recovery systems. The site-wide annual well gauging event is typically conducted during the second quarter of each year with results used to identify the presence of LNAPL and determine groundwater flow patterns.

Liquid level measurements collected during the third quarter of 2015 are provided in **Table 2**. The fourth quarter 2015 liquid level measurements are provided in **Table 3**.

The purpose of the annual groundwater sampling event is to evaluate concentration trends at the perimeter of the refinery. The annual groundwater sampling program consists of sampling select wells throughout the Point Breeze and Girard Point Processing Areas and has historically been performed during the fourth quarter of each year. However, this year and in future years, annual perimeter groundwater sampling will be performed in the second quarter in conjunction with annual site-wide gauging. The annual perimeter groundwater sampling event will be performed in May 2016.

Please contact me at (302) 477-0192 or jroppenheim@evergreenresmgt.com with any questions or comments.

Best Regards,



James Oppenheim, PE
Vice President

Enclosures: Table 1 – Groundwater and LNAPL Recovery Summary, Philadelphia Refinery Complex
 Table 2 – Third Quarter 2015 Gauging Data
 Table 3 – Fourth Quarter 2015 Gauging Data

cc: Paul Gotthold, United States Environmental Protection Agency
 Nicholas Maliha, PE, Philadelphia Water Department
 Charles D. Barksdale, Jr. PE, PES Refining & Marketing, LLC
 Tiffani Doerr, Aquaterra Technologies, Inc.
 Jennifer Menges, Stantec Consulting Services Inc.

File: Philadelphia Refinery Remediation Program
 Groundwater Remediation Status Report, Second Half 2015

Table 1
Groundwater and LNAPL Recovery Summary
Philadelphia Refinery Complex
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC
Third and Fourth Quarters 2015

AOI	RECOVERY SYSTEM AREA		JULY 2015	AUGUST 2015	SEPTEMBER 2015	OCTOBER 2015	NOVEMBER 2015	DECEMBER 2015
1	Belmont Terminal	Groundwater	801,786	511,955	384,837	666,829	646,159	688,533
		LNAPL	43	33	0	0	1,265	50
1	26th Street Sewer Area (26th Street North)	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	279,749	969,019	592,877
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	NA	NA	NA
2	Pollock Street West End System	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	192,000
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	805
2	Pollock Street Vertical Well System	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
2	Pollock Street Horizontal Well System	Groundwater	1,065,101	1,402,160	1,144,939	1,571,727	1,789,822	1,301,406
		LNAPL	NA	NA	NA	NA	NA	NA
3	RW-2	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
4	Penrose Avenue Remediation System	Groundwater	396,356	424,624	414,680	300,360	128,780	200,190
		LNAPL	5	4	38	60	42	119
4	S-30	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
4	S-36	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
5	9 Berth	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
6	27 Pump House	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
7	No. 3 Separator System	Groundwater	299,450	241,450	203,800	254,500	264,000	193,100
		LNAPL	1,263	1,400	735	543	290	229
8	PGW Border Recovery System	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
8	Jackson Street Sewer Area	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
8	NY Bulkhead Area/No. 3 Tank Farm Separator	Groundwater	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE
		LNAPL	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE	OFF-LINE

NOTES:

AOI: Area of interest

LNAPL: Light Non-Aqueous Phase Liquid

NA: Not applicable

All recovery totals are in gallons.

Reported groundwater and LNAPL totals include recovered volumes from June 23 to December 23, 2015.

Some of the recovery systems pump total fluids (groundwater and LNAPL). For the purpose of calculating the volume of liquids recovered for these systems where LNAPL cannot be quantified separately, the volume of total fluids recovered is reported as groundwater recovered.

Belmont Terminal: The Frontage Road system was not operational for the second half of 2015. The Loading Rack system was operational for the second half of 2015 with the exception of the following: The RW-22 power cord was repaired on July 8, and the water pump was restarted. The RW-4 product pump was inoperable from July 17 to July 30. The flow meter was dead on July 30, and the RW-23 and RW-24 product pumps were shut off. The RW-23 and RW-24 product pumps were restarted on August 6. The RW-22 water pump was inoperable on August 12 due to a damaged power cord and (water pump) motor. The system was shut off September 9 to September 10 for fusing on the main discharge line. On September 14, the system was shut off for maintenance to the discharge line. A new water pump was installed in RW-22 on October 1, and the system was restarted. On November 5, the system was down on high holding tank level alarm. The system was restarted on November 9 after the holding tank was vac'd out; the RW-4 product pump was inoperable. On November 16, the RW-22 water pump was inoperable. The breaker was reset, and the water pump was restarted. The RW-22 water pump was tripped again on November 25; the water pump was left off. On December 9, the water pump in RW-24 was running continuously; removed, cleaned, reinstalled, and restarted. The RW-22 water pump was tripped again on December 28; the water pump was left off.

Shunk Street Sewer Ventilation System and Biofilter: The system was operational for the second half of 2015 with the following exception: The system was shut off on November 25 for electrical upgrades. The system was restarted prior to operation and maintenance (O&M) activities completed on December 4.

26th Street Sewer Area: The system was started on October 12. On October 13, the flow meter was inoperable; removed, cleaned, and reinstalled. On December 4, the air compressor was down on rotation. The belts were tightened, the air inlet media was changed, and the system was restarted. On December 9, the system was off due to low oil in the air compressor. The annual air compressor maintenance was performed on December 15, and the system was restarted. On December 22, the system was shut off for maintenance to the manifolds. The system was restarted on December 30 and shut off on December 31.

26th Street & Packer Avenue Sewers Biofilter: The system was operational for the second half of 2015 with the exception of the following: The system was shut off on September 30 for upgrades and remained off the rest of the reporting period.

Pollock Street West End System: On December 1, RW-105, RW-122, and RW-124 were started. RW-129 was started on December 11. RW-117 and RW-128 were started on December 14.

Pollock Street Horizontal Well System: HW-1 and HW-2 were shut off on August 10 for re-development; HW-2 was restarted on August 21, and HW-1 and restarted on August 31. The HW-2 discharge line was snaked on July 10. The HW-2 Y-strainer was clogged with silt, thus not registering flow on July 13; the Y-strainer was removed, cleaned and reinstalled. The HW-1 flow meter was clogged on September 14; the flow meter was cleared, and the system was restarted. On December 14, the HW-3 pump was cycling however, no water was moving; removed the pump and reinstalled on December 18. HW-3 was inoperable from December 21 throughout the remainder of the reporting period. On December 28, the HW-2 pump was removed.

Pollock Street Sewer Outfall Skimmer: The skimmer was off for the second half of 2015 due to the lack of recoverable oil in the outfall.

Penrose Avenue Remediation System: The system was operational for the second half of 2015 with the following exceptions: RW-706 was inoperable on July 15. The pump was removed, cleared, and reinstalled. The flow meter was clogged with iron and debris on July 22. RW-706 was inoperable on July 27; the pump was removed and replaced. The transfer pump was removed and cleaned on July 29. On August 11, RW-700 and RW-706 were hung up, and the ball valve on the bottom of the OWS was leaking. The valve was removed and reversed. The effluent line to the PWD sanitary sewer was cleared on August 13. RW-706 was hung up on August 24. On September 2, RW-708 was hung up. RW-706 was hung up on September 22. The flow meter was clogged on October 15. The system was down on high OWS alarm on October 19, and RW-708 was shut off. The system was down on high OWS alarm again on October 21. RW-706 was hung up on November 4. The system was shut off on November 5 after water was observed coming out of effluent manhole (at PWD connection). The discharge line was jetted on November 19, and the system was restarted. RW-701 was hung up on November 24. RW-708 was restarted on December 2. On December 8, the system was down on high OWS alarm; the alarm was reset, and the system was restarted, with the exception of RW-708. RW-708 was restarted on December 17.

No. 3 Separator System: The system was operational for the second half of 2015 with the exception of the following: On July 6, RW-810 was inoperable. The pump was pulled, repaired, and restarted. RW-705 was hung up on September 14. On November 3, RW-810 was hung up, and a leak was observed on the OWS. The OWS was repaired, and RW-810 remained off until November 4 when the pump was removed, cleaned, and reinstalled.

Jackson Street Water Curtain: The system was operational for the second half of 2015.

Table 2
Third Quarter 2015 Gauging Data
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	ARCO-1	8/6/2015	---	25.55	---	Intermediate	Static	
AOI 1	ARCO-1D	8/6/2015	---	26.53	---	Deep	Static	
AOI 1	ARCO-2	8/6/2015	---	25.65	---	Intermediate	Static	
AOI 1	ARCO-3	8/6/2015	---	24.42	---	Intermediate	Static	
AOI 1	MW-26	8/6/2015	22.20	23.46	1.26	Shallow	Static	
AOI 1	MW-27	8/6/2015	24.26	24.30	0.04	Shallow	Static	
AOI 1	MW-28	8/6/2015	---	24.53	---	Intermediate	Static	
AOI 1	MW-29	8/6/2015	24.23	26.30	2.07	Intermediate	Static	
AOI 1	MW-30	8/6/2015	---	27.13	---	Shallow	Static	
AOI 1	MW-31	8/6/2015	---	25.50	---	Shallow	Static	
AOI 1	MW-32	8/6/2015	---	24.85	---	Intermediate	Static	
AOI 1	MW-33	8/6/2015	---	25.93	---	Shallow	Static	
AOI 1	MW-35	8/6/2015	---	26.72	---	Intermediate	Static	
AOI 1	MW-36	8/6/2015	---	27.95	---	Intermediate	Static	
AOI 1	MW-37	8/6/2015	---	27.01	---	Intermediate	Static	
AOI 1	MW-38	8/6/2015	---	23.18	---	Intermediate	Static	
AOI 1	MW-39	8/6/2015	---	23.02	---	Intermediate	Static	
AOI 1	MW-40	8/6/2015	23.34	23.67	0.33	Intermediate	Static	
AOI 1	MW-41	8/6/2015	---	22.94	---	Intermediate	Static	
AOI 1	MW-43	8/7/2015	---	26.08	---	Intermediate	Static	
AOI 1	MW-44	8/6/2015	---	25.40	---	Intermediate	Static	
AOI 1	OW-2	8/6/2015	---	27.03	---	Shallow	Static	
AOI 1	OW-12	8/6/2015	---	25.65	---	Shallow	Static	
AOI 1	OW-13	8/6/2015	---	27.62	---	Shallow	Static	
AOI 1	OW-14	8/6/2015	---	27.64	---	Shallow	Static	
AOI 1	OW-16	8/6/2015	26.81	26.89	0.08	Shallow	Static	
AOI 1	OW-17	8/6/2015	---	27.88	---	Shallow	Static	
AOI 1	OW-18	8/6/2015	---	26.95	---	Intermediate	Static	
AOI 1	OW-19	8/6/2015	NA	NA	NA	Intermediate	Static	Not accessible - vehicle parked on top of well.
AOI 1	OW-20	8/6/2015	---	27.31	---	Shallow	Static	
AOI 1	PZ-400	8/6/2015	---	23.65	---	Shallow	Static	
AOI 1	PZ-401	8/5/2015	19.64	19.65	0.01	Shallow	Static	
AOI 1	PZ-402	8/5/2015	19.31	19.53	0.22	Shallow	Static	
AOI 1	PZ-403	8/5/2015	22.71	22.72	0.01	Shallow	Static	
AOI 1	PZ-404	8/5/2015	26.01	26.49	0.48	Shallow	Static	
AOI 1	RW-1	8/6/2015	NA	NA	NA	Intermediate	Static	Not accessible - vehicle parked on top of well.
AOI 1	RW-4	8/6/2015	25.90	26.26	0.36	Intermediate	Pumping	
AOI 1	RW-6	8/6/2015	---	26.48	---	Intermediate	Static	
AOI 1	RW-7	8/6/2015	---	23.81	---	Intermediate	Static	
AOI 1	RW-15	8/6/2015	---	26.55	---	Intermediate	Static	
AOI 1	RW-21	8/6/2015	---	24.50	---	Shallow	Static	
AOI 1	RW-22	8/6/2015	26.25	26.54	0.29	Shallow	Pumping	
AOI 1	RW-23	8/6/2015	24.05	26.02	1.97	Intermediate	Pumping	
AOI 1	RW-24	8/6/2015	26.54	28.77	2.23	Intermediate	Pumping	
AOI 1	RW-25	8/6/2015	25.55	26.27	0.72	Intermediate	Static	
AOI 1	RW-26	8/6/2015	---	25.33	---	Intermediate	Static	
AOI 1	RW-27	8/6/2015	---	25.84	---	Intermediate	Static	
AOI 1	RW-28	8/6/2015	---	25.61	---	Intermediate	Static	
AOI 1	RW-29	8/6/2015	---	25.50	---	Intermediate	Static	
AOI 1	RW-30	8/6/2015	---	25.36	---	Intermediate	Static	
AOI 1	RW-31	8/6/2015	---	25.30	---	Intermediate	Static	
AOI 1	RW-32	8/6/2015	---	23.41	---	Intermediate	Static	
AOI 1	RW-110	8/5/2015	---	16.32	---	Shallow	Static	
AOI 1	RW-111	8/5/2015	---	16.47	---	Shallow	Static	
AOI 1	RW-112	8/5/2015	---	16.38	---	Shallow	Static	
AOI 1	RW-400	8/6/2015	---	23.77	---	Intermediate	Static	
AOI 1	RW-401	8/7/2015	20.36	20.95	0.59	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	RW-402	8/5/2015	---	17.61	---	Intermediate	Static	
AOI 1	RW-403	8/5/2015	---	20.64	---	Intermediate	Static	
AOI 1	RW-404	8/5/2015	---	21.98	---	Intermediate	Static	
AOI 1	RW-405	8/5/2015	24.29	24.37	0.08	Intermediate	Static	
AOI 1	RW-406	8/5/2015	22.64	23.08	0.44	Intermediate	Static	
AOI 1	S-41	8/5/2015	---	25.47	---	Intermediate	Static	
AOI 1	S-42I	8/5/2015	---	24.99	---	Intermediate	Static	
AOI 1	S-43	8/5/2015	---	23.65	---	Intermediate	Static	
AOI 1	S-44	8/5/2015	---	25.29	---	Intermediate	Static	
AOI 1	S-45	8/5/2015	DRY	DRY	DRY	Intermediate	Static	Well is dry at 20.00 ft bloc.
AOI 1	S-46	8/5/2015	---	21.21	---	Intermediate	Static	
AOI 1	S-46D	8/5/2015	---	14.34	---	Deep	Static	
AOI 1	S-47I	8/5/2015	---	20.84	---	Intermediate	Static	
AOI 1	S-50	8/5/2015	---	22.49	---	Shallow	Static	
AOI 1	S-51	8/5/2015	---	22.10	---	Shallow	Static	
AOI 1	S-52	8/5/2015	---	22.70	---	Intermediate	Static	
AOI 1	S-74	8/6/2015	---	25.57	---	Shallow	Static	
AOI 1	S-75	8/6/2015	---	26.75	---	Shallow	Static	
AOI 1	S-76	8/6/2015	26.53	27.58	1.05	Shallow	Static	
AOI 1	S-77	8/5/2015	10.11	10.85	0.74	Shallow	Static	
AOI 1	S-77P	8/5/2015	---	28.50	---	Shallow	Static	
AOI 1	S-78	8/5/2015	---	25.89	---	Intermediate	Static	
AOI 1	S-79	8/5/2015	23.40	23.73	0.33	Intermediate	Static	
AOI 1	S-79P	8/5/2015	---	26.11	---	Shallow	Static	
AOI 1	S-80	8/5/2015	---	27.67	---	Shallow	Static	
AOI 1	S-80D	8/5/2015	---	29.71	---	Deep	Static	
AOI 1	S-81	8/5/2015	21.13	21.13	<0.01	Shallow	Static	
AOI 1	S-82	8/5/2015	---	22.60	---	Shallow	Static	
AOI 1	S-83	8/5/2015	19.12	19.60	0.48	Shallow	Static	
AOI 1	S-84P	8/5/2015	NA	NA	NA	Shallow	Static	Not accessible - covered with stone and dirt.
AOI 1	S-85	8/5/2015	---	23.33	---	Shallow	Static	
AOI 1	S-86	8/5/2015	25.95	25.96	0.01	Intermediate	Static	
AOI 1	S-87I	8/5/2015	24.59	24.59	<0.01	Intermediate	Static	
AOI 1	S-88	8/5/2015	---	24.81	---	Intermediate	Static	
AOI 1	S-88A	8/5/2015	---	23.41	---	Shallow	Static	
AOI 1	S-89	8/5/2015	---	26.11	---	Intermediate	Static	
AOI 1	S-95	8/5/2015	---	22.02	---	Intermediate	Static	
AOI 1	S-98	8/6/2015	---	22.85	---	Intermediate	Static	
AOI 1	S-99	8/6/2015	---	24.82	---	Intermediate	Static	
AOI 1	S-100	8/6/2015	22.66	24.05	1.39	Intermediate	Static	
AOI 1	S-101	8/6/2015	---	47.09	---	Intermediate	Static	
AOI 1	S-116	8/5/2015	NA	NA	NA	Shallow	Static	Not accessible - covered with stone and dirt.
AOI 1	S-117	8/5/2015	---	16.89	---	Shallow	Static	
AOI 1	S-118	8/5/2015	---	17.16	---	Shallow	Static	
AOI 1	S-125	8/5/2015	21.80	21.86	0.06	Shallow	Static	
AOI 1	S-126	8/5/2015	13.62	13.69	0.07	Shallow	Static	
AOI 1	S-127	8/5/2015	---	16.24	---	Shallow	Static	
AOI 1	S-162	8/5/2015	---	16.39	---	Shallow	Static	
AOI 1	S-164	8/5/2015	---	15.11	---	Shallow	Static	
AOI 1	S-179	8/5/2015	---	19.79	---	Intermediate	Static	
AOI 1	S-180	8/5/2015	---	19.58	---	Intermediate	Static	
AOI 1	S-181	8/5/2015	---	20.27	---	Intermediate	Static	
AOI 1	S-182	8/5/2015	---	20.46	---	Intermediate	Static	
AOI 1	S-183	8/5/2015	---	20.89	---	Intermediate	Static	
AOI 1	S-184	8/5/2015	---	16.60	---	Intermediate	Static	
AOI 1	S-185	8/5/2015	---	19.61	---	Intermediate	Static	
AOI 1	S-186	8/5/2015	---	21.62	---	Intermediate	Static	
AOI 1	S-187	8/5/2015	---	21.77	---	Intermediate	Static	
AOI 1	S-188	8/5/2015	---	22.16	---	Intermediate	Static	
AOI 1	S-189	8/5/2015	23.30	23.43	0.13	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	S-190	8/5/2015	---	22.72	---	Intermediate	Static	
AOI 1	S-191	8/5/2015	---	22.69	---	Intermediate	Static	
AOI 1	S-192	8/5/2015	---	23.57	---	Intermediate	Static	
AOI 1	S-193	8/6/2015	---	23.67	---	Intermediate	Static	
AOI 1	S-194	8/6/2015	---	26.10	---	Shallow	Static	
AOI 1	S-196	8/6/2015	---	45.34	---	Shallow	Static	
AOI 1	S-197	8/6/2015	---	45.05	---	Shallow	Static	
AOI 1	S-198	8/5/2015	24.74	26.32	1.58	Intermediate	Static	
AOI 1	S-199	8/5/2015	24.70	25.50	0.80	Intermediate	Static	
AOI 1	S-200	8/5/2015	---	24.77	---	Intermediate	Static	
AOI 1	S-201	8/7/2015	23.42	24.13	0.71	Intermediate	Static	
AOI 1	S-202	8/5/2015	---	27.93	---	Intermediate	Static	
AOI 1	S-203	8/5/2015	27.44	28.90	1.46	Intermediate	Static	
AOI 1	S-205	8/5/2015	17.14	18.45	1.31	Intermediate	Static	
AOI 1	S-206	8/5/2015	---	26.91	---	Intermediate	Static	
AOI 1	S-207	8/5/2015	---	13.04	---	Intermediate	Static	
AOI 1	S-208	8/5/2015	---	18.93	---	Intermediate	Static	
AOI 1	S-209	8/5/2015	---	25.83	---	Intermediate	Static	
AOI 1	S-210	8/5/2015	23.77	23.79	0.02	Intermediate	Static	
AOI 1	S-211	8/5/2015	---	13.59	---	Intermediate	Static	
AOI 1	S-212	8/5/2015	---	17.10	---	Intermediate	Static	
AOI 1	S-213	8/5/2015	---	13.68	---	Intermediate	Static	
AOI 1	S-214	8/5/2015	---	18.79	---	Intermediate	Static	
AOI 1	S-215	8/5/2015	26.30	26.31	0.01	Intermediate	Static	
AOI 1	S-226	8/5/2015	---	21.72	---	Intermediate	Static	
AOI 1	S-227	8/5/2015	---	22.20	---	Intermediate	Static	
AOI 1	S-228	8/5/2015	---	21.51	---	Intermediate	Static	
AOI 1	S-230	8/5/2015	---	19.67	---	Intermediate	Static	
AOI 1	S-231	8/5/2015	---	20.05	---	Intermediate	Static	
AOI 1	S-232	8/5/2015	---	20.83	---	Intermediate	Static	
AOI 1	S-255	8/5/2015	---	22.44	---	Intermediate	Static	
AOI 1	S-256	8/5/2015	---	21.59	---	Intermediate	Static	
AOI 1	S-257	8/5/2015	---	23.14	---	Intermediate	Static	
AOI 1	S-258	8/5/2015	---	23.74	---	Intermediate	Static	
AOI 1	S-259	8/5/2015	---	24.43	---	Intermediate	Static	
AOI 1	S-260	8/5/2015	---	23.32	---	Intermediate	Static	
AOI 1	S-261	8/5/2015	---	25.54	---	Intermediate	Static	
AOI 1	S-262	8/5/2015	---	18.39	---	Intermediate	Static	
AOI 1	S-263	8/5/2015	---	15.96	---	Intermediate	Static	
AOI 1	S-264D	8/5/2015	---	25.84	---	Deep	Static	
AOI 1	S-265	8/6/2015	14.31	14.35	0.04	Intermediate	Static	
AOI 1	S-267	8/6/2015	---	18.32	---	Intermediate	Static	
AOI 1	S-268	8/6/2015	---	26.76	---	Intermediate	Static	
AOI 1	S-269	8/5/2015	---	19.94	---	Intermediate	Static	
AOI 1	S-270	8/5/2015	---	21.17	---	Intermediate	Static	
AOI 1	S-271	8/5/2015	---	24.02	---	Intermediate	Static	
AOI 1	S-272	8/5/2015	---	23.78	---	Intermediate	Static	
AOI 1	S-273	8/5/2015	---	23.19	---	Intermediate	Static	
AOI 1	S-274	8/5/2015	22.83	22.86	0.03	Intermediate	Static	
AOI 1	S-275	8/5/2015	---	22.08	---	Intermediate	Static	
AOI 1	S-276	8/5/2015	22.07	22.79	0.72	Intermediate	Static	
AOI 1	S-277	8/5/2015	21.39	22.22	0.83	Intermediate	Static	
AOI 1	S-312	8/5/2015	---	6.65	---	Shallow/Intermediate	Static	
AOI 1	S-330	8/6/2015	---	25.32	---	Intermediate	Static	
AOI 1	S-331	8/6/2015	---	27.22	---	Intermediate	Static	
AOI 1	S-332	8/7/2015	---	25.93	---	Intermediate	Static	
AOI 1	S-388D	8/5/2015	---	25.08	---	Deep	Static	
AOI 1	S-389D	8/5/2015	---	25.00	---	Deep	Static	
AOI 1	S-390D	8/5/2015	---	25.29	---	Deep	Static	
AOI 1	S-391D	8/5/2015	NM	NM	NM	Deep	Static	Well is destroyed.

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	S-392D	8/5/2015	---	19.07	---	Deep	Static	
AOI 1	S-393D	8/6/2015	---	29.46	---	Deep	Static	
AOI 1	S-394	8/6/2015	---	29.63	---	Deep	Static	
AOI 1	S-395	8/6/2015	---	27.44	---	Shallow	Static	
AOI 1	S-396	8/5/2015	---	24.69	---	Intermediate	Static	
AOI 1	S-397	8/5/2015	---	25.30	---	Intermediate	Static	
AOI 1	S-398	8/5/2015	---	22.54	---	Intermediate	Static	
AOI 1	S-399	8/5/2015	---	19.25	---	Intermediate	Static	
AOI 1	S-400	8/5/2015	NM	NM	NM	Deep	Static	Well is destroyed.
AOI 1	S-401	8/5/2015	---	25.93	---	Intermediate	Static	
AOI 1	S-402	8/5/2015	---	28.79	---	Not Classified	Static	
AOI 1	S-403	8/5/2015	---	23.31	---	Not Classified	Static	
AOI 1	S-404	8/5/2015	---	11.92	---	Not Classified	Static	
AOI 1	S-405	8/5/2015	---	22.04	---	Not Classified	Static	
AOI 1	S-417	8/5/2015	26.84	28.42	1.58	Not Classified	Static	
AOI 1	S-418	8/5/2015	---	17.53	---	Not Classified	Static	
AOI 1	S-419	8/5/2015	---	14.83	---	Not Classified	Static	
AOI 1	TW-3	8/6/2015	---	27.62	---	Shallow	Static	
AOI 1	TW-5	8/6/2015	---	27.35	---	Shallow	Static	
AOI 1	TW-8	8/6/2015	---	25.73	---	Shallow	Static	
AOI 1	TW-9	8/6/2015	---	27.47	---	Shallow	Static	
AOI 1	TW-10	8/6/2015	25.93	25.93	<0.01	Shallow	Static	
AOI 1	TW-11	8/6/2015	---	27.90	---	Shallow	Static	
AOI 2	C-HEADER	8/5/2015	---	11.30	---	Shallow/Intermediate	Static	
AOI 2	PGW-MW-8S	8/5/2015	---	29.99	---	Shallow	Static	
AOI 2	PZ-100	8/5/2015	---	15.27	---	Shallow	Static	
AOI 2	PZ-101	8/5/2015	---	7.17	---	Shallow	Static	
AOI 2	River-1	8/5/2015	---	10.40	---	NA	Static	At 0905.
AOI 2	River-3	8/5/2015	---	11.04	---	NA	Static	At 1014.
AOI 2	RW-100	8/5/2015	17.47	17.91	0.44	Shallow	Static	
AOI 2	RW-101	8/5/2015	16.85	17.52	0.67	Shallow	Static	
AOI 2	RW-102	8/5/2015	14.08	14.09	0.01	Shallow	Static	
AOI 2	RW-103	8/5/2015	16.41	17.22	0.81	Shallow	Static	
AOI 2	RW-104	8/5/2015	---	7.90	---	Shallow	Static	
AOI 2	RW-105	8/5/2015	7.94	7.94	<0.01	Shallow	Static	
AOI 2	RW-106	8/5/2015	6.53	6.53	<0.01	Shallow	Static	
AOI 2	RW-107	8/5/2015	---	8.88	---	Shallow	Static	
AOI 2	RW-108	8/5/2015	---	7.48	---	Shallow	Static	
AOI 2	RW-109	8/5/2015	---	6.85	---	Shallow	Static	
AOI 2	RW-113	8/5/2015	---	7.78	---	Shallow	Static	
AOI 2	RW-114	8/5/2015	---	10.36	---	Shallow	Static	
AOI 2	RW-115	8/5/2015	7.57	7.57	<0.01	Shallow	Static	
AOI 2	RW-116	8/5/2015	---	8.06	---	Shallow	Static	
AOI 2	RW-117	8/5/2015	7.10	7.19	0.09	Shallow	Static	
AOI 2	RW-118	8/5/2015	9.01	9.01	<0.01	Shallow	Static	
AOI 2	RW-119	8/5/2015	10.02	10.03	0.01	Shallow	Static	
AOI 2	RW-120	8/5/2015	10.78	10.78	<0.01	Shallow	Static	
AOI 2	RW-121	8/5/2015	---	12.51	---	Shallow/Intermediate	Static	
AOI 2	RW-122	8/5/2015	7.60	7.61	0.01	Shallow	Static	
AOI 2	RW-123	8/5/2015	---	7.20	---	Shallow	Static	
AOI 2	RW-124	8/5/2015	---	6.39	---	Shallow	Static	
AOI 2	RW-125	8/5/2015	---	12.02	---	Shallow	Static	
AOI 2	RW-126	8/5/2015	6.71	6.71	<0.01	Shallow	Static	
AOI 2	RW-127	8/5/2015	---	11.25	---	Shallow	Static	
AOI 2	RW-128	8/5/2015	7.58	7.58	<0.01	Shallow	Static	
AOI 2	RW-129	8/5/2015	8.19	8.20	0.01	Shallow	Static	
AOI 2	RW-600	8/5/2015	---	4.89	---	Shallow/Intermediate	Static	
AOI 2	RW-601	8/5/2015	---	8.82	---	Shallow/Intermediate	Static	
AOI 2	S-48	8/6/2015	19.09	19.50	0.41	Shallow/Intermediate	Static	
AOI 2	S-53	8/5/2015	17.63	18.13	0.50	Shallow	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 2	S-54	8/5/2015	21.24	21.43	0.19	Intermediate	Static	
AOI 2	S-61	8/5/2015	15.94	15.98	0.04	Shallow/Intermediate	Static	
AOI 2	S-62	8/5/2015	---	18.03	---	Intermediate	Static	
AOI 2	S-63	8/5/2015	18.38	18.38	<0.01	Shallow	Static	
AOI 2	S-64	8/5/2015	---	5.75	---	Shallow/Intermediate	Static	
AOI 2	S-65	8/5/2015	8.93	8.96	0.03	Shallow/Intermediate	Static	
AOI 2	S-70	8/7/2015	NM	NM	NM	Shallow/Intermediate	Static	Well is filled with stone at 14.40 ft bloc.
AOI 2	S-71	8/5/2015	---	19.97	---	Shallow/Intermediate	Static	
AOI 2	S-72	8/5/2015	---	26.36	---	Intermediate	Static	
AOI 2	S-72D	8/5/2015	---	32.26	---	Deep	Static	
AOI 2	S-91	8/5/2015	18.50	18.50	<0.01	Intermediate	Static	
AOI 2	S-92	8/5/2015	10.24	10.28	0.04	Intermediate	Static	
AOI 2	S-93	8/5/2015	---	15.28	---	Intermediate	Static	
AOI 2	S-105	8/5/2015	---	10.32	---	Shallow	Static	
AOI 2	S-107	8/5/2015	8.65	9.02	0.37	Shallow/Intermediate	Static	
AOI 2	S-108	8/5/2015	5.23	5.24	0.01	Shallow/Intermediate	Static	
AOI 2	S-110	8/5/2015	---	15.11	---	Shallow/Intermediate	Static	
AOI 2	S-130	8/5/2015	19.42	19.68	0.26	Shallow/Intermediate	Static	
AOI 2	S-131	8/5/2015	14.30	16.27	1.97	Shallow	Static	
AOI 2	S-132	8/5/2015	---	17.69	---	Shallow/Intermediate	Static	
AOI 2	S-133	8/5/2015	---	17.96	---	Shallow/Intermediate	Static	
AOI 2	S-134	8/5/2015	---	19.32	---	Shallow/Intermediate	Static	
AOI 2	S-135	8/5/2015	21.70	23.80	2.10	Shallow	Static	
AOI 2	S-136	8/5/2015	---	17.23	---	Shallow/Intermediate	Static	
AOI 2	S-137	8/5/2015	---	16.51	---	Shallow/Intermediate	Static	
AOI 2	S-139	8/5/2015	---	18.41	---	Shallow/Intermediate	Static	
AOI 2	S-140	8/5/2015	---	19.03	---	Shallow/Intermediate	Static	
AOI 2	S-141	8/5/2015	19.22	19.74	0.52	Shallow/Intermediate	Static	
AOI 2	S-142	8/5/2015	17.98	18.38	0.40	Shallow	Static	
AOI 2	S-143	8/5/2015	NM	NM	NM	Shallow/Intermediate	Static	Well is blocked at 9.75 ft bloc.
AOI 2	S-150	8/5/2015	---	17.03	---	Shallow/Intermediate	Static	
AOI 2	S-152	8/5/2015	---	7.50	---	Shallow/Intermediate	Static	
AOI 2	S-153	8/5/2015	---	8.20	---	Shallow/Intermediate	Static	
AOI 2	S-154	8/5/2015	---	10.73	---	Shallow/Intermediate	Static	
AOI 2	S-156	8/5/2015	17.12	18.94	1.82	Shallow	Static	
AOI 2	S-157	8/5/2015	15.66	18.42	2.76	Shallow/Intermediate	Static	
AOI 2	S-159	8/5/2015	15.44	15.44	<0.01	Shallow/Intermediate	Static	
AOI 2	S-165	8/5/2015	---	16.16	---	Shallow/Intermediate	Static	
AOI 2	S-166	8/5/2015	---	16.14	---	Shallow/Intermediate	Static	
AOI 2	S-174	8/5/2015	10.06	11.61	1.55	Shallow	Static	
AOI 2	S-175	8/5/2015	16.68	16.69	0.01	Shallow	Static	
AOI 2	S-177	8/5/2015	NA	NA	NA	Shallow/Intermediate	Static	Not accessible - area around well is flooded.
AOI 2	S-178	8/5/2015	NA	NA	NA	Shallow/Intermediate	Static	Not accessible - area around well is flooded.
AOI 2	S-246A	8/5/2015	---	10.00	---	Shallow/Intermediate	Static	
AOI 2	S-247	8/5/2015	---	11.03	---	Shallow/Intermediate	Static	
AOI 2	S-248	8/5/2015	---	9.89	---	Shallow/Intermediate	Static	
AOI 2	S-249	8/5/2015	---	11.25	---	Shallow/Intermediate	Static	
AOI 2	S-251	8/5/2015	---	16.33	---	Shallow/Intermediate	Static	
AOI 2	S-252	8/5/2015	---	16.38	---	Shallow/Intermediate	Static	
AOI 2	S-253	8/5/2015	---	17.90	---	Shallow/Intermediate	Static	
AOI 2	S-254	8/5/2015	18.27	18.27	<0.01	Shallow/Intermediate	Static	
AOI 2	S-292	8/5/2015	DRY	DRY	DRY	Shallow/Intermediate	Static	Well is dry at 19.50 ft bloc.
AOI 2	S-294	8/5/2015	---	29.57	---	Intermediate	Static	
AOI 2	S-294D	8/5/2015	---	32.11	---	Deep	Static	
AOI 2	S-295	8/5/2015	---	23.70	---	Shallow/Intermediate	Static	
AOI 2	S-297	8/7/2015	23.47	23.60	0.13	Shallow/Intermediate	Static	Well is damaged - metal casing and concrete pulled out of ground
AOI 2	S-298	8/5/2015	15.99	16.59	0.60	Shallow/Intermediate	Static	
AOI 2	S-299	8/5/2015	---	20.29	---	Shallow/Intermediate	Static	
AOI 2	S-300	8/5/2015	---	20.09	---	Shallow/Intermediate	Static	
AOI 2	S-301	8/5/2015	---	15.70	---	Shallow/Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 2	S-302	8/5/2015	21.00	21.23	0.23	Intermediate	Static	
AOI 2	S-302D	8/5/2015	---	23.96	---	Deep	Static	
AOI 2	S-303	8/5/2015	---	19.15	---	Shallow/Intermediate	Static	
AOI 2	S-304	8/5/2015	11.67	11.67	<0.01	Shallow/Intermediate	Static	
AOI 2	S-305	8/5/2015	---	17.89	---	Intermediate	Static	
AOI 2	S-305D	8/5/2015	---	19.65	---	Deep	Static	
AOI 2	S-306	8/5/2015	---	19.64	---	Intermediate	Static	
AOI 2	S-307	8/5/2015	---	15.27	---	Shallow/Intermediate	Static	
AOI 2	S-308	8/5/2015	---	24.01	---	Shallow/Intermediate	Static	
AOI 2	S-309	8/5/2015	---	17.01	---	Shallow/Intermediate	Static	
AOI 2	S-310	8/5/2015	---	8.91	---	Shallow/Intermediate	Static	Well is damaged.
AOI 2	S-311	8/5/2015	24.62	24.65	0.03	Intermediate	Static	
AOI 2	S-313	8/5/2015	---	17.95	---	Shallow	Static	
AOI 2	S-314	8/5/2015	---	18.02	---	Shallow	Static	
AOI 2	S-315	8/5/2015	18.14	18.21	0.07	Shallow	Static	
AOI 2	S-316	8/5/2015	---	17.05	---	Shallow	Static	
AOI 2	S-317	8/5/2015	---	17.49	---	Shallow	Static	
AOI 2	S-318	8/5/2015	---	21.34	---	Shallow/Intermediate	Static	
AOI 2	S-328	8/5/2015	18.38	18.39	0.01	Shallow/Intermediate	Static	
AOI 2	S-333	8/5/2015	---	12.42	---	Shallow/Intermediate	Static	
AOI 2	S-335	8/5/2015	---	10.77	---	Shallow/Intermediate	Static	Casing broken at grade.
AOI 2	S-336	8/5/2015	---	8.99	---	Shallow/Intermediate	Static	
AOI 2	S-337	8/5/2015	---	10.72	---	Shallow/Intermediate	Static	
AOI 2	S-338	8/5/2015	12.37	12.45	0.08	Shallow/Intermediate	Static	
AOI 2	S-346	8/5/2015	17.42	17.80	0.38	Shallow/Intermediate	Static	
AOI 2	S-347	8/5/2015	17.06	17.62	0.56	Shallow/Intermediate	Static	
AOI 2	S-348	8/5/2015	11.68	11.99	0.31	Shallow/Intermediate	Static	
AOI 2	S-349	8/5/2015	13.72	13.85	0.13	Shallow/Intermediate	Static	
AOI 2	S-350	8/5/2015	---	26.71	---	Shallow/Intermediate	Static	
AOI 2	S-351	8/5/2015	---	30.42	---	Shallow/Intermediate	Static	
AOI 2	S-354	8/5/2015	---	24.32	---	Shallow/Intermediate	Static	
AOI 2	S-355	8/5/2015	26.55	27.00	0.45	Shallow/Intermediate	Static	
AOI 2	S-357	8/5/2015	20.44	20.75	0.31	Shallow/Intermediate	Static	
AOI 2	S-359	8/5/2015	---	16.39	---	Shallow/Intermediate	Static	
AOI 2	S-360	8/5/2015	21.98	21.98	<0.01	Shallow/Intermediate	Static	
AOI 2	S-361	8/5/2015	---	23.10	---	Shallow/Intermediate	Static	
AOI 2	S-362	8/5/2015	NM	NM	NM	Shallow/Intermediate	Static	Well is blocked at 4.15 ft bloc.
AOI 2	S-363	8/5/2015	---	24.46	---	Shallow/Intermediate	Static	
AOI 2	S-406	8/5/2015	---	9.43	---	Shallow/Intermediate	Static	
AOI 2	S-420	8/5/2015	---	6.59	---	shallow	Static	
AOI 2	SD-1	8/5/2015	---	7.90	---	Shallow	Static	
AOI 3	RW-2	8/3/2015	11.05	11.44	0.39	Intermediate	Static	
AOI 4	RW-700	8/3/2015	---	20.43	---	Intermediate	Pumping	
AOI 4	RW-701	8/3/2015	---	19.58	---	Intermediate	Pumping	
AOI 4	RW-702	8/3/2015	---	31.70	---	Intermediate	Pumping	
AOI 4	RW-703	8/3/2015	---	30.17	---	Intermediate	Pumping	
AOI 4	RW-704	8/3/2015	---	21.40	---	Intermediate	Pumping	
AOI 4	RW-705	8/3/2015	---	14.84	---	Intermediate	Static	
AOI 4	RW-706	8/3/2015	---	19.78	---	Intermediate	Pumping	
AOI 4	RW-707	8/3/2015	---	15.51	---	Intermediate	Static	
AOI 4	RW-708	8/3/2015	---	14.63	---	Intermediate	Pumping	
AOI 4	RW-709	8/3/2015	---	14.49	---	Intermediate	Static	
AOI 4	RW-710	8/3/2015	---	15.28	---	Intermediate	Static	
AOI 4	RW-711	8/3/2015	NM	NM	NM	Intermediate	Static	Top of pump at 14.37 ft. bloc.
AOI 4	RW-712	8/3/2015	---	14.78	---	Intermediate	Static	
AOI 4	RW-713	8/3/2015	---	14.20	---	Intermediate	Static	
AOI 4	RW-714	8/3/2015	---	14.43	---	Intermediate	Static	
AOI 4	RW-715	8/3/2015	---	14.49	---	Intermediate	Static	
AOI 4	RW-716	8/3/2015	---	14.66	---	Intermediate	Static	
AOI 4	RW-717	8/3/2015	---	14.70	---	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 4	S-29	8/3/2015	20.05	23.24	3.19	Intermediate	Static	
AOI 4	S-30	8/3/2015	20.87	28.90	8.03	Intermediate	Static	
AOI 4	S-34	8/3/2015	---	19.84	---	Shallow	Static	
AOI 4	S-35	8/3/2015	---	20.00	---	Shallow	Static	
AOI 4	S-36	8/3/2015	---	23.12	---	Shallow	Static	
AOI 4	S-221	8/3/2015	21.93	23.04	1.11	Intermediate	Static	
AOI 4	S-236	8/3/2015	22.00	23.08	1.08	Intermediate	Static	
AOI 4	S-237	8/3/2015	21.84	23.06	1.22	Intermediate	Static	
AOI 4	S-240	8/3/2015	22.87	23.60	0.73	Intermediate	Static	
AOI 4	S-241	8/3/2015	25.00	26.82	1.82	Intermediate	Static	
AOI 4	S-279	8/3/2015	24.95	24.95	<0.01	Intermediate	Static	
AOI 5	RWBH-1	8/3/2015	---	3.68	---	Shallow	Static	
AOI 5	RWBH-2	8/3/2015	3.98	3.98	<0.01	Shallow	Static	
AOI 6	B-124	8/3/2015	4.88	6.77	1.89	Shallow	Static	
AOI 6	B-132	8/3/2015	4.57	4.66	0.09	Shallow	Static	
AOI 6	B-133	8/3/2015	---	4.99	---	Shallow	Static	
AOI 6	B-134	8/3/2015	4.60	4.60	<0.01	Shallow	Static	
AOI 6	B-136	8/3/2015	4.87	4.88	0.01	Shallow	Static	
AOI 6	B-137	8/3/2015	4.14	4.60	0.46	Shallow	Static	
AOI 6	B-138	8/3/2015	4.29	4.29	<0.01	Shallow	Static	
AOI 6	B-139	8/3/2015	---	3.93	---	Shallow	Static	Well was damaged during unit shut-down. The casing is broken approximately 6" below grade.
AOI 6	B-142	8/3/2015	6.75	7.53	0.78	Shallow	Static	
AOI 6	B-143	8/3/2015	4.81	5.42	0.61	Shallow	Static	
AOI 6	B-147	8/3/2015	5.78	5.91	0.13	Shallow	Static	
AOI 6	SUMP-1	8/3/2015	5.37	5.48	0.11	Shallow	Static	
AOI 7	River-4	8/4/2015	---	9.25	---	NA	Static	At 0845.
AOI 7	RW-801	8/4/2015	---	19.10	---	Shallow	Pumping	
AOI 7	RW-802	8/4/2015	21.20	21.20	<0.01	Shallow	Pumping	
AOI 7	RW-803	8/4/2015	---	21.25	---	Shallow	Pumping	
AOI 7	RW-804	8/4/2015	---	21.20	---	Shallow	Pumping	
AOI 7	RW-805	8/4/2015	---	18.10	---	Shallow	Pumping	
AOI 7	RW-806	8/4/2015	---	20.30	---	Shallow	Pumping	
AOI 7	RW-807	8/4/2015	---	20.70	---	Shallow	Pumping	
AOI 7	RW-808	8/4/2015	---	18.75	---	Shallow	Pumping	
AOI 7	RW-809	8/4/2015	---	19.75	---	Shallow	Pumping	
AOI 7	RW-810	8/4/2015	15.10	15.10	<0.01	Shallow	Pumping	
AOI 8	N-76	8/4/2015	19.80	24.69	4.89	Intermediate	Static	
AOI 8	N-137	8/4/2015	17.21	17.53	0.32	Intermediate	Static	
AOI 8	N-138	8/4/2015	26.88	27.25	0.37	Intermediate	Static	
AOI 8	N-139	8/4/2015	26.63	27.03	0.40	Intermediate	Static	
AOI 8	N-140	8/4/2015	---	16.90	---	Shallow	Static	
AOI 8	N-141	8/4/2015	---	13.62	---	Shallow	Static	
AOI 8	N-142	8/4/2015	26.28	26.62	0.34	Shallow	Static	
AOI 8	N-143	8/4/2015	---	22.45	---	Shallow	Static	
AOI 8	N-144	8/4/2015	---	25.62	---	Shallow	Static	
AOI 8	N-145	8/4/2015	17.74	17.99	0.25	Shallow	Static	
AOI 8	N-146	8/4/2015	17.21	18.36	1.15	Shallow	Static	
AOI 8	River-2	8/4/2015	---	11.12	---	NA	Static	At 0928.
AOI 8	RW-200	8/4/2015	---	6.04	---	Intermediate	Static	
AOI 8	RW-201	8/4/2015	22.71	23.09	0.38	Intermediate	Static	
AOI 8	RW-202	8/4/2015	---	20.27	---	Intermediate	Static	
AOI 8	RW-203	8/4/2015	22.22	22.40	0.18	Intermediate	Static	
AOI 8	RW-204	8/4/2015	18.79	20.50	1.71	Intermediate	Static	
AOI 8	RW-205	8/4/2015	18.62	21.41	2.79	Intermediate	Static	
AOI 8	RW-206	8/4/2015	20.63	21.70	1.07	Intermediate	Static	
AOI 8	RW-300	8/4/2015	14.53	14.77	0.24	Intermediate	Static	
AOI 8	RW-301	8/4/2015	---	11.91	---	Intermediate	Static	
AOI 8	RW-302	8/4/2015	---	13.10	---	Intermediate	Static	
AOI 8	RW-303	8/4/2015	---	13.88	---	Intermediate	Static	
AOI 8	RW-304	8/4/2015	---	14.69	---	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft btoC)	Depth to Water (ft btoC)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 8	RW-305	8/4/2015	---	14.70	---	Intermediate	Static	
AOI 8	RW-306	8/4/2015	---	12.79	---	Intermediate	Static	
AOI 8	RW-307	8/4/2015	---	14.63	---	Intermediate	Static	
AOI 8	RW-308	8/4/2015	---	16.58	---	Intermediate	Static	
AOI 8	RW-309	8/4/2015	---	15.45	---	Intermediate	Static	
AOI 8	RW-500	8/4/2015	---	2.98	---	Intermediate	Static	
AOI 8	RW-501	8/4/2015	---	6.91	---	Intermediate	Static	
AOI 8	RW-502	8/4/2015	8.81	9.29	0.48	Intermediate	Static	

Notes:

Groundwater monitoring was performed under pumping conditions.

AOI = Area of interest

LNAPL = Light non-aqueous phase liquid

ft btoC = feet below top of casing

--- = LNAPL not present

NM = Field reading not measured

NA = Not Accessible, Not Applicable, or Not Available

DRY = Well was dry at time of gauging

Not Classified = Well classification not available

Table 3
Fourth Quarter 2015 Gauging Data
Philadelphia Refinery Operations, a series of Evergreen Resources Group, LLC

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	ARCO-1	11/16/2015	---	27.13	---	Intermediate	Static	
AOI 1	ARCO-1D	11/16/2015	---	27.00	---	Deep	Static	
AOI 1	ARCO-2	11/16/2015	---	26.22	---	Intermediate	Static	
AOI 1	ARCO-3	11/16/2015	---	24.89	---	Intermediate	Static	
AOI 1	MW-26	11/16/2015	22.75	24.20	1.45	Shallow	Static	
AOI 1	MW-27	11/16/2015	24.68	25.55	0.87	Shallow	Static	
AOI 1	MW-28	11/16/2015	---	25.02	---	Intermediate	Static	
AOI 1	MW-29	11/16/2015	24.87	26.21	1.34	Intermediate	Static	
AOI 1	MW-30	11/16/2015	---	27.29	---	Shallow	Static	
AOI 1	MW-31	11/16/2015	---	25.90	---	Shallow	Static	
AOI 1	MW-32	11/16/2015	---	25.22	---	Intermediate	Static	
AOI 1	MW-33	11/16/2015	---	26.14	---	Shallow	Static	
AOI 1	MW-35	11/16/2015	---	27.06	---	Intermediate	Static	
AOI 1	MW-36	11/16/2015	---	28.35	---	Intermediate	Static	
AOI 1	MW-37	11/16/2015	---	27.42	---	Intermediate	Static	
AOI 1	MW-38	11/16/2015	---	23.65	---	Intermediate	Static	
AOI 1	MW-39	11/16/2015	---	23.60	---	Intermediate	Static	
AOI 1	MW-40	11/16/2015	23.96	24.35	0.39	Intermediate	Static	
AOI 1	MW-41	11/16/2015	---	23.54	---	Intermediate	Static	
AOI 1	MW-43	11/16/2015	---	26.29	---	Intermediate	Static	
AOI 1	MW-44	11/16/2015	---	25.80	---	Intermediate	Static	
AOI 1	OW-2	11/16/2015	---	27.46	---	Shallow	Static	
AOI 1	OW-12	11/16/2015	---	25.90	---	Shallow	Static	
AOI 1	OW-13	11/16/2015	---	28.00	---	Shallow	Static	
AOI 1	OW-14	11/16/2015	---	28.10	---	Shallow	Static	
AOI 1	OW-16	11/16/2015	NA	NA	NA	Shallow	Static	Not accessible - vehicle parked on top of well.
AOI 1	OW-17	11/16/2015	---	26.27	---	Shallow	Static	
AOI 1	OW-18	11/16/2015	---	27.30	---	Intermediate	Static	
AOI 1	OW-19	11/16/2015	NA	NA	NA	Intermediate	Static	Not accessible - vehicle parked on top of well.
AOI 1	OW-20	11/16/2015	---	27.70	---	Shallow	Static	
AOI 1	PZ-400	11/16/2015	---	24.33	---	Shallow	Static	
AOI 1	PZ-401	11/16/2015	20.86	20.88	0.02	Shallow	Static	
AOI 1	PZ-402	11/17/2015	20.80	21.09	0.29	Shallow	Static	
AOI 1	PZ-403	11/16/2015	24.00	24.01	0.01	Shallow	Static	LNAPL is very viscous.
AOI 1	PZ-404	11/16/2015	26.47	26.78	0.31	Shallow	Static	
AOI 1	RW-1	11/16/2015	---	25.58	---	Intermediate	Static	
AOI 1	RW-4	11/16/2015	25.85	28.18	2.33	Intermediate	Pumping	Product pump was inoperable.
AOI 1	RW-6	11/16/2015	---	26.88	---	Intermediate	Static	
AOI 1	RW-7	11/16/2015	---	24.16	---	Intermediate	Static	
AOI 1	RW-15	10/16/2015	---	26.91	---	Intermediate	Static	
AOI 1	RW-21	11/16/2015	---	24.86	---	Shallow	Static	
AOI 1	RW-22	11/16/2015	---	23.05	---	Shallow	Static	Pump inoperable.
AOI 1	RW-23	11/16/2015	27.90	28.35	0.45	Intermediate	Pumping	
AOI 1	RW-24	11/16/2015	24.75	26.00	1.25	Intermediate	Pumping	
AOI 1	RW-25	11/16/2015	25.94	26.63	0.69	Intermediate	Static	
AOI 1	RW-26	11/16/2015	---	25.68	---	Intermediate	Static	
AOI 1	RW-27	11/16/2015	---	26.23	---	Intermediate	Static	
AOI 1	RW-28	11/16/2015	---	25.77	---	Intermediate	Static	
AOI 1	RW-29	11/16/2015	---	25.85	---	Intermediate	Static	
AOI 1	RW-30	11/16/2015	---	25.68	---	Intermediate	Static	
AOI 1	RW-31	11/16/2015	---	25.60	---	Intermediate	Static	
AOI 1	RW-32	11/16/2015	---	23.36	---	Intermediate	Static	
AOI 1	RW-110	11/16/2015	---	13.54	---	Shallow	Static	
AOI 1	RW-111	11/16/2015	---	16.51	---	Shallow	Static	
AOI 1	RW-112	11/16/2015	---	14.29	---	Shallow	Static	
AOI 1	RW-400	11/16/2015	---	28.18	---	Intermediate	Pumping	
AOI 1	RW-401	11/16/2015	21.74	22.19	0.45	Intermediate	Static	
AOI 1	RW-402	11/16/2015	---	23.56	---	Intermediate	Pumping	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	RW-403	11/16/2015	---	22.01	---	Intermediate	Static	
AOI 1	RW-404	11/16/2015	---	22.80	---	Intermediate	Static	
AOI 1	RW-405	11/16/2015	24.64	24.75	0.11	Intermediate	Static	
AOI 1	RW-406	11/16/2015	24.02	24.51	0.49	Intermediate	Static	
AOI 1	S-41	11/16/2015	---	26.00	---	Intermediate	Static	
AOI 1	S-42I	11/16/2015	---	25.47	---	Intermediate	Static	
AOI 1	S-43	11/16/2015	DRY	DRY	DRY	Intermediate	Static	Well dry at 24.12 ft bloc.
AOI 1	S-44	11/16/2015	---	25.61	---	Intermediate	Static	
AOI 1	S-45	11/16/2015	DRY	DRY	DRY	Intermediate	Static	Well is dry at 20.00 ft bloc.
AOI 1	S-46	11/16/2015	---	21.44	---	Intermediate	Static	
AOI 1	S-46D	11/16/2015	---	14.87	---	Deep	Static	
AOI 1	S-47I	11/16/2015	---	21.07	---	Intermediate	Static	
AOI 1	S-50	11/16/2015	---	22.74	---	Shallow	Static	
AOI 1	S-51	11/16/2015	---	22.45	---	Shallow	Static	
AOI 1	S-52	11/16/2015	---	23.10	---	Intermediate	Static	
AOI 1	S-74	11/16/2015	---	25.98	---	Shallow	Static	
AOI 1	S-75	11/16/2015	---	27.42	---	Shallow	Static	
AOI 1	S-76	11/16/2015	27.08	27.96	0.88	Shallow	Static	
AOI 1	S-77	11/16/2015	10.77	11.49	0.72	Shallow	Static	
AOI 1	S-77P	11/16/2015	---	28.71	---	Shallow	Static	
AOI 1	S-78	11/16/2015	---	25.91	---	Intermediate	Static	
AOI 1	S-79	11/16/2015	23.79	24.09	0.30	Intermediate	Static	
AOI 1	S-79P	11/16/2015	---	26.65	---	Shallow	Static	
AOI 1	S-80	11/16/2015	---	28.26	---	Shallow	Static	
AOI 1	S-80D	11/16/2015	---	30.37	---	Deep	Static	
AOI 1	S-81	11/16/2015	NM	NM	NM	Shallow	Static	Unable to locate.
AOI 1	S-82	11/16/2015	23.79	23.81	0.02	Shallow	Static	
AOI 1	S-83	11/16/2015	20.79	22.57	1.78	Shallow	Static	
AOI 1	S-84P	11/16/2015	NA	NA	NA	Shallow	Static	Not accessible - covered with stone and dirt.
AOI 1	S-85	11/16/2015	---	24.24	---	Shallow	Static	
AOI 1	S-86	11/16/2015	26.46	26.47	0.01	Intermediate	Static	
AOI 1	S-87I	11/16/2015	---	25.11	---	Intermediate	Static	
AOI 1	S-88	11/16/2015	---	25.10	---	Intermediate	Static	
AOI 1	S-88A	11/16/2015	---	23.92	---	Shallow	Static	Well casing broken at grade.
AOI 1	S-89	11/16/2015	---	26.45	---	Intermediate	Static	
AOI 1	S-95	11/16/2015	---	22.61	---	Intermediate	Static	
AOI 1	S-98	11/16/2015	---	23.52	---	Intermediate	Static	
AOI 1	S-99	11/16/2015	---	25.25	---	Intermediate	Static	
AOI 1	S-100	11/16/2015	23.63	24.77	1.14	Intermediate	Static	
AOI 1	S-101	11/16/2015	---	47.62	---	Intermediate	Static	
AOI 1	S-116	11/16/2015	NA	NA	NA	Shallow	Static	Not accessible - covered with stone and dirt.
AOI 1	S-117	11/16/2015	---	17.15	---	Shallow	Static	
AOI 1	S-118	11/16/2015	---	17.72	---	Shallow	Static	
AOI 1	S-125	11/16/2015	23.26	23.46	0.20	Shallow	Static	
AOI 1	S-126	11/16/2015	14.70	14.94	0.24	Shallow	Static	LNAPL is very viscous.
AOI 1	S-127	11/16/2015	---	16.44	---	Shallow	Static	
AOI 1	S-162	11/16/2015	---	16.49	---	Shallow	Static	
AOI 1	S-164	11/16/2015	---	15.28	---	Shallow	Static	
AOI 1	S-179	11/16/2015	---	22.03	---	Intermediate	Static	
AOI 1	S-180	11/16/2015	23.48	23.48	<0.01	Intermediate	Pumping	
AOI 1	S-181	11/16/2015	---	22.59	---	Intermediate	Pumping	
AOI 1	S-182	11/16/2015	---	22.90	---	Intermediate	Pumping	
AOI 1	S-183	11/16/2015	---	23.32	---	Intermediate	Pumping	
AOI 1	S-184	11/16/2015	---	20.50	---	Intermediate	Pumping	
AOI 1	S-185	11/16/2015	---	21.23	---	Intermediate	Pumping	
AOI 1	S-186	11/16/2015	---	24.16	---	Intermediate	Pumping	
AOI 1	S-187	11/16/2015	---	24.07	---	Intermediate	Pumping	
AOI 1	S-188	11/16/2015	---	24.68	---	Intermediate	Pumping	
AOI 1	S-189	11/16/2015	---	26.29	---	Intermediate	Pumping	
AOI 1	S-190	11/16/2015	---	25.22	---	Intermediate	Pumping	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	S-191	11/16/2015	---	25.12	---	Intermediate	Pumping	
AOI 1	S-192	11/16/2015	---	25.81	---	Intermediate	Pumping	
AOI 1	S-193	11/16/2015	---	24.36	---	Intermediate	Static	
AOI 1	S-194	11/16/2015	---	27.08	---	Shallow	Static	
AOI 1	S-196	11/16/2015	---	45.82	---	Shallow	Static	
AOI 1	S-197	11/16/2015	---	45.65	---	Shallow	Static	
AOI 1	S-198	11/16/2015	25.35	26.64	1.29	Intermediate	Static	
AOI 1	S-199	11/16/2015	25.20	26.36	1.16	Intermediate	Static	
AOI 1	S-200	11/16/2015	---	25.22	---	Intermediate	Static	
AOI 1	S-201	11/16/2015	24.00	25.21	1.21	Intermediate	Static	
AOI 1	S-202	11/16/2015	---	27.86	---	Intermediate	Static	
AOI 1	S-203	11/16/2015	27.81	28.99	1.18	Intermediate	Static	
AOI 1	S-205	11/16/2015	18.27	19.65	1.38	Intermediate	Static	
AOI 1	S-206	11/16/2015	---	26.74	---	Intermediate	Static	
AOI 1	S-207	11/16/2015	---	14.54	---	Intermediate	Static	
AOI 1	S-208	11/16/2015	---	19.15	---	Intermediate	Static	
AOI 1	S-209	11/16/2015	---	26.20	---	Intermediate	Static	
AOI 1	S-210	11/16/2015	24.00	24.09	0.09	Intermediate	Static	
AOI 1	S-211	11/16/2015	---	13.75	---	Intermediate	Static	
AOI 1	S-212	11/16/2015	---	17.31	---	Intermediate	Static	
AOI 1	S-213	11/16/2015	---	13.92	---	Intermediate	Static	
AOI 1	S-214	11/16/2015	---	19.39	---	Intermediate	Static	
AOI 1	S-215	11/16/2015	26.59	26.65	0.06	Intermediate	Static	
AOI 1	S-226	11/16/2015	---	22.01	---	Intermediate	Static	
AOI 1	S-227	11/16/2015	---	22.71	---	Intermediate	Static	
AOI 1	S-228	11/16/2015	---	22.01	---	Intermediate	Static	
AOI 1	S-230	11/16/2015	---	19.81	---	Intermediate	Static	
AOI 1	S-231	11/16/2015	---	20.31	---	Intermediate	Static	
AOI 1	S-232	11/16/2015	---	20.99	---	Intermediate	Static	
AOI 1	S-255	11/16/2015	---	22.76	---	Intermediate	Static	
AOI 1	S-256	11/16/2015	---	22.05	---	Intermediate	Static	
AOI 1	S-257	11/16/2015	---	23.70	---	Intermediate	Static	
AOI 1	S-258	11/16/2015	---	24.19	---	Intermediate	Static	
AOI 1	S-259	11/16/2015	---	24.91	---	Intermediate	Static	
AOI 1	S-260	11/16/2015	---	23.61	---	Intermediate	Static	
AOI 1	S-261	11/16/2015	---	23.52	---	Intermediate	Static	
AOI 1	S-262	11/16/2015	---	18.65	---	Intermediate	Static	
AOI 1	S-263	11/16/2015	---	16.23	---	Intermediate	Static	
AOI 1	S-264D	11/16/2015	---	26.35	---	Deep	Static	
AOI 1	S-265	11/16/2015	---	15.05	---	Intermediate	Static	
AOI 1	S-267	11/16/2015	---	19.83	---	Intermediate	Static	
AOI 1	S-268	11/16/2015	---	27.21	---	Intermediate	Static	
AOI 1	S-269	11/16/2015	---	19.78	---	Intermediate	Static	
AOI 1	S-270	11/16/2015	---	21.52	---	Intermediate	Static	
AOI 1	S-271	11/16/2015	---	24.87	---	Intermediate	Static	
AOI 1	S-272	11/16/2015	---	24.59	---	Intermediate	Static	
AOI 1	S-273	11/16/2015	---	24.01	---	Intermediate	Static	
AOI 1	S-274	11/16/2015	23.79	23.87	0.08	Intermediate	Static	
AOI 1	S-275	11/16/2015	---	23.11	---	Intermediate	Static	
AOI 1	S-276	11/16/2015	23.48	23.87	0.39	Intermediate	Static	
AOI 1	S-277	11/16/2015	23.19	23.98	0.79	Intermediate	Static	
AOI 1	S-312	11/16/2015	---	6.99	---	Shallow/Intermediate	Static	
AOI 1	S-330	11/16/2015	---	25.61	---	Intermediate	Static	
AOI 1	S-331	11/16/2015	---	27.70	---	Intermediate	Static	
AOI 1	S-332	11/16/2015	---	25.24	---	Intermediate	Static	
AOI 1	S-388D	11/16/2015	---	25.56	---	Deep	Static	
AOI 1	S-389D	11/16/2015	---	25.59	---	Deep	Static	
AOI 1	S-390D	11/16/2015	---	25.78	---	Deep	Static	
AOI 1	S-391D	11/16/2015	NM	NM	NM	Deep	Static	Well is destroyed.
AOI 1	S-392D	11/16/2015	---	19.54	---	Deep	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 1	S-393D	11/16/2015	---	29.90	---	Deep	Static	
AOI 1	S-394	11/16/2015	---	30.30	---	Deep	Static	
AOI 1	S-395	11/16/2015	---	27.84	---	Shallow	Static	
AOI 1	S-396	11/16/2015	---	25.21	---	Intermediate	Static	
AOI 1	S-397	11/16/2015	---	25.89	---	Intermediate	Static	
AOI 1	S-398	11/16/2015	---	25.02	---	Intermediate	Static	
AOI 1	S-399	11/16/2015	---	19.71	---	Intermediate	Static	
AOI 1	S-400	11/16/2015	NM	NM	NM	Deep	Static	Well is destroyed.
AOI 1	S-401	11/16/2015	---	26.16	---	Intermediate	Static	
AOI 1	S-402	11/16/2015	28.97	28.97	<0.01	Not Classified	Static	
AOI 1	S-403	11/16/2015	---	23.55	---	Not Classified	Static	
AOI 1	S-404	11/16/2015	12.15	12.18	0.03	Not Classified	Static	LNAPL is very viscous.
AOI 1	S-405	11/16/2015	---	22.53	---	Not Classified	Static	
AOI 1	S-417	11/16/2015	26.94	28.04	1.10	Not Classified	Static	
AOI 1	S-418	11/16/2015	---	17.60	---	Not Classified	Static	Well casing broken at grade. Casing taped back together.
AOI 1	S-419	11/16/2015	---	15.21	---	Not Classified	Static	
AOI 1	TW-3	11/16/2015	---	27.93	---	Shallow	Static	
AOI 1	TW-5	11/16/2015	---	27.79	---	Shallow	Static	
AOI 1	TW-8	11/16/2015	---	26.11	---	Shallow	Static	
AOI 1	TW-9	11/16/2015	---	27.84	---	Shallow	Static	
AOI 1	TW-10	11/16/2015	26.27	26.38	0.11	Shallow	Static	
AOI 1	TW-11	11/16/2015	---	28.16	---	Shallow	Static	
AOI 2	C-HEADER	11/17/2015	---	12.89	---	Shallow/Intermediate	Static	
AOI 2	PGW-MW-85	11/20/2015	---	30.11	---	Shallow	Static	
AOI 2	PZ-100	11/17/2015	---	16.42	---	Shallow	Static	
AOI 2	PZ-101	11/17/2015	---	10.04	---	Shallow	Static	
AOI 2	River 1	11/17/2015	---	12.10	---	NA	Static	At 9:00.
AOI 2	River 3	11/17/2015	---	10.79	---	NA	Static	At 8:24.
AOI 2	RW-100	11/17/2015	18.26	18.68	0.42	Shallow	Static	
AOI 2	RW-101	11/17/2015	17.69	18.30	0.61	Shallow	Static	
AOI 2	RW-102	11/17/2015	14.87	14.89	0.02	Shallow	Static	
AOI 2	RW-103	11/17/2015	16.89	17.78	0.89	Shallow	Static	
AOI 2	RW-104	11/17/2015	---	8.94	---	Shallow	Static	
AOI 2	RW-105	11/17/2015	8.52	9.17	0.65	Shallow	Static	
AOI 2	RW-106	11/17/2015	7.32	7.34	0.02	Shallow	Static	
AOI 2	RW-107	11/17/2015	---	9.68	---	Shallow	Static	
AOI 2	RW-108	11/17/2015	---	8.91	---	Shallow	Static	
AOI 2	RW-109	11/17/2015	7.62	7.91	0.29	Shallow	Static	
AOI 2	RW-113	11/17/2015	---	8.54	---	Shallow	Static	
AOI 2	RW-114	11/17/2015	---	11.18	---	Shallow	Static	
AOI 2	RW-115	11/17/2015	8.33	8.36	0.03	Shallow	Static	
AOI 2	RW-116	11/17/2015	---	8.83	---	Shallow	Static	
AOI 2	RW-117	11/17/2015	7.86	8.11	0.25	Shallow	Static	
AOI 2	RW-118	11/17/2015	9.79	9.82	0.03	Shallow	Static	
AOI 2	RW-119	11/17/2015	10.81	10.84	0.03	Shallow	Static	
AOI 2	RW-120	11/17/2015	11.55	11.56	0.01	Shallow	Static	
AOI 2	RW-121	11/17/2015	---	13.27	---	Shallow/Intermediate	Static	
AOI 2	RW-122	11/17/2015	8.18	9.19	1.01	Shallow	Static	
AOI 2	RW-123	11/17/2015	---	7.98	---	Shallow	Static	
AOI 2	RW-124	11/17/2015	7.14	7.15	0.01	Shallow	Static	
AOI 2	RW-125	11/17/2015	---	12.31	---	Shallow	Static	
AOI 2	RW-126	11/17/2015	---	7.42	---	Shallow	Static	
AOI 2	RW-127	11/17/2015	---	11.94	---	Shallow	Static	
AOI 2	RW-128	11/17/2015	8.00	8.00	<0.01	Shallow	Static	
AOI 2	RW-129	11/17/2015	8.65	8.66	0.01	Shallow	Static	
AOI 2	RW-600	11/17/2015	---	5.70	---	Shallow/Intermediate	Static	
AOI 2	RW-601	11/17/2015	---	8.99	---	Shallow/Intermediate	Static	
AOI 2	S-48	11/17/2015	19.17	19.53	0.36	Shallow/Intermediate	Static	
AOI 2	S-53	11/17/2015	17.92	18.36	0.44	Shallow	Static	
AOI 2	S-54	11/17/2015	21.44	21.45	0.01	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 2	S-61	11/17/2015	16.62	16.90	0.28	Shallow/Intermediate	Static	
AOI 2	S-62	11/17/2015	---	18.85	---	Intermediate	Static	
AOI 2	S-63	11/17/2015	19.10	19.56	0.46	Shallow	Static	
AOI 2	S-64	11/17/2015	---	6.58	---	Shallow/Intermediate	Static	
AOI 2	S-65	11/17/2015	9.84	9.94	0.10	Shallow/Intermediate	Static	
AOI 2	S-70	11/17/2015	NM	NM	NM	Shallow/Intermediate	Static	Well is filled with stone at 14.40 ft bloc.
AOI 2	S-71	11/17/2015	---	20.39	---	Shallow/Intermediate	Static	
AOI 2	S-72	11/20/2015	---	26.51	---	Intermediate	Static	
AOI 2	S-72D	11/17/2015	---	32.70	---	Deep	Static	
AOI 2	S-91	11/17/2015	18.81	18.82	0.01	Intermediate	Static	LNAPL is viscous.
AOI 2	S-92	11/17/2015	11.11	11.17	0.06	Intermediate	Static	
AOI 2	S-93	11/17/2015	---	16.01	---	Intermediate	Static	
AOI 2	S-105	11/17/2015	---	11.15	---	Shallow	Static	
AOI 2	S-107	11/17/2015	9.70	9.72	0.02	Shallow/Intermediate	Static	
AOI 2	S-108	11/17/2015	6.78	6.78	<0.01	Shallow/Intermediate	Static	
AOI 2	S-110	11/17/2015	---	15.38	---	Shallow/Intermediate	Static	
AOI 2	S-130	11/17/2015	19.06	19.07	0.01	Shallow/Intermediate	Static	
AOI 2	S-131	11/17/2015	14.97	14.97	<0.01	Shallow	Static	Requires new manhole.
AOI 2	S-132	11/17/2015	---	18.12	---	Shallow/Intermediate	Static	
AOI 2	S-133	11/17/2015	---	18.35	---	Shallow/Intermediate	Static	
AOI 2	S-134	11/17/2015	---	19.58	---	Shallow/Intermediate	Static	
AOI 2	S-135	11/17/2015	21.32	23.40	2.08	Shallow	Static	
AOI 2	S-136	11/17/2015	---	17.62	---	Shallow/Intermediate	Static	
AOI 2	S-137	11/17/2015	---	17.08	---	Shallow/Intermediate	Static	
AOI 2	S-139	11/17/2015	---	19.28	---	Shallow/Intermediate	Static	
AOI 2	S-140	11/17/2015	---	19.75	---	Shallow/Intermediate	Static	
AOI 2	S-141	11/17/2015	19.83	20.34	0.51	Shallow/Intermediate	Static	
AOI 2	S-142	11/17/2015	19.07	19.53	0.46	Shallow	Static	
AOI 2	S-143	11/17/2015	NM	NM	NM	Shallow/Intermediate	Static	Well is blocked at 9.90 ft bloc.
AOI 2	S-150	11/17/2015	---	17.41	---	Shallow/Intermediate	Static	
AOI 2	S-152	11/17/2015	---	8.31	---	Shallow/Intermediate	Static	
AOI 2	S-153	11/17/2015	---	8.47	---	Shallow/Intermediate	Static	
AOI 2	S-154	11/17/2015	---	10.49	---	Shallow/Intermediate	Static	
AOI 2	S-156	11/17/2015	17.57	17.94	0.37	Shallow	Static	
AOI 2	S-157	11/17/2015	16.10	17.59	1.49	Shallow/Intermediate	Static	
AOI 2	S-159	11/17/2015	16.18	16.19	0.01	Shallow/Intermediate	Static	
AOI 2	S-165	11/17/2015	---	16.19	---	Shallow/Intermediate	Static	
AOI 2	S-166	11/17/2015	---	16.18	---	Shallow/Intermediate	Static	
AOI 2	S-174	11/17/2015	10.38	11.81	1.43	Shallow	Static	
AOI 2	S-175	11/17/2015	16.81	16.82	0.01	Shallow	Static	
AOI 2	S-177	11/17/2015	NA	NA	NA	Shallow/Intermediate	Static	Not accessible - area around well is flooded.
AOI 2	S-178	11/17/2015	NA	NA	NA	Shallow/Intermediate	Static	Not accessible - area around well is flooded.
AOI 2	S-246A	11/17/2015	---	10.79	---	Shallow/Intermediate	Static	
AOI 2	S-247	11/17/2015	---	11.46	---	Shallow/Intermediate	Static	
AOI 2	S-248	11/17/2015	---	10.27	---	Shallow/Intermediate	Static	
AOI 2	S-249	11/17/2015	---	12.79	---	Shallow/Intermediate	Static	
AOI 2	S-251	11/17/2015	---	17.10	---	Shallow/Intermediate	Static	
AOI 2	S-252	11/17/2015	---	17.11	---	Shallow/Intermediate	Static	
AOI 2	S-253	11/17/2015	---	18.43	---	Shallow/Intermediate	Static	
AOI 2	S-254	11/17/2015	18.83	18.86	0.03	Shallow/Intermediate	Static	
AOI 2	S-292	11/17/2015	DRY	DRY	DRY	Shallow/Intermediate	Static	Well is dry at 19.50 ft bloc.
AOI 2	S-294	11/17/2015	---	29.79	---	Intermediate	Static	
AOI 2	S-294D	11/17/2015	---	32.56	---	Deep	Static	
AOI 2	S-295	11/17/2015	---	23.86	---	Shallow/Intermediate	Static	
AOI 2	S-297	11/17/2015	23.51	23.65	0.14	Shallow/Intermediate	Static	Well is damaged - metal casing and concrete pad pulled out of ground.
AOI 2	S-298	11/17/2015	16.31	16.52	0.21	Shallow/Intermediate	Static	
AOI 2	S-299	11/17/2015	---	20.59	---	Shallow/Intermediate	Static	
AOI 2	S-300	11/17/2015	---	20.24	---	Shallow/Intermediate	Static	
AOI 2	S-301	11/17/2015	---	16.61	---	Shallow/Intermediate	Static	
AOI 2	S-302	11/17/2015	21.54	21.82	0.28	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 2	S-302D	11/17/2015	---	24.70	---	Deep	Static	
AOI 2	S-303	11/17/2015	---	19.75	---	Shallow/Intermediate	Static	
AOI 2	S-304	11/17/2015	---	11.94	---	Shallow/Intermediate	Static	Casing damaged at grade.
AOI 2	S-305	11/17/2015	---	17.94	---	Intermediate	Static	
AOI 2	S-305D	11/17/2015	---	20.13	---	Deep	Static	
AOI 2	S-306	11/17/2015	---	20.43	---	Intermediate	Static	
AOI 2	S-307	11/17/2015	---	16.21	---	Shallow/Intermediate	Static	
AOI 2	S-308	11/17/2015	---	24.09	---	Shallow/Intermediate	Static	
AOI 2	S-309	11/17/2015	---	17.85	---	Shallow/Intermediate	Static	
AOI 2	S-310	11/17/2015	---	10.94	---	Shallow/Intermediate	Static	Well is damaged.
AOI 2	S-311	11/17/2015	25.00	25.00	<0.01	Intermediate	Static	
AOI 2	S-313	11/20/2015	18.41	18.40	-0.01	Shallow	Static	
AOI 2	S-314	11/17/2015	---	18.55	---	Shallow	Static	
AOI 2	S-315	11/17/2015	18.74	18.93	0.19	Shallow	Static	
AOI 2	S-316	11/17/2015	---	16.67	---	Shallow	Static	
AOI 2	S-317	11/17/2015	---	18.04	---	Shallow	Static	
AOI 2	S-318	11/17/2015	---	21.88	---	Shallow/Intermediate	Static	
AOI 2	S-328	11/17/2015	18.76	18.76	<0.01	Shallow/Intermediate	Static	
AOI 2	S-333	11/17/2015	---	12.98	---	Shallow/Intermediate	Static	
AOI 2	S-335	11/17/2015	---	11.20	---	Shallow/Intermediate	Static	Casing broken at grade.
AOI 2	S-336	11/17/2015	---	9.41	---	Shallow/Intermediate	Static	
AOI 2	S-337	11/17/2015	---	11.53	---	Shallow/Intermediate	Static	
AOI 2	S-338	11/17/2015	12.71	12.82	0.11	Shallow/Intermediate	Static	
AOI 2	S-346	11/17/2015	17.53	17.80	0.27	Shallow/Intermediate	Static	
AOI 2	S-347	11/17/2015	17.13	17.58	0.45	Shallow/Intermediate	Static	
AOI 2	S-348	11/17/2015	12.73	13.04	0.31	Shallow/Intermediate	Static	
AOI 2	S-349	11/17/2015	15.28	15.38	0.10	Shallow/Intermediate	Static	
AOI 2	S-350	11/17/2015	---	26.93	---	Shallow/Intermediate	Static	
AOI 2	S-351	11/17/2015	---	30.59	---	Shallow/Intermediate	Static	
AOI 2	S-354	11/17/2015	---	24.58	---	Shallow/Intermediate	Static	
AOI 2	S-355	11/17/2015	26.79	27.11	0.32	Shallow/Intermediate	Static	
AOI 2	S-357	11/17/2015	21.79	22.29	0.50	Shallow/Intermediate	Static	
AOI 2	S-359	11/17/2015	---	17.19	---	Shallow/Intermediate	Static	
AOI 2	S-360	11/17/2015	22.12	22.12	<0.01	Shallow/Intermediate	Static	
AOI 2	S-361	11/17/2015	---	23.64	---	Shallow/Intermediate	Static	
AOI 2	S-362	11/17/2015	NM	NM	NM	Shallow/Intermediate	Static	Well is blocked at 4.13 ft bloc.
AOI 2	S-363	11/17/2015	24.71	24.71	<0.01	Shallow/Intermediate	Static	
AOI 2	S-406	11/17/2015	---	9.96	---	Shallow/Intermediate	Static	
AOI 2	S-420	11/17/2015	---	6.58	---	Shallow	Static	
AOI 2	SD-1	11/17/2015	---	8.12	---	Shallow	Static	
AOI 3	RW-2	11/16/2015	11.65	12.03	0.38	Intermediate	Static	
AOI 4	RW-700	11/18/2015	17.53	18.55	1.02	Intermediate	Static	
AOI 4	RW-701	11/18/2015	17.90	18.91	1.01	Intermediate	Static	
AOI 4	RW-702	11/18/2015	---	20.65	---	Intermediate	Static	
AOI 4	RW-703	11/18/2015	---	20.27	---	Intermediate	Static	
AOI 4	RW-704	11/18/2015	---	20.31	---	Intermediate	Static	
AOI 4	RW-705	11/18/2015	---	15.51	---	Intermediate	Static	
AOI 4	RW-706	11/18/2015	---	15.60	---	Intermediate	Static	
AOI 4	RW-707	11/18/2015	---	15.91	---	Intermediate	Static	
AOI 4	RW-708	11/18/2015	15.20	15.20	<0.01	Intermediate	Static	
AOI 4	RW-709	11/18/2015	---	15.00	---	Intermediate	Static	
AOI 4	RW-710	11/18/2015	---	15.81	---	Intermediate	Static	
AOI 4	RW-711	11/18/2015	---	15.18	---	Intermediate	Static	
AOI 4	RW-712	11/18/2015	---	15.54	---	Intermediate	Static	
AOI 4	RW-713	11/18/2015	---	14.69	---	Intermediate	Static	
AOI 4	RW-714	11/18/2015	---	14.99	---	Intermediate	Static	
AOI 4	RW-715	11/18/2015	---	15.01	---	Intermediate	Static	
AOI 4	RW-716	11/20/2015	---	15.23	---	Intermediate	Static	
AOI 4	RW-717	11/20/2015	---	15.24	---	Intermediate	Static	
AOI 4	S-29	11/18/2015	20.74	23.29	2.55	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 4	S-30	11/18/2015	21.62	29.10	7.48	Intermediate	Static	
AOI 4	S-34	11/18/2015	---	20.48	---	Shallow	Static	
AOI 4	S-35	11/18/2015	---	20.59	---	Shallow	Static	
AOI 4	S-36	11/18/2015	---	23.74	---	Shallow	Static	
AOI 4	S-38	11/18/2015	---	18.59	---	Shallow	Static	
AOI 4	S-39	11/18/2015	---	22.31	---	Intermediate	Static	
AOI 4	S-59D	11/18/2015	---	16.40	---	Deep	Static	
AOI 4	S-102	11/18/2015	---	17.54	---	Shallow	Static	
AOI 4	S-103	11/18/2015	---	24.97	---	Shallow	Static	
AOI 4	S-104	11/18/2015	16.72	18.16	1.44	Shallow	Static	
AOI 4	S-119	11/18/2015	---	26.19	---	Intermediate	Static	
AOI 4	S-119D	11/18/2015	---	24.90	---	Deep	Static	
AOI 4	S-122	11/18/2015	---	25.19	---	Intermediate	Static	
AOI 4	S-216	11/18/2015	---	15.01	---	Intermediate	Static	
AOI 4	S-218	11/18/2015	---	24.97	---	Intermediate	Static	
AOI 4	S-219	11/18/2015	---	22.53	---	Intermediate	Static	
AOI 4	S-220	11/18/2015	20.16	20.92	0.76	Intermediate	Static	
AOI 4	S-225	11/18/2015	---	16.21	---	Intermediate	Static	
AOI 4	S-365	11/18/2015	20.61	20.63	0.02	Shallow/Intermediate	Static	
AOI 4	S-366	11/18/2015	---	21.42	---	Shallow/Intermediate	Static	
AOI 4	S-368	11/18/2015	---	17.13	---	Shallow/Intermediate	Static	
AOI 4	S-369	11/18/2015	---	29.66	---	Shallow/Intermediate	Static	
AOI 4	S-370	11/18/2015	---	11.82	---	Shallow/Intermediate	Static	
AOI 4	S-381	11/18/2015	---	25.69	---	Shallow/Intermediate	Static	
AOI 4	S-38D	11/18/2015	---	18.63	---	Deep	Static	
AOI 4	S-38D2	11/18/2015	---	19.07	---	Deep	Static	
AOI 5	RWBH-1	11/16/2015	4.34	4.34	<0.01	Shallow	Static	
AOI 5	RWBH-2	11/16/2015	3.89	5.31	1.42	Shallow	Static	
AOI 5	WP9-8	11/19/2015	5.12	6.77	1.65	Shallow	Static	
AOI 6	B-92	11/19/2015	---	5.90	---	Shallow	Static	
AOI 6	B-123	11/19/2015	---	5.47	---	Shallow	Static	
AOI 6	B-124	11/19/2015	5.38	6.53	1.15	Shallow	Static	
AOI 6	B-125	11/19/2015	---	5.32	---	Shallow	Static	
AOI 6	B-126	11/19/2015	---	5.23	---	Shallow	Static	
AOI 6	B-132	11/19/2015	4.68	4.77	0.09	Shallow	Static	
AOI 6	B-133	11/19/2015	---	5.04	---	Shallow	Static	
AOI 6	B-134	11/19/2015	---	4.61	---	Shallow	Static	
AOI 6	B-135	11/19/2015	4.68	4.69	0.01	Shallow	Static	
AOI 6	B-136	11/19/2015	5.23	5.25	0.02	Shallow	Static	
AOI 6	B-137	11/19/2015	4.74	5.14	0.40	Shallow	Static	
AOI 6	B-138	11/19/2015	5.03	5.03	<0.01	Shallow	Static	
AOI 6	B-139	11/19/2015	NM	NM	NM	Shallow	Static	Well is destroyed.
AOI 6	B-141	11/19/2015	---	3.77	---	Shallow	Static	Well casing is damaged.
AOI 6	B-142	11/19/2015	7.01	7.84	0.83	Shallow	Static	
AOI 6	B-143	11/19/2015	5.46	6.23	0.77	Shallow	Static	
AOI 6	B-144	11/19/2015	5.20	5.20	<0.01	Shallow	Static	
AOI 6	B-145	11/19/2015	---	5.28	---	Shallow	Static	
AOI 6	B-147	11/19/2015	6.07	6.21	0.14	Shallow	Static	
AOI 6	B-148	11/19/2015	5.16	6.07	0.91	Shallow	Static	
AOI 6	B-149	11/19/2015	3.44	4.03	0.59	Shallow	Static	
AOI 6	B-150	11/19/2015	3.45	5.86	2.41	Shallow	Static	
AOI 6	B-154	11/19/2015	---	3.72	---	Shallow	Static	
AOI 6	B-155	11/19/2015	---	5.40	---	Shallow	Static	
AOI 6	B-156	11/19/2015	---	6.00	---	Shallow	Static	
AOI 6	B-161	11/19/2015	5.09	5.09	<0.01	Shallow	Static	
AOI 6	B-163	11/19/2015	---	2.35	---	Shallow	Static	
AOI 6	RW-9	11/19/2015	5.33	6.02	0.69	Shallow	Static	
AOI 6	SUMP-1	11/19/2015	5.67	5.71	0.04	Shallow	Static	
AOI 6	U-1	11/19/2015	DRY	DRY	DRY	Shallow	Static	Well is dry at 7.91 ft bloc.
AOI 6	U-2	11/19/2015	---	7.50	---	Shallow	Static	

AOI	Well ID	Date	Depth to LNAPL (ft bloc)	Depth to Water (ft bloc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 6	U-3	11/19/2015	6.81	7.38	0.57	Shallow	Static	
AOI 6	U-4	11/19/2015	---	4.80	---	Shallow	Static	
AOI 6	U-5	11/19/2015	---	8.90	---	Shallow	Static	
AOI 6	WP9-3	11/19/2015	---	2.30	---	Shallow	Static	
AOI 6	WP9-4	11/19/2015	---	5.63	---	Shallow	Static	
AOI 7	C-62	11/18/2015	---	4.95	---	Shallow	Static	
AOI 7	C-64	11/18/2015	9.51	9.62	0.11	Shallow	Static	
AOI 7	C-65	11/18/2015	4.85	5.39	0.54	Shallow	Static	
AOI 7	C-65D	11/18/2015	---	2.08	---	Deep	Static	
AOI 7	C-97	11/18/2015	16.54	17.65	1.11	Shallow	Static	
AOI 7	C-127	11/18/2015	---	9.33	---	Shallow	Static	
AOI 7	C-142	11/18/2015	---	9.74	---	Shallow/Intermediate	Static	
AOI 7	C-143	11/18/2015	---	10.58	---	Shallow/Intermediate	Static	
AOI 7	C-144D	11/18/2015	---	14.58	---	Deep	Static	
AOI 7	C-145	11/18/2015	---	6.37	---	Shallow	Static	
AOI 7	C-146	11/18/2015	11.41	11.70	0.29	Shallow	Static	
AOI 7	C-147	11/18/2015	11.90	11.93	0.03	Shallow	Static	
AOI 7	C-148	11/18/2015	---	13.74	---	Shallow	Static	
AOI 7	C-150	11/18/2015	12.52	15.40	2.88	Shallow	Static	
AOI 7	C-151	11/18/2015	---	12.69	---	Shallow	Static	
AOI 7	C-152	11/18/2015	---	11.13	---	Shallow	Static	
AOI 7	C-153	11/18/2015	14.71	15.06	0.35	Shallow	Static	
AOI 7	C-154	11/18/2015	12.02	12.03	0.01	Shallow	Static	
AOI 7	C-155	11/18/2015	---	6.86	---	Shallow	Static	
AOI 7	C-160	11/18/2015	DRY	DRY	DRY	Shallow	Static	Well is dry at 9.90 ft bloc.
AOI 7	C-161	11/18/2015	10.69	10.70	0.01	Shallow	Static	
AOI 7	C-162	11/18/2015	---	10.96	---	Shallow	Static	
AOI 7	C-166	11/18/2015	DRY	DRY	DRY	Shallow	Static	Well is dry at 7.05 ft bloc.
AOI 7	C-167	11/18/2015	DRY	DRY	DRY	Shallow	Static	Well is dry at 12.15 ft bloc.
AOI 7	C-168	11/18/2015	3.85	3.86	0.01	Shallow	Static	Well casing is damaged.
AOI 7	C-169	11/18/2015	12.76	12.85	0.09	Shallow	Static	
AOI 7	RW-801	11/18/2015	---	19.05	---	Shallow	Pumping	
AOI 7	RW-802	11/18/2015	21.20	21.20	<0.01	Shallow	Pumping	
AOI 7	RW-803	11/18/2015	---	21.10	---	Shallow	Pumping	
AOI 7	RW-804	11/18/2015	---	20.80	---	Shallow	Pumping	
AOI 7	RW-805	11/18/2015	---	18.10	---	Shallow	Pumping	
AOI 7	RW-806	11/18/2015	---	20.20	---	Shallow	Pumping	
AOI 7	RW-807	11/18/2015	---	20.80	---	Shallow	Pumping	
AOI 7	RW-808	11/18/2015	---	18.80	---	Shallow	Pumping	
AOI 7	RW-809	11/18/2015	19.95	19.95	<0.01	Shallow	Pumping	
AOI 7	RW-810	11/18/2015	16.92	16.92	<0.01	Shallow	Pumping	
AOI 7	WP14-2	11/18/2015	DRY	DRY	DRY	Shallow	Static	Well is dry at 10.05 ft bloc.
AOI 8	N-3	11/18/2015	---	15.63	---	Shallow	Static	
AOI 8	N-4	11/18/2015	---	18.65	---	Deep	Static	
AOI 8	N-11	11/18/2015	---	19.02	---	Intermediate	Static	
AOI 8	N-76	11/18/2015	20.46	26.00	5.54	Intermediate	Static	
AOI 8	N-98	11/18/2015	---	23.79	---	Intermediate	Static	
AOI 8	N-137	11/18/2015	17.88	18.19	0.31	Intermediate	Static	
AOI 8	N-138	11/18/2015	27.54	27.95	0.41	Intermediate	Static	
AOI 8	N-139	11/18/2015	27.29	27.89	0.60	Intermediate	Static	
AOI 8	N-140	11/18/2015	---	17.33	---	Shallow	Static	
AOI 8	N-141	11/18/2015	---	14.21	---	Shallow	Static	
AOI 8	N-142	11/18/2015	26.95	27.59	0.64	Shallow	Static	
AOI 8	N-143	11/18/2015	22.87	22.88	0.01	Shallow	Static	
AOI 8	N-144	11/18/2015	---	26.49	---	Shallow	Static	
AOI 8	N-145	11/20/2015	18.63	18.39	-0.24	Shallow	Static	
AOI 8	N-146	11/18/2015	18.18	19.70	1.52	Shallow	Static	LNAPL is viscous.
AOI 8	River2	11/18/2015	---	9.91	---		Static	At 9:02.
AOI 8	RW-200	11/18/2015	---	6.52	---	Intermediate	Static	
AOI 8	RW-201	11/18/2015	23.19	23.59	0.40	Intermediate	Static	

AOI	Well ID	Date	Depth to LNAPL (ft btoc)	Depth to Water (ft btoc)	Apparent LNAPL Thickness (ft)	Well Classification	Static or Pumping	Comments
AOI 8	RW-202	11/18/2015	---	20.93	---	Intermediate	Static	
AOI 8	RW-203	11/18/2015	22.73	22.89	0.16	Intermediate	Static	
AOI 8	RW-204	11/18/2015	19.35	21.09	1.74	Intermediate	Static	
AOI 8	RW-205	11/18/2015	19.21	21.99	2.78	Intermediate	Static	
AOI 8	RW-206	11/18/2015	21.29	23.29	2.00	Intermediate	Static	
AOI 8	RW-300	11/18/2015	15.39	15.60	0.21	Intermediate	Static	
AOI 8	RW-301	11/18/2015	---	12.39	---	Intermediate	Static	
AOI 8	RW-302	11/18/2015	---	13.66	---	Intermediate	Static	
AOI 8	RW-303	11/18/2015	---	14.40	---	Intermediate	Static	
AOI 8	RW-304	11/18/2015	---	15.19	---	Intermediate	Static	
AOI 8	RW-305	11/18/2015	---	15.10	---	Intermediate	Static	
AOI 8	RW-306	11/18/2015	13.18	13.20	0.02	Intermediate	Static	
AOI 8	RW-307	11/18/2015	---	14.88	---	Intermediate	Static	
AOI 8	RW-308	11/18/2015	---	16.89	---	Intermediate	Static	
AOI 8	RW-309	11/18/2015	---	15.76	---	Intermediate	Static	
AOI 8	RW-500	11/18/2015	---	3.38	---	Intermediate	Static	
AOI 8	RW-501	11/18/2015	---	7.08	---	Intermediate	Static	
AOI 8	RW-502	11/18/2015	9.14	9.53	0.39	Intermediate	Static	

Notes:

Groundwater monitoring was performed under pumping conditions.

AOI = Area of interest

LNAPL = Light non-aqueous phase liquid

ft btoc = feet below top of casing

--- = LNAPL not present

NM = Field reading not measured

NA = Not Accessible, Not Applicable, or Not Available

DRY = Well was dry at time of gauging

Not Classified = Well classification not available