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June 10, 2020

Mr. Ricky Vargas
Land and Redevelopment Program Branch
Land, Chemicals and Redevelopment Division
United States Environmental Protection Agency, Region 2
290 Broadway, 25th Floor
New York, New York 10007

Re: Justification for No Further Investigation for Groundwater
Potential Area of Concern 6
Former Chevron Perth Amboy Facility
Perth Amboy, New Jersey
SRP PI # 003621

Dear Mr. Vargas:

INTRODUCTION

The Potential Area of Concern (PAOC) 6 ex-situ stabilization (ESS) implementation work plan (IWP) (Chevron 2016) was submitted to the United States Environmental Protection Agency (USEPA) and New Jersey Department of Environmental Protection (NJDEP) in December 2016. NJDEP approved and provided comments to Chevron Environmental Management Company (Chevron) in a letter dated February 27, 2017. A combined construction completion report (CCR) for Area of Concern (AOC) 23, AOC 41 (jointly referred to as AOC 23/41), Solid Waste Management Unit (SWMU) 18, and PAOC 6 (Chevron 2020a) was submitted to the USEPA and NJDEP in February 2020. The responses to NJDEP comments on the PAOC 6 ESS IWP were included as Appendix A on the AOC 23/41, SWMU 18, and PAOC 6 in-situ stabilization (ISS) and ESS CCR. USEPA and NJDEP approved the AOC 23/41, SWMU 18, and PAOC 6 ISS/ESS CCR in a letter dated April 6, 2020. The USEPA and NJDEP also commented:

> *Appendix A: NJDEP Ground Water Comments: The response to comments presented in Appendix A regarding NJDEP Ground Water Comments, requests no further investigation (NFI). A NFI determination/request shall be presented formally in a separate document with all of the supporting documentation.*

Chevron is submitting this justification for NFI for groundwater in PAOC 6 to USEPA and NJDEP for review and approval. The locations of PAOC 6, AOC 23/41, and SWMU 18 are shown on Figure 1.

GROUNDWATER INVESTIGATIONS

Groundwater in the PAOC 6 area was evaluated during previous PAOC remedial investigation (RI) sampling events. Groundwater samples have been collected and analyzed for target compound list (TCL) volatile organic compounds (VOCs), TCL semi volatile organic compounds (SVOCs), and target analyte list (TAL) metals as shown on Tables 1 through 3. The results of the corrective measure implementation (CMI) potential contaminates of concern (PCOCs) – lead, benzene, and arsenic – are shown on Figures 2, 3, and 4.

Eighteen temporary well points and hydropunch locations (HP-0121, H0418, H0418R2, H0419, H0420, H0896, H1102, H1145, H1169, H1281, H1397, H1398, H1420R3, H1422R1, H1422R2, H1427R1, H1427R2, and H1673) have been installed in and around PAOC 6. The associated well records are included as Attachment 1. Groundwater samples were collected and analyzed for VOCs and SVOCs at all 18 locations. Benzene was detected below the CMI action level of 100 micrograms per liter (µg/L) within the PAOC 6 area. Groundwater samples were collected and analyzed for metals at locations H0148, H0419, H0420, and H0896. Lead and arsenic were detected below their CMI action levels of 50 and 60 µg/L, respectively. Lead was detected above the CMI action level in hydropunch location HP-0121, south of PAOC 6.

Review of sampling data for PAOC 6 showed that light non-aqueous phase liquid (LNAPL) was not identified on the groundwater table in any of the temporary well points or hydropunch locations installed within the PAOC 6 area. LNAPL was also not identified within the excavation areas during the PAOC 6 ESS CMI.

Two shallow monitoring wells (P-1 and MW-397) are located near PAOC 6. Monitoring well P-1 has been sampled and analyzed for VOCs, SVOCs, and metals semi-annually since 2005. Monitoring well MW-397 was sampled and analyzed for VOCs, SVOCs, and metals in March and June 2014 and October and December 2017. Groundwater samples are currently being collected and analyzed for VOCs on a quarterly basis as part of the SWMU 35 post-implementation monitoring. Although benzene, lead, and arsenic have been detected in groundwater samples from P-1 and MW-397, detections have been below their respective CMI action levels.

Groundwater flow in PAOC 6 is to the east/northeast. Four shallow monitoring wells (MW-260R, MW-261R, MW-267R, and MW-551) and one deep monitoring well (MW-550) are located within AOC 23 and SWMU 18, downgradient of PAOC 6. Monitoring wells MW-261R, MW-267R, MW-550, and MW-551 were installed after the completion of the AOC 23/41 and SWMU 18 CMI. Prior to the CMI, monitoring wells MW-261, MW-267, MW-238, and MW-117 were located within the area. These monitoring wells were abandoned between March 2017 and June 2018 prior to the AOC 23/41 and SWMU 18 CMI. As requested by the NJDEP, shallow monitoring well MW-117 and deep monitoring well MW-238 were re-installed in September 2018 as MW-551 (shallow) and MW-550 (deep) approximately 20 feet south of the original locations. Groundwater samples have been collected from these monitoring wells and analyzed for VOCs, SVOCs, and metals. As shown on Figure 3, prior to the CMI in AOC 23/41 and SWMU 18, benzene was detected above the CMI action level in monitoring wells MW-117, MW-260, and MW-261. Benzene is currently below the CMI action level at monitoring wells MW-261R, MW-267R, MW-550, and MW-551. As

shown on Figure 2, lead has not been detected above the CMI action level in monitoring wells MW-117, MW-238, MW-261, MW-267, MW-267R, and MW-551 except for the first sampling events in MW-261 and MW-267 and two of the 19 sampling events in MW-117. Lead has not been detected in groundwater above the CMI action level in monitoring wells installed after the CMI. As shown on Figure 4, arsenic has not been detected in groundwater above the CMI action level in monitoring wells within AOC 23/41 and SWMU 18. The remaining benzene impacts in groundwater within AOC 23/41 and SWMU 18 will be addressed as described in the AOC 23/41 and SWMU 18 IWP (Chevron 2020b) submitted to the USEPA and NJDEP in April 2020.

CORRECTIVE MEASURE IMPLEMENTATIONS

As part of the CMI, ESS was completed within PAOC 6 to address lead-impacted soil. A total of 856 cubic yards of soil was excavated in a 1,057-square-foot area, as shown on Figure 5, and disposed of in the Facility Corrective Action Management Unit (CAMU). SWMU 19 is located west of the PAOC 6 ESS CM area. ESS was also completed in SWMU 19 to address benzo(a)pyrene, tetraethyl lead (TEL), and lead impacts in soil. Approximately 500 cubic yards of soil were excavated in SWMU 19, adjacent to the PAOC 6 CM area. During the AOC 23/41 and SWMU 18 ESS CMI, the soil impacts in AOC 23/41 and SWMU 18 extended to the northern boundary of the ESS CMI in PAOC 6. A total of 7,175 cubic yards of lead-, benzene-, and arsenic-impacted soil was excavated from the AOC 23/41 and SWMU 18 CM area, located downgradient of PAOC 6. Excavated soil was disposed of in the Facility CAMU.

Approximately 8,530 cubic yards of soil has been excavated as part of the PAOC 6, SWMU 19, and AOC 23/41 and SWMU 18 CMs. Since benzene, lead, and arsenic were not identified in PAOC 6 groundwater prior to the implementation of the CMs, and the CMs removed the potential source of soil impacts, NFI is warranted for PAOC 6 groundwater.

CONCLUSIONS

Detections of PCOC (benzene, lead and arsenic) in groundwater in temporary well points and monitoring wells within PAOC 6 have been below their respective CMI action levels. Groundwater results for lead and arsenic downgradient of PAOC 6 have also been below the CMI action levels. The excavation CMs completed in PAOC 6 and the surrounding areas removed the impacts in soil that could potentially be a source of impacts in groundwater. Therefore, an NFI for PAOC 6 groundwater is warranted.

REFERENCES

Chevron. 2016. Ex-Situ Stabilization Implementation Work Plan PAOC 6. December.

Chevron. 2020a. In-Situ and Ex-Situ Stabilization Construction Completion Report for AOC 23, AOC 41, SWMU 18, and PAOC 6. February.

Chevron. 2020b. Construction Completion Report/Implementation Work Plan for Area of Concern 23, 41, and Solid Waste Management Unit 18. April.

CLOSING

Based on the results summarized in this letter and the conclusions drawn from them, Chevron requests review and approval by USEPA and NJDEP of this request for NFI for groundwater in PAOC 6. If you require additional information for your review, please contact me at (732) 738-2023.

Sincerely,

Robert Mancini
Project Manager, Downstream

cc: Charlie Zielinski - NJDEP, Bureau of Case Management
Brendan Leehan, Buckeye Perth Amboy Terminal, LLC
Krista Manley, Buckeye Perth Amboy Terminal, LLC

ATTACHMENTS

Tables

Table 1 – Summary of Volatile Organic Compound Results in Groundwater
Table 2 – Summary of Semi-Volatile Organic Compound Results in Groundwater
Table 3 – Summary of Metals Results in Groundwater

Figures

Figure 1 – Aerial Photograph of PAOC 6
Figure 2 – Lead Results in Groundwater
Figure 3 – Benzene Results in Groundwater
Figure 4 – Arsenic Results in Groundwater
Figure 5 – Corrective Measures Completed in the PAOC 6 Area

Attachments

Attachment 1 – Well Records

TABLES

Table 1
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			Location ID	H-1618	H-1619	H-1623	H-1632	H0325	H0326	H0327	H0418	H0418R2	H0419	H0420	H0441	H0443	H0896	H0985	H0986	H0987	H0988	H1102	H1145	H1169	H1281	H1397	H1398	H1420R3	H1422R1
			Field Sample ID	H1618	H1619	H1623	H1632	H0325	H0326	H0327	H0418	H0418R2	H0419	H0420	H0441	H0443	H0896	H0985	H0986	H0987	H0988	H1102	H1145	H1169	H1281	H1397	H1398	H1420J3L4	H1422R1
			Sample Date	11/21/2016	11/21/2016	11/29/2016	12/06/2016	08/20/1999	08/20/1999	08/20/1999	09/30/1999	05/19/2017	09/30/1999	09/30/1999	10/13/1999	10/14/1999	01/22/2003	10/26/2006	10/26/2006	10/26/2006	10/26/2006	07/03/2013	07/03/2013	07/03/2013	02/07/2013	08/15/2013	08/15/2013	03/13/2017	11/19/2013
			Sample Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	Report Units	Filtered	CMI GW Criteria or GWQS	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result
1,1 Dichloroethene	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8U
1,1,1-Trichloroethane	ug/L	N	30	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8U
1,1,2,2-Tetrachloroethane	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
1,1,2-Trichloroethane	ug/L	N	3	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/L	N	NA	2U	2U	4U	2U	-	-	-	-	2UJ	-	-	-	-	2U	2U	200U	10U	10U	2U	2U	4U	2U	2U	2U	2UJ	2U
1,1-Dichloroethane	ug/L	N	50	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
1,2,4-Trichlorobenzene	ug/L	N	9	1U	1U	2U	1U	-	-	-	-	1UJ	21U	-	-	10U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	1UJ	1U
1,2,4-Trimethylbenzene	ug/L	N	NA	-	-	-	-	330	42	370	7.1	-	-	4.9	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	N	0.02	2U	2U	4U	2U	-	-	-	-	2UJ	-	-	-	-	2U	2U	200U	10U	10U	2U	2U	4U	2U	2U	2U	2UJ	2U
1,2-Dibromoethane	ug/L	N	NA	0.5U	0.5U	1U	0.5U	5.2U	0.52U	5.2U	0.52U	0.5UJ	-	0.52U	5.0U	-	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	N	600	1U	1U	2U	1U	67U	83U	13U	12U	1UJ	21U	14U	17U	10U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	1UJ	1U
1,2-Dichloroethane	ug/L	N	2	0.5U	0.5U	1U	0.5U	20U	2.0U	20U	2.0U	0.5UJ	0.50U	2.0U	5.0U	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
1,2-Dichloroethene	ug/L	N	NA	-	-	-	-	-	-	-	-	-	0.50U	-	-	2.5U	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
1,3,5-Trimethylbenzene	ug/L	N	NA	-	-	-	-	870	93	1200	4.6	-	-	-	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	N	600	1U	1U	2U	1U	67U	83U	13U	12U	1UJ	21U	14U	17U	10U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	1UJ	1U
1,4-Dichlorobenzene	ug/L	N	75	1U	1U	2U	1U	67U	83U	13U	12U	1UJ	21U	14U	17U	10U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	1UJ	1U
1,4-Dioxane	ug/L	N	NA	-	-	-	-	5000U	500U	5000U	500U	-	-	500U	500U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone)	ug/L	N	300	3U	3U	11J	3U	100U	10U	30	10U	3UJ	1.0U	10U	10U	5.0U	10	3U	300U	15U	15U	3U	3U	6U	3U	3U	3U	9J	3U
2-Hexanone	ug/L	N	NA	3U	3U	6U	3U	-	-	-	-	3UJ	1.0U	-	-	5.0U	3U	3U	300U	15U	15U	3U	3U	6U	3U	3U	3U	3UJ	3U
4-Methyl-2-pentanone	ug/L	N	NA	3U	3U	6U	3U	-	-	-	-	3UJ	1.0U	-	-	5.0U	3U	3U	300U	15U	15U	3U	3U	6U	3U	3U	3U	3UJ	3U
Acetone	ug/L	N	6000	7J	6U	15J	6U	-	-	-	-	10J	1.0U	-	-	5.0U	17J	6U	600U	30U	30U	6U	9J	15J	6U	6U	6U	45J	6U
Benzene	ug/L	N	100	44	9	44	8	**1200**	**710**	**460**	23	4J	8	1.0U	8	**630**	2J	32	**31000**	**240**	17J	6	0.5U	46	3J	0.8J	5	12J	0.7J
Bromodichloromethane	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Bromoform	ug/L	N	4	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Bromomethane (Methyl bromide)	ug/L	N	10	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	1.0U	-	-	5.0U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Carbon disulfide	ug/L	N	700	1U	1U	2U	1U	50U	5.0U	50U	5.0U	2J	0.50U	5.0U	5.0U	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	4J	1U
Carbon Tetrachloride	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Chlorobenzene	ug/L	N	50	0.5U	0.5U	1U	0.5U	40U	4.0U	40U	4.0U	0.5UJ	0.50U	4.0U	5.0U	2.5U	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8U
Chloroethane	ug/L	N	NA	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	1.0U	-	-	5.0U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Chloroform	ug/L	N	70	0.5U	0.5U	1U	0.5U	50U	5.0U	50U	5.0U	0.5UJ	0.50U	5.0U	5.0U	2.5U	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8J
Chloromethane (Methyl chloride)	ug/L	N	NA	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	1.0U	-	-	5.0U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
cis-1,2-Dichloroethene	ug/L	N	70	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	-	-	-	-	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8U
cis-1,3-Dichloropropene	ug/L	N	NA	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Cyclohexane	ug/L	N	NA	10	2J	77	49	-	-	-	-	2UJ	-	-	-	-	5	14	840	200	37	3J	2U	29	17	14	2U	7J	2U
Dibromochloromethane	ug/L	N	1	0.5U	0.5U	1U	0.5UJ	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Dichlorodifluoromethane (Freon 12)	ug/L	N	1000	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	-	-	-	-	2U	2U	200U	10U	10U	2U	2U	4U	2U	2U	2U	0.5UJ	2U
Ethylbenzene	ug/L	N	700	33	17	32	4	200	540	390	14	5J	22	5.0U	20	210	6	0.8U	250J	33	4U	1J	1J	580	30	0.8U	15	5J	0.8U
Isopropylbenzene	ug/L	N	NA	4J	1J	66	10	-	-	-	-	1UJ	8.0	-	3.6	-	13	1U	100U	63	6J	5	3J	150	61	10	1U	17J	1U
Methyl acetate	ug/L	N	7000	1U	1U	2U	1U	-	-	-	-	1UJ	-	-	-	-	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	1UJ	1U
Methyl-t-butyl ether	ug/L	N	70	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	-	-	-	-	0.5U	0.5U	50U	3U	3U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5UJ	0.5U
Methylcyclohexane	ug/L	N	NA	14	2J	220	110	-	-	-	-	1UJ	-	-	-	-	10	11	1300	150	47	3J	2J	47	30	8	2J	15J	4J
Methylene chloride (Dichloromethane)	ug/L	N	3	2U	2U	4U	2U	-	-	-	-	2UJ	0.50U	-	-	2.5U	2U	2U	200U	10U	10U	2U	2U	4U	2U	2U	2U	2UJ	2U
n-Propylbenzene	ug/L	N	NA	-	-	-	-	-	21	-	3.1	-	12	-	9.1	-	51J	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (C6-C10)-GRO	ug/L	N	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	N	100	1U	1U	2U	1U	50U	5.0U	50U	5.0U	1UJ	0.50U	5.0U	5.0U	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	1UJ	1U
Tetrachloroethene	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8U
Toluene	ug/L	N	600	89	12	11	3	260	400	**1000**	8	0.9J	29	5.0U	6	130	1J	3J	**610**	28	9J	0.7U	0.7U	11	2J	0.8J	0.7U	5J	0.7U
Total TIC VOCS	ug/L	N	NA	660J	160J	2400J	450J	-	-	-	-	28J	-	-	-	-	-	-	-	-	-	350J	190J	5200J	840J	210J	97J	850J	180J
trans-1,2-Dichloroethene	ug/L	N	100	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	-	-	-	-	0.8U	0.8U	80U	4U	4U	0.8U	0.8U	2U	0.8U	0.8U	0.8U	0.5UJ	0.8U
trans-1,3-Dichloropropene	ug/L	N	NA	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Trichloroethene (Trichloroethylene)	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	0.50U	-	-	2.5U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Trichlorofluoromethane (Freon 11)	ug/L	N	200	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	-	-	-	-	2U	2U	200U	10U	10U	2U	2U	4U	2U	2U	2U	0.5UJ	2U
Vinyl chloride (Chloroethene)	ug/L	N	1	0.5U	0.5U	1U	0.5U	-	-	-	-	0.5UJ	1.0U	-	-	5.0U	1U	1U	100U	5U	5U	1U	1U	2U	1U	1U	1U	0.5UJ	1U
Xylene (total)	ug/L	N	1000	280	75	110	20	**1600**	**2700**	**2100**	31	16J	37	40	300	**1100**	11	19	860	260	57	0.8U	0.8U	**1600**	97	3J	0.8U	23J	0.8U

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 1
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			H1422R2	H1427R1	H1427R2	H1673	HP-0088	HP-0121	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117
			H1422R2	H1427B2G1	H1427G3I4	H1673J3L4	HP-0088-A	HP-0121-A	M117A1X	M117A2Y	M117A3	M117A4A	M117A5X	M117A6X	M117A7X	M117A8X	M117A9X	M117B1X	M117B2X	M117B3X	M117B4X	M117B5X	D0327131	M117B6X	M117B7X	M117HS	M117B8X	M117HS2	M117B9X	M117C1X
			11/19/2013	12/03/2013	12/03/2013	03/20/2017	08/26/1997	09/18/1997	11/22/2002	02/27/2003	09/12/2003	03/02/2004	10/06/2004	06/08/2005	11/08/2005	06/01/2006	11/21/2006	06/07/2007	08/08/2008	05/13/2009	06/08/2011	03/07/2012	03/26/2013	03/27/2013	05/28/2014	08/05/2015	08/07/2015	02/03/2016	02/18/2016	02/07/2017
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1,1 Dichloroethene	ug/L	N	16U	0.8U	0.8U	0.5UJ	-	-	16U	0.8U	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
1,1,1-Trichloroethane	ug/L	N	16U	0.8U	0.8U	0.5UJ	-	-	16U	0.8U	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
1,1,2-Trichloroethane	ug/L	N	16U	0.8U	0.8U	0.5UJ	-	-	16U	0.8U	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/L	N	40U	2U	2U	2UJ	-	-	40U	2U	100U	2U	40U	40U	20U	20U	40U	-	4U	20U	4U	50U	2UJ	2UJ	4U	10U	20UJ	20U	2U	2U
1,1-Dichloroethane	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
1,2,4-Trichlorobenzene	ug/L	N	20U	1U	1U	1UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	2U	5U	10UJ	10U	1U	1U
1,2,4-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	N	40U	2U	2U	2UJ	-	-	40U	2U	100U	2U	40U	40U	20U	20U	40U	-	4U	20U	4U	50U	2U	2U	4U	10U	20UJ	20U	2U	2U
1,2-Dibromoethane	ug/L	N	20U	1U	1U	0.5UJ	10U	0.52U	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	N	20U	1U	1U	1UJ	1000U	100U	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	2U	5U	10UJ	10U	1U	1U
1,2-Dichloroethane	ug/L	N	20U	1U	1U	0.5UJ	40U	2.0U	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
1,2-Dichloroethene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
1,3,5-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	N	20U	1U	1U	1UJ	1000U	100U	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	2U	5U	10UJ	10U	1U	1U
1,4-Dichlorobenzene	ug/L	N	20U	1U	1U	1UJ	1000U	100U	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	2U	5U	10UJ	10U	1U	1U
1,4-Dioxane	ug/L	N	-	-	-	-	10000U	500U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone)	ug/L	N	60U	3U	3U	3UJ	200U	10U	73J	44	150U	31	60U	60U	30U	30U	60U	-	6J	30U	6U	75U	4J	4J	6U	15U	30UJ	30U	3U	3U
2-Hexanone	ug/L	N	60U	3U	3U	3UJ	-	-	60U	3U	150U	7J	60U	60U	30U	30U	60U	-	6U	30U	6U	75U	3U	3U	6U	15U	30UJ	30U	3U	3U
4-Methyl-2-pentanone	ug/L	N	60U	3U	3U	3UJ	-	-	60U	8J	150U	4J	60U	60U	30U	30U	60U	-	6U	30U	6U	75U	3U	3U	6U	15U	30UJ	30U	3U	3U
Acetone	ug/L	N	120U	6J	6U	6UJ	-	-	150J	120	300U	110	250J	120U	74J	60U	120U	-	17J	60U	12U	150U	15J	17J	12U	30U	60UJ	60U	8J	6U
Benzene	ug/L	N	10U	7	2J	0.5UJ	**1800**	16	**1900**	**1100**	**850**	**730**	**1600**	**700**	**1300**	**1700**	**1700**	**840**	**1200**	**560**	**2100**	**1600**	**1800**	**1900**	**2200**	**460**	**1900J**	**860**	**470**	95
Bromodichloromethane	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Bromoform	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Bromomethane (Methyl bromide)	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5UJ
Carbon disulfide	ug/L	N	20U	1U	1U	1UJ	100U	5.0U	20U	1U	50U	1J	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1UJ	1UJ	2U	5U	10UJ	10U	1U	1U
Carbon Tetrachloride	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Chlorobenzene	ug/L	N	16U	0.8U	0.8U	0.5UJ	80U	4.0U	16U	0.8U	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
Chloroethane	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Chloroform	ug/L	N	16U	0.8U	0.8U	0.5UJ	100U	5.0U	16U	1J	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
Chloromethane (Methyl chloride)	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
cis-1,2-Dichloroethene	ug/L	N	16U	0.8U	0.8U	0.5UJ	-	-	16U	0.8U	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
cis-1,3-Dichloropropene	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Cyclohexane	ug/L	N	40U	13	23	2UJ	-	-	41J	78	100U	47	40J	40U	20U	35J	40U	-	29	26J	40	50U	44	52	36	10J	33J	26J	27	14
Dibromochloromethane	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	ug/L	N	40U	2U	2U	0.5UJ	-	-	40U	2U	100U	2U	40U	40U	20U	20U	40U	-	4U	20U	4U	50U	2U	2U	1U	3U	5UJ	5U	0.5U	0.5U
Ethylbenzene	ug/L	N	16U	42	14	0.5UJ	290	10	110	130	40U	90	110	84J	56	100	73J	130	99	180	210	160	230	230	200	40	84J	130	94	77
Isopropylbenzene	ug/L	N	20U	22	37	1UJ	-	-	20U	19	50U	10	20U	20U	10U	12J	20U	-	11	11J	14	25U	18	18	16	5U	12J	10J	9	4J
Methyl acetate	ug/L	N	20U	1U	1U	1UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	2U	5U	10UJ	10U	1U	1U
Methyl-t-butyl ether	ug/L	N	10U	0.5U	0.5U	0.5UJ	-	-	**240**	**220**	**170J**	**130**	**190**	**100**	**140**	**160**	**160**	-	**99**	36J	**150**	**71J**	**110**	**120**	**120**	20	**84J**	30	32	0.9J
Methylcyclohexane	ug/L	N	20U	22	25	1UJ	-	-	33J	53	50U	38	24J	20U	10U	18J	20U	-	17	16J	17	25U	23	25	16	6J	14J	11J	17	4J
Methylene chloride (Dichloromethane)	ug/L	N	40U	2U	2U	2UJ	-	-	40U	2U	100U	2U	40U	40U	20U	20U	40U	-	4U	20U	4U	50U	2U	2U	4U	10U	20UJ	20U	2U	2U
n-Propylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (C6-C10)-GRO	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	N	20U	1U	1U	1UJ	100U	5.0U	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	2U	5U	10UJ	10U	1U	1U
Tetrachloroethene	ug/L	N	16U	0.8U	0.8U	0.5UJ	-	-	16U	0.8U	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
Toluene	ug/L	N	14U	5J	7	0.5UJ	**920**	5.0U	290	270	92J	280	340	330	160	310	230	280	470	**820**	**810**	**700**	540	550	340	34	65J	570	150	41
Total TIC VOCS	ug/L	N	0U	930J	890J	12J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	N	16U	0.8U	0.8U	0.5UJ	-	-	16U	0.8U	40U	0.8U	16U	16U	8U	8U	16U	-	2U	8U	2U	20U	0.8U	0.8U	1U	3U	5UJ	5U	0.5U	0.5U
trans-1,3-Dichloropropene	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	ug/L	N	40U	2U	2U	0.5UJ	-	-	40U	2U	100U	2U	40U	40U	20U	20U	40U	-	4U	20U	4U	50U	2U	2U	1U	3U	5UJ	5U	0.5U	0.5UJ
Vinyl chloride (Chloroethene)	ug/L	N	20U	1U	1U	0.5UJ	-	-	20U	1U	50U	1U	20U	20U	10U	10U	20U	-	2U	10U	2U	25U	1U	1U	1U	3U	5UJ	5U	0.5U	0.5U
Xylene (total)	ug/L	N	16U	82	84	0.5UJ	**1500**	5.0U	520	570	170J	450	560	440	260	480	330	590	470	930	820	690	840	860	770	270	500J	910	420	410

Notes:
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Table 1
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260
			M238A1X	M238A2X	M238A3X	M238A4X	M238A5X	M238A6X	M238A7X	M238A8X	M238A9X	M238B1X	M238B2X	M238B3X	M238HS	M238B4X	M238B5X	M260A1X	M260A2X	M260A3X	M260A4X	M260A5X	M260A6X	M260A7X	M260A8X	M260A9X	D0821121	M260B1X	M260B2X	M260B4X
			12/15/2006	05/10/2007	12/11/2007	07/18/2008	11/04/2008	07/21/2009	11/06/2009	07/08/2010	06/08/2011	03/07/2012	04/25/2013	05/29/2014	02/03/2016	02/18/2016	02/07/2017	03/13/2007	05/10/2007	07/18/2008	11/04/2008	05/13/2009	11/06/2009	06/21/2011	11/15/2011	03/07/2012	08/21/2012	08/21/2012	03/26/2013	09/27/2013
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1,1 Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
1,1,1-Trichloroethane	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
1,1,2,2-Tetrachloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,1,2-Trichloroethane	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	-	-	-	-	2U	-	-	-	40U	50U	20U	50U	100U	40U	200U	40U	100U	20U	20U	100U	20U
1,1-Dichloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,2,4-Trichlorobenzene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,2,4-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	960J	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	-	-	-	-	2U	-	-	-	40U	50U	20U	50U	100U	40U	200U	40U	100U	20U	20U	100U	20U
1,2-Dibromoethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,2-Dichloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,2-Dichloroethene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,3,5-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	260J	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,4-Dichlorobenzene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
1,4-Dioxane	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone)	ug/L	N	3U	3U	3U	3U	3U	3U	3U	-	-	-	-	3U	-	-	-	60U	75U	30U	75U	150U	60U	300U	60U	150U	30U	57J	150U	39J
2-Hexanone	ug/L	N	3U	3U	3U	3U	3U	3U	3U	-	-	-	-	3U	-	-	-	60U	75U	30U	75U	150U	60U	300U	60U	150U	30U	30U	150U	30U
4-Methyl-2-pentanone	ug/L	N	3U	3U	3U	3U	3U	3U	3U	-	-	-	-	3U	-	-	-	60U	75U	30U	75U	150U	60U	300U	60U	150U	30U	30U	150U	30U
Acetone	ug/L	N	6U	6U	6U	6U	6U	6U	6U	-	-	-	-	6U	-	-	-	120U	150U	60U	190J	300U	120U	600U	220J	300U	120J	210	300U	130J
Benzene	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	**36000**	**24000**	**7800**	**13000**	**13000**	**19000**	**18000**	**15000**	**19000**	**13000**	**14000**	**22000**	**14000**
Bromodichloromethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Bromoform	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Bromomethane (Methyl bromide)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Carbon disulfide	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Carbon Tetrachloride	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Chlorobenzene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
Chloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Chloroform	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
Chloromethane (Methyl chloride)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
cis-1,2-Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
cis-1,3-Dichloropropene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Cyclohexane	ug/L	N	2U	2U	2U	2U	2U	2U	2U	-	-	-	-	2U	-	-	-	720	350	33J	190	370	160	220J	240	120J	190	240	300	190
Dibromochloromethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Dichlorodifluoromethane (Freon 12)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	-	-	-	-	0.5U	-	-	-	40U	50U	20U	50U	100U	40U	200U	40U	100U	20U	20U	100U	20U
Ethylbenzene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	400	250	47J	620	**1000**	590	590	660	**800**	660	**750**	**770**	660
Isopropylbenzene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	26J	25U	10U	25U	50U	27J	100U	24J	50U	23J	29J	50U	26J
Methyl acetate	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Methyl-t-butyl ether	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	-	-	-	0.5U	-	-	-	10U	13U	5U	13U	25U	10U	50U	10U	25U	9J	9J	25U	7J
Methylcyclohexane	ug/L	N	1U	1J	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	560	250	43J	95J	190J	81J	150J	100	50U	80	100	160J	87
Methylene chloride (Dichloromethane)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	-	-	-	-	2U	-	-	-	40U	50U	20U	50U	100U	40U	200U	40U	100U	20U	20U	100U	20U
n-Propylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (C6-C10)-GRO	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	1U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Tetrachloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
Toluene	ug/L	N	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.5U	0.5U	0.5U	0.5U	**1700**	**1400**	290	**4500**	**7500**	**3500**	**4400**	**5000**	**6600**	**6500**	**6900**	**5600**	**5700**
Total TIC VOCS	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	-	-	-	-	0.5U	-	-	-	16U	20U	8U	20U	40U	16U	80U	16U	40U	8U	8U	40U	8U
trans-1,3-Dichloropropene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Trichloroethene (Trichloroethylene)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Trichlorofluoromethane (Freon 11)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	-	-	-	-	0.5U	-	-	-	40U	50U	20U	50U	100U	40U	200U	40U	100U	20U	20U	100U	20U
Vinyl chloride (Chloroethene)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	-	-	-	-	0.5U	-	-	-	20U	25U	10U	25U	50U	20U	100U	20U	50U	10U	10U	50U	10U
Xylene (total)	ug/L	N	0.8U	0.9J	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	**2400**	**1500**	340	**4300**	**6700**	**4000**	**4100**	**4300**	**5500**	**4300**	**5100**	**5000**	**4500**

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 1
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260R	MW-260R	MW-260R	MW-260R	MW-260R	MW-260R	MW-260R	MW-261	MW-261	MW-261	MW-261R	MW-261R	MW-261R	MW-261R	MW-261R	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267
			M260B5X	M260B6X	M260B7X	M260B8X	D0908161	M260B9X	M260RC1X	M260RC2X	D0521191	M260RC3X	M260RC4X	D1104191	M260RC5X	M261A1X	M261A2X	M261A3X	M261RC4X	M261RA5X	M261RA6X	M261RA7X	M261RA8X	M267A1X	M267A2X	M267A3X	M267A4X	M267A5X	M267A6X	M267A7X
			05/28/2014	07/02/2015	03/08/2016	09/08/2016	09/08/2016	02/07/2017	11/26/2018	02/05/2019	05/21/2019	05/21/2019	08/23/2019	11/04/2019	11/04/2019	03/07/2007	05/10/2007	12/11/2007	11/27/2018	02/05/2019	05/01/2019	07/29/2019	11/06/2019	03/07/2007	05/23/2007	12/11/2007	07/18/2008	10/28/2008	07/21/2009	11/06/2009
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1,1 Dichloroethene	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	0.8U	0.8U	0.8U	0.2U	0.2U	0.2U	2U	0.2U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
1,1,1-Trichloroethane	ug/L	N	5U	5U	10U	5U	5U	100U	6U	6UJ	3UJ	3UJ	8UJ	3U	3U	0.8U	0.8U	0.8U	0.3U	0.3U	0.3U	3U	0.3U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
1,1,2,2-Tetrachloroethane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
1,1,2-Trichloroethane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	0.8U	0.8U	0.8U	0.2U	0.2U	0.2U	2U	0.2U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/L	N	20U	20U	40U	20U	20U	400U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	2U	0.2U	2U	2U	2U	20U	20U	20U	2U
1,1-Dichloroethane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
1,2,4-Trichlorobenzene	ug/L	N	10U	10U	20U	10U	10U	200U	6U	6UJ	3UJ	3UJ	8UJ	3U	3U	1U	1U	1U	0.3U	0.3U	0.3U	3U	0.3U	1U	1U	1U	10U	10U	10U	1U
1,2,4-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	N	20U	20U	40U	20U	20U	400U	6U	6UJ	3UJ	3UJ	8UJ	3U	3U	2U	2U	2U	0.3U	0.3U	0.3U	3U	0.3U	2U	2U	2U	20U	20U	20U	2U
1,2-Dibromoethane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	N	10U	10U	20U	10U	10U	200U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
1,2-Dichloroethane	ug/L	N	5U	5U	10U	5U	5U	100U	6U	6UJ	3UJ	3UJ	8UJ	3U	3U	1U	1U	1U	0.3U	0.3U	0.3U	3U	0.3U	1U	1U	1U	10U	10U	10U	1U
1,2-Dichloroethene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
1,3,5-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	N	10U	10U	20U	10U	10U	200U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
1,4-Dichlorobenzene	ug/L	N	10U	10U	20U	10U	10U	200U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
1,4-Dioxane	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone)	ug/L	N	46J	37J	60U	36J	34J	600U	6U	6UJ	3UJ	3UJ	8UJ	3U	3J	7J	14	3U	0.3U	0.3U	0.3U	3U	0.3U	3U	3U	3U	30U	30U	30U	3U
2-Hexanone	ug/L	N	30U	30U	60U	30U	30U	600U	6U	6UJ	3UJ	3UJ	8UJ	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	3U	0.3U	3U	3U	3U	30U	30U	30U	3U
4-Methyl-2-pentanone	ug/L	N	30U	30U	60U	30U	30U	600U	10U	10UJ	5UJ	5UJ	13UJ	5U	5U	3U	3U	3U	0.5U	0.5U	0.7J	5U	0.5U	3U	3U	3U	30U	30U	30U	3U
Acetone	ug/L	N	60U	160J	180J	150J	140J	1200U	17J	14UJ	7UJ	7UJ	18UJ	7J	9J	23	43	21	2J	0.7U	2J	7U	4J	6U	8J	6U	60U	60U	60U	6U
Benzene	ug/L	N	**15000**	**15000**	**15000**	**13000**	**14000**	**14000**	**7200**	**6500J**	**10000J**	**10000J**	**12000J**	**7800**	**7800**	**510**	**350**	**140**	7	6	8	11	7	28	28	22	13J	5J	11J	12
Bromodichloromethane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Bromoform	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	25UJ	10U	10U	1U	1U	1U	0.2U	0.2U	0.2U	5U	1U	1U	1U	1U	10U	10U	10U	1U
Bromomethane (Methyl bromide)	ug/L	N	5U	5U	10U	5UJ	5UJ	100UJ	6U	6UJ	3UJ	3UJ	8UJ	3U	3U	1U	1U	1U	0.3U	0.3U	0.3U	3U	0.3U	1U	1U	1U	10U	10U	10U	1U
Carbon disulfide	ug/L	N	10U	10U	20U	10UJ	10UJ	200U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	1J	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Carbon Tetrachloride	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Chlorobenzene	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	0.8U	0.8U	0.8U	0.2U	0.2U	0.2U	2U	0.2U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
Chloroethane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Chloroform	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	0.8U	0.8U	0.8U	0.2U	0.2U	0.2U	2U	0.2U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
Chloromethane (Methyl chloride)	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
cis-1,2-Dichloroethene	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	0.8U	0.8U	0.8U	0.2U	0.2U	0.2U	2U	0.2U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
cis-1,3-Dichloropropene	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Cyclohexane	ug/L	N	300	180	390	190	190	420J	53J	8J	28UJ	34UJ	25UJ	31J	40J	220	170	180	60	60	38	34J	42	24	10	13	20U	20U	20U	11
Dibromochloromethane	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Dichlorodifluoromethane (Freon 12)	ug/L	N	5U	5U	10U	5U	5U	100U	4UJ	4UJ	2UJ	2UJ	5UJ	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	2U	0.2U	2U	2U	2U	20U	20U	20U	2U
Ethylbenzene	ug/L	N	**950**	700	**1100**	**850**	**850**	**1200**	39	12J	59J	59J	25J	61	60	24	24	10	2	2	2	4U	0.7J	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
Isopropylbenzene	ug/L	N	36J	26J	41J	31J	30J	200U	4U	4UJ	5J	5J	5UJ	7J	6J	43	50	32	36	45	22	21J	35	1J	1U	1J	10U	10U	10U	1U
Methyl acetate	ug/L	N	10U	10U	20U	10U	10U	200U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Methyl-t-butyl ether	ug/L	N	9J	9J	10U	8J	8J	100U	4U	4UJ	3J	3J	5UJ	3J	3J	2J	0.7J	3J	0.5J	0.5J	0.2U	2U	3	0.5U	0.5U	0.5U	5U	5U	5U	0.5U
Methylcyclohexane	ug/L	N	130	99	160	100	98	200U	43J	4UJ	11J	14J	13UJ	15J	23J	130	120	110	44	39	23	14J	23	11	4J	5	10U	10U	10U	4J
Methylene chloride (Dichloromethane)	ug/L	N	20U	20U	40U	20U	20U	400U	6U	6UJ	3UJ	3UJ	9UJ	3U	3U	2U	2U	2U	0.3U	0.3U	0.3U	3U	0.3U	2U	2U	2U	20U	20U	20U	2U
n-Propylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	150J	85J	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (C6-C10)-GRO	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	N	10U	10U	20U	10U	10U	200U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Tetrachloroethene	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	0.8U	0.8U	0.8U	0.2U	0.2U	0.2U	2U	0.2U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
Toluene	ug/L	N	**7700**	**5600**	**8000**	**6900**	**7000**	**8500**	26	13J	59J	60J	41J	120	110	25	23	14	3	3	2	3J	2	2J	2J	2J	7U	7U	7U	1J
Total TIC VOCS	ug/L	N	-	-	-	-	-	-	0U	0U	200J	200J	0U	460J	400J	-	-	-	760J	820J	470J	310J	560J	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	0.8U	0.8U	0.8U	0.2U	0.2U	0.2U	2U	0.2U	0.8U	0.8U	0.8U	8U	8U	8U	0.8U
trans-1,3-Dichloropropene	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Trichloroethene (Trichloroethylene)	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Trichlorofluoromethane (Freon 11)	ug/L	N	5U	5U	10U	5U	5U	100UJ	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	2U	0.2U	2U	2U	2U	20U	20U	20U	2U
Vinyl chloride (Chloroethene)	ug/L	N	5U	5U	10U	5U	5U	100U	4U	4UJ	2UJ	2UJ	5UJ	2U	2U	1U	1U	1U	0.2U	0.2U	0.2U	2U	0.2U	1U	1U	1U	10U	10U	10U	1U
Xylene (total)	ug/L	N	**6300**	**4700**	**7200**	**5600**	**5500**	**7300**	78J	20UJ	120J	120J	93J	240	240	60	35	28	11	10	5	10U	7	25	22	16	8U	8U	10J	15

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 1
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267R	MW-267R	MW-267R	MW-267R	MW-267R	MW-267R	MW-267R	MW-267R	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397
			M267A9X	M267B2X	M267B3X	M267B4X	M267B5X	M267B6X	M267B7X	M267B8X	M267B9X	M267C1X	M267C2X	M267C3X	M267RC4X	M267RC6X	M267RC7X	M267RC8X	D110619	M267RC9X	D1219191	M267RD1X	M397A1X	M397A2X	M397A3X	M397A4X	M397A5X	M397A6X	M397A7X	M397A8X
			09/21/2010	06/07/2011	11/15/2011	03/07/2012	08/21/2012	03/26/2013	09/27/2013	05/28/2014	07/22/2015	03/08/2016	09/08/2016	02/07/2017	10/22/2018	02/05/2019	05/02/2019	07/30/2019	11/06/2019	11/06/2019	12/19/2019	12/19/2019	03/18/2014	06/13/2014	10/16/2017	12/12/2017	10/17/2018	01/17/2019	04/09/2019	07/12/2019
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1,1 Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
1,1,1-Trichloroethane	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.3U	3UJ	0.3U	3UJ	2U	2U	0.3UJ	0.3UJ	0.8U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichloroethane	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/L	N	2U	2U	2U	2U	10U	2U	2U	2U	2UJ	2U	20U	2U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U
1,1-Dichloroethane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
1,2,4-Trichlorobenzene	ug/L	N	1U	1U	1U	1U	5U	1U	1U	1U	1UJ	1U	10U	1U	0.3U	3UJ	0.3U	3UJ	2U	2U	0.3UJ	0.3UJ	1U	1U	1U	1U	0.3U	0.3U	0.3U	0.3U
1,2,4-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	N	2U	2U	2U	2U	10U	2U	2U	2U	2UJ	2U	20U	2U	0.3U	3UJ	0.3U	3UJ	2U	2U	0.3UJ	0.3UJ	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromoethane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	N	1U	1U	1U	1U	5U	1U	1U	1U	1UJ	1U	10U	1U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U
1,2-Dichloroethane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.3U	3UJ	0.3U	3UJ	2U	2U	0.3UJ	0.3UJ	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3UJ	0.3U
1,2-Dichloroethene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
1,3,5-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	N	1U	1U	1U	1U	5U	1U	1U	1U	1UJ	1U	10U	1U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U
1,4-Dichlorobenzene	ug/L	N	1U	1U	1U	1U	5U	1U	1U	1U	1UJ	1U	10U	1U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U
1,4-Dioxane	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone)	ug/L	N	3U	3U	3U	3U	15U	3U	3U	3U	3UJ	3U	30U	3U	0.3U	3UJ	0.3U	3UJ	2U	2U	0.5J	0.4J	3U	5J	3J	3U	0.3U	3J	0.3U	0.3U
2-Hexanone	ug/L	N	3U	3U	3U	3U	15U	3U	3U	3U	3UJ	3U	30U	3U	0.3U	3UJ	0.3U	3UJ	2U	2U	0.3UJ	0.3UJ	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U
4-Methyl-2-pentanone	ug/L	N	3U	3U	3U	3U	15U	3U	3U	3U	3UJ	3U	30U	3U	0.5U	5UJ	0.5U	5UJ	3U	3U	0.5UJ	0.5UJ	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U
Acetone	ug/L	N	6U	6U	6U	10J	30U	6U	6U	6U	6UJ	21	60U	10J	0.7U	7UJ	0.7U	7UJ	4U	4U	4J	3J	7J	12J	14J	26	10J	6J	0.7U	4J
Benzene	ug/L	N	10	11	5	8	5J	5	1J	1	0.5UJ	2	5U	1	1	2UJ	2	2UJ	1J	1J	1J	1J	19	5	2	2	0.4J	0.8J	0.7J	6
Bromodichloromethane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Bromoform	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	10UJ	5U	5U	1UJ	1UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Bromomethane (Methyl bromide)	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5UJ	0.5UJ	0.3U	3UJ	0.3U	3UJ	2U	2U	0.3UJ	0.3UJ	1U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	ug/L	N	1J	1U	1J	1U	5U	1U	1J	1J	1UJ	1U	10UJ	1U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.4J	0.4J	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U
Carbon Tetrachloride	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5UJ	0.5U	0.2U	0.2U	0.2U	0.2U
Chlorobenzene	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.8U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Chloroethane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Chloroform	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.8U	0.5U	0.5U	0.5U	1	0.2U	0.2U	0.2U
Chloromethane (Methyl chloride)	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
cis-1,2-Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.8U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
cis-1,3-Dichloropropene	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Cyclohexane	ug/L	N	9	12	4J	6	10U	5J	2J	4J	2UJ	9	20U	4J	2J	2UJ	0.5J	10UJ	5U	5U	1UJ	1UJ	22	15	13	19	6J	13	19	8
Dibromochloromethane	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2UJ	0.2U
Dichlorodifluoromethane (Freon 12)	ug/L	N	2U	2U	2U	2U	10U	2U	2U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	2U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Ethylbenzene	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.6J	4UJ	0.4U	4UJ	2U	2U	0.4UJ	0.4UJ	2J	2	0.6J	0.6J	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	ug/L	N	1U	1U	1U	1U	5U	1U	1U	1U	1UJ	1U	10U	1U	0.6J	2UJ	0.4J	2UJ	1U	1U	0.2UJ	0.2UJ	33	34	34	32	14	28	40	1J
Methyl acetate	ug/L	N	1U	1U	1U	1U	5U	1U	1U	1U	1UJ	1U	10U	1U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U
Methyl-t-butyl ether	ug/L	N	0.5U	0.5U	0.5U	0.5U	3U	0.5U	0.5U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2UJ	0.2U
Methylcyclohexane	ug/L	N	4J	4J	1J	1J	5U	1J	1U	1J	1UJ	3J	10U	1U	1J	2UJ	0.2U	5UJ	3U	3U	0.5UJ	0.5UJ	24	23	29	32	10	33	38	0.8J
Methylene chloride (Dichloromethane)	ug/L	N	2U	2U	2U	2U	10U	2U	2U	2U	2UJ	2U	20U	2U	0.3U	3UJ	0.3U	4UJ	2U	2U	0.3UJ	0.3UJ	2U	2U	0.5U	0.5U	0.3U	0.3U	0.3U	1U
n-Propylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (C6-C10)-GRO	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1200J+	910	-	-	-	-
Styrene	ug/L	N	1U	1U	1U	1U	5U	1U	1U	1U	1UJ	1U	10U	1U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U
Tetrachloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Toluene	ug/L	N	0.9J	1J	0.7U	0.8J	4U	0.8J	0.7U	0.7J	0.5UJ	0.6J	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	5J	4	4	5	1J	3	2	0.2U
Total TIC VOCS	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	6J	0U	0U	0U	0U	0U	-	-	670J	580J	430J	-	230J	470J	500J	110J
trans-1,2-Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	4U	0.8U	0.8U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.8U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
trans-1,3-Dichloropropene	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Trichloroethene (Trichloroethylene)	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	ug/L	N	2U	2U	2U	2U	10U	2U	2U	0.5U	0.5UJ	0.5U	5U	0.5UJ	0.2U	2UJ	0.2UJ	2UJ	1U	1U	0.2UJ	0.2UJ	2U	0.5U	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U
Vinyl chloride (Chloroethene)	ug/L	N	1U	1U	1U	1U	5U	1U	1U	0.5U	0.5UJ	0.5U	5U	0.5U	0.2U	2UJ	0.2U	2UJ	1U	1U	0.2UJ	0.2UJ	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Xylene (total)	ug/L	N	12	15	8	9	6J	8	3J	5	0.5UJ	6	5U	3	2J	10UJ	1U	14UJ	7U	7U	1UJ	1UJ	45	36	17	19	5J	12	9	1U

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 1
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-397	MW-397	MW-397	MW-550	MW-550	MW-550	MW-550	MW-550	MW-550	MW-550	MW-551	MW-551	MW-551	MW-551	MW-551	MW-551	MW-551	MW-551	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1
			D0930198	M397A9X	M397B1X	D1126188	M550A1X	M550A2X	D0503198	M550A3X	M550A4X	M550A5X	M551A1X	D0204198B	M551A2X	M551A3X	D0726198	M551A4X	M551A5X	M551A6X	P001A2X	P001A3X	P001A4X	P001A5X	P001A6X	P001A7X	P001A8X	P001A9X	P001B1X	P001B2X
			09/30/2019	09/30/2019	01/23/2020	11/26/2018	11/26/2018	02/04/2019	05/03/2019	05/03/2019	07/29/2019	11/07/2019	11/26/2018	02/04/2019	02/04/2019	05/03/2019	07/26/2019	07/26/2019	11/06/2019	12/19/2019	11/15/2005	06/02/2006	12/01/2006	06/12/2007	12/13/2007	08/22/2008	11/04/2008	07/10/2009	11/12/2009	06/29/2010
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1,1 Dichloroethene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,1-Trichloroethane	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ	0.3UJ	0.3UJ	3UJ	3UJ	2UJ	0.3U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2,2-Tetrachloroethane	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2,4-Trichlorobenzene	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3J	0.3UJ	0.3UJ	3UJ	3UJ	2UJ	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2,4-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ	0.3UJ	0.3UJ	3UJ	3UJ	2UJ	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ	0.3UJ	0.3UJ	3UJ	3UJ	2UJ	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,3,5-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dioxane	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone)	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	2J	5J	4J	1J	3UJ	3UJ	2UJ	1J	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ	0.3UJ	0.3UJ	3UJ	3UJ	2UJ	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	ug/L	N	0.5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5UJ	5UJ	5UJ	3UJ	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Acetone	ug/L	N	6J	7U	0.7U	0.7U	0.7U	0.7UJ	0.7U	0.7U	0.7U	0.7U	0.7U	31J	32J	3J	10J-	14J-	4UJ	6J	6U	8J	8J	6U	6U	7J	6U	6J	6U	6U
Benzene	ug/L	N	0.4J	2U	0.4J	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	**170**	**150J**	**150J**	**230J**	66J-	66J-	81J	52J	2J	2J	2J	2J	1J	1J	1J	1J	0.6J	1J
Bromodichloromethane	ug/L	N	0.4J	2U	0.2U	0.4J	0.5J	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromoform	ug/L	N	1U	10U	1UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	1U	0.2U	0.2UJ	0.2UJ	0.2UJ	5UJ	5UJ	5UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ	0.3UJ	0.3UJ	3UJ	3UJ	2UJ	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon disulfide	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.9J	0.8J	0.8J	0.4J	4J-	3J-	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	2J	1U	1U
Carbon Tetrachloride	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chloroform	ug/L	N	2	2U	0.2U	15	15	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
cis-1,3-Dichloropropene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cyclohexane	ug/L	N	12	10U	9	0.3J	0.2U	0.2U	0.2U	0.2U	2U	1U	60	17J	16J	52J	20UJ	4J-	11J	2J	11	8	8	6	13	6	10	4J	4J	5J
Dibromochloromethane	ug/L	N	0.2U	2U	0.2U	0.2J	0.3J	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	ug/L	N	0.2U	2U	0.2U	0.2UJ	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Ethylbenzene	ug/L	N	0.4U	4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	130	130J	120J	220J	23J-	25J-	26J	7J	3J	2J	5	2J	2J	1J	1J	1J	0.8U	0.8U
Isopropylbenzene	ug/L	N	23J	15J	16	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	10	10J	10J	20J	2UJ	2UJ	9J	0.6J	5J	6	6	3J	6	5J	4J	6	4J	3J
Methyl acetate	ug/L	N	0.2U	2U	0.3U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	25	28J	28J	27J	18J-	18J-	26J	22J	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	ug/L	N	19J	11J	26	0.4J	0.2J	0.2U	0.2U	0.2U	1U	0.5U	52	12J	12J	58J	10UJ	3J-	3UJ	2J	12	10	12	8	13	6	8	1J	1J	2J
Methylene chloride (Dichloromethane)	ug/L	N	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ	0.3UJ	0.3UJ	4UJ	5UJ	2UJ	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
n-Propylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (C6-C10)-GRO	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2J	2UJ	2UJ	1UJ	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Toluene	ug/L	N	1	2U	1	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	17	17J	16J	31J	12J-	11J-	15J	3J	0.8J	0.7U	1J	0.7U	0.7U	0.7U	0.7U	0.9J	0.7U	1J
Total TIC VOCS	ug/L	N	300J	0U	400J	0U	0U	0U	0U	720J	0U	0U	1000J	1000J	1000J	1600J	160J	0U	440J	-	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	ug/L	N	0.2U	**12J**	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	ug/L	N	0.2UJ	2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	ug/L	N	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2UJ	2UJ	2UJ	1UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Xylene (total)	ug/L	N	8J	14U	6	1U	1U	1U	1U	1U	1U	1U	550	360J	360J	420J	76J-	78J-	110J	30J	14	9	17	6	5	4J	5	2J	1J	5J

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 1
SUMMARY OF VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1
			P001B3X	P001B4X	P001B5X	P001B6X	P001B7X	P001B8X	P001B9X	P001C1X	P001C2X	P001C3X	P001HS	P001C4X	P001C5X	P001C6X	P001C7X	D1017178A	P001C8X	P001C9X	P001D2	P001D3X	P001D4X	D1207181	P001D5X	P001D6X	P001D7X	P001D8X	P001D9X
			09/29/2010	06/07/2011	11/15/2011	03/09/2012	08/09/2012	04/05/2013	09/25/2013	06/24/2014	11/14/2014	06/30/2015	02/03/2016	02/17/2016	08/16/2016	02/08/2017	08/24/2017	10/17/2017	10/17/2017	12/11/2017	06/06/2018	08/23/2018	10/01/2018	12/07/2018	12/07/2018	03/19/2019	06/12/2019	09/06/2019	12/06/2019
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1,1 Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,1-Trichloroethane	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichloroethane	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1-Dichloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2,4-Trichlorobenzene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2,4-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane (DBCP)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromoethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3UJ	0.3U	0.3U	0.3J	0.4J	0.3U	0.3UJ	0.3U
1,2-Dichloroethene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3,5-Trimethylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,4-Dichlorobenzene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,4-Dioxane	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (Methyl ethyl ketone)	ug/L	N	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	2J	0.3U	0.3U	0.3U	0.3U	1J	0.3U	0.3U
2-Hexanone	ug/L	N	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3UJ	3U	0.3U	0.3U	0.3U	0.3U	0.3U	2J	0.3U	0.3U
4-Methyl-2-pentanone	ug/L	N	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Acetone	ug/L	N	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6UJ	6U	6J	6U	6U	6U	16J	18UJ	3U	2UJ	3UJ	2UJ	16J	0.7U	1J
Benzene	ug/L	N	2J	1J	0.9J	0.8J	0.9J	0.5U	0.9J	0.5U	0.5J	0.5U	0.5U	0.5U	0.7J	0.5U	0.5U	0.5U	0.5U	0.5U	0.8J	8	8	6	5	14	18	0.4J	0.3J
Bromodichloromethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Bromoform	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U
Bromomethane (Methyl bromide)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Carbon Tetrachloride	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U
Chlorobenzene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroform	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloromethane (Methyl chloride)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,2-Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,3-Dichloropropene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Cyclohexane	ug/L	N	9	5	4J	4J	4J	2U	3J	2U	2J	2U	2U	2U	2U	2J	2U	2U	2U	2U	4J	7	13	12	11	13	0.9J	8	7
Dibromochloromethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Dichlorodifluoromethane (Freon 12)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.2UJ	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ
Ethylbenzene	ug/L	N	2J	1J	0.9J	0.8U	0.8U	0.8U	0.8U	0.5U	0.6J	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3	3	0.6J	0.4J	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	ug/L	N	7	4J	4J	4J	3J	1U	3J	1U	2J	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5J	2J	2J	1J	1J	0.4J	1J	1J
Methyl acetate	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methyl-t-butyl ether	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methylcyclohexane	ug/L	N	6	3J	4J	3J	3J	1U	1J	1U	2J	1U	1U	1U	1U	1U	1U	1U	1U	1U	1J	2J	4J	3J	3J	2J	0.2U	1J	0.9J
Methylene chloride (Dichloromethane)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.4UJ	0.3U
n-Propylbenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Petroleum Hydrocarbons (C6-C10)-GRO	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	120	150	-	-	-	-	-	-	-	-	-
Styrene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Tetrachloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Toluene	ug/L	N	1J	0.8J	0.8J	0.7U	1J	0.7U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.7J	0.6J	0.2U	0.2U	0.2J	0.2U	0.2J	0.2U
Total TIC VOCS	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18J	20J	-	28J	-	100J	110J	96J	93J	41J	120J	110J
trans-1,2-Dichloroethene	ug/L	N	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,3-Dichloropropene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichloroethene (Trichloroethylene)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ
Vinyl chloride (Chloroethene)	ug/L	N	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Xylene (total)	ug/L	N	7	4J	6	3J	4J	0.8U	3J	0.5U	4	0.5U	0.9J	0.5U	2	0.5U	0.7J	0.5U	0.5U	1	0.5U	8	5	1U	1U	1U	1U	1U	1U

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 2
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			Location ID	H0325	H0326	H0327	H0418	H0419	H0420	H0441	H0443	H0896	H0985	H0986	H0987	H0988	H1422R1	H1422R2	HP-0088	HP-0121	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117
			Field Sample ID	H0325	H0326	H0327	H0418	H0419	H0420	H0441	H0443	H0896	H0985	H0986	H0987	H0988	H1422R1	H1422R2	HP-0088-A	HP-0121-A	M117A1X	M117A2Y	M117A3	M117A4A	M117A5X	M117A6X	M117A7X	M117A8X	M117A9X	M117B1X	M117B2X	M117B3X
			Sample Date	08/20/1999	08/20/1999	08/20/1999	09/30/1999	09/30/1999	09/30/1999	10/13/1999	10/14/1999	01/22/2003	10/26/2006	10/26/2006	10/26/2006	10/26/2006	11/19/2013	11/19/2013	08/26/1997	09/18/1997	11/22/2002	02/27/2003	09/12/2003	03/02/2004	10/06/2004	06/08/2005	11/08/2005	06/01/2006	11/21/2006	06/07/2007	08/08/2008	05/13/2009
			Sample Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	Report Units	Filtered	CMI GW Criteria or GWQS	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result	Report Result
1-Methyl-naphthalene	ug/L	N	NA	94	130	52	11	73	15	37	-	-	-	-	-	-	-	-	320	64	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	N	700	-	-	-	-	100U	-	-	50U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
2,4,6-Trichlorophenol	ug/L	N	20	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
2,4-Dichlorophenol	ug/L	N	20	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
2,4-Dimethylphenol	ug/L	N	100	**3300**	**110**	**880**	2	21U	14U	12	35	2U	-	-	-	-	-	-	**6700**	100U	**40000**	**55000**	**43000**	**28000**	**42000**	**37000**	**28000**	**24000**	**41000**	**2700**	**24000**	**2200**
2,4-Dinitrophenol	ug/L	N	40	130U	170U	27U	25U	100U	28U	33U	50U	40U	-	-	-	-	-	-	2100U	200U	200U	200U	190U	190U	190U	200U	200U	20U	19U	19U	200U	19U
2,4-Dinitrotoluene	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
2,6-Dinitrotoluene	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
2-Chloronaphthalene	ug/L	N	600	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	2U	2U	2U	20U	2U
2-Chlorophenol (o-Chlorophenol)	ug/L	N	40	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
2-Methyl-Naphthalene	ug/L	N	NA	140	250	90	11	56	10	51	10U	4J	-	-	-	-	-	-	470	12	80J	100	130	53J	66J	49J	48J	48	28	23	58	15
2-Methylphenol (o-Cresol)	ug/L	N	NA	1200	160	380	12U	21U	14U	4	1	2U	-	-	-	-	-	-	7700	100U	64000	77000	51000	41000	41000	34000	22000	8300	19000	550	3900	490
2-Nitroaniline (o-Nitroaniline)	ug/L	N	NA	-	-	-	-	100U	-	-	50U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
2-Nitrophenol (o-Nitrophenol)	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
3 & 4-Methylphenol	ug/L	N	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4400	100U	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	N	30	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	20U	20U	2U	2U	2U	20U	2U
3-Nitroaniline	ug/L	N	NA	-	-	-	-	100U	-	-	50U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	ug/L	N	NA	-	-	-	-	100U	-	-	50U	10U	-	-	-	-	-	-	-	-	50U	50U	48U	48U	47U	51U	50U	5U	5U	5U	50U	5U
4-Bromophenylphenylether	ug/L	N	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
4-Chloroaniline	ug/L	N	30	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1J
4-Chlorophenyl phenyl ether	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	2U	2U	2U	20U	2U
4-Methylphenol (p-Cresol)	ug/L	N	NA	-	-	-	-	21U	-	-	10U	4U	-	-	-	-	-	-	-	-	69000	87000	53000	44000	45000	40000	22000	11000	19000	640	3400	430
4-Nitroaniline	ug/L	N	NA	-	-	-	-	100U	-	-	50U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
4-Nitrophenol	ug/L	N	NA	130U	170U	27U	25U	100U	28U	33U	50U	20U	-	-	-	-	-	-	2100U	200U	100U	100U	97U	97U	95U	100U	100U	10U	10U	9U	100U	10U
6-Methylchrysene	ug/L	N	NA	67U	83U	13U	12U	-	14U	17U	-	-	-	-	-	-	-	-	1000U	72	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	N	NA	67U	83U	13U	12U	-	14U	17U	-	-	-	-	-	-	-	-	1000U	180	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	N	400	-	-	-	-	5	-	-	10U	3J	-	-	-	-	-	-	-	8	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Acenaphthylene	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Acetophenone	ug/L	N	700	-	-	-	-	-	-	-	-	4U	-	-	-	-	-	-	-	-	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Anthracene	ug/L	N	2000	67U	83U	13U	12U	21U	2	17U	10U	2U	-	-	-	-	-	-	1000U	100U	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Atrazine	ug/L	N	3	-	-	-	-	-	-	-	-	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	2U	2U	2U	20U	2U
Benzaldehyde	ug/L	N	NA	-	-	-	-	-	-	-	-	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Benzenethiol	ug/L	N	NA	67U	83U	13U	12U	-	14U	17U	-	-	-	-	-	-	-	-	2800	100U	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	N	0.1	67U	83U	13U	12U	21U	14U	17U	10U	2U	-	-	-	-	-	-	1000U	**78**	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Benzo(a)pyrene	ug/L	N	0.1	67U	83U	13U	12U	21U	14U	17U	10U	2U	-	-	-	-	-	-	1000U	**74**	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Benzo(b)fluoranthene	ug/L	N	0.2	67U	83U	13U	12U	21U	14U	17U	10U	2U	-	-	-	-	-	-	1000U	**51**	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Benzo(g,h,i)perylene	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2J	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Benzo(k)fluoranthene	ug/L	N	0.5	67U	83U	13U	12U	21U	14U	17U	10U	2U	-	-	-	-	-	-	1000U	100U	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
bis(2-Chloroethoxy)methane	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
bis(2-Chloroethyl) ether	ug/L	N	7	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
bis(2-chloroisopropyl) ether	ug/L	N	3000	-	-	-	-	-	-	-	-	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
bis(2-Ethylhexyl)phthalate	ug/L	N	3	67U	83U	13U	2	**25**	14U	2	10U	4U	-	-	-	-	-	-	1000U	100U	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Bromofluorobenzene	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	N	100	67U	83U	13U	12U	21U	14U	17U	10U	4U	-	-	-	-	-	-	1000U	100U	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Caprolactam	ug/L	N	NA	-	-	-	-	-	-	-	-	10U	-	-	-	-	-	-	-	-	50U	50U	48U	48U	47U	51U	50U	5U	5U	5U	50U	5U
Carbazole	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Chrysene	ug/L	N	5	67U	83U	13U	12U	**10**	3	17U	10U	3J	-	-	-	-	-	-	1000U	**170**	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Di-n-butylphthalate	ug/L	N	700	67U	83U	13U	12U	21U	14U	17U	10U	4U	-	-	-	-	-	-	1000U	100U	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Di-n-octylphthalate	ug/L	N	100	67U	83U	13U	12U	21U	14U	17U	10U	4U	-	-	-	-	-	-	1000U	100U	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Dibenz(a,h)anthracene	ug/L	N	0.3	67U	83U	13U	12U	21U	14U	17U	10U	2U	-	-	-	-	-	-	1000U	100U	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Dibenzo(a,h)acridine	ug/L	N	NA	67U	83U	13U	12U	-	14U	17U	-	-	-	-	-	-	-	-	1000U	100U	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	N	NA	-	-	-	-	3	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Diethylphthalate	ug/L	N	6000	67U	83U	13U	12U	21U	14U	3	10U	4U	-	-	-	-	-	-	1000U	100U	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Dimethyl phthalate	ug/L	N	NA	67U	83U	13U	12U	21U	14U	17U	10U	4U	-	-	-	-	-	-	1000U	100U	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Diphenyl (Biphenyl, Phenyl benzene)	ug/L	N	400	-	-	-	-	-	-	-	-	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Fluoranthene	ug/L	N	300	67U	83U	13U	12U	3	2	17U	10U	3J	-	-	-	-	-	-	1000U	20	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Fluorene	ug/L	N	300	-	-	-	-	9	-	-	10U	4J	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Hexachlorobenzene	ug/L	N	0.02	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Hexachlorobutadiene	ug/L	N	1	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Hexachlorocyclopentadiene	ug/L	N	40	-	-	-	-	21U	-	-	10U	10U	-	-	-	-	-	-	-	-	50U	50U	48U	48U	47U	51U	50U	5U	5U	5U	50U	5U
Hexachloroethane	ug/L	N	7	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Indene	ug/L	N	NA	67U	83U	13U	12U	-	14U	17U	-	-	-	-	-	-	-	-	1000U	100U	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)Pyrene	ug/L	N	0.2	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Isophorone	ug/L	N	40	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
N-Nitrosodi-n-propylamine	ug/L	N	10	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
N-Nitrosodiphenylamine (Diphenylamine)	ug/L	N	10	-	-	-	-	21U	-	-	10U	4U	-	-	-	-	-	-	-	-	20U	20U	19U	19U	19U	20U	20U	2U	2U	2U	20U	2U
Naphthalene	ug/L	N	300	140	**360**	120	13	21U	5	96	4	4J	3J	100U	66	5U	1U	20U	180	16	120	41J	140	100J	170J	74J	78J	110J	51	52	140J	43
Nitrobenzene	ug/L	N	6	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
p-Chloro-m-cresol	ug/L	N	NA	-	-	-	-	21U	-	-	10U	2U	-	-	-	-	-	-	-	-	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Pentachlorophenol	ug/L	N	0.3	-	-	-	-	100U	-	-	50U	6U	-	-	-	-	-	-	-	-	30U	30U	29U	29U	28U	31U	30U	3U	3U	3U	30U	3U
Phenanthrene	ug/L	N	NA	67U	83U	13U	2	19	4	17U	10U	9J	-	-	-	-	-	-	110	73	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U
Phenol	ug/L	N	2000	210	24	48	12U	21U	14U	17U	12	2U	-	-	-	-	-	-	**2900**	100U	**13000**	**18000**	**9900**	**7800**	**11000**	**7100**	**3500**	1500J	**3600**	110	790	76
Pyrene	ug/L	N	200	67U	83U	13U	12U	9	5	17U	10U	6J	-	-	-	-	-	-	1000U	110	10U	10U	10U	10U	9U	10U	10U	1U	1U	0.9U	10U	1U

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 2
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-260	MW-260R	MW-260R
			M117B4X	M117B5X	D0327131	M117B6X	M117B7X	M117HS	M117B8X	M117HS2	M117B9X	M117C1X	M238A1X	M238A2X	M238A3X	M238A4X	M238A5X	M238A6X	M238A7X	M238A8X	M238A9X	M238B1X	M238B2X	M238B3X	M238HS	M238B4X	M238B5X	M260A2X	M260RC1X	M260RC2X
			06/08/2011	03/07/2012	03/26/2013	03/27/2013	05/28/2014	08/05/2015	08/07/2015	02/03/2016	02/18/2016	02/07/2017	12/15/2006	05/10/2007	12/11/2007	07/18/2008	11/04/2008	07/21/2009	11/06/2009	07/08/2010	06/08/2011	03/07/2012	04/25/2013	05/29/2014	02/03/2016	02/18/2016	02/07/2017	05/10/2007	11/26/2018	02/05/2019
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1-Methyl-naphthalene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
2,4,6-Trichlorophenol	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
2,4-Dichlorophenol	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
2,4-Dimethylphenol	ug/L	N	**25000**	**10000**	**7300J**	**14000J**	**24000**	**1200**	**12000**	**6800**	**6800**	20	3U	3U	3U	3U	3U	3U	3U	3U	3U	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	**1200**	**140J**
2,4-Dinitrophenol	ug/L	N	100U	100U	110U	110U	110U	10U	10U	11U	11U	10U	19U	19U	19U	19U	20U	23U	19U	10U	10U	11U	10U	10U	11U	11U	11U	-	14U	14U
2,4-Dinitrotoluene	ug/L	N	10U	10U	11U	11U	11U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	-	1U	1U
2,6-Dinitrotoluene	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
2-Chloronaphthalene	ug/L	N	20U	4U	4U	4U	4U	0.4U	0.4U	0.4U	0.4U	0.4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	-	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
2-Methyl-Naphthalene	ug/L	N	45J	27	18J	31J	51	8	19	36	14	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	3	0.5J
2-Methylphenol (o-Cresol)	ug/L	N	2300	1300	1000J	1900J	1000	4	130	4700	580	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	47	3
2-Nitroaniline (o-Nitroaniline)	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	2U	2U
2-Nitrophenol (o-Nitrophenol)	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	3U	3U
3 & 4-Methylphenol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	N	20U	20U	22U	21U	21U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	-	3U	3U
3-Nitroaniline	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	ug/L	N	50U	51U	55U	53U	53U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	-	8U	8U
4-Bromophenylphenylether	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
4-Chloroaniline	ug/L	N	10U	5U	5U	5U	5U	2U	2U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	2U	2U	2U	-	4U	4U
4-Chlorophenyl phenyl ether	ug/L	N	20U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
4-Methylphenol (p-Cresol)	ug/L	N	1600	1200	1000J	1900J	490	0.5U	0.5U	3200	460	1	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	2J	0.5U
4-Nitroaniline	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.9U	0.9U
4-Nitrophenol	ug/L	N	100U	100U	110U	110U	110U	10U	10U	11U	11U	10U	10U	10U	10U	10U	10U	11U	10U	10U	10U	11U	10U	10U	11U	11U	11U	-	10U	10U
6-Methylchrysene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.2J	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Acenaphthylene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Acetophenone	ug/L	N	20U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	4U	4U
Anthracene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Atrazine	ug/L	N	20U	20U	22U	21U	21U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	-	2U	2U
Benzaldehyde	ug/L	N	10U	33J	11U	11U	11U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	-	3U	3U
Benzenethiol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Benzo(a)pyrene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Benzo(b)fluoranthene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Benzo(g,h,i)perylene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Benzo(k)fluoranthene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
bis(2-Chloroethoxy)methane	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
bis(2-Chloroethyl) ether	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
bis(2-chloroisopropyl) ether	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	ug/L	N	20U	20U	22U	21U	21U	2U	2U	2U	2U	2U	2U	**8**	2U	2U	2U	**6**	**5J**	2U	2U	2U	2U	2U	2U	2U	2U	-	5U	5U
Bromofluorobenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	N	20U	20U	22U	21U	21U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	-	2U	2U
Caprolactam	ug/L	N	50U	51U	55U	53U	53U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	-	5U	5U
Carbazole	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
Chrysene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Di-n-butylphthalate	ug/L	N	20U	20U	22UJ	21UJ	21U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	-	2U	2U
Di-n-octylphthalate	ug/L	N	20U	20U	22U	21U	21U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	9	2U	2U	2U	2U	2U	2U	2U	2U	2U	-	5U	5U
Dibenz(a,h)anthracene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Dibenzo(a,h)acridine	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
Diethylphthalate	ug/L	N	20U	20U	22U	21U	21U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	-	2U	2U
Dimethyl phthalate	ug/L	N	20U	20U	22U	21U	21U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	-	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	3U	3U
Fluoranthene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Fluorene	ug/L	N	10U	1U	1U	1U	1U	0.2J	0.1U	0.4J	0.5J	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Hexachlorobenzene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Hexachlorobutadiene	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
Hexachlorocyclopentadiene	ug/L	N	50U	51U	55U	53U	53U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	-	5U	5U
Hexachloroethane	ug/L	N	10U	10U	11U	11U	11U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	-	1U	1U
Indene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)Pyrene	ug/L	N	10U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U
Isophorone	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
N-Nitrosodi-n-propylamine	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.7U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	ug/L	N	20U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.7U	0.7U
Naphthalene	ug/L	N	110	89	57J	99J	1U	35	0.1U	140	34	4	1U	7J	1U	1U	1U	1U	1U	1U	1U	2	0.1U	0.1U	0.1U	0.1U	0.1U	130J	8	3
Nitrobenzene	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
p-Chloro-m-cresol	ug/L	N	10U	5U	5U	5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U
Pentachlorophenol	ug/L	N	30U	10U	11U	11U	11U	1U	1U	1U	1U	1U	3U	3U	3U	3U	3U	3U	3U	3U	3U	1U	1U	1U	1U	1U	1U	-	1U	1U
Phenanthrene	ug/L	N	10U	1U	1U	1U	1U	0.3J	0.6	0.3J	0.4J	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.2J
Phenol	ug/L	N	370	300	290J	520J	100	11	9	990	130	1	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.9J	0.5U	0.5U	-	17	12
Pyrene	ug/L	N	10U	1U	1U	1U	1U	0.1J	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U	0.1U

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 2
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-260R	MW-260R	MW-260R	MW-260R	MW-260R	MW-261R	MW-261R	MW-261R	MW-261R	MW-261R	MW-261R	MW-267R	MW-267R	MW-267R	MW-267R	MW-267R	MW-267R	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397	MW-397
			D0521191	M260RC3X	M260RC4X	D1104191	M260RC5X	M261RC4X	M261RA5X	M261RA6X	D0729198	M261RA7X	M261RA8X	M267RC4X	M267RC6X	M267RC7X	M267RC8X	D110619	M267RC9X	M397A1X	M397A2X	M397A3X	M397A4X	M397A5X	M397A6X	M397A7X	M397A8X	D0930198	M397A9X
			05/21/2019	05/21/2019	08/23/2019	11/04/2019	11/04/2019	11/27/2018	02/05/2019	05/01/2019	07/29/2019	07/29/2019	11/06/2019	10/22/2018	02/05/2019	05/02/2019	07/30/2019	11/06/2019	11/06/2019	03/18/2014	06/13/2014	10/16/2017	12/12/2017	10/17/2018	01/17/2019	04/09/2019	07/12/2019	09/30/2019	09/30/2019
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1-Methyl-naphthalene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
2,4,6-Trichlorophenol	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
2,4-Dichlorophenol	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
2,4-Dimethylphenol	ug/L	N	**880**	**740**	**610**	**1600**	**1700**	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.6U	0.7U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	4U
2,4-Dinitrophenol	ug/L	N	14U	14U	14U	18U	16U	14U	14U	14U	15U	14U	14U	14U	14U	15U	15U	14U	14U	11U	15U	10U	10U	14U	14U	15U	15U	15U	15U	17U
2,4-Dinitrotoluene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	ug/L	N	0.5U	0.5U	0.5UJ	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
2-Chloronaphthalene	ug/L	N	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.6U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U
2-Chlorophenol (o-Chlorophenol)	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
2-Methyl-Naphthalene	ug/L	N	0.4J	0.5J	0.8	3	3	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.3J	0.2J	0.1J	0.3J	0.1U	0.1U	10	6	0.1J	0.7	0.1U	0.3J	0.1U	0.1U	0.4J	0.3J
2-Methylphenol (o-Cresol)	ug/L	N	5	0.5U	33	290	380	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
2-Nitroaniline (o-Nitroaniline)	ug/L	N	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.6U	0.7U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	ug/L	N	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.6U	0.7U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	4U
3 & 4-Methylphenol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	N	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	2U	3U	2U	2U	3U	3U	3U	3U	3U	3U	4U
3-Nitroaniline	ug/L	N	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.6U	0.7U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	4U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	ug/L	N	8U	8U	8U	10UJ	9UJ	8U	8U	8U	8U	8U	8U	8U	8U	9U	8U	8U	8U	6U	7U	5U	5U	8U	8U	8U	9U	9U	10U
4-Bromophenylphenylether	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
4-Chloroaniline	ug/L	N	4U	4U	4U	5U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	0.6U	0.7U	2U	2U	4U	4U	4U	4U	4U	5U
4-Chlorophenyl phenyl ether	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
4-Methylphenol (p-Cresol)	ug/L	N	0.5U	0.5U	3	24	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
4-Nitroaniline	ug/L	N	0.9U	0.9U	0.9U	1U	1U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	1U	0.9U	0.9U	0.9U	0.6U	0.7U	0.5U	0.5U	0.9U	0.9U	0.9U	1U	1U	1U
4-Nitrophenol	ug/L	N	10U	10U	10U	13U	11U	10U	10U	10U	10U	10U	10U	10U	10U	11U	10U	10U	10U	11U	15U	10U	10U	10U	10U	10U	10U	11U	11U	12U
6-Methylchrysene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.5J	0.1U	0.5J	0.1U	0.5J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	2	2	3	3	3	3	2	68	4	4
Acenaphthylene	ug/L	N	0.1U	0.1U	0.1U	0.1U	1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.4J	0.2J	0.1U	0.1U	0.1U	0.2J	0.1U
Acetophenone	ug/L	N	4U	4U	4U	5U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	4U	0.6U	0.7U	0.5U	0.5U	4U	4U	4U	4U	4U	5U
Anthracene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.4J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.4J	0.4J	0.7	1	0.7	1	0.4J	0.1U	0.8	0.8
Atrazine	ug/L	N	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	ug/L	N	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	1U	1U	1U	1U	3U	3U	3U	3U	3U	4U
Benzenethiol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**0.3J**	**1**	**0.4J**	**1**	**0.4J**	**1**	**0.2J**	0.1U	**0.3J**	**0.4J**
Benzo(a)pyrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	**0.4J**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**0.2J**	**1**	**0.6**	**1**	**0.5J**	**1**	**0.2J**	0.1U	**0.4J**	**0.4J**
Benzo(b)fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	**0.9**	**0.5J**	**1**	**0.3J**	**1**	0.1J	0.1U	**0.3J**	**0.3J**
Benzo(g,h,i)perylene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.9	0.5J	0.9	0.3J	1	0.2J	0.1U	0.3J	0.4J
Benzo(k)fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.4J	0.2J	0.5J	0.1U	0.5	0.1U	0.1U	0.2J	0.1U
bis(2-Chloroethoxy)methane	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
bis(2-Chloroethyl) ether	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
bis(2-chloroisopropyl) ether	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
bis(2-Ethylhexyl)phthalate	ug/L	N	5U	5U	5U	6U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	2UJ	3U	2U	2U	5UJ	5U	5U	5U	5U	6U
Bromofluorobenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	N	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	ug/L	N	5U	5U	5U	6U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	6U	7U	5U	5U	5U	5U	5U	5U	5U	6U
Carbazole	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.7J	1J	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
Chrysene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.5J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.4J	2	0.7	1	0.7	2	0.2J	0.1U	0.4J	0.4J
Di-n-butylphthalate	ug/L	N	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	ug/L	N	5U	5U	5U	6U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	2U	3U	2U	2U	5U	5U	5U	5U	5U	6U
Dibenz(a,h)anthracene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1J	0.3J	0.1U	0.3J	0.1U	0.1U	0.1U	0.1U
Dibenzo(a,h)acridine	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.8J	1	0.9J	1J	0.8J	0.6J	1J	1J	1J
Diethylphthalate	ug/L	N	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	ug/L	N	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	3U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	ug/L	N	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.6U	0.7U	0.5U	0.5U	3U	3U	3U	3U	3U	4U
Fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.6	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.6	2	1	3	1	3	0.6	4	1	1
Fluorene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.7	0.6	0.3J	0.8J	0.1U	0.7	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1	2	2	2	2	2	1	0.1U	2	2
Hexachlorobenzene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
Hexachlorocyclopentadiene	ug/L	N	5U	5U	5U	6U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	6U	7U	5U	5U	5UJ	5U	5U	5UJ	5U	6U
Hexachloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)Pyrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	**0.5J**	0.2J	**0.9**	0.2J	**0.9**	0.1U	0.1U	0.2J	0.1U
Isophorone	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
N-Nitrosodi-n-propylamine	ug/L	N	0.7U	0.7U	0.7U	0.9U	0.8U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.8U	0.7U	0.7U	0.7U	0.6U	0.7U	0.5U	0.5U	0.7U	0.7U	0.7U	0.8U	0.8U	0.9U
N-Nitrosodiphenylamine (Diphenylamine)	ug/L	N	0.7U	0.7U	0.7U	0.9U	0.8U	0.7U	0.7U	0.7U	1J	0.7U	0.7U	0.7U	0.7U	0.8U	0.7U	0.7U	0.7U	0.6U	0.7U	0.5U	0.5U	0.7U	0.7U	0.7U	0.8U	0.8U	0.9U
Naphthalene	ug/L	N	4	4	6	12	11	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1U	0.2J	0.1U	0.1U	5	6	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
p-Chloro-m-cresol	ug/L	N	0.5U	0.5U	0.5U	0.6U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
Pentachlorophenol	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	**2J**	1U	1U	1U
Phenanthrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	1J	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.8	1	0.2J	0.7	0.2J	0.6	0.1U	1	0.6	0.6
Phenol	ug/L	N	11	8	41	140J	88J	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U
Pyrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.8	3	2	3	1	4	0.7	3	1	1

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 2
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-397	MW-550	MW-550	MW-550	MW-550	MW-550	MW-550	MW-550	MW-551	MW-551	MW-551	MW-551	MW-551	MW-551	MW-551	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1
			M397B1X	D1126188	M550A1X	M550A2X	D0503198	M550A3X	M550A4X	M550A5X	M551A1X	D0204198B	M551A2X	M551A3X	M551A4X	M551A5X	M551A6X	P001A2X	P001A3X	P001A4X	P001A5X	P001A6X	P001A7X	P001A8X	P001A9X	P001B1X	P001B2X	P001B3X	P001B4X
			01/23/2020	11/26/2018	11/26/2018	02/04/2019	05/03/2019	05/03/2019	07/29/2019	11/07/2019	11/26/2018	02/04/2019	02/04/2019	05/03/2019	07/26/2019	11/06/2019	12/19/2019	11/15/2005	06/02/2006	12/01/2006	06/12/2007	12/13/2007	08/22/2008	11/04/2008	07/10/2009	11/12/2009	06/29/2010	09/29/2010	06/07/2011
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1-Methyl-naphthalene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71J	-	70J	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	N	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2,4,6-Trichlorophenol	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2,4-Dichlorophenol	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2,4-Dimethylphenol	ug/L	N	3U	3U	3U	3U	3U	4U	3U	3U	**200**	**130**	**140**	**160**	**120**	41	15	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	4U
2,4-Dinitrophenol	ug/L	N	15U	14U	15U	14U	15U	16U	14U	14U	15U	14U	14U	15U	15U	14U	15U	20U	20U	21U	19U	19U	21U	22U	19U	22U	12U	10U	12U
2,4-Dinitrotoluene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2-Chloronaphthalene	ug/L	N	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
2-Chlorophenol (o-Chlorophenol)	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2-Methyl-Naphthalene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	7	9	10	13	3	0.4J	0.1U	81	67	66	4J	1U	17J	1U	1U	1U	3J	1U	1U
2-Methylphenol (o-Cresol)	ug/L	N	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	15	160	180	99	36	2J	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2-Nitroaniline (o-Nitroaniline)	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
2-Nitrophenol (o-Nitrophenol)	ug/L	N	3U	3U	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
3 & 4-Methylphenol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	N	3U	3U	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
3-Nitroaniline	ug/L	N	3U	3UJ	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	ug/L	N	9U	8U	9U	8U	9U	9U	8U	8U	8U	8U	8U	8U	8U	8U	8U	5U	5U	5U	5U	5U	5U	6U	5U	5U	6U	5U	6U
4-Bromophenylphenylether	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
4-Chloroaniline	ug/L	N	4U	4UJ	4U	4U	4U	5U	4U	4U	4U	4U	4U	4U	4U	4U	4U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
4-Chlorophenyl phenyl ether	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
4-Methylphenol (p-Cresol)	ug/L	N	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.8J	4J	0.5U	3	2J	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
4-Nitroaniline	ug/L	N	1U	0.9U	1U	0.9U	1U	1U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
4-Nitrophenol	ug/L	N	11U	10U	11U	10U	11U	12U	10U	10U	10U	10U	10U	10U	11U	10U	10U	10U	10U	11U	9U	10U	10U	11U	10U	11U	12U	10U	12U
6-Methylchrysene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	230	280	370	320	370	350	300	290	370	330	1U	300
Acenaphthylene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	2J	3J	6	3J	4J	2J	1U	1U	3J	5J	1U	4J
Acetophenone	ug/L	N	4U	4U	4U	4U	4U	5U	4U	4U	4U	4U	10J	4U	4U	4U	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Anthracene	ug/L	N	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	16	9	16	8	10	9	8	7	20	10	1U	8
Atrazine	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	ug/L	N	3U	3U	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Benzenethiol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**0.2J**	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	**2J**	1U	1U	1U
Benzo(a)pyrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**0.2J**	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(b)fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(g,h,i)perylene	ug/L	N	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(k)fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
bis(2-Chloroethoxy)methane	ug/L	N	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
bis(2-Chloroethyl) ether	ug/L	N	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
bis(2-chloroisopropyl) ether	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
bis(2-Ethylhexyl)phthalate	ug/L	N	5U	5U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	2U	2U	2U	2U	2U	2U	2U	2U	**12**	2U	2U	2U
Bromofluorobenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	ug/L	N	5U	5U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	6U	5U	5U	6U	5U	6U
Carbazole	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	38	38	22	30	17	22	12	9	5J	16	1U	12
Chrysene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	2J	1U	1U	1U
Di-n-butylphthalate	ug/L	N	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	ug/L	N	5U	5U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	ug/L	N	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Dibenzo(a,h)acridine	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	110	110	110	130	140	140	110	110	130	140	1U	140
Diethylphthalate	ug/L	N	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	ug/L	N	3U	3U	3U	3U	3U	4U	3U	3U	3U	3U	3U	3U	3U	3U	3U	1J	1U	1J	1J	1J	1U	1U	1U	1U	1U	1U	1U
Fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	7	5J	15	9	15	12	9	8	42	11	1U	13
Fluorene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1J	0.1U	0.1U	0.1U	120	110	110	120	130	140	110	92	74	130	1U	120
Hexachlorobenzene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Hexachlorobutadiene	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Hexachlorocyclopentadiene	ug/L	N	5U	5U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	6U	5U	5U	6U	5U	6U
Hexachloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Indene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)Pyrene	ug/L	N	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Isophorone	ug/L	N	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
N-Nitrosodi-n-propylamine	ug/L	N	0.8U	0.7UJ	0.7U	0.7U	0.8U	0.8U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
N-Nitrosodiphenylamine (Diphenylamine)	ug/L	N	0.8U	0.7U	0.7U	0.7U	0.8U	0.8U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Naphthalene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	22	22	27	26	8	8	0.1U	130	140J	**460J**	89	52J	110J	43J	4J	4J	53	1U	4J
Nitrobenzene	ug/L	N	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
p-Chloro-m-cresol	ug/L	N	2U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Pentachlorophenol	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	4U
Phenanthrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.2J	0.1U	0.1J	0.1U	0.1U	0.1U	26	34	28	37	32	32	12	8	2J	15	1U	11
Phenol	ug/L	N	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	1J	3	3	13	0.5U	0.5U	0.5U	1U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U
Pyrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.4J	0.1U	0.1U	0.1U	0.1U	0.1U	5	3J	11	6	9	6	5J	5	30	7	1U	7

Notes:
Bold and highlighted indicates exceedance to criteria
NA - No criterion available for the analyte
U - Analyte not detected at that concentration
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyzed or was rejected

Table 2
SUMMARY OF SEMI-VOLATILE ORGANIC COMPOUND RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1
			P001B5X	P001B6X	P001B7X	P001B8X	P001B9X	P001C1X	P001C2X	P001C3X	P001HS	P001C4X	P001C5X	P001C6X	P001C7X	D1017178A	P001C8X	P001C9X	P001D2	P001D3X	P001D4X	D1207181	P001D5X	P001D6X	P001D7X	P001D8X	P001D9X
			11/15/2011	03/09/2012	08/09/2012	04/05/2013	09/25/2013	06/24/2014	11/14/2014	06/30/2015	02/03/2016	02/17/2016	08/16/2016	02/08/2017	08/24/2017	10/17/2017	10/17/2017	12/11/2017	06/06/2018	08/23/2018	10/01/2018	12/07/2018	12/07/2018	03/19/2019	06/12/2019	09/06/2019	12/06/2019
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
1-Methyl-naphthalene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	ug/L	N	0.5U	0.6U	0.8J	0.6U	0.9J	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2,4-Dinitrophenol	ug/L	N	11U	11U	10U	11U	10U	10U	11U	10U	10U	10U	10UJ	10U	10U	10UJ	10U	11U	14U	14U	14U	14U	14U	14U	13U	14U	14U
2,4-Dinitrotoluene	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	0.9U	1U	-
2,6-Dinitrotoluene	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
2-Chloronaphthalene	ug/L	N	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	-
2-Chlorophenol (o-Chlorophenol)	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthalene	ug/L	N	2	0.1U	7	0.1U	8	0.1U	0.5J	0.1U	0.1U	0.1U	2J	0.1U	0.7	0.1U	0.2J-	1	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	-
2-Methylphenol (o-Cresol)	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	-
2-Nitrophenol (o-Nitrophenol)	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U
3 & 4-Methylphenol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3,3'-Dichlorobenzidine	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	3U	3U	3U	3U	3U	3U	3U	3U	-
3-Nitroaniline	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	-
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	ug/L	N	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5UJ	5U	5U	5UJ	5U	5U	8U	8U	8U	8U	8U	8U	7U	8U	8U
4-Bromophenylphenylether	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
4-Chloroaniline	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	4U	4U	4U	4U	4U	4U	4U	4U	-
4-Chlorophenyl phenyl ether	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
4-Methylphenol (p-Cresol)	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.8U	0.9U	-
4-Nitrophenol	ug/L	N	11U	11U	10U	11U	10U	10U	11U	10U	10U	10U	10UJ	10U	10U	10U	10U	11U	10U	10U	10U	10U	10U	10U	9U	10U	10U
6-Methylchrysene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7,12-Dimethylbenz(a)anthracene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	ug/L	N	300	220	190	100	160	90	190	38	58	53	170J	82	83	110	150J-	110	47	31	43J	39	37	59	16	84	-
Acenaphthylene	ug/L	N	2	13	3	1	1	0.8	2	0.5	0.3J	0.5	1J	0.8	0.8	1	2J-	1	2	1	0.5	0.3J	0.4J	0.1U	0.09U	0.1U	-
Acetophenone	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	4U	4U	4U	4U	4U	4U	4U	4U	-
Anthracene	ug/L	N	11	2	9	5	5	2	4	0.3J	3	2	2J	2	1	2	13J-	4	0.5J	0.2J	1	0.6	0.5J	0.9	0.09U	3	-
Atrazine	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	-
Benzaldehyde	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1UJ	1U	3U	3U	3U	3U	3U	3U	3U	3U	-
Benzenethiol	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo(a)anthracene	ug/L	N	**0.5J**	**0.2J**	**0.3J**	0.1J	**0.2J**	**0.2J**	**0.4J**	0.1U	**0.6**	**0.2J**	**0.2J**	**0.2J**	**0.2J**	**0.5J**	**5J-**	**2**	0.1U	0.1U	**0.8**	0.1U	0.1U	0.1U	0.09U	**2**	-
Benzo(a)pyrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1J	0.1U	0.1UJ	0.1U	0.1U	0.1U	**2J-**	**0.5**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.09U	**0.8**	-
Benzo(b)fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.2J	**2J-**	**0.6**	0.1U	0.1U	**0.4J**	0.1U	0.1U	0.1U	0.09U	**0.8**	-
Benzo(g,h,i)perylene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1J	1J-	0.3J	0.1U	0.1U	0.3J	0.1U	0.1U	0.1U	0.09U	0.5J	-
Benzo(k)fluoranthene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.5J-	0.2J	0.1U	0.1U	0.4J	0.1U	0.1U	0.1U	0.09U	0.1U	-
bis(2-Chloroethoxy)methane	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
bis(2-Chloroethyl) ether	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
bis(2-chloroisopropyl) ether	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
bis(2-Ethylhexyl)phthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	**15J-**	2J	5U	5U	5U	5U	5U	5U	5U	5U	-
Bromofluorobenzene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzylphthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	-
Caprolactam	ug/L	N	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5UJ	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5U	5U	-
Carbazole	ug/L	N	11	9	9	2	11	1	10	0.9J	0.5U	0.6J	6J	0.5U	2	0.5U	0.5UJ	2	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
Chrysene	ug/L	N	0.4J	0.2J	0.1U	0.1J	0.2J	0.2J	0.4J	0.1U	0.6	0.1J	0.2J	0.2J	0.1U	0.5J	5J-	1	0.1U	0.1U	0.7	0.1U	0.1U	0.1U	0.09U	2	-
Di-n-butylphthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	-
Di-n-octylphthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	5U	5U	5U	5U	5U	5U	5U	5U	-
Dibenz(a,h)anthracene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	**0.6J-**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	-
Dibenzo(a,h)acridine	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	ug/L	N	130	89	88	37	67	10	59	5	0.5U	5	47J	8	11	0.5U	2J-	11	2J	0.8J	3	0.5U	0.5U	1J	0.5U	4	-
Diethylphthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	-
Dimethyl phthalate	ug/L	N	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	-
Diphenyl (Biphenyl, Phenyl benzene)	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	-
Fluoranthene	ug/L	N	13	8	15	9	11	10	11	3	10	4	7J	5	4	8	53J-	17	3	2	9	2	2	2	1	13	-
Fluorene	ug/L	N	100	66	78	17	47	5	41	3	0.2J	3	31J	7	8	0.3J	2J-	9	0.4J	0.1U	0.8	0.1U	0.1U	0.1U	0.09U	1	-
Hexachlorobenzene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	-
Hexachlorobutadiene	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
Hexachlorocyclopentadiene	ug/L	N	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5UJ	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5U	5U	-
Hexachloroethane	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	0.9U	1U	-
Indene	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-cd)Pyrene	ug/L	N	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	**0.6J-**	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	-
Isophorone	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
N-Nitrosodi-n-propylamine	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.6U	0.7U	-
N-Nitrosodiphenylamine (Diphenylamine)	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.6U	0.7U	-
Naphthalene	ug/L	N	100	1	60	2	83	0.7	16	0.2J	0.1U	0.4J	38J	0.2J	14	0.1U	0.3J-	20	0.2J	0.4J	0.8	0.1U	0.1U	0.1U	0.09U	0.1U	-
Nitrobenzene	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-
p-Chloro-m-cresol	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	ug/L	N	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	0.9U	1U	1U
Phenanthrene	ug/L	N	14	5	5	2	10	0.4J	7	0.1U	0.1U	0.2J	2J	0.3J	0.3J	0.1U	0.1UJ	2	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	-
Phenol	ug/L	N	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pyrene	ug/L	N	7	5	8	6	6	7	7	2	7	3	4J	3	3	7	46J-	13	2	1	7	2	2	1	0.7	11	-

Notes:
Bold and highlighted indicates exceedance to criteria
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Table 3
SUMMARY OF METALS RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			Location ID	H0325	H0326	H0327	H0418	H0419	H0420	H0441	H0443	H0896	H0985	H0987	HP-0088	HP-0121	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117
			Field Sample ID	H0325	H0326	H0327	H0418	H0419	H0420	H0441	H0443	H0896	H0985	H0987	HP-0088-A	HP-0121-A	M117A1Y	M117A2X	M117A3	M117A4A	M117A4A	M117A5	M117A6	M117A7	M117A8	M117A9	M117B1	M117B2
			Sample Date	08/20/1999	08/20/1999	08/20/1999	09/30/1999	09/30/1999	09/30/1999	10/13/1999	10/14/1999	01/22/2003	10/26/2006	10/26/2006	08/26/1997	09/18/1997	11/21/2002	02/27/2003	09/12/2003	03/02/2004	03/02/2004	10/05/2004	06/07/2005	11/07/2005	05/31/2006	11/20/2006	06/06/2007	08/08/2008
			Sample Matrix	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**CMI GW Criteria or GWQS**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
Aluminum	ug/L	N	200	-	-	-	-	-	-	-	-	47.7U	-	-	-	-	110J	**1400**	131J	-	-	-	-	-	-	-	-	-
Aluminum	ug/L	Y	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	ug/L	N	6	4.27	**10.4**	**7.20**	5.25	**12.7**	3.13	3.12	2.91	9.9U	-	-	-	-	9.9U	9.9U	8.5U	-	-	-	-	-	-	-	-	9.7U
Antimony	ug/L	Y	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	ug/L	N	60	11.9	**146**	11.2	6.58	7.15	4.18U	8.81	16.0	4.9U	-	-	-	-	9.2J	18	5.2J	21.3	-	9.4J	9.3U	9.3U	11.0J	10U	10.0U	10.2U
Arsenic	ug/L	Y	60	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	ug/L	N	6000	81.4	183	204	671	103	119	97.2	256	0.44U	-	-	-	-	199	230	245	-	-	-	-	-	-	-	-	-
Barium	ug/L	Y	6000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	N	1	**2.77**	**4.02**	**3.78**	0.470	0.820	0.240	**1.11**	0.800	0.50U	-	-	-	-	0.50U	0.50U	0.46J	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	Y	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	N	4	0.390	0.19U	0.470	0.260	0.260	0.19U	0.19U	0.19U	0.94U	-	-	-	-	0.94U	0.94U	0.87U	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	Y	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	ug/L	N	NA	-	-	-	-	-	-	-	-	76.3J	-	-	-	-	128000	58400	118000	-	-	-	-	-	-	-	-	-
Calcium	ug/L	Y	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	ug/L	N	70	16.5	**141**	7.57	16.5	13.2	9.60	7.64	10.0	2.0U	-	-	-	-	16.2J	14J	11.3	-	-	-	-	-	-	-	-	-
Chromium	ug/L	Y	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	ug/L	N	NA	1.04	8.69	0.347U	3.08	14.9	2.19	3.00	1.19	1.7U	-	-	-	-	2.2J	1.7U	2.0J	-	-	-	-	-	-	-	-	2.1U
Cobalt	ug/L	Y	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	ug/L	N	1300	-	-	-	-	-	-	-	-	2.6U	-	-	-	-	2.6U	17J	2.1U	-	-	-	-	-	-	-	-	-
Copper	ug/L	Y	1300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	ug/L	N	300	-	-	-	-	-	-	-	-	164	-	-	-	-	**20500**	**4700**	**16000**	**4410**	-	-	-	-	-	-	-	-
Iron	ug/L	Y	300	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	**1810**	**25300**	-	-	-	-	-	-	-
Lead	ug/L	N	50	**243**	**70.2**	24.6	48.0	22.8	20.8	30.2	**72.0**	8.9U	**3160J**	**21800J**	**1350**	**201**	8.9U	**73**	9.3J	48.8	-	11.5J	19.9J	9.7J	6.9U	6.9U	13.0J	6.9U
Lead	ug/L	Y	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	N	NA	-	-	-	-	-	-	-	-	99.3J	-	-	-	-	325000	166000	272000	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	Y	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	ug/L	N	50	-	-	-	-	-	-	-	-	2.9J	-	-	-	-	**603**	**190**	**639**	-	-	-	-	-	-	-	-	-
Manganese	ug/L	Y	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/L	N	2	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.079U	-	-	-	-	0.48J	0.40U	0.16U	-	-	-	-	-	-	-	-	-
Mercury	ug/L	Y	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	ug/L	N	100	20.8	61.0	12.8	10.7	14.2	9.71	9.27	7.63	1.9U	-	-	-	-	9.6J	12J	6.3J	-	-	-	-	-	-	-	-	-
Nickel	ug/L	Y	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/L	N	NA	-	-	-	-	-	-	-	-	47.2U	-	-	-	-	136000	65400	113000	-	-	-	-	-	-	-	-	-
Potassium	ug/L	Y	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	ug/L	N	40	2.84	10.1	6.18	4.41	2.04U	2.04U	6.82	2.21	4.8U	-	-	-	-	4.8U	4.8U	4.7U	-	-	-	-	-	-	-	-	-
Selenium	ug/L	Y	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	ug/L	N	40	-	-	-	-	-	-	-	-	1.4U	-	-	-	-	1.4U	1.4U	37.2	-	-	-	-	-	-	-	-	-
Silver	ug/L	Y	40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/L	N	50000	-	-	-	-	-	-	-	-	5000U	-	-	-	-	**3250000**	**1890000**	**2740000**	-	-	-	-	-	-	-	-	-
Sodium	ug/L	Y	50000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	ug/L	N	2	-	-	-	-	-	-	-	-	9.5U	-	-	-	-	9.5U	9.5U	8.9U	-	-	-	-	-	-	-	-	-
Thallium	ug/L	Y	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	N	NA	28.0	192	19.0	33.4	10.1	28.9	43.4	10.8	1.7U	-	-	-	-	26.6	39	17.2	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	Y	NA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/L	N	2000	-	-	-	-	-	-	-	-	4.9U	-	-	-	-	4.9U	19J	4.1U	-	-	-	-	-	-	-	-	-
Zinc	ug/L	Y	2000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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PAOC 6 No Further Investigation
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			MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-117	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238	MW-238
			M117B3	M117B4	M117B5	D0326131	M117B6	M117B7	M117HS	M117B8	M117HS2	D0217163	M117B9	M117C1	M238A1	M238A2	M238A3	M238A4	M238A5	M238A6	M238A7	M238A8	M238A9	M238B1	M238B2	M238B3	M238HS	M238B4
			05/12/2009	06/07/2011	03/06/2012	03/26/2013	03/26/2013	05/27/2014	08/05/2015	08/06/2015	02/03/2016	02/17/2016	02/17/2016	02/06/2017	12/14/2006	05/09/2007	12/10/2007	07/17/2008	11/03/2008	07/20/2009	11/05/2009	07/07/2010	06/07/2011	03/06/2012	04/24/2013	05/28/2014	02/03/2016	02/17/2016
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
Aluminum	ug/L	N	-	-	-	112J	108J	82.8U	**3850**	**337**	**390**	**1560**	**5390**	**1160**	**1100**	**596**	136J	**1260**	179J	-	-	-	-	-	119J	82.8U	92.9U	145J
Aluminum	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	ug/L	N	-	-	-	0.33U	0.37J	0.64J	4.8J	0.60U	0.43J	2.0J	1.6J	0.48U	9.7U	9.7U	9.7U	9.7U	9.7U	-	-	-	-	-	0.33U	0.34U	0.33U	0.33U
Antimony	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	ug/L	N	10.0U	10.6J	5.1U	1.7J	1.7J	2.5	13.0	3.0	4.2	5.7	5.3	0.95J	10.6J	10U	10.0U	15.2J	10.0U	7.2U	7.2U	9.8U	9.8U	5.1U	2.2	4.1	1.3J	2.6
Arsenic	ug/L	Y	-	-	-	1.5J	1.3J	2.5	3.2	3.1	3.3	-	1.9J	-	-	-	-	-	-	-	-	-	-	-	1.3J	1.2J	2.0	1.5J
Barium	ug/L	N	-	-	-	129	124	90.9	212	166	125	85.0	92.9	26.3	5.1	55.2	40.0	80.0	54.5	-	-	-	-	-	21.5	47.7	39.4	53.8
Barium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	N	-	-	-	0.67U	0.67U	0.67U	0.80J	0.70U	1.1U	1.1U	1.1U	0.67U	0.94U	0.94U	0.90U	0.90U	0.90U	-	-	-	-	-	0.67U	0.67U	1.1U	1.1U
Beryllium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	N	-	-	-	0.36U	0.37J	0.76U	1.1U	0.36U	0.64U	0.64U	0.64U	0.49U	0.91U	0.91U	0.90U	2.0U	2.0U	-	-	-	-	-	0.36U	0.76U	0.64U	0.64U
Cadmium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	ug/L	N	-	-	-	92600	91800	52800	140000	126000	107000	65600	63500	31200	15100	9800	9980	11100	10600	-	-	-	-	-	7180	9530	16400	13900
Calcium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	ug/L	N	-	-	-	3.3J	3.1J	4.4J	44.1	8.9J	9.7J	8.3J	23.0	1.8U	2.7J	2.3U	2.3U	3.0U	3.0U	-	-	-	-	-	1.1U	1.6U	2.0U	2.0U
Chromium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	ug/L	N	-	-	-	0.66U	0.66U	1.3U	3.2J	1.1J	0.90U	3.9UJ	5.8J	1.9U	2.1U	2.1U	2.1U	2.1U	2.1U	-	-	-	-	-	0.66U	1.3U	0.90U	2.6UJ
Cobalt	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	ug/L	N	-	-	-	2.1U	2.1U	3.7J	699	2.5U	3.9J	23.1	77.5	35.3J	3.2J	2.2U	2.2U	5.6J	2.7U	-	-	-	-	-	2.1U	2.7U	4.8J	3.6J
Copper	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	ug/L	N	-	-	-	**6790**	**7270**	**2570**	**94500**	**5130**	**13300**	**15200**	**30800**	**2480**	**4080**	**4030**	**587**	**5260**	**1440**	**7200**	**1610**	**4850**	**3000**	**3030**	**1710**	**4340**	**1160**	**1500**
Iron	ug/L	Y	-	-	-	**5700**	**5750**	118J	**1760**	**3940**	**9170**	-	**1180**	74.7U	-	-	52.2U	**1880**	52.2U	**2000**	**349**	**2530**	**2630**	**2060**	**360**	**1420**	**1600**	**547**
Lead	ug/L	N	10.1J	6.9U	8.1J	2.0	1.9	1.7	**134**	8.1	16.4	**198**	**192**	19.6	6.9U	6.9U	6.9U	6.9U	6.9U	-	-	-	-	-	1.4	0.40J	0.95J	1.8U
Lead	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	N	-	-	-	76100	76600	62400	281000	260000	226000	32700	32800	12000	15600	16100	16200	21000	19500	-	-	-	-	-	15300	21300	15200	20400
Magnesium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	ug/L	N	-	-	-	**813**	**786**	**211**	**370**	**384**	**453**	**657**	**700**	**136**	**250**	**191**	**71.1**	**227**	**135**	-	-	-	-	-	**142**	**170**	**55.6**	**359**
Manganese	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/L	N	-	-	-	0.076J	0.077J	0.060U	0.050UJ	0.050U	0.25UJ	0.050U	0.050U	0.050U	0.056U	0.056U	0.056U	0.056U	0.056U	-	-	-	-	-	0.070U	0.060U	0.13UJ	0.050U
Mercury	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	ug/L	N	-	-	-	2.1J	2.1J	1.8J	22.6	1.3J	3.0J	10.0	16.9	4.2J	5.6U	5.6U	5.6U	5.6U	5.6U	-	-	-	-	-	1.1U	1.5U	2.5U	2.5U
Nickel	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/L	N	-	-	-	27800	27800	36800	109000	87400	89300	14700	14500	5510	21400	21600	28200	31100	30100	-	-	-	-	-	21800	25700	17200	22600
Potassium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	ug/L	N	-	-	-	7.5U	7.9J	8.4U	15.4J	8.2U	8.2U	8.2U	8.2U	9.7U	9.4U	9.4U	9.4U	10.7U	10.7U	-	-	-	-	-	7.5U	8.4U	8.2U	8.2U
Selenium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	ug/L	N	-	-	-	1.2U	1.2U	2.1U	1.4U	1.4U	1.8U	1.8U	1.8U	1.9U	1.6U	1.6U	1.6U	2.2U	2.2U	-	-	-	-	-	1.2U	2.1U	1.8U	1.8U
Silver	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/L	N	-	-	-	**885000**	**899000**	**980000**	**2620000**	**2240000**	**2190000**	**295000**	**288000**	**106000**	**256000**	**211000**	**200000**	**207000**	**216000**	-	-	-	-	-	**233000**	**146000**	**146000**	**158000**
Sodium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	ug/L	N	-	-	-	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U	13.5U	13.5U	10.5U	14.0U	14.0U	-	-	-	-	-	0.15U	0.15U	0.15U	0.15U
Thallium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	N	-	-	-	2.7J	2.5J	5.5	86.4	5.9	8.2	13.0	24.6	4.5J	3.3J	1.5U	1.5U	3.8J	2.5U	-	-	-	-	-	1.3U	2.0U	2.3U	2.3U
Vanadium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/L	N	-	-	-	2.6J	4.6J	8.6U	1130	4.9J	9.5J	81.3	115	29.4	8.1U	8.1U	8.2J	11.0J	12.0J	-	-	-	-	-	21.1	15.1J	14.2J	14.8J
Zinc	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
Bold and highlighted indicates exceedance
NA - No criterion available for the analyte
U - Analyte not detected at that concentrat
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Table 3
SUMMARY OF METALS RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-238	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260	MW-260R	MW-260R	MW-260R	MW-260R
			M238B5	M260A1	M260A2	M260A3	M260A4	M260A5	M260A6	M260A7	M260A8	M260A9	D0820121	M260B1	M260B3	M260B4	M260B5	M260B6	M260B7	D0907161	M260B8	M260B9	D0521191	M260RC3	D1104191	M260RC5
			02/06/2017	03/13/2007	05/09/2007	07/17/2008	11/03/2008	03/12/2009	11/05/2009	06/20/2011	11/14/2011	03/06/2012	08/20/2012	08/20/2012	04/10/2013	09/26/2013	05/27/2014	07/01/2015	03/07/2016	09/07/2016	09/07/2016	02/06/2017	05/21/2019	05/21/2019	11/04/2019	11/04/2019
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
Aluminum	ug/L	N	86.8U	-	-	-	-	-	-	-	-	-	157J	171J	**217**	165J	174J	146J	**586J**	103J	121J	**326**	**227J**	**205J**	84.1	85.6
Aluminum	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	ug/L	N	0.48U	-	-	-	-	-	-	-	-	-	3.5U	3.5U	0.68J	0.68J	1.2	0.89U	2.2J	0.87J	0.77J	2.4U	0.65J	0.61J	0.54J	0.41J
Antimony	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	ug/L	N	1.8J	-	-	18.6J	19.4J	10.0U	12.0J	10.8J	5.1U	58.4	5.3	5.5	6.1	14.2	11.8	11.1	36.6	7.5	8.2	26.9	8.4	8.2	11.2	11.4
Arsenic	ug/L	Y	-	-	-	-	-	-	-	-	-	-	5.8	5.4	4.6	11.9	10.2	9.4	26.2	7.3	8.0	-	-	-	-	-
Barium	ug/L	N	64.0	-	-	-	-	-	-	-	-	-	489	469	193	870	767	333	228	529	548	208	193	204	414	388
Barium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	N	0.67U	-	-	-	-	-	-	-	-	-	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	1.1U	0.67U	0.67U	0.67U	1U	1U	1U	1U
Beryllium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	N	0.49U	-	-	-	-	-	-	-	-	-	0.36U	0.36U	0.36U	0.76U	0.76U	0.33U	0.64U	0.49U	0.49U	0.49U	1U	1U	1U	1U
Cadmium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	ug/L	N	12400	-	-	-	-	-	-	-	-	-	136000	131000	114000	138000	124000	108000	57800	117000	119000	57700	167000	174000	128000	122000
Calcium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	ug/L	N	1.8U	-	-	-	-	-	-	-	-	-	13.6J	12.2J	16.7	14.6J	17.3	18.3	45.4	13.1J	13.4J	25.3	5.3J	5.3U	7.6UJ	7.7UJ
Chromium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	ug/L	N	1.9U	-	-	-	-	-	-	-	-	-	2.3J	2.0J	1.6J	3.3J	1.3U	1.9J	3.8J	1.9U	1.9U	2.1J	2.4J	3.6J	1.5U	1.5U
Cobalt	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	ug/L	N	4.1U	-	-	-	-	-	-	-	-	-	2.1U	2.1U	2.2J	2.7U	2.7U	2.8U	4.6J	4.1U	4.6UJ	4.1U	6.2U	6.2U	12U	12U
Copper	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	ug/L	N	**2140**	**26600**	**16300**	**8750**	**2150**	**1480**	**4510**	**714**	**2710**	**4000**	**1290**	**1670**	**3110**	**2190**	**2750**	**1300**	**2100**	**1120**	**1170**	**821**	**4280**	**4610**	**6690**	**6480**
Iron	ug/L	Y	260	**25500**	**14700**	129J	**1800**	114J	**313**	**579**	**2340**	**2960**	**320**	**386**	97.6J	**1790**	**2120**	**620**	**458**	**581**	**672**	**543**	**3160**	**3140**	-	-
Lead	ug/L	N	1.5	-	-	6.9U	11.6J	6.9U	7.2J	2.2U	5.2J	26.3	5.1U	5.1U	2.8	1.0	1.8	1.9	8.1	0.60J	0.61J	3.3J	1.1U	1.1U	0.08J	0.098J
Lead	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	N	24600	-	-	-	-	-	-	-	-	-	391000	383000	325000	341000	301000	279000	135000	296000	307000	134000	311000	329000	362000	348000
Magnesium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	ug/L	N	**322**	-	-	-	-	-	-	-	-	-	**1640**	**1490**	**711**	**3520**	**3480**	**933**	**840**	**2320**	**2410**	**572**	**1700**	**1840**	**1610**	**1510**
Manganese	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/L	N	0.050U	-	-	-	-	-	-	-	-	-	0.070U	0.070U	0.70U	0.060U	0.060U	0.050U	0.050U	0.050U	0.050U	0.050U	0.05U	0.05U	0.05U	0.05U
Mercury	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	ug/L	N	2.8U	-	-	-	-	-	-	-	-	-	1.1U	1.2J	4.5J	6.3J	7.8J	11.3	49.8	3.3J	3.6J	30.1	3.1U	3.1U	2.1U	4.3J
Nickel	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/L	N	25600	-	-	-	-	-	-	-	-	-	134000	141000	125000	115000	102000	109000	68000	128000	132000	64300	93300	97400	116000	110000
Potassium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	ug/L	N	9.7U	-	-	-	-	-	-	-	-	-	7.5U	7.5U	7.5U	8.4U	8.4U	4.8U	8.2U	9.7U	9.7U	9.7U	22.9J	21U	16U	16U
Selenium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	ug/L	N	1.9U	-	-	-	-	-	-	-	-	-	1.2U	1.2U	1.2U	2.1U	2.1U	1.8U	1.8U	1.9U	1.9U	1.9U	5U	5U	5U	5U
Silver	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/L	N	**155000**	-	-	-	-	-	-	-	-	-	**3720000**	**3620000**	**3690000**	**3800000**	**3650000**	**3140000**	**2290000**	**3620000**	**3570000**	**2470000**	**2690000**	**2830000**	**3320000**	**3010000**
Sodium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	ug/L	N	0.16U	-	-	14.0U	14.0U	-	-	-	-	-	5.7U	5.7U	0.15U	0.15U	0.15U	0.15U	0.75U	0.16U	0.16U	0.80U	0.11U	0.11U	0.13U	0.13U
Thallium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	N	1.6U	-	-	-	-	-	-	-	-	-	24.0	24.1	55.4	27.0	43.7	49.7	139	33.5	34.6	78.1	15.7	15.6	32.7	32.6
Vanadium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/L	N	6.7J	-	-	-	-	-	-	-	-	-	11.7J	13.2J	16.2J	6.0J	8.3U	12.7J	29.9	5.4U	5.4U	10.1J	3.3J	4J	4.9UJ	5UJ
Zinc	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes:
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NA - No criterion available for the analyte
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Table 3
SUMMARY OF METALS RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-261	MW-261	MW-261	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267	MW-267
			M261A1	M261A2	M261A3	M267A1	M267A2	M267A3	M267A4	M267A5	M267A6	M267A7	M267A9	M267B2	M267B3	M267B4	M267B5	M267B6	M267B7	M267B8	M267B9	M267C1	M267C2	M267C3
			03/06/2007	05/09/2007	12/10/2007	03/06/2007	05/22/2007	12/10/2007	07/17/2008	10/27/2008	07/20/2009	11/05/2009	09/20/2010	06/06/2011	11/14/2011	03/06/2012	08/20/2012	03/25/2013	09/26/2013	05/27/2014	07/22/2015	03/07/2016	09/07/2016	02/06/2017
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
Aluminum	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	ug/L	N	**35300**	**29200**	**16100**	**22700**	**13100**	**13300**	**5830**	**3680**	**2100**	**6260**	**4130**	**11000**	**3780**	**21000**	**4080**	**9020**	**18600**	**24700**	**8240**	**9640**	**1450**	**9350**
Iron	ug/L	Y	**34400**	**28000**	**12300**	**19400**	**11800**	**2690**	**1360**	**375**	247	170J	**3910**	**6000**	**424**	**6440**	237	**5600**	**19500**	**21500**	**3280**	**6710**	**409**	**4530**
Lead	ug/L	N	**73.7**	6.9U	6.9U	**109**	7.2J	6.9U	6.9U	6.9U	6.9U	6.9U	6.9U	2.2U	-	8.5J	5.1U	0.19J	0.15J	0.12J	2.2	1.4	0.64J	0.72J
Lead	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/L	N	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Table 3
SUMMARY OF METALS RESULTS IN GROUNDWATER
PAOC 6 No Further Investigation
Former Chevron Perth Amboy Facility

			MW-267R	MW-267R	MW-397	MW-397	MW-397	MW-397	MW-397	MW-551	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1
			D1219191	M267RD1	M397A1	M397A1	M397A2	M397A3	M397A4	M551A6	P001A2	P001A3	P001A4	P001A5	P001A6	P001A7	P001A8	P001A9	P001B1	P001B2	P001B3	P001B4	P001B5	P001B6
			12/19/2019	12/19/2019	03/18/2014	03/18/2014	06/06/2014	10/16/2017	12/12/2017	12/18/2019	11/14/2005	06/01/2006	11/30/2006	06/11/2007	12/12/2007	08/21/2008	11/03/2008	07/09/2009	11/12/2009	06/28/2010	09/29/2010	06/06/2011	11/14/2011	03/08/2012
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
Aluminum	ug/L	N	-	-	**1370**	-	**346**	89.4U	89.4U	123	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aluminum	ug/L	Y	-	-	-	82.8U	82.8U	89.4U	89.4U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	ug/L	N	-	-	1.6	-	0.46J	0.45U	0.45U	0.72UJ	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Antimony	ug/L	Y	-	-	-	0.34U	0.34U	0.45U	0.45U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	ug/L	N	-	-	4.7	-	1.7J	0.9J	0.98J	6.1	9.3U	10U	10U	10.0U	10.0U	10.2U	10.0U	7.2U	7.2U	9.8U	9.8U	5.1U	5.1U	5.1U
Arsenic	ug/L	Y	-	-	-	1.9J	1.2J	1.2J	0.91J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	ug/L	N	-	-	107	-	92.9	53.4	43.8	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Barium	ug/L	Y	-	-	-	96.3	89.8	55	43.6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	N	-	-	0.67U	-	0.67U	2U	2U	1U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Beryllium	ug/L	Y	-	-	-	0.67U	0.67U	2U	2U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	N	-	-	0.76U	-	0.76U	1.8U	1.8U	1U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cadmium	ug/L	Y	-	-	-	0.76U	0.76U	1.8U	1.8U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	ug/L	N	-	-	71500	-	62400	32900	27900	230000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Calcium	ug/L	Y	-	-	-	69500	61700	33200	27800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	ug/L	N	-	-	5.1J	-	2.8J	3.3U	3.3U	2J	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chromium	ug/L	Y	-	-	-	1.8J	2.4J	3.3U	3.3U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	ug/L	N	-	-	1.7J	-	1.3U	1.7U	2.5UJ	1.5U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cobalt	ug/L	Y	-	-	-	1.3U	1.3U	1.7U	2.2UJ	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	ug/L	N	-	-	10.8	-	2.7U	4U	4U	12U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Copper	ug/L	Y	-	-	-	2.7U	2.7U	4U	4U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	ug/L	N	**4200**	**3820**	**17400**	-	**16800**	**8450**	**7220**	**21100**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron	ug/L	Y	41.2U	**2970**	-	**13200**	**15300**	**9900**	**6840**	**19100**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lead	ug/L	N	0.071UJ	0.071U	47.9	-	11.4	0.11U	1.9	0.42J	8.4U	6.9U	6.9U	6.9U	6.9U	6.9U	6.9U	6.9U	6.9U	6.9U	6.9U	2.2U	2.2U	12.5J
Lead	ug/L	Y	-	-	-	2.2	0.085U	2	0.11U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	N	-	-	46000	-	38200	18500	15900	428000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Magnesium	ug/L	Y	-	-	-	44200	37600	18600	15800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	ug/L	N	-	-	**1210**	-	**1050**	**489**	**422**	**3290**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese	ug/L	Y	-	-	-	**1110**	**1020**	**496**	**422**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/L	N	-	-	0.060U	-	0.060U	0.05U	0.05U	0.05U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mercury	ug/L	Y	-	-	-	0.060U	0.060U	0.05U	0.05U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	ug/L	N	-	-	1.5U	-	2.0J	4U	4U	2.6J	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nickel	ug/L	Y	-	-	-	1.5U	2.7J	4U	4U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/L	N	-	-	16000	-	15600	10900	9200	124000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Potassium	ug/L	Y	-	-	-	18500	15300	10800	9190	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	ug/L	N	-	-	8.4U	-	8.4U	9.3U	9.3U	16U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Selenium	ug/L	Y	-	-	-	8.4U	8.4U	9.3U	9.3U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	ug/L	N	-	-	2.1U	-	2.1U	2.4U	2.4U	5U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Silver	ug/L	Y	-	-	-	2.1U	2.1U	2.4U	2.4U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/L	N	-	-	**378000**	-	**362000**	**172000**	**145000**	**2990000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sodium	ug/L	Y	-	-	-	**398000**	**364000**	**174000**	**145000**	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	ug/L	N	-	-	0.15U	-	0.15U	0.12U	0.12U	0.13U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thallium	ug/L	Y	-	-	-	0.15U	0.15U	0.12U	0.12U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	N	-	-	5.3	-	4.1J	1.6U	1.6U	5.2J	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vanadium	ug/L	Y	-	-	-	2.0U	2.0U	1.6U	1.6U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/L	N	-	-	17.0UJ	-	3.9J	6.5U	6.5U	3.7U	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Zinc	ug/L	Y	-	-	-	4.0J	4.0J	6.5U	6.5U	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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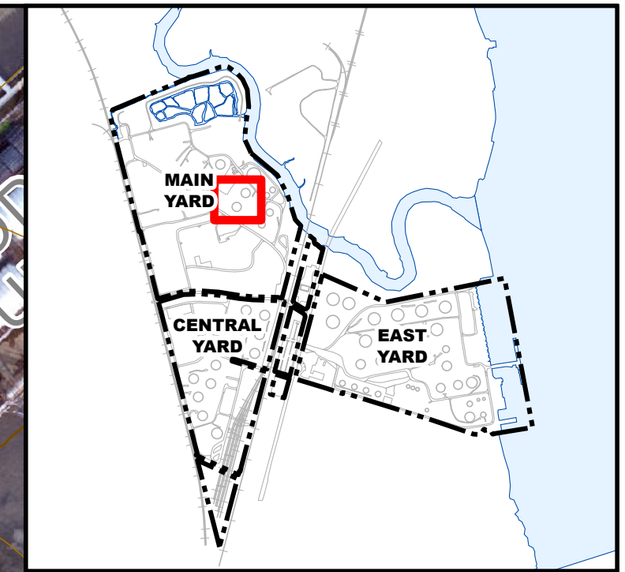
			P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1	P-1
			P001B7	P001B8	P001B9	P001C1	P001C2	P001C3	P001HS	P001C4	P001C5	P001C6	P001C7	D1017178A	P001C8	P001C9	P001D3	D1207181	P001D5	P001D6	P001D8	P001D9
			08/08/2012	04/04/2013	09/24/2013	06/23/2014	11/13/2014	06/29/2015	02/03/2016	02/16/2016	08/16/2016	02/07/2017	08/23/2017	10/17/2017	10/17/2017	12/11/2017	08/22/2018	12/07/2018	12/07/2018	03/19/2019	09/06/2019	12/06/2019
			WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER	WATER
Parameter Name	**Report Units**	**Filtered**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**	**Report Result**
Aluminum	ug/L	N	74.3U	74.3U	82.8U	67.4U	67.4U	67.4U	193J	92.9U	86.8U	86.8U	89.4U	89.4U	89.4U	89.4U	153U	153U	153U	153U	107U	139
Aluminum	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	89.4U	89.4U	89.4U	-	765U	153U	-	-	-
Antimony	ug/L	N	3.5U	0.33U	0.34U	0.33U	0.33U	0.33U	0.33U	0.33U	0.48U	0.48U	0.45U	1.4J	2.6J	0.45U	0.41U	0.41U	2U	0.41U	0.41U	0.66J
Antimony	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	0.53UJ	1.2J	0.45U	-	0.41U	0.41U	-	-	-
Arsenic	ug/L	N	0.40U	0.40U	0.42U	0.82U	0.82U	0.82U	0.77J	0.54U	0.68U	0.68U	0.72U	1.2J	1.5J	0.72U	7.5	2.3	2.1	6.3	8	3.3
Arsenic	ug/L	Y	0.40U	0.40U	0.42U	0.82U	0.82U	0.82U	1.7J	0.54U	0.68U	-	-	0.72U	0.72U	0.72U	-	2J	2J	-	-	-
Barium	ug/L	N	73.4	341	362	153	268	187	129	110	125	89.9	116	147	150	170	1290	1050	1050	1010	1330	1260
Barium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	150	148	162	-	1020	1030	-	-	-
Beryllium	ug/L	N	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	1.1U	1.1U	0.67U	0.67U	2.0U	2U	2U	2U	1.0U	1U	1U	1U	1U	1U
Beryllium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	2U	2U	2U	-	1U	1U	-	-	-
Cadmium	ug/L	N	0.46J	0.36U	0.76U	0.33U	0.33U	0.33U	0.64U	0.64U	0.49U	0.49U	1.8U	1.8U	1.8U	1.8U	1.0U	1U	1U	1.7J	3.2J	1.9J
Cadmium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	1.8U	1.8U	1.8U	-	1U	1U	-	-	-
Calcium	ug/L	N	76900	260000	217000	107000	207000	157000	114000	116000	106000	99400	102000	119000	119000	139000	116000	162000	160000	131000	133000	118000
Calcium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	114000	113000	136000	-	160000	162000	-	-	-
Chromium	ug/L	N	1.1J	1.4J	1.8J	1.3U	1.3U	2.9J	2.5J	2.6J	1.8U	1.8U	3.3U	3.3U	3.3U	3.3U	5.3U	6.1J	5.3U	5.3U	1.6U	1.6U
Chromium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	3.3U	3.3U	3.3U	-	5.3U	5.5J	-	-	-
Cobalt	ug/L	N	0.66U	0.66U	1.3U	1.0U	1.0U	1.0U	0.90U	2.0UJ	1.9U	1.9U	1.7U	1.7U	1.7U	1.7U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U
Cobalt	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	2UJ	1.7U	1.7U	-	1.5U	1.5U	-	-	-
Copper	ug/L	N	2.1U	2.1U	2.7U	2.8U	2.8U	6.8J	13.7	3.2U	4.1U	4.1U	4.0U	4U	4U	4U	6.2U	10.5J	10.8J	6.8J	6.2U	12U
Copper	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	4U	4U	4U	-	6.2U	6.2U	-	-	-
Iron	ug/L	N	153J	**1620**	**2500**	**1680**	**1030**	**1180**	**1420**	**661**	**1150**	**323**	247	**1630**	**1880J**	**2050**	**116000**	**57900**	**56400**	**76000**	**83400**	**70200**
Iron	ug/L	Y	33.3U	**906**	**1110**	**1320**	**814**	**511**	**763**	**345**	**637**	205	80.5U	**1440**	**1470J**	**1160**	**118000**	**56200**	**56400**	**72600**	**80900**	**69100**
Lead	ug/L	N	5.1U	0.18J	0.38J	0.41J	0.56J	0.48J	1.9	0.41J	0.41J	0.34J	0.23J	0.4J	0.79J	0.32J	1.1U	1.1J	1.1U	1.1U	1.1U	0.56
Lead	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	0.11U	0.11U	0.11U	-	1.1U	1.1U	-	-	-
Magnesium	ug/L	N	16700	67900	63800	28500	56200	40100	30000	29400	26800	24800	28500	32200	32400	38300	141000	125000J	124000J	134000	160000	150000
Magnesium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	31700	31300	37400	-	124000J	125000J	-	-	-
Manganese	ug/L	N	**87.6**	**665**	**433**	**338**	**800**	**709**	**512**	**496**	**322**	**405**	**348**	**545**	**548**	**701**	**652**	**990**	**969**	**977**	**1010**	**923**
Manganese	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	**552**	**550**	**700**	-	**978**	**985**	-	-	-
Mercury	ug/L	N	0.072J	0.079J	0.060U	0.060U	0.060U	0.050U	0.13UJ	0.050U	0.050U	0.050UJ	0.050U	0.05U	0.05U	0.05U	0.050UJ	0.05U	0.05U	0.05U	0.05U	0.05U
Mercury	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	0.05U	0.05U	0.05U	-	0.05U	0.05U	-	-	-
Nickel	ug/L	N	1.1U	1.1U	1.5U	1.6U	1.6U	1.6U	2.5U	2.5U	2.8U	2.8U	4.0U	4U	4U	4U	3.1U	3.1U	3.1U	4.5J	2.1U	2.1U
Nickel	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	4U	4U	4U	-	3.1U	3.1U	-	-	-
Potassium	ug/L	N	9170	14100	17800	8790	14500	10700	7550	7110	7830	6470	9470	10700	10700	11700	27700	32000J	31700J	25200	30500	31500
Potassium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	10800	10400	11300	-	31500J	31500J	-	-	-
Selenium	ug/L	N	7.5U	7.5U	8.4U	4.8U	4.8U	4.8U	8.2U	8.2U	9.7U	9.7U	9.3U	9.3U	9.3U	9.3U	21.0U	21U	21U	37UJ	16U	16U
Selenium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	14.6J	9.3U	9.3U	-	21U	21U	-	-	-
Silver	ug/L	N	1.2U	1.2U	2.1U	1.8U	1.8U	1.8U	1.8U	1.8U	1.9U	1.9U	2.4U	2.4U	2.4U	2.4U	5.0U	5U	5U	5U	5U	5U
Silver	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	2.4U	2.4U	2.4U	-	5U	5U	-	-	-
Sodium	ug/L	N	**54000**	**409000**	**344000**	**149000**	**175000**	**323000**	**85100**	**89400**	**86400**	**66400**	**99800**	**98600**	**102000**	**120000**	**1380000**	**1160000J**	**1150000J**	**1240000**	**1440000**	**1380000**
Sodium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	**103000**	**99800**	**115000**	-	**1190000J**	**1200000J**	-	-	-
Thallium	ug/L	N	5.7U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U	0.11U	0.11U	0.13U
Thallium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	0.12U	0.12U	0.12U	-	0.11U	0.11U	-	-	-
Vanadium	ug/L	N	1.3U	1.3U	2.0U	1.9U	1.9U	1.9U	2.3U	2.3U	1.6U	1.6U	2.7J	1.7J	2J	1.6U	3.0U	3U	3U	3U	1.9U	1.9U
Vanadium	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	4.4UJ	3.5UJ	1.6U	-	3U	3U	-	-	-
Zinc	ug/L	N	2.0J	2.0U	4.4J	2.0U	6.6J	2.1J	8.2J	3.9U	5.4U	5.4U	6.5U	6.5U	6.5U	6.5U	4.1UJ	3.2J	3U	8.2J	9.3J	3.7U
Zinc	ug/L	Y	-	-	-	-	-	-	-	-	-	-	-	6.5U	6.5U	6.5U	-	3U	3U	-	-	-

Notes:
Bold and highlighted indicates exceedance
NA - No criterion available for the analyte
U - Analyte not detected at that concentrat
J - Analyte concentration is estatimated
-- - indicates the parameter was not analyz

FIGURES



LEGEND

- AOC Boundary
- PAOC Boundary
- Suspected TEL Burial Area (SWMU)

Topographic Contours

- 1' Contour
- 1' Contour Depression
- 5' Contour
- 5' Contour Depression

GENERAL NOTES:

1. Aerial photograph dated October 2017 was provided by Parsons.
2. Topographic contours shown are at 1-ft interval.
3. The horizontal datum is the New Jersey State Plane Coordinate System NAD83.
4. The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29).

AERIAL PHOTOGRAPH OF PAOC 6

PAOC 6 JUSTIFICATION FOR NFI FOR GROUNDWATER

CHEVRON
ENVIRONMENTAL MANAGEMENT COMPANY
PERTH AMBOY, NEW JERSEY

PROJECT #:	DATE:	DWN:	CHKD:	FIG NO.:
452038-37600	5/13/2020	ADW	JL	1

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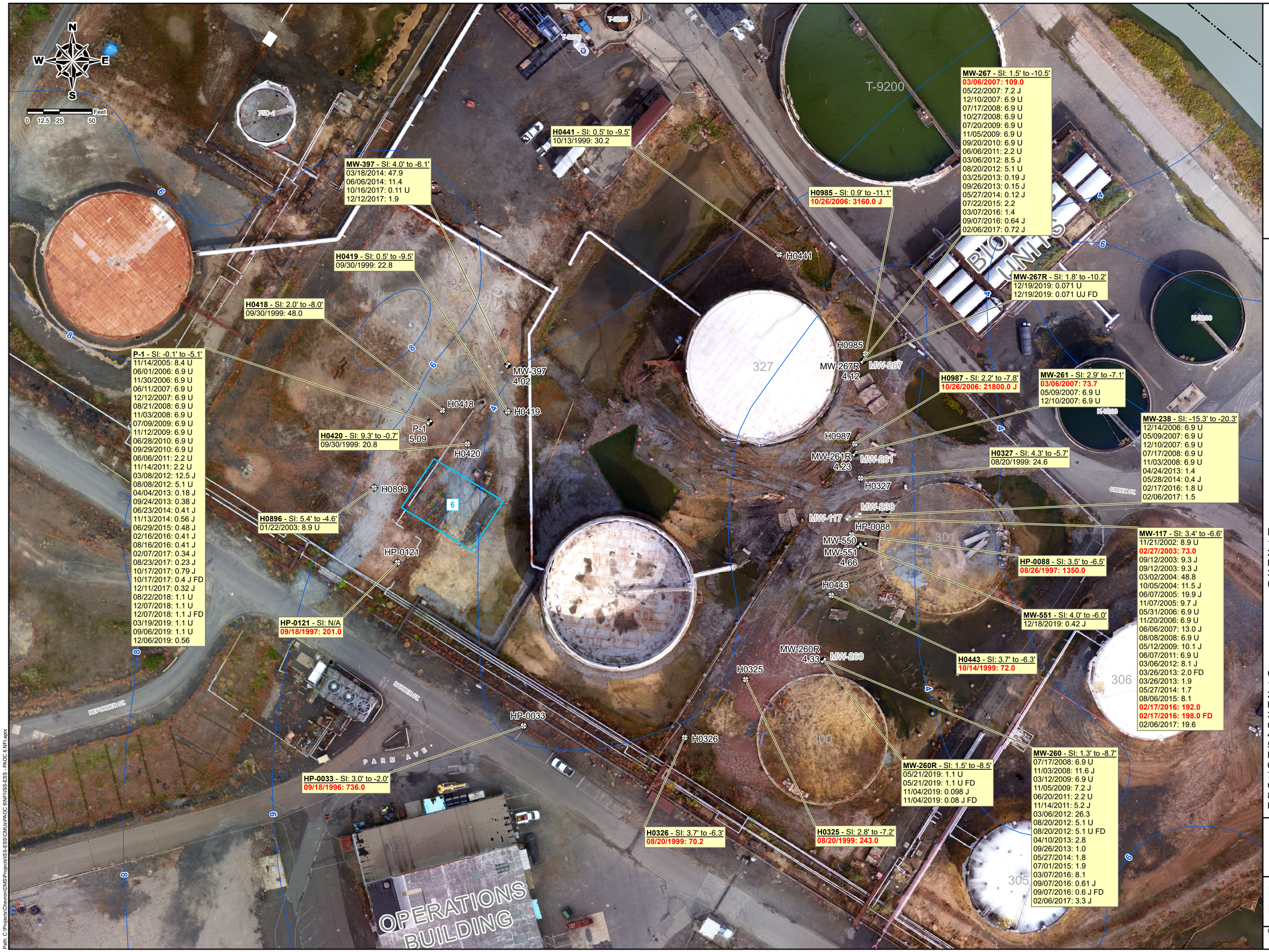

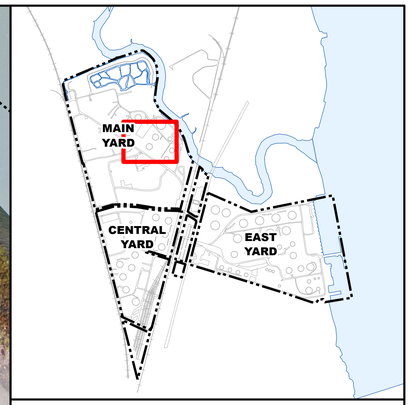

LEGEND

- Deep Monitoring Well - Current
- Deep Monitoring Well - Abandoned
- Shallow Monitoring Well - Current
- Shallow Monitoring Well - Abandoned
- Temporary Well Point
- Q4 2019 Shallow Groundwater Contour
- PAOC 6 Boundary

PERTINENT NOTES:

1. Lead results reported as ug/L.
2. Values in RED indicate results above CMI Action Level of 50 ug/l.
3. Screen interval elevations were measured in feet (NGVD29).

Well ID — Screen Interval (ft, NGVD29)

H0970 - SI: 9.3' to 1.3'
02/17/2005: 38.3

Sample Date — Lead Results (ug/L)

GENERAL NOTES:

1. "U" = Compound not detected above MDL.
2. "J" = Estimated concentration less than the reporting limit but above MDL.
3. "UJ" = Analyte not detected above the appropriate reported sample quantitation limit.
4. "FD" = Field duplicate sample
5. Aerial photograph dated October 2017 was provided by Parsons.
6. Topographic contours shown are at 1-ft interval.
7. The horizontal datum is the New Jersey State Plane Coordinate System NAD83.
8. The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29).

LEAD RESULTS IN GROUNDWATER
PAOC 6 JUSTIFICATION FOR NFI
FOR GROUNDWATER

Chevron
CHEVRON
ENVIRONMENTAL MANAGEMENT COMPANY
PERTH AMBOY, NEW JERSEY

PROJECT #:	DATE:	DWN:	CHKD:	FIG NO.:
452038-37600	5/4/2020	ADW	JL	2

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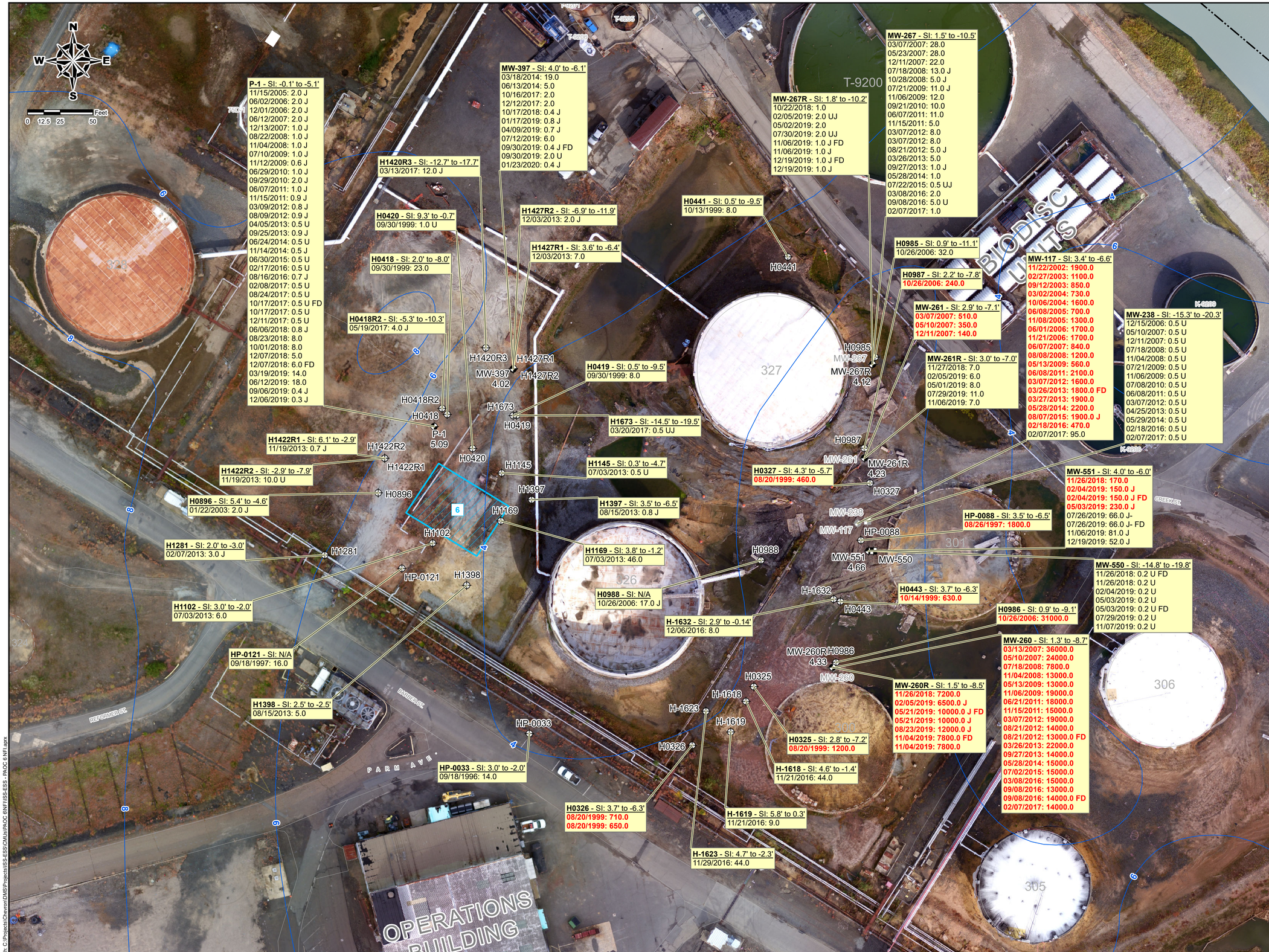

PERTINENT NOTES:

1. Values in RED indicate results above CMI Action Level of 100 ug/L.
2. Screen interval elevations were measured in feet (NGVD29).

Well ID → H0970 - SI: 9.3' to 1.3' ← Screen Interval (ft, NGVD29)
02/17/2005: 38.3
Sample Date → ← Benzene Results (ug/L)

GENERAL NOTES:

1. "U" = Compound not detected above MDL.
2. "J" = Estimated concentration less than the reporting limit but above MDL.
3. "UJ" = Analyte not detected above the appropriate reported sample quantitation limit.
4. "FD" = Field duplicate sample
5. Aerial photograph dated October 2017 was provided by Parsons.
6. Topographic contours shown are at 1-ft interval.
7. The horizontal datum is the New Jersey State Plane Coordinate System NAD83.
8. The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29).

BENZENE RESULTS IN GROUNDWATER
PAOC 6 JUSTIFICATION FOR NFI
FOR GROUNDWATER

CHEVRON
ENVIRONMENTAL MANAGEMENT COMPANY
PERTH AMBOY, NEW JERSEY

PROJECT #:	DATE:	DWN:	CHKD:	FIG NO.:
452038-37600	5/4/2020	ADW	JL	3

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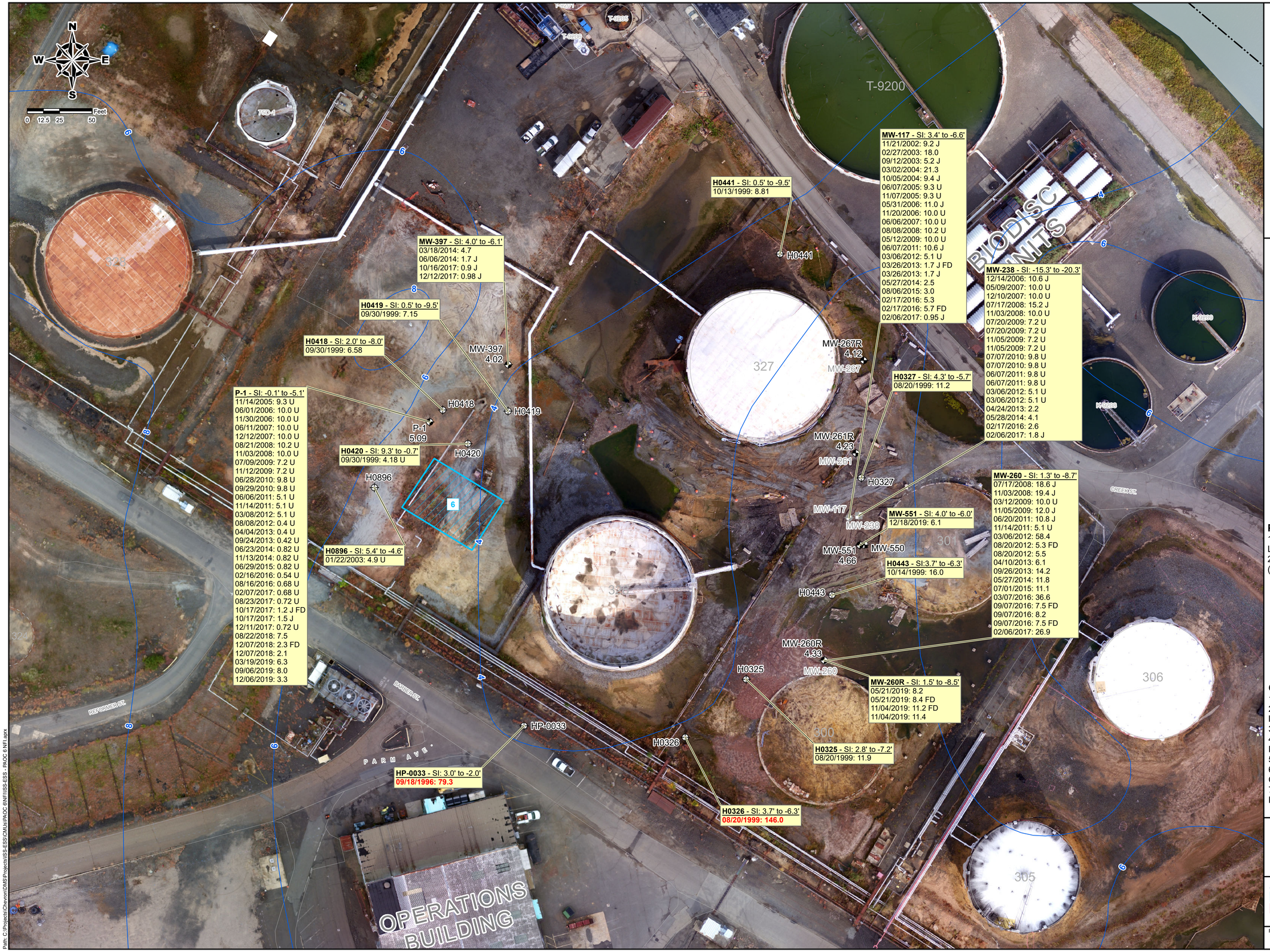
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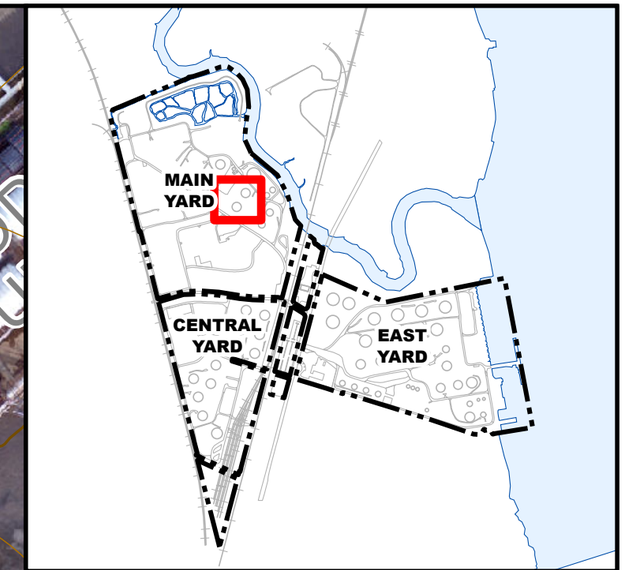


LEGEND

- Final ESS CM for PAOC 6
- Final ESS CM for AOC 23/41/SWMU 18
- Final ISS CM for AOC 23/41/SWMU 18
- Final ESS CM for SWMU 19
- Final ISCO CM
- Final Arsenic Cap CM
- AOC Boundary
- PAOC Boundary
- Suspected TEL Burial Area

GENERAL NOTES:

1. Aerial photograph dated October 2017 was provided by Parsons.
2. Topographic contours shown are at 1-ft interval.
3. The horizontal datum is the New Jersey State Plane Coordinate System NAD83.
4. The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29).

CORRECTIVE MEASURES COMPLETED IN THE PAOC 6 AREA

PAOC 6 JUSTIFICATION FOR NFI FOR GROUNDWATER

CHEVRON
ENVIRONMENTAL MANAGEMENT COMPANY
PERTH AMBOY, NEW JERSEY

PROJECT #:	DATE:	DWN:	CHKD:	FIG NO.:
452038-37600	5/4/2020	ADW	JL	5

Path: C:\Projects\Chevron\DMS\Projects\ISS-ESS\CMUs\PAOC 6\NFI\ISS-ESS - PAOC 6 NFI.aprx

ATTACHMENT 1
WELL RECORDS

Project Name: Corrective Action Projects	Site Id: H0418
PHASE II OWSS INVESTIGATION	Location: NF 4
Logged By: GWS	Date(s): 09/29/99
Consulting Firm: E.S.E., INC.	Method: Direct Push – 4' Macro Core
Contractor: E.P.I.	Borehole Dia.: 2.00in
Remarks: Set 1" PVC 10-slot at 5'-15' bgs Set porous media at 5'-13' bgs	Total Depth: 16.00' Groundwater Depth: 6.00' Datum: Ground Surface

Depth (ft)	OVM	Recovery	Water Level	Graphic Log	USCS Code	Material Description (USCS)	Sample No.
	0 ppm				FI/SP	0'-4'[FILL] POORLY GRADED SANDS(SP) Brown to Light Brown and Gray, fine sands, some angular gravels, stiff, moist	
	0 ppm						
5	0 ppm					4'-6' NO RECOVERY	
	8 ppm				FI/CL	6'-8'[FILL] CLAY WITH SANDS(CL) Brown mottled Gray, =>75% low plasticity fines, =>25% fine sands, micacious, stiff, moist	
	7 ppm					8'-9' NO RECOVERY	
					FI/CL	9'-11' Same as 6'-8' interval, some staining	
10	6 ppm						
	102 ppm				CL	11'-12'[NATIVE] CLAY WITH SANDS(CL) Dark Gray, Black,=>90% low plasticity fines, =>10% fine sands, organics, roots, stiff, moist	
	45 ppm 31 ppm					12'-14' SLOUGH	
15	184 ppm 0 ppm				CL	14'-16' Same as 11'-12' interval	

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: NA
Boring/Well ID: H0418R2	Driller: A. Mackiewitz	Easting: NA
Permit No: NA	Consulting Firm: Parsons	Elevation: NA
Location: SWMU 35	Logged By: C. Franc	Datum: Ground Surface
Start Date/Time: 05/19/2017	Drill Rig Type: 6680 DT	Total Depth: 30.0 Ft
Complete Date: 05/19/2017	Drilling Method: Direct Push - Split Spoon	Boring Diameter: 2 in
Weather: 80 degrees F, Sunny	Sample Method: Split Spoon	Water Depth in Soil: 7 Ft
Field Book No: 324	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Set screen from 19-24ft bgs.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
0			2.4	FILL	SW	Brown SAND, gravel, loose, dry
			8.8			
1			88.3	FILL	CL	Brown-Red-Black CLAY, some gravel, some sand, mottled, stiff, dry
			22.7			
2			10.8			
			16.7			
3			6.7			
			68.6			
4						No Recovery
5			5.4	FILL	CL	Same as above 1-4' interval
			69.5	FILL	CL	Same as above 5-5.5' interval, some staining
6			312.8			
			228.6	FILL	CL	Same as above 5.5-6.5' interval, heavy staining, soft, wet
7			668.2			
			722.8			
8			412.2			
			541.8	Native	PT	PEAT, very organic, soft, organic odor, some staining
9						No Recovery
10						

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: NA
Boring/Well ID: H0418R2	Driller: A. Mackiewitz	Easting: NA
Permit No: NA	Consulting Firm: Parsons	Elevation: NA
Location: SWMU 35	Logged By: C. Franc	Datum: Ground Surface
Start Date/Time: 05/19/2017	Drill Rig Type: 6680 DT	Total Depth: 30.0 Ft
Complete Date: 05/19/2017	Drilling Method: Direct Push - Split Spoon	Boring Diameter: 2 in
Weather: 80 degrees F, Sunny	Sample Method: Split Spoon	Water Depth in Soil: 7 Ft
Field Book No: 324	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Set screen from 19-24ft bgs.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
10			203.6			Dark Brown PEAT, very organic, moist, soft, strong organic odor, no stain, H2S=4 ppm from 11-11.5' bgs., H2S=2 ppm from 12.5-13' bgs.
			353.9			
11			330.4			
			344.8			
12			329.5	Native	PT	
			324.8			
13			380.6			
			398.8			
14			304.5			
			167.9			
15			127			Same as above 10-15' interval, H2S=407 ppm from 15-15.5' bgs., H2S=49 ppm from 16-16.5' bgs., H2S=408 ppm from 17-17.5' bgs.
			379.1			
16			353.3			
			349.1	Native	PT	
17			460.2			
			377			
18			167.8			
			256.6			Dark Gray CLAY, some silt, soft, moist
19			10.7	Native	CL	
						No Recovery
20						

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: NA
Boring/Well ID: H0418R2	Driller: A. Mackiewitz	Easting: NA
Permit No: NA	Consulting Firm: Parsons	Elevation: NA
Location: SWMU 35	Logged By: C. Franc	Datum: Ground Surface
Start Date/Time: 05/19/2017	Drill Rig Type: 6680 DT	Total Depth: 30.0 Ft
Complete Date: 05/19/2017	Drilling Method: Direct Push - Split Spoon	Boring Diameter: 2 in
Weather: 80 degrees F, Sunny	Sample Method: Split Spoon	Water Depth in Soil: 7 Ft
Field Book No: 324	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Set screen from 19-24ft bgs.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
20			8			Light Gray CLAY, trace fine sand, firm, moist
			21.7	Native	CL	
21			8.5			
			4.4			Light Gray SILT, firm, moist
22			2	Native	ML	
			1.3	Native	ML	Light Gray SILT, some f-m sand, trace small gravel, moist, firm
23			1.7			Red TILL, c-f sand, small gravel, some silt, stiff, dry
			1.1	Native		
24						No Recovery
25			0.9	Native		Same as above 23-24' interval
			0.8	Native		Pale Gray large GRAVEL, c-f sand, dry
				Native		Same as above 25-25.5' interval
26			2.1			TILL, c-f sand, large to small gravel, trace silt, stiff, moist
			0.8			
27			0	Native		
			0			
28						No Recovery
29						
30.0						

Project Name: Corrective Action Projects	Site Id: H0419
PHASE II OWSS INVESTIGATION	Location: NF 4
Logged By: GWS	Date(s): 09/29/99
Consulting Firm: E.S.E., INC.	Method: Direct Push – 4' Macro Core
Contractor: E.P.I.	Borehole Dia.: 2.00in
Remarks: Set 1" PVC 10-slot at 4'-14' bgs Set porous media at 5'-13' bgs	Total Depth: 12.00' Groundwater Depth: 6.00' Datum: Ground Surface

Depth (ft)	OVM	Recovery	Water Level	Graphic Log	USCS Code	Material Description (USCS)	Sample No.
	0 ppm				FI/SP FI/CL	0'-1'[FILL] POORLY GRADED SANDS(SP) Brown to Light Brown and Gray, fine sands, some angular gravels, stiff, moist 1'-4'[FILL] CLAY WITH SANDS(CL) Brown mottled Gray, =>80% low plasticity fines, =>20% fine sands, micacious, stiff, moist	
	0 ppm						
5	0 ppm				FI/CL	4'-8' Same as 1'-4' interval	
	0 ppm						
	16 ppm				FI/CL	8'-10' Same as 1'-4'	
10	4 ppm 0 ppm				CL	10'-12'[NATIVE] CLAY WITH SANDS(CL) Dark Gray, Black, =>90% low plasticity fines, =>10% fine sands, organics, roots, stiff, moist	
15							

Project Name: Corrective Action Projects	Site Id: H0420
PHASE II OWSS INVESTIGATION	Location: NF 4
Logged By: GWS	Date(s): 09/29/99
Consulting Firm: E.S.E., INC.	Method: Direct Push – 4' Macro Core
Contractor: E.P.I.	Borehole Dia.: 2.00in
Remarks: Set 1" PVC 10-slot at 4'-14' bgs Set porous media at 5'-13' bgs	Total Depth: 12.00' Groundwater Depth: 6.00' Datum: Ground Surface

Depth (ft)	OVM	Recovery	Water Level	Graphic Log	USCS Code	Material Description (USCS)	Sample No.
	0 ppm				FI/SP	0'-1' NO RECOVERY 1'-2'[FILL] POORLY GRADED SANDS(SP) Brown to Light Brown and Gray, fine sands, some angular gravels, stiff, moist	
	0 ppm				FI/CL	2'-4'[FILL] CLAY WITH SANDS(CL) Brown mottled Gray, =>80% low plasticity fines, =>20% fine sands, micacious, stiff, moist	
5	0 ppm				FI/CL	4'-5' NO RECOVERY 5'-8' Same as 2'-4' interval	
	0 ppm						
	0 ppm				FI/CL	8'-10' Same as 2'-4' interval	
10	2 ppm				FI	10'-11'[FILL] FLY ASH globules of black liquid, saturated	
	7 ppm				CL	11'-12'[NATIVE] CLAY WITH SANDS(CL) Dark Gray, Black, =>90% low plasticity fines, =>10% fine sands, organics, roots, stiff, moist	
	0 ppm						
15							

Project Name: CHEVRONTEXACO	Site Id: H0896
	Location: MAIN YARD, PAOC 10
Logged By: GR	Date(s): 01/21/03 – 01/21/03
Consulting Firm: RFI TEAM	Method: Direct Push – 3' Macro Core
Contractor: JCA	Borehole Dia.: 2.00in
Remarks:	Total Depth: 11.00'
	Groundwater Depth: 8.00'
	Datum: Ground Surface

Depth (ft)	OVM	Recovery	Water Level	Graphic Log	USCS Code	Material Description	Sample No.
	0 ppm				FI/ML	Brown SILT, little C–F sand, little gravel, M stiff, dry	
					FI/ML	Red to Dk Brown SILT,trace C–F sand and gravel,catalyst beads, M stiff, dry	
	65 ppm				FI/ML	Lt Gray to Brown SILT,M–F sand,trace gravel,catalyst beads,wood fragments, M stiff, dry	S0982B1
	386 ppm						
	95 ppm				FI/ML	Gray to Brown SILT,little clay,trace C–F sand and gravel,catalyst beads,M stiff, dry	NA
	40 ppm				FI/ML	Gray, Brown SILT,some clay,trace C–F sand and gravel,M stiff,dry	
	33 ppm				FI/FI	Black FLYASH, catalyst beads, trace gravel, loose, wet	
	0 ppm				FI/ML	Light to Dark Brown SILT, some clay,trace M–F sand, trace gravel, M stiff to soft, moist	
	0 ppm				FI/CL	Gray to Brown CLAY, some silt, trace C–F sand and gravel, soft, wet, thin seams red to dark brown silt,little clay, trace C–F sand, trace gravel, few catalyst beads, soft, wet @ 8'–8.5' bgs	NA
	73 ppm						
	1 ppm				FI/SW	Dark Gray M–F SAND, catalyst beads, trace gravel, loose, wet	
10	15 ppm				OH	Gray CLAY,thins seams of brown peat,catalyst beads,trace C–F sand trace silt, soft, moist	

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621707.5077
Boring/Well ID: S2675	Driller: W. Reeves	Easting: 557179.1542
Permit No: NA	Consulting Firm: Leidos Engineering, LLC	Elevation: 7.00
Location: PAOC 8, gasoline blender	Logged By: K. Byron Light	Datum: Ground Surface
Start Date: 07/02/2013	Drill Rig Type: Geoprobe 6610DT	Total Depth: 12.0 Ft
Complete Date: 07/02/2013	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Cloudy, intermittent rain	Sample Method: 5 foot Macrocore	Water Depth in Soil: 5.0 Ft
Field Book No: 246	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Additional weather, temperature 80 deg. Hand cleared 0 to 5 feet. H1102 built with screen 4 to 9 feet bgs.

Depth Ft	Sample ID	Recovery	OVM	Recovery	Stratum	USCS Code	Graphic Log	Material Description
0			0	60		SW		Brown (7.5YR 3/4) SILTY SAND, contains small to medium angular gravel 0 to 0.5 feet, sand fine grained and angular, 10 percent medium grained and rounded, loose, noncohesive.
	S2675A2		0.9					
1			4.5					
			44.7			CL		Grayish (7.5YR 7/2) SILTY CLAY, discrete pockets of fine grained black sand, soft, low plasticity, moist.
2	S2675B1		102			CL		White (7.5YR 8/1) SILTY CLAY, 30 percent pale blue/green (GLEY 7/10G) catalyst beads round 1 to 2 mm, soft, low plasticity.
			62.7					
3			18.7					
			7.2					
4			4.5					
			7.5					
5			0	12				
			0					
6								No recovery.
7								
8								
9								
10			2.8	24		CL		SILTY CLAY as in 2 to 6 foot interval.
			4.2			SW		Brown (10YR 3/6) SAND, 50 percent catalyst beads, sand fine grained angular, soft, slightly cohesive, wet.
11	S2675F3		0.7			PT		Dark brown (10YR 3/3) PEAT, contains roots and organic material, soft, high plasticity.
			0.7					
12.0								

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621761.1928
Boring/Well ID: S2678	Driller: W. Reeves	Easting: 557231.8806
Permit No: NA	Consulting Firm: Leidos Engineering, LLC	Elevation: 4.27
Location: PAOC 8, gasoline blender	Logged By: K. Byron Light	Datum: Ground Surface
Start Date: 07/01/2013	Drill Rig Type: Geoprobe 6610DT	Total Depth: 15.0 Ft
Complete Date: 07/01/2013	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Cloudy, light rain, 80 deg.	Sample Method: 5 foot Macrocore	Water Depth in Soil: 5.0 Ft
Field Book No: 246	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Hand cleared 0 to 5 feet. PID ambient 13 to 14 ppm due to humidity. H1145 screened 4 to 9 feet bgs. Stop work 1015 to 1100, thunder and lightning.

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0	S2678A1		20.6		GW		Brown (10YR 3/4) GRAVEL, matrix fine grained sand and clay, fine grained and angular, moist.
1			22.9				
			17.8				
			17.3				
2			22.3		CL		Gray (10YR 6/2) CLAY, 50 percent green (GLEY1 6/10GY) 1 to 2 mm diameter CATALYST BEADS, soft, low plasticity, moist.
			24.6				
3	S2678B3		43.7				
			23.5				
4			22.8		SW		Yellowish brown (10YR 6/8) SAND, grains uniformly fine and angular, soft, noncohesive, wet.
			17.4				
5			16.1				
			15.3				
6			13.8				
			12.4				
7							
8							
9							
10			10.7				
			8.3				
11			4.7				
			10.8				
12			9.1		PT		Dark brown (10YR 2/2) PEAT, contains roots and organic material, soft, highly plastic, moist.
			8.7				
13			9.6				
			9.8				
14							No recovery.
15.0							

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621724.607
Boring/Well ID: S3281	Driller: W. Reeves	Easting: 557231.3105
Permit No: NA	Consulting Firm: Leidos Engineering, LLC	Elevation: 4.77
Location: PAOC 8 gasoline blender	Logged By: K. Byron Light	Datum: Ground Surface
Start Date: 07/01/2013	Drill Rig Type: Geoprobe 6610DT	Total Depth: 10.0 Ft
Complete Date: 07/01/2013	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Cloudy, steady rain, 80 deg.	Sample Method: 5 foot Macrocore	Water Depth in Soil: 2.0 Ft
Field Book No: 246	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1169 screened 1 to 6 feet bgs. MS/MSD collected with S3281A1, and Duplicate collected with S3281D3.

Depth Ft	Sample ID	Recovery	OVM	Recovery	Stratum	USCS Code	Graphic Log	Material Description
0	S3281A1		5.1					
			13.1			CL		Brown (10YR 4/6) SILTY CLAY, 10 percent fine grained angular gravel, soft, medium plasticity, moist.
1			14.3					
			15.7					
2			28.4	60				
	S3281B2		17.6					Olive brown (2.5YR 4/9) very coarse SAND, with clay, 50 percent angular gravel in 2 to 3 feet bgs (none below 3 feet), fine grained, rounded, noncohesive, soft, wet.
3			12.8			SW		
			14.7					
4			13.1					
			4.6					
5	S3281C3		58.1					
			51.5			SP		Black (2.5Y 5/1) coarse SAND, 50 percent fine gravel 5.5 to 6 feet, gradual increase in gravel percentage from 0 at 5 feet to 50 at 6 feet, angular, noncohesive, hard, wet.
6			13.1					
			17.5			PT		Black PEAT, contains roots and organic matter, soft, high plasticity, moist.
7	S3281D3		14.2	36				
			13.7					
8								
9								
10.0								

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621740.7424
Boring/Well ID: S3879	Driller: W. Reeves	Easting: 557254.8398
Permit No: NA	Consulting Firm: Leidos Engineering, LLC	Elevation: 4.00
Location: MY, PAOC 6	Logged By: C. Spangler	Datum: Ground Surface
Start Date: 08/14/2013	Drill Rig Type: Geoprobe	Total Depth: 15.0 Ft
Complete Date: 08/14/2013	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Sunny, clear, wind 10 to 15mph	Sample Method: 5 foot Macrocore	Water Depth in Soil: 4.5 Ft
Field Book No: 247	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Standing water adjacent to bore hole, PSH observed on macrocore. Temporary well H1397 set 0.5 to 10.5 feet, screen installed after well stabilization.

Depth Ft	Sample ID	Recovery	OVM	Recovery	Stratum	USCS Code	Graphic Log	Material Description
0			0.5					
	S3879A2		0.9					
1			4.4			CL		Dark yellowish brown (10YR 4/4) SANDY CLAY, gravel (large/small) at top, trace pebbles, trace roots, medium to very coarse, loose, low to nonplastic, moist.
			6.4					
2			13.9	60				
			24.9					
3			19.8			CL		Very dark grayish brown (10YR 3/2) CLAY, trace sand, trace pebbles, pebbles at 4 feet bgs, medium hardness, medium plasticity, moist to wet.
			16.9					
4			6.8					
						PT		Very dark brown (10YR 2/2) PEAT/ORGANIC MATERIAL, black (10YR 2/1) small grav at 4.75 to 5.5 feet bgs, soft, high plasticity, wet at 4.5 feet.
5			38.9					
			11.9					
6			38.3					
	S3879D2		154.5					
7			41.9	30				
								No recovery.
8								
9								
10			12.7					
	S3879F2		62.3					Same as 4.5 to 7.5 foot interval, no gravel.
11			17.3			PT		
			8.7					
12			12.2	36				
13								No recovery.
14								
15.0								

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621675.2813
Boring/Well ID: S3284	Driller: W. Reeves	Easting: 557205.1192
Permit No: NA	Consulting Firm: Leidos Engineering, LLC	Elevation: 5.98
Location: PAOC 6	Logged By: C. Spangler	Datum: Ground Surface
Start Date: 08/14/2013	Drill Rig Type: Geoprobe	Total Depth: 10.0 Ft
Complete Date: 08/14/2013	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Sunny, clear, upper 70s	Sample Method: 5 foot Macrocore	Water Depth in Soil: 5.0 Ft
Field Book No: 247	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1398 screen set 3.5 to 8.5 feet. Additional weather, wind 10 to 15 mph.

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0			0.8		CL		Dark yellowish brown (10YR 4/4) SANDY CLAY, many gravel and pebbles, loose, nonplastic, micasceous, medium to fine, dry to slightly moist.
	S3284A2		1				
1			0.9				
			1.2				
2			1		CL		Dark yellowish brown (10YR 3/4) SANDY CLAY, with beads (green), beads are 0.5mm or greater in diameter with pale green hue, loose, nonplastic, medium to fine, slightly moist.
			28.7				
3			2.7		SC		Light greenish gray (GLeY1 7/1) CLAYEY SAND, with beads, beads are 0.5mm or greater in diameter with pale green hue, loose, very fine to fine, dry.
			4.5				
4			14.2		CL		Dark yellowish brown (10YR 4/6), same as 2 to 3 foot interval.
	S3284C2		35.4		OH		Black (10YR 2/1) grades to very dark gray (10YR 3/1) with depth PEAT, soft, high plasticity, cohesive, moist to wet, slight hydrocarbon odor at 5 feet only.
5			1.5				
			2.2				
6			0				
			0				
7			0				
			0				
8			0				
			0				
9			0				
			0				
10.0							

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: NA
Boring/Well ID: H1420R3	Driller: A. Mackiewicz	Easting: NA
Permit No:	Consulting Firm: Parsons	Elevation: NA
Location: SWMU 35	Logged By: A.A / B.H.	Datum: Ground Surface
Start Date/Time: 03/10/2017	Drill Rig Type: Geoprobe	Total Depth: 30.0 Ft
Complete Date: 03/10/2017	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: 41F, Cloudy, overcast, snow	Sample Method:	Water Depth in Soil: 5 Ft
Field Book No: ISCO 326	Hammer Weight:	
	Hammer Drop:	

Remarks: Dual tube, discrete cones on 3/10/2017, temp well sampled 3/13/2017.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
0			0.4	FILL	SW	Brown coarse to fine SAND, some Gravel, dry, no stain, no odor, loose.
			0.6	FILL	SW/CL	Brown CLAY, some Silt and fine Sand, medium stiff, trace angular Gravel, moist, no stain, no odor,
1			1.1	FILL	CL	Olive brown CLAY, medium stiff, moist, some fine Sand, some angular Gravel, no stain, strong odor.
			32.9	FILL	SW/CL	Brown coarse to fine SAND, some Gravel, no stain, moderate odor, dry.
2			2.3	FILL	CL	Brown CLAY and Silt, stiff, some angular Gravel, no stain, no odor, moist.
			4.1			
3			10.6			
4						No Recovery.
5			109	FILL	CL	Reddish brown CLAY, soft, moist, no stain, no odor.
			409.3	FILL	CL	Black CLAY, soft, wet, stain, strong odor.
6			986.4	FILL	CL	Light yellowish-brown CLAY, mottled, soft, no stain, strong odor.
			110.4			
7			91.2	FILL	CL	Black CATALYST BEADS, stain, strong odor, wet.
				FILL	CL	Green CATALYST BEADS, strong odor.
			110.5	FILL	SM	Light gray very fine SAND, some green Catalyst beads, wet, medium dense, slight odor, no stain.
8			35.5	FILL	SM	Black CATALYST BEADS, stain, moderate odor.
9						No Recovery.
10						

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: NA
Boring/Well ID: H1420R3	Driller: A. Mackiewicz	Easting: NA
Permit No:	Consulting Firm: Parsons	Elevation: NA
Location: SWMU 35	Logged By: A.A / B.H.	Datum: Ground Surface
Start Date/Time: 03/10/2017	Drill Rig Type: Geoprobe	Total Depth: 30.0 Ft
Complete Date: 03/10/2017	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: 41F, Cloudy, overcast, snow	Sample Method:	Water Depth in Soil: 5 Ft
Field Book No: ISCO 326	Hammer Weight:	
	Hammer Drop:	

Remarks: Dual tube, discrete cones on 3/10/2017, temp well sampled 3/13/2017.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
10			83.9	FILL	CL	Black CLAY, soft, mottled structure, stain, strong odor.
			80.2	FILL	GW	Black SLAG, gravel-like, loose, stain, strong odor.
11			81.3	NATIVE	PT	Brown PEAT, organic roots, soft, no stain, organic odor.
			148.4			
12			141.9			
13						No Recovery.
14						
15						
16			54	NATIVE	PT	Brown PEAT, organic roots, soft, no stain, organic odor.
			207.3			
17			146.2			
			229.4			
18			270.7			
			631.8			
19			312.8			
			1232			
20						

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: NA
Boring/Well ID: H1420R3	Driller: A. Mackiewicz	Easting: NA
Permit No:	Consulting Firm: Parsons	Elevation: NA
Location: SWMU 35	Logged By: A.A / B.H.	Datum: Ground Surface
Start Date/Time: 03/10/2017	Drill Rig Type: Geoprobe	Total Depth: 30.0 Ft
Complete Date: 03/10/2017	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: 41F, Cloudy, overcast, snow	Sample Method:	Water Depth in Soil: 5 Ft
Field Book No: ISCO 326	Hammer Weight:	
	Hammer Drop:	

Remarks: Dual tube, discrete cones on 3/10/2017, temp well sampled 3/13/2017.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
20			16.8	NATIVE	CL	Dark brown CLAY and some Silt, organic odor, no stain, moist.
			98.9			
21			3.8	NATIVE	CL	Gray CLAY, soft, wet, no stain, no odor.
			5.6	NATIVE	CL	Gray CLAY, medium dense, wet, no stain, no odor.
22			1.2			
			1.5	NATIVE	CL	Reddish brown CLAY, some Silt, medium dense, no stain, no odor.
23			0.3			
24						No Recovery.
25			1.7	NATIVE	CL	Reddish brown CLAY, very soft, wet, no stain, no odor.
			20			
26			6.7	NATIVE	CL	Reddish brown CLAY, soft, moist, no stain, no odor.
			0.9			
27			0.3			
			0.2			
28			0.2			
			0.5			
29						
30.0						

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621772.47
Boring/Well ID: H1422	Driller: Joe Barnak	Easting: 557142.51
Permit No: NA	Consulting Firm: Parsons	Elevation: 7.6
Location: SWMU 19	Logged By: R. Patu	Datum: Ground Surface
Start Date/Time: 11/18/2013	Drill Rig Type: Geoprobe	Total Depth: 10.0 Ft
Complete Date: 11/18/2013	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: 60F, Sunny	Sample Method: MC	Water Depth in Soil:
Field Book No: 259	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks:

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
0			0	FILL	SM	Red brown medium fine SAND, little Silt, coarse Gravel, very dense, dry, no stain, no odor.
			0			
1			0			
			4.7	FILL	SM	Brown/black medium fine SAND, some Silt, no stain, no odor, dry.
2			0.9			
						No Recovery.
3						
4						
5			0.2			No Recovery. Re-drill S3997R1 to 20 feet.
			0.1			
6			0.1			
			0			
7						
8						
9						
10.0						

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: NA
Boring/Well ID: H1422R1	Driller: A. Mackiewicz	Easting: NA
Permit No: NA	Consulting Firm: Parsons	Elevation: NA
Location: SWMU 35	Logged By: B. Hiza	Datum: Ground Surface
Start Date/Time: 05/25/2017	Drill Rig Type: Geoprobe	Total Depth: 25.0 Ft
Complete Date: 05/25/2017	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: 63F, Overcast, Rain	Sample Method:	Water Depth in Soil: 6.5 Ft
Field Book No: 324	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Screen interval 18 to 23 feet.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
0			0.1	FILL	SC	Brown coarse to fine SAND, some Clay, trace sub-angular Gravel, moist, no stain, no odor.
			0.2	FILL	SC/CL	Dark reddish-brown CLAY, little fine Sand, moist, soft, no stain, no odor.
1			0.2	FILL	CL	Brown CLAY, some Silt, some sub-angular Gravel, medium stiff, moist, no stain, no odor, Catalyst Beads at 1.8 to 2.0 feet.
			13.7			
2			13.8	FILL	CL	Dark reddish-brown CLAY, little fine Sand, moist, soft, no stain, no odor.
			2.2	FILL	CL	Grayish-brown CLAY, some Silt, trace fine Sand, trace sub-rounded Gravel, medium stiff, no stain, no odor.
3			1.4			
			1.1			
4						No Recovery.
5			0.4	FILL	CL	Grayish-brown CLAY, some Silt, trace fine Sand, trace sub-rounded Gravel, medium stiff, no stain, no odor.
			0.3	FILL	CL	Gray CLAY, some Silt, soft, moist, no stain, no odor.
6			0.3	FILL	CL	Brown CLAY, trace fine Sand, trace sub-rounded Gravel, soft moist, no stain, no odor.
			0.3	FILL	SM/PT	Dark gray fine SAND and Catalyst Beads, some stain, wet, no odor.
				FILL	SM/PT	Black SILT, some Clay, moist to wet, soft, stain, slight odor.
7			1.2	NATIVE	PT	Dark brown PEAT, organic Root material, soft, moist, no stain, strong organic odor.
			9.2			
8			25.8			
9						No Recovery.
10						

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621840.7
Boring/Well ID: S4114	Driller: Joe Barnak	Easting: 557240.7
Permit No:	Consulting Firm: Parsons	Elevation: 6.1
Location: SWMU19	Logged By: N Mehta	Datum: Ground Surface
Start Date/Time: 12/02/2013	Drill Rig Type: Geoprobe	Total Depth: 25.0 Ft
Complete Date: 12/02/2013	Drilling Method: Direct Push - Tripod	Boring Diameter: 2 in
Weather: 45F, Cloudy	Sample Method: MC	Water Depth in Soil: 7.0 Ft
Field Book No: 250	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1427B2G1 (2.4-12.5), H1427G3I4 (13-18) S411B2 M/S & duplicate collected for VOCfts

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0			0.1	FILL	CL		Brown SILT saturated, loose, no stain, no odor
			0.1				
1			0.2	FILL	CL/ML		Light brown CLAY, some Silt, wet soft no stain, no odor
			0.1				
2			0.4				
			2.8				
3							No Recovery
4							
5			1.9	FILL	SM		Brown SILT, some Sand, saturated, loose, no stain, no odor
	S4114C4		44.9				
6			3.1	FILL	CL		Light brown CLAY, medium stiff, moist, no stain, no odor
			1.1				
7			0.5				
			0.6				
8			1.3				
			7.4	FILL	GM		Dark brown SILT, some Sand and fine Gravel, moist, medium, dense, no stain, no odor
9							No Recovery
10							

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621840.7
Boring/Well ID: S4114	Driller: Joe Barnak	Easting: 557240.7
Permit No:	Consulting Firm: Parsons	Elevation: 6.1
Location: SWMU19	Logged By: N Mehta	Datum: Ground Surface
Start Date/Time: 12/02/2013	Drill Rig Type: Geoprobe	Total Depth: 25.0 Ft
Complete Date: 12/02/2013	Drilling Method: Direct Push - Tripod	Boring Diameter: 2 in
Weather: 45F, Cloudy	Sample Method: MC	Water Depth in Soil: 7.0 Ft
Field Book No: 250	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1427B2G1 (2.4-12.5), H1427G3I4 (13-18) S411B2 M/S & duplicate collected for VOCfts

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
10			13.8	FILL	CL		Light, brown CLAY, some Silt, moist, soft to medium stiff, no stain, no odor
	S4114F2		136.2				
11			12.4				
			2.9				
12			1.4	FILL	SW		Black medium to coarse GRAVEL, little Sand, wet, dense, no stain, no odor
	S4114G2		5.2	NATIVE	PT		Dark brown PEAT with fibrous roots wet, no stain, no odor
13			8.8				
			208.4				
14			373.6				
	S4114H2		397.2				
15			5.7	NATIVE	CL		Brown CLAY, saturated very soft, no stain, no odor
			35.8				
16			59	NATIVE	GM		Dark brown to black SILT, some fine to coarse Gravel, wet, medium, dense, no stain and no odor
			4				
17			53.6	NATIVE	PT		Dark brown PEAT with fibrous rods, moist, no stain, no odor
			533.5				
18	S4114J1		1053				
19							No Recovery
20							

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621840.7
Boring/Well ID: S4114	Driller: Joe Barnak	Easting: 557240.7
Permit No:	Consulting Firm: Parsons	Elevation: 6.1
Location: SWMU19	Logged By: N Mehta	Datum: Ground Surface
Start Date/Time: 12/02/2013	Drill Rig Type: Geoprobe	Total Depth: 25.0 Ft
Complete Date: 12/02/2013	Drilling Method: Direct Push - Tripod	Boring Diameter: 2 in
Weather: 45F, Cloudy	Sample Method: MC	Water Depth in Soil: 7.0 Ft
Field Book No: 250	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1427B2G1 (2.4-12.5), H1427G3I4 (13-18) S411B2 M/S & duplicate collected for VOCfts

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
20			698.8				Dark brown PEAT with fiber ours rods, wet, no stain, no odor
			488				
21			546.2	NATIVE	PT		
			76.5				
22			28				Grey CLAY, some Silt and fine Gravel, soft, wet, no stain, no odor
			158.2				
23			56.9	NATIVE	CL		
	S4114L4		18				
24			0.3				Grey CLAY, medium stiff, wet, some red mottling at end of boring, no stain, no odor
			0	NATIVE	CL		
25.0							

Site: Chevron: Perth Amboy NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621805.1875
Boring/Well ID: S5280	Driller: A. Mackiewicz	Easting: 557243.3125
Permit No: NA	Consulting Firm: Parsons	Elevation: 4.55
Location: SWMU 35	Logged By: AA nad BH	Datum: Ground Surface
Start Date/Time: 03/13/2017	Drill Rig Type: Geoprobe	Total Depth: 30.0 Ft
Complete Date: 03/13/2017	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Cloudy, windy, 34 F	Sample Method: MC	Water Depth in Soil: 5 Ft
Field Book No: ISCO 326	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Duel tube, discrete cores, H1673 installed, screened 19-24ft bgs., removed 3/20/2017.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
0			0	FILL	SW	Brown f-c SAND, some gravel, moist, loose, no staining or odor
			0	FILL	SW	Brown f-c SAND, angular gravel, loose, moist, no staining, no odor
1			0	FILL	SW/CL	Brown CLAY, some silt, some gravel, trace f-sand, m-dense, moist, no stain or odor
			0.4			
2			4.9			
			41.7			
3			342.1	FILL	CL	Dark Gray to Black f-SAND, green/black catalyst beads, loose, staining and strong odor
4						No Recovery
5			1.7	FILL	CL	Brown CLAY, some silt, some gravel, trace f-sand, m-dense, moist, no stain or odor
			1.3	FILL	SM/CL	Yellowish Brown SAND, m-dense, loose, moist, no stain or odor
6			1.8	FILL	CL	Reddish Brown CLAY, trace f-sand, trace sub-angular gravel, soft, moist-wet
			1			
7			6.9	FILL	CL	Black CLAY, trace catalyst beads, soft, staining, moderate odor, moist-wet
8						No Recovery
9						
10						

Site: Chevron: Perth Amboy NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621805.1875
Boring/Well ID: S5280	Driller: A. Mackiewicz	Easting: 557243.3125
Permit No: NA	Consulting Firm: Parsons	Elevation: 4.55
Location: SWMU 35	Logged By: AA nad BH	Datum: Ground Surface
Start Date/Time: 03/13/2017	Drill Rig Type: Geoprobe	Total Depth: 30.0 Ft
Complete Date: 03/13/2017	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Cloudy, windy, 34 F	Sample Method: MC	Water Depth in Soil: 5 Ft
Field Book No: ISCO 326	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Duel tube, discrete cores, H1673 installed, screened 19-24ft bgs., removed 3/20/2017.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
10			52.9	Native	PT	Olive Brown PEAT, organics, roots, soft, moist to wet, no staining, strong organic odor
			83.8			
11			142			
			121.1			
12			81.2			
			89.9			
13			124.7			
			109.3			
14			22.2			
			53.9			
15			71.6	Native	PT	Olive Brown PEAT, organics, roots, soft, moist to wet, no staining, strong organic odor, increase silt from 17-20' bgs.
			3.1			
16			37.5			
			123.1			
17			119.2			
			42.1			
18			222.9			
			128.7			
19			194			
			26.2			
20						

Site: Chevron: Perth Amboy NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621805.1875
Boring/Well ID: S5280	Driller: A. Mackiewicz	Easting: 557243.3125
Permit No: NA	Consulting Firm: Parsons	Elevation: 4.55
Location: SWMU 35	Logged By: AA nad BH	Datum: Ground Surface
Start Date/Time: 03/13/2017	Drill Rig Type: Geoprobe	Total Depth: 30.0 Ft
Complete Date: 03/13/2017	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: Cloudy, windy, 34 F	Sample Method: MC	Water Depth in Soil: 5 Ft
Field Book No: ISCO 326	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Duel tube, discrete cores, H1673 installed, screened 19-24ft bgs., removed 3/20/2017.

Depth Ft	Sample ID	Recovery	PID	Stratum	USCS Code	Material Description
20			19.5	Native	CL	Dark Gray CLAY, moist to wet, soft, strong organic odor, no staining
			20.3	Native	CL/SC	Dark Gray CLAY, some f-sand, wet, soft, strong organic odor, no staining
21			4.7			
			13.8	Native	CL	Gray CLAY, some silt, soft, moist-wet, no staining, no odor
22			1.7			
			0.2	Native	CL	Reddish Brown CLAY, some silt, some rounded gravel, stiff, dry, till, no stain or odor
23			0.5			
			0.1			
24						No Recovery
25			0.1	Native	CL	Reddish Brown CLAY, some silt, m-dense, dry, no stain or odor
			0.2	Native	CL	Reddish Brown CLAY, some silt, some rounded gravel, stiff, dry, till, no stain or odor
26			0.1			
			0.1			
27			0	Native	SW	Reddish Orange c-f SAND, loose, some rounded gravel, loose, wet, no stain or odor
			0.1	Native	CL	Reddish Brown CLAY, some silt, m-dense, dry, no stain or odor
				Native	SW	Reddish Brown m-f SAND, some rounded gravel, loose, no stain or odor
28			0.1	Native	SW	Grayish Brown m-f SAND, loose, wet, no stain or odor
29						No Recovery
30.0						

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
2600065076

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC

Company/Organization: Buckeye Perth Amboy Terminal, LLC

Address: P.O. Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Refinery

Address: 1200 STATE ST

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557504 Northing (Y): 621722
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL DECOMMISSIONED: February 13, 2017

WELL USE: MONITORING

Other Use(s):

Local ID: NF-H (MW-117)

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 11

Was a New Well Drilled? N

Formation Type: Unconsolidated

New Well Permit Number:

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	1	4	PVC	Sch 40
Screen	1	11	4	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	11	4	0	5	94	8
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No

Authorization Official:

Obstruction Type:

Authorization Number:

Alternative Decomm. Method? No

Authorization Date:

Method Used

ATTACHMENTS:

Sealing Driller: Andrew Mackiewicz
MONITORING
LICENSE # 690132

Company: EAST COAST DRILLING, INC.
1256 N CHURCH ST
Moorestown (Burlington), NJ 08057

MONITORING WELL CERTIFICATION-FORM A- AS-BUILT CERTIFICATION
(One form must be completed for each well)

Name of Permittee: Chevron Products Company
Name of Facility: Chevron - Perth Amboy Facility
Location: 1200 State Street, Perth Amboy City, Middlesex County, New Jersey
NJPDES Permit No: _____

CERTIFICATION

Well Permit Number (As assigned by NJDEP's Well Drilling Permits Section, (609-984-6831)) :	26-65076
Owner's Well Number (As shown on the application or plans):	NF-H (MW-117)
Well Completion Date:	7-16-02
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	+3.00
Total Depth of Well (one-hundredth of a foot):	11.00
Depth to Top of Screen From Top of Casing (one-hundredth of a foot):	4.00
Screen Length (feet):	10.00
Screen or Slot Size:	.010
Screen or Slot Material:	Sch 40 PVC
Casing Material: (PVC, Steel or Other-Specify):	Sch 40 PVC
Casing Diameter (inches):	4"
Static Water Level from Top of Casing at the Time of Installation (one-hundredth of a foot):	3.25
Yield (gallons per minutes):	.25
Length of Time well Pumped or Bailed:	1 Hour 30 Minutes
Lithologic Log:	Attach

AUTHENTICATION

I certify under penalty of law that, where applicable, I meet the requirements as specified on the reverse of this page, that I have personally examined and am familiar with the information submitted in this document and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

James W. Duffy
Name (Type or Print)

James W Duffy
Signature

M1224
Certification or License No.

Seal

_____
Certification by Executive Officer or Duly Authorized Representative

_____
Name (Type or Print)

_____
Signature

_____
Title

_____
Date

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Chevron USA Products Company
Name of Facility: Chevron Perth Amboy Refinery
Location: 1200 State Street, Perth Amboy, NJ 08861
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): **MW117**

Geographic Coordinate NAD 83 (to nearest 1/10 of a second):

Longitude: West **74° 15' 53.11"** Latitude: North **40° 32' 24.16"**

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North: **621722.6** East **557504.2**

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **6.94' (Steel=7.28', Grnd=4.4')**

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
NJ GC MON C-37 22.109' NVD 29

Significant observations and notes:

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

September 25, 2002
Professional Land Surveyor's Signature Date

J. Peter Borbas, P.L.S., NJ License No. 31653
Professional Land Surveyor's Name and License Number

402 Main Street, Boonton, NJ 07005 (973) 316-8743
Professional Land Surveyor's Address and Phone Number

DWR-138 M
8/00

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit No. 26 - 65076

Atlas Sheet Coordinates 26 : 41 : 319

OWNER IDENTIFICATION - Owner CHEVRON PRODUCTS CO
Address 1200 STATE ST
City PERTH AMBOY State NJ Zip Code

WELL LOCATION - If not the same as owner please give address. Owner's Well No. NF-H (MW-117)
County MIDDLESEX Municipality PERTH AMBOY CIT Lot No. 1 Block No. 484.1
Address 1200 STATE ST

DATE WELL STARTED 7/16/02
DATE WELL COMPLETED 7/16/02

TYPE OF WELL (as per Well Permit Categories) MONITORING
Regulatory Program Requiring Well Case I.D.#

CONSULTING FIRM/FIELD SUPERVISOR (if applicable) Tele. #

WELL CONSTRUCTION

Total depth drilled 11 ft.
Well finished to 11 ft.

Borehole diameter:
Top 10 in.
Bottom 10 in.

Well was finished: [X] above grade
[ ] flush mounted

If finished above grade, casing height (stick up) above land surface 3 ft.

Was steel protective casing installed?
[X] Yes [ ] No

Static water level after drilling 3.25 ft.

Water level was measured using M-scope

Well was developed for 1.5 hours
at .25 gpm

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+3	1	4	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	1	11	4	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	.5	11		#0	
Grout	0	.5		Neat Cement Bentonite	47 lbs. 2.5 lbs.

Grouting Method Tremie
Drilling Method H.S.A.

Method of development pumping

Was permanent pumping equipment installed? [ ] Yes [/] No

Pump capacity — gpm

Pump type: —

Drilling Fluid Potable Water Type of Rig Hurricane

Health and Safety Plan submitted? [X] Yes [ ] No

Level of Protection used on site (circle one) None D C B A

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company JAMES C. ANDERSON ASSOC. INC.

Well Driller (Print) Wellington Reeve

Driller's Signature Wellington Reeve

Registration No. J1455 Date 9/30/02

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations.

0- 1.5' Stone
13' Gray Sandy Silts

AS-BUILT WELL LOCATION
(NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: EASTING:
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

COPIES: White - DEP Canary - Driller Pink - Owner Goldenrod - Health Dept.

Site Id: MW-117	Purpose: Monitoring Well, Shallow
Logged By: MAH	Location: NORTH FIELD - SWMU 18
Consulting Firm: RFI TEAM	Permit No.: 26-65076
Contractor: JCA	Date(s): 07/16/02 - 07/16/02
Drilling Method: Direct Push - 4' Macro Core	Borehole Dia.: 2.00in
Screens: type: Slotted size: 0.010india: 4.00in fm: 1.00' to: 11.00'	Total Depth: 12.00'
Annular Fill: type: Grout fm: 0.00' to: 0.50' type: Sand Pack (generic) fm: 0.50' to: 12.00' type: fm: to:	Groundwater Level: 1.50'
	Datum: Mean Sea Level

Depth (ft)	Recovery	Water Level	PID	Well Construction	USCS Code	Graphic Log	Material Description
			25 ppm	MP. EL. 6.94	FI/GP		Blue-Gray GRAVEL
			352 ppm				Dark Gray SILT, little gravel, loose, dry
			1450 ppm				
			29 ppm		FI/ML		Light Brown SILT, some F sand, dry
			45 ppm				Hydrocarbon staining from 20?-22?, strong odor
			1100 ppm				
			59 ppm		FI/CL		Dark Gray CLAY, some silt, trace gravel, dry
			6 ppm		NR/NR		NO RECOVERY
			2 ppm		FI/ML		Dark Gray SILT, trace plants, wet
			4 ppm				
			3 ppm				
10			2 ppm		FI/ML		Dark Gray SILT, trace plants, wet
			3 ppm		CL		Dark Gray CLAY, little silt, wet
20							

DWR-133M
2/00

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

MONITORING WELL PERMIT

Mail To:
NJDEP
BUREAU OF WATER ALLOCATION
PO BOX 426
TRENTON, NJ 08625-0426

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. _____

COORD #: • •

Owner _____

Address _____

Name of Facility _____

Address _____

Driller _____

Address _____

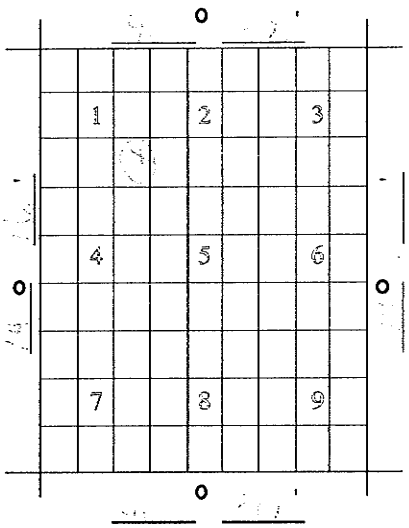
Diameter of Well(s) Inches	Proposed Depth of Well(s) Feet
# of Wells Applied for (max. 10)	Will pumping equipment be uilized? YES ☐ NO ☐
Type of Well (see reverse)	If Yes, give pump capacity cumulative GPM

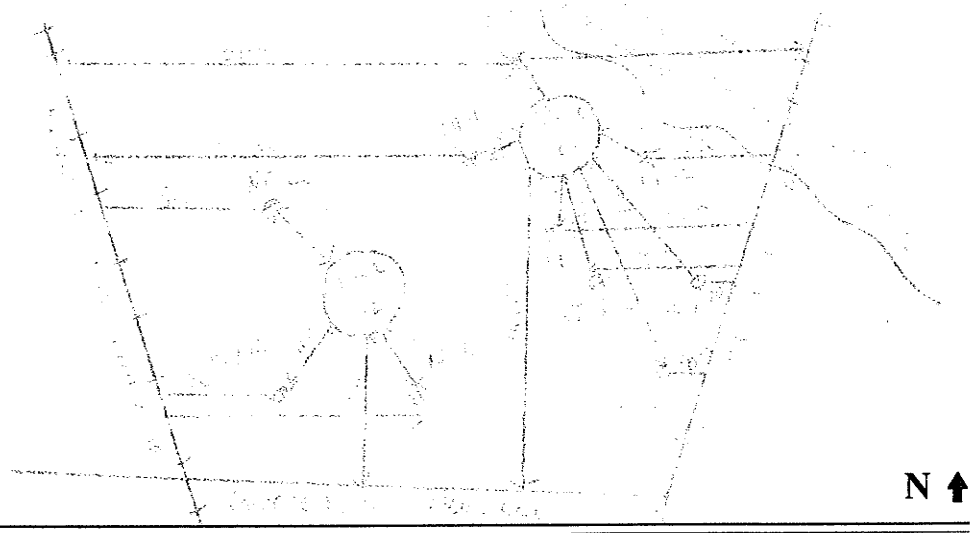
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County

State Atlas Map No. _____

Draw sketch of well(s) nearest roads,buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.





FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site
- ☐ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain)_____

CASE I.D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J.D.E.P.
JUL 2 2002

FOR D.E.P. USE
- ☐ Issuance of this permit is subject to the conditions attached. (see next page)
- ☐ For monitoring purposes only
- ☐ _____
- ☐ The well(s) may not be completed with more than 25 feet of total screen or uncased borehole.

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT.
In compliance with N.J.S.A.58:4A-14, application is made for a permit to drill a well as described above.

Date _____ Signature of Driller _____ Registration No. _____

Signature of Property Owner _____

COPIES: Water Allocation - White Health Dept. - Yellow Owner - Blue Driller - White

DWR
09/13

New Jersey Department of Environmental Protection
Division of Water Supply and Geoscience - Bureau of Water Allocation and Well Permitting

WELL DECOMMISSIONING REPORT

MAIL TO: **Mail Code 401-04Q**
Bureau of Water Allocation and Well Permitting
401 E. State St - PO Box 420
Trenton, NJ 08625-0420

WELL PERMIT # 2600080793
of well decommissioned

DATE WELL DECOMMISSIONED 2/13/2017

PROPERTY OWNER: Buckeye Perth Amboy Terminal, LLC.

Company/Organization: Buckeye Perth Amboy Terminal, LLC.

Mailing Address: P.O. Box 56169 Houston, TX 77256

FACILITY/LOCATION NAME: Former Chevron Refinery

Location Description: 1130' W of State Street & 1180' N of Maurer Road

Well Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 55751 Northing (Y): 621724
(NAD 83 Horizontal Datum) NJ State Plane in US Survey Feet
Method: ☐ Survey ☐ Digital Image ☒ GPS

Was a New Well Drilled? ☐ Yes ☒ No
Permit # of New Well:

WELL USE: Monitoring

Reason for Decommissioning: No longer in use

WELL DECOMMISSIONING INFORMATION

Well Depth (ft.): 25 Local ID: MW-238

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Left in Place?	Material	Wgt./Rating or Screen Slot # (lbs/sch no.)
Borehole(s)						
Single/Inner Casing	0	20	2	☒ Y ☐ N	PVC	40
Middle Casing/Tail Piece				☐ Y ☐ N		
Outer Casing	0	19	6	☒ Y ☐ N	Black Carbon Steel	
Screen(s)	20	25	2	☒ Y ☐ N	PVC	.010

MATERIALS USED TO DECOMMISSION WELL

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	25	2	0	5	94	8
Gravel Pack							

Formation Type: ☐ Consolidated ☒ Unconsolidated

ADDITIONAL INFORMATION

Obstructions: ☐ Yes ☒ No

Authorization Official:

Obstruction Type:

Authorization Number: A1702008

Alt. Decomm. Method/Approval granted by BWSWP? ☐ Yes ☒ No

Authorization Date: 2/1/2017

Method Used

Drilling Company Name & Address: East Coast Drilling, Inc. 1256 N Church Street Moorestown, NJ 08057

I certify that this well was decommissioned in accordance with N.J.A.C. 7:9D-3 et seq.

Andrew Mackiewicz		MW690132
Name Of Licensed Well Driller Performing Work (Print or Type)	Signature of NJ Licensed Well Driller Performing Work	Registration #

Original – BWAWP *Copies – Health Department, Property Owner, Driller*

MONITORING WELL CERTIFICATION-FORM A- AS-BUILT CERTIFICATION

(One form must be completed for each well)

Name of Permittee: Chevron Products Company
Name of Facility: Chevron - Perth Amboy Facility
Location: 1200 State Street, Perth Amboy, Middlesex, NJ 08861
NJDES Permit No: _____

CERTIFICATION

Well Permit Number (As assigned by NJDEP's Well Drilling Permits Section, (609-984-6831)) :	2 6 0 0 0 8 0 7 9 3
Owner's Well Number (As shown on the application or plans):	MW-238
Well Completion Date:	11-07-06
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	+2.50
Total Depth of Well (one-hundredth of a foot):	25.00
Depth to Top of Screen From Top of Casing (one-hundredth of a foot):	22.50
Screen Length (feet):	5'
Screen or Slot Size:	.010
Screen or Slot Material:	Sch 40 PVC
Casing Material: (PVC, Steel or Other-Specify):	PVC Sch. 40 - Inner Black Carbon Steel Sch 40 - Outer
Casing Diameter (inches):	2" Inner & 6" Outer from 0' to 19'
Static Water Level from Top of Casing at the Time of Installation (one-hundredth of a foot):	3.00
Yield (gallons per minutes):	1.50
Length of Time well Pumped or Bailed:	1 Hours 00 Minutes
Lithologic Log:	Attach

AUTHENTICATION

I certify under penalty of law that, where applicable, I meet the requirements as specified on the reverse of this page, that I have personally examined and am familiar with the information submitted in this document and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

James W. Duffy
Name (Type or Print)

James W Duffy
Signature

M1224
Certification or License No.

Seal

Certification by Executive Officer or Duly Authorized Representative

Name (Type or Print)

Signature

Title

Date

\\Eng4\drilling\Forms\Form A\26-80793.wpd

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: **Chevron USA Products Company**
Name of Facility: **Chevron Perth Amboy Refinery**
Location: **200 State Street, Perth Amboy, NJ 08861**
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): **MW-238**

Geographic Coordinate NAD 83 (to nearest 1/10 of a second):

Longitude: **West 74° 15' 53.01"** Latitude: **North 40° 32' 24.18"**

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North: 621724.3 East: 557511.7

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **6.78'**
(Ground= 4.7', Steel= 7.32')

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
NJ GC MON C-37 22.109' NVD 29

Significant observations and notes:

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

December 22, 2006
Professional Land Surveyor's Signature Date

J. Peter Borbas, P.L.S., NJ License No. 31653
Professional Land Surveyor's Name and License Number

402 Main Street, Boonton, NJ 07005 (973) 316-8743
Professional Land Surveyor's Address and Phone Number

New Jersey Department of Environmental Protection
Bureau of Water Allocation

Well Permit Number
2600080793

MONITORING WELL RECORD

Atlas Sheet Coordinates
2641318

OWNER IDENTIFICATION CHEVRON PRODUCTS CO.

Address 1200 STATE STREET

City Perth Amboy State New Jersey Zip Code 08861

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** MW238

County Middlesex Municipality Perth Amboy City Lot No. 1 Block No. 478.02

Address 1200 STATE STREET CHEVRON-PERTH AMBOY

WELL USE Monitoring

DATE WELL STARTED 11/06/06

DATE WELL COMPLETED 11/07/06

WELL CONSTRUCTION

Total Depth Drilled 19/27 ft.

Finished Well Depth 19/25 ft.

Borehole Diameter:

Top 10/6 in.

Bottom 10/6 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2.5 ft.

Steel protective casing installed? ☒ Yes ☐ No

Static Water Level after drilling 3 ft BG

Water Level was Measured Using M-Scope

Well was developed for 10 hours at 1-1.5 gpm

Method of development SWAB + PUMP

Pump Capacity N/A gpm

Pump Type N/A

Drilling Fluid BENTONITE Type of Rig FAILING F-7

Health and Safety Plan Submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2.5	20	2.0	RISER PVC FT	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)	0	19	6.0	BLACK CARBON STEEL P.E.	SCH 40
Open Hole or Screen (No. Used 0.010 SLOTT)	20	25	2.0	SCREEN PVC FT	SCH 40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	19	27	"0"	WELL GRAVEL	350#
BENTONITE Grout SEAL	17	19	~5"	Neat Cement	850 lbs
BENTONITE CEMENT	0	17		Bentonite	70 lbs

Grouting Method PRESSURE TREMIE

Drilling Method MUD ROTARY

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

DEPTH (FT)	CLASSIFICATION
0 - 3.5	Gravel (F-C), Brn Silt, Little clay - F-CSd
3.5 - 6.0	Brn Tan, F-Med Sand
6.0' - 12'	MARSH MAT w/ roots brn silty clay
12' - 20'	Grey-Brn Silt, Some clay + roots
20' - 27'	Red brn silt, F-M Sd Tr F Gravel

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company EAST COAST DRILLING, INC.

Well Driller (Print) JON R. URIGAN

Driller's Signature Jon R. Urigan

Registration No. M 1386 Date 11/16/06

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: ___° ___' ___.___" LONGITUDE: ___° ___' ___.___"

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

Site: Chevron	Drilling Company: ECD	Northing:	
Boring/Well ID: S2129	Driller Name: Steve Maylon	Easting:	
Permit No.:	Consulting Firm: SAIC	Elevation:	
Location: MW-117D	Logged By: SEL	Datum: groundsurface	
Start Date/Time: 1506 10/25/06	Drill Rig Type: Geoprobe	Total Depth: 20' BGS	
Complete Date/Time: 1525 10/25/06	Drilling Method: Direct Push	Boring Diameter: 2.5"	
Weather: 50°F, clear, 30 mph gusts	Sample Method: 5' Macrocore	Observed Ground Water Depth: 6' BGS	
Field Book No.: 144	Hammer Weight: NA		
	Hammer Drop: NA		

Remarks:

Depth (ft. bgs)	Sample ID	Recovery (in.)	Blow Count (per 6 in.)	OVM (ppm)	USCS Code	Fill/Native	Material Description
		37"			GW		0'- 2.3' Brown Gravel F-C some
1							fine sand and silt, moist, loose
							no staining / no odor
2							
				0.0	SM		2.3'- 3.5' Brown fine sand, some silt
3				15.3			trace f-c gravel, medium dense
				14.8			moist
4				5.1			
				19.6			3.5'- 3.9 Brown silt, some clay,
5				1.3	ML		little fine sand, fine gravel,
		56"					medium stiff, moist
6				25.4			
	Fill / Native	6.2'		2.5	SM-ML		3.9'- 5 Brown silt, some fine
7				0.5			sand, medium stiff moist
				2.0			slight petroleum stain and odor
8				3.3			
				1.9	SM-ML		5'- 6.2' same as above (3.9-5')
9				2.0			~~6.2~~ - at 6.2 slight petroleum
				0.5			staining and odor
10				10.0	ML		6.2'-8' Gray silt, little clay
		36"					soft wet at 6.2'
11					PT		8'-10' ~~Peat~~ same as above
					OL		with root fragments, moist + soft
12							
				1.1	OL		10-12 same as above (8'-10')
13				0.4	CL-ML		12'-14.5 Gray silt some clay
				5.2			moist, soft
14				5.3	PT		14.5-15 Peat soft moist
				7.1			15
15				0.3	PT		15-16 Peat soft moist
		52"			OH		16-17 Gray silt soft, wet, possible petro stain no odor
16					PT		17-17.7 Peat soft, moist
				0.0			no staining no odor
17				0.3	CL-ML		17.7-18.5 Gray silt, some clay
				0.0			soft moist
18				0.0	CL-SC		18.5-20' Red brown clay some
				0.0			sand, F-C gravel, ~~[illegible]~~, very
19				0.0			stiff, moist
				0.0			

DWR-133M
5/06

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

21 cc 080790
thru
26 cc 080799

Mail To:
NJDEP
BUREAU OF WATER SYSTEMS
AND WELL PERMITTING
PO BOX 426
TRENTON, NJ 08625-0426

MONITORING WELL PERMIT

Permit No. _____

VALID ONLY AFTER APPROVAL BY THE D.E.P.

COORD #: 26 41 318

Owner Chevron Products Co
Address 1200 State Street
Perth Amboy, NJ 08861

Driller East Coast Drilling
Address 1256 N. Church St
Moorestown, NJ 08057

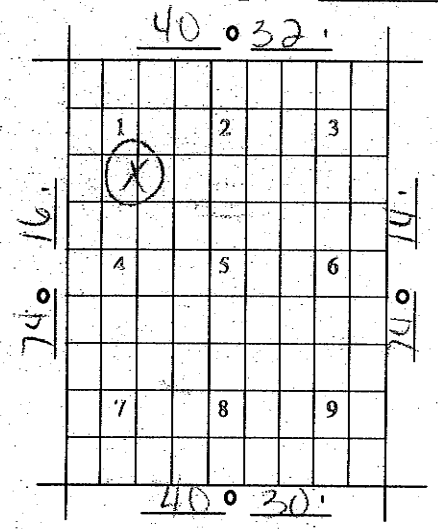
Name of Facility Chevron - Perth Amboy
Address 1200 State Street
Perth Amboy, NJ 08861

Diameter of Well(s)	2" Inches	Proposed Depth of Well(s)	30' Feet
# of Wells Applied for (max. 10)	10	Will pumping equipment be utilized?	YES ☐ NO ☑
Type of Well (see reverse)	Monitoring	If Yes, give pump capacity	_____ cumulative GPM

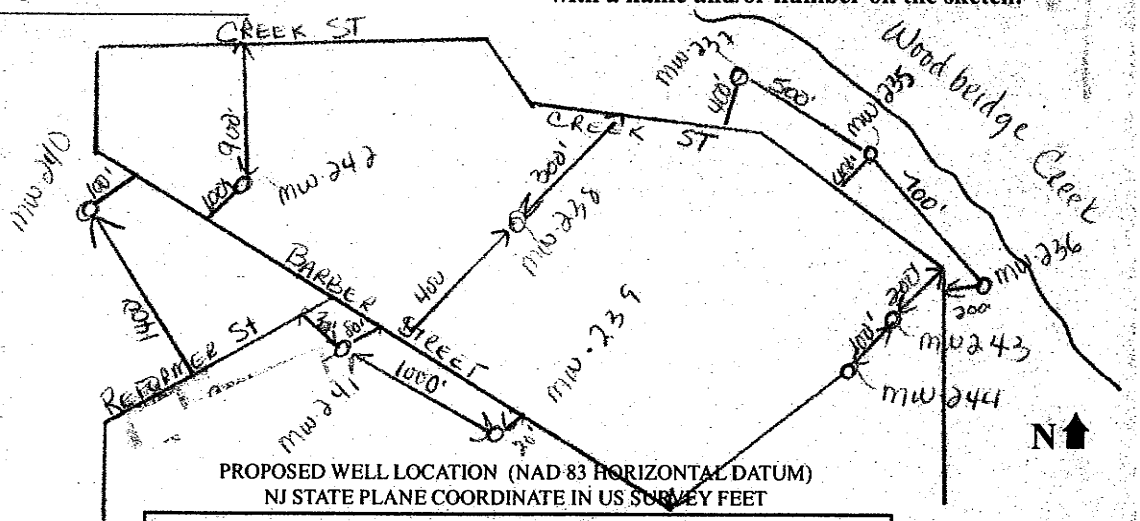
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	478.02	Perth Amboy	Middlesex

State Atlas Map No. 26



Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



PROPOSED WELL LOCATION (NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____
OR
LATITUDE: ___ o ___ ' ___ " LONGITUDE: ___ o ___ ' ___ "

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☒ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____
- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site

CASE I.D. Number

This Space for Approval Stamp
WELL PERMIT APPROVED
N.J. D.E.P.
SEP 27 2006
BUREAU OF WATER SYSTEMS & WELL PERMITTING

FOR D.E.P. USE ☐ Issuance of this permit is subject to the conditions attached. (see next page) ☒ For monitoring purposes only
☐ _____

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT.
In compliance with N.J.S.A.58:4A-14, application is made for a permit to drill a well as described above.

Date 9/22/06 Signature of Driller James W. Duffy Registration No. M224
Signature of Property Owner Robert Lore

COPIES: Water Systems & Well Permitting - White Health Dept. - Yellow Owner - Blue Driller - White

SAIC C0040

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
2600081462

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC

Company/Organization: Buckeye Perth Amboy Terminal, LLC

Address: P.O. Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Refinery

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.2

Easting (X): 557485 Northing (Y): 621612
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL DECOMMISSIONED: February 13, 2017

WELL USE: MONITORING

Other Use(s):

Local ID: NF5-GW3(MW-260)

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 13

Was a New Well Drilled? N

Formation Type: Unconsolidated

New Well Permit Number:

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	3	2	PVC	Sch 40
Screen	3	13	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	13	2	0	2.5	47	4
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No

Authorization Official:

Obstruction Type:

Authorization Number:

Alternative Decomm. Method? No

Authorization Date:

Method Used

ATTACHMENTS:

Sealing Driller: Andrew Mackiewicz
MONITORING
LICENSE # 690132

Company: EAST COAST DRILLING, INC.
1256 N CHURCH ST
Moorestown (Burlington), NJ 08057

MONITORING WELL CERTIFICATION-FORM A- AS-BUILT CERTIFICATION

(One form must be completed for each well)

Name of Permittee: Chevron Products Company
Name of Facility: Chervron Product Company
Location: 1200 State Street, Perth Amboy, Middlesex County. New Jersey 08861
NJDES Permit No: _____

CERTIFICATION

Well Permit Number (As assigned by NJDEP's Well Drilling Permits Section, (609-984-6831)) :	2 6 0 0 0 8 1 4 6 2
Owner's Well Number (As shown on the application or plans):	NF5-GW3 (MW-260)
Well Completion Date:	12-05-06
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	+2.50
Total Depth of Well (one-hundredth of a foot):	13.00
Depth to Top of Screen From Top of Casing (one-hundredth of a foot):	5.50
Screen Length (feet):	10'
Screen or Slot Size:	.010
Screen or Slot Material:	Sch 40 PVC
Casing Material: (PVC, Steel or Other-Specify):	Sch 40 PVC
Casing Diameter (inches):	2"
Static Water Level from Top of Casing at the Time of Installation (one-hundredth of a foot):	5.00
Yield (gallons per minutes):	2.00
Length of Time well Pumped or Bailed:	1 Hours 00 Minutes
Lithologic Log:	Attach

AUTHENTICATION

I certify under penalty of law that, where applicable, I meet the requirements as specified on the reverse of this page, that I have personally examined and am familiar with the information submitted in this document and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

James W. Duffy
Name (Type or Print)

James W Duffy
Signature

M1224
Certification or License No.

Seal

Certification by Executive Officer or Duly Authorized Representative

ROBERT P. BLANCHARD
Name (Type or Print)

Signature

VP, ENVIR SERVICES, VIRS CORP
Title

4-20-07
Date

\\Eng4\drilling\Forms\Form A\26 81462.wpd

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: **Chevron USA Products Company**
Name of Facility: **Chevron Perth Amboy Refinery**
Location: **200 State Street, Perth Amboy, NJ 08861**
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): **MW-260**

Geographic Coordinate NAD 83 (to nearest 1/10 of a second):

Longitude: **West 74° 15' 53.35"** Latitude: **North 40° 32' 23.07"**

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North: 621612.2 East: 557485.4

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **7.06'**
(Ground= 4.3', Steel= 7.45')

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
NGVD 29 NJ GC MON C-37 Elevation= 22.109'

Significant observations and notes:

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

April 13, 2007
Professional Land Surveyor's Signature Date

J. Peter Borbas, P.L.S., NJ License No. 31653
Professional Land Surveyor's Name and License Number

402 Main Street, Boonton, NJ 07005 (973) 316-8743
Professional Land Surveyor's Address and Phone Number

New Jersey Department of Environmental Protection
Bureau of Water Allocation

Well Permit Number
2600081462

MONITORING WELL RECORD

Atlas Sheet Coordinates
2641319

OWNER IDENTIFICATION CHEVRON PRODUCTS COMPANY

Address 1200 STATE STREET

City Perth Amboy State New Jersey Zip Code 08861

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** NF5-GW3 (MW-260)

County Middlesex Municipality Perth Amboy City Lot No. 1 Block No. 478.2

Address 1200 STATE STREET

WELL USE Monitoring

DATE WELL STARTED 12-5-06

DATE WELL COMPLETED 12-5-06

WELL CONSTRUCTION

Total Depth Drilled 13.5 ft.

Finished Well Depth 13 ft.

Borehole Diameter:

Top 8 in.

Bottom 8 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2.5 ft.

Steel protective casing installed? ☒ Yes ☐ No

Static Water Level after drilling 5 ft.

Water Level was Measured Using M-Scope

Well was developed for 1 hours

at 2 gpm

Method of development Pumping

Pump Capacity — gpm

Pump Type —

Drilling Fluid Potable Water Type of Rig Auger

Health and Safety Plan Submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2.5	3	2	PVC	40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 1010)	3	13	2	PVC	40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2.5	13.5		#0	
Grout	0	2.5		Neat Cement Bentonite	94 lbs 5 lbs

Grouting Method Gravity

Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-6" Gravel & traprock
6"-3' Lt. Brn. f-m sand
3'-4' Lt. Gray f-c sand
4'-6' Red-Brn. clay, trace silt
6'-7' Black Gravel & f-c sand
7'-13.5' Black silt & peat

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company EAST COAST DRILLING, INC.

Well Driller (Print) Wellington Reeve

Driller's Signature Wellington Reeve

Registration No. J1455 Date 12/21/06

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING:_____ **EASTING:**_____

OR

LATITUDE:___ ° ___ ' ___.__ " **LONGITUDE:**___ ° ___ ' ___.__ "

ORIGINAL: DEP ***COPIES: DRILLER*** ***OWNER*** ***HEALTH DEPARTMENT***

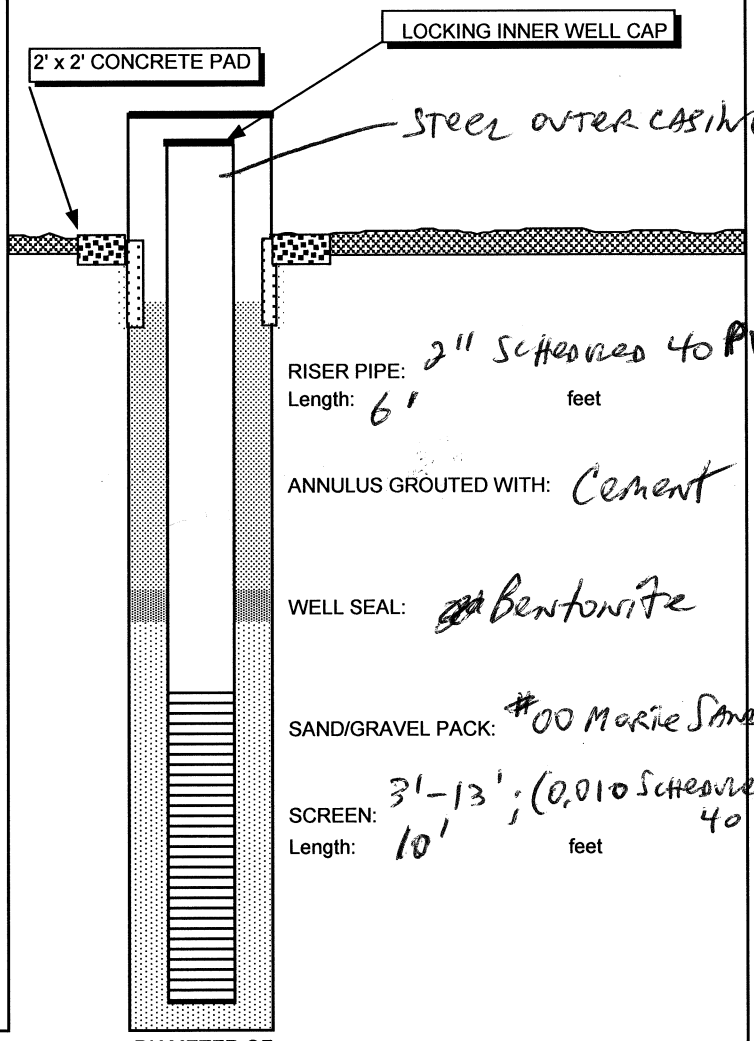
URS

INSTALLATION OF WELL NO.: MW-260 (S2175)

Project name and location CHEVRON PERTH AMBOY, MAIN/NORTH YARD		**Surveyor**	**Elevation datum** NGVD
Drilling company ECD	**Driller** WELLS Reeve DERRICK CRANE	**Date surveyed**	**Ground elevation**
Date and time of completion 12/5/06 @ 10:45AM		**Northing**	**Top of protective steel casing elevation**
Inspector MARK REED		**Easting**	**Top of riser pipe elevation**

A = Ground Surface
B = Top of Riser
C = Top of Seal
D = Bottom of Seal
E= Top of Sand Pack
F = Top of Screen
G = Bottom of Screen
H = Bottom of Borehole

KEY	ELEVATIONS (ft above Mean Sea Level)	DEPTHS (ft below ground, not to scale)
B		-3'
A		0.0
~~D~~		
C		.5
D		2.5
E		2.5
F		3.0
G		13.0
H		13.5



RISER PIPE: 2" SCHEDULED 40 PVC
Length: 6' feet

ANNULUS GROUTED WITH: Cement

WELL SEAL: Bentonite

SAND/GRAVEL PACK: #00 MORIE SAND PACK

SCREEN: 3'-13'; (0.010 SCHEDULED 40 PVC)
Length: 10' feet

DIAMETER OF BOREHOLE: 4 1/4"

Sleeve is 3' to 13'; GROUND WATER IS AT ≈ 6.0'

Site: Chevron		Drilling Company: ECD		Northing:	
Boring/Well ID: S2175/H0986		Driller Name: Jim Ziegler		Easting:	
Permit No.: —		Consulting Firm: URS		Elevation:	
Location: North Field/Main Yard		Logged By: NMK		Datum: Ground Surface	
Start Date/Time: 10-26-06 / 1124		Drill Rig Type: Geoprobe		Total Depth: 10'	
Complete Date/Time: 10-26-06 / 1135		Drilling Method: 5' MC		Boring Diameter: 2-inch	
Weather: Sunny, ~50		Sample Method: 5' MC		Observed Ground Water Depth: 6'	
Field Book No.:		Hammer Weight: —			
		Hammer Drop: —			

Remarks:

Depth (ft. bgs)	Sample ID	Recovery (in.)	Blow Count (per 6 in.)	OVM (ppm)	USCS Code	Fill/Native	Material Description
							Surface - gravel/cobble
		40		1.0	ML	F	0-2 Red brown sand, w/ silt, dry
1				7.5			
				140			
2				973			
				1531	SM		2-3 Red brown sand, dense, moist
3				451			
	S2175B3			2020			3-3.8 Light gray F-C sand, dry
4				881	CL		3.8-5 Red brown clay, soft, dry
				210			
5				381			
		60		59.9			5-6 Same as above, moist
6				309			
				1527	GW		6-6.5 Black gravel, trace sand, saturated, staining
7				879	PT	N	6.5-7 Black peat, soft, moist
				741			7-10 Dark brown peat, soft, moist
8				444			
				750			
9				806			
				520			
10				264			
							EOB
11							10-13.5' DK. BROWN PEAT, HARD, STIFF DRY
12							
13							
14							
15							
16							
17							
18							
19							

DWR-133M
5/06

26 CC 081461 thru 26 CC 081465

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

Mail To:
NJDEP
BUREAU OF WATER SYSTEMS
AND WELL PERMITTING
PO BOX 426
TRENTON, NJ 08625-0426

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. _____

COORD #: 26 · 41 · 319

Owner Chevron Products Company
Address 1200 State Street
Perth Amboy, NJ 08861

Driller East Coast Drilling
Address 1256 N. Church St
Moorestown, NJ 08057

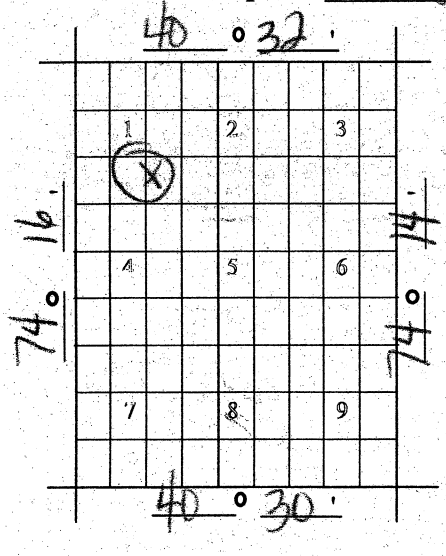
Name of Facility Chevron
Address 1200 State Street
Perth Amboy, NJ 08861

Diameter of Well(s)	2" Inches	Proposed Depth of Well(s)	20' Feet
# of Wells Applied for (max. 10)	5	Will pumping equipment be utilized?	YES ☐ NO ☒
Type of Well (see reverse)	Monitoring	If Yes, give pump capacity	— cumulative GPM

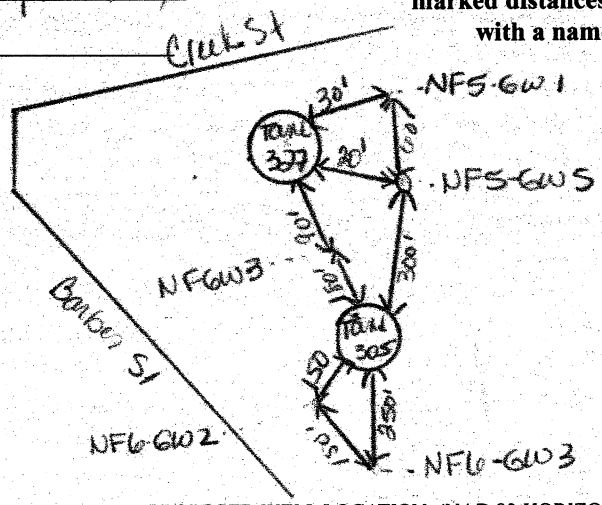
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	478.2	Perth Amboy	Middlesex

State Atlas Map No. 26



Draw sketch of well(s) nearest roads,buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



PROPOSED WELL LOCATION (NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____

OR

LATITUDE: __ ° __ ' __ " LONGITUDE: __ ° __ ' __ "

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☒ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____
- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site

CASE I.D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J. D.E.P.
NOV 21 2006
BUREAU OF WATER SYSTEMS & WELL PERMITTING

FOR D.E.P. USE ☐ Issuance of this permit is subject to the conditions attached. (see next page) ☒ For monitoring purposes only ☐ _____

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT.
In compliance with N.J.S.A.58:4A-14, application is made for a permit to drill a well as described above.

Date 11/16/06 Signature of Driller [illegible] Registration No. M1224

Signature of Property Owner Robert Lorenzo

COPIES: Water Systems & Well Permitting - White Health Dept. - Yellow Owner - Blue Driller - White

1RSC00080

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Facility MY SWMU 18

List all AKAs: Chevron Perth Amboy Refinery

Street Address: 380 Maurer Road

Municipality: Perth Amboy City (Township, Borough or City)

County: Middlesex Zip Code: 08861

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Buckeye Perth Amboy Terminal
2. Well Location (Street Address) 380 Maurer Road
3. Well Location (Municipal Block and Lot) Block# 478.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809580
2. Site Well Number as shown on application or plans): MW-260R
3. Well Completion Date: 9/26/2018
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 3.00
5. Total Depth of Well to the nearest ½ foot: 13.00
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'): 3.00
7. Screen Length (or length of open hole) in feet: 10
8. Screen or Slot Size: .010
9. Screen or Slot Material: Sch. 40 PVC
10. Casing Material (PVC, steel, or other – specify): Sch. 40 PVC
11. Casing Diameter (inches): 2" PVC Sch 40
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 2.2
13. Yield (gallons per minute): 0
14. Development Techinque (specify): Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes): Hour 00 Minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Perth Amboy Facility
List all AKAs: Buckeye Partners
Street Address: 1200 State Street
Municipality: Perth Amboy (Township, Borough or City)
County: Middlesex Zip Code: 08861
Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address) Main Yard, 1200 State Street, Perth Amboy, NJ
3. Well Location (Municipal Block and Lot) Block # Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809580
2. Site Well Number (As shown on application or plans): MW-260R
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°32'23.07" Longitude: West 74°15'53.36"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 621612.6 East 557485.0
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 7.88
   Elevation of Top of Outer Casing: 8.22 Elevation of Ground: 4.5
   Check one: [ ] NAVD 88 [X] NGVD29 [ ] On Site Datum [ ] Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29). Benchmark: USC&GS Monument C-37, NGVD29 elevation = 22.109'
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 3/18/19
Surveyor's Name: John D. Beattie License Number: 24GS04331900
Firm Name: Borbas Surveying & Mapping, LLC Certificate of Authorization #: 24GA28056200
Mailing Address: 402 Main Street
City/Town: Boonton State: New Jersey Zip Code: 07005
Phone Number: 973-316-8743 Ext: Fax: 973-402-6627

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel 609-984-6831

Well Permit Number
E201809580

MONITORING WELL RECORD

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Company/Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557485 Northing (Y): 621612
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: September 26, 2018

DATE WELL COMPLETED: September 26, 2018

WELL USE: MONITORING

Other Use(s):

Local ID: MW-260R

WELL CONSTRUCTION

Total Depth Drilled (ft.): 13 Finished Well Depth (ft.): 13 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	13	8		
Casing	0	3	2	PVC	Sch 40
Screen	3	13	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	2	6	2	2	20	2
Gravel Pack	2	13	6	2	#0		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 2.2 ft. below land surface
Water Level Measure Tool: M-Scope
Well Development Period: .3 hrs.
Method of Development: Pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: HSA
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 13: T SP - Poorly graded sands and gravelly sands, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Andrew Mackiewicz, MONITORING LICENSE # 690132 Company: EAST COAST DRILLING, INC.

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621616.39
Boring/Well ID: S2175	Driller: Jim Zieger	Easting: 557487.64
Permit No: 2600081462	Consulting Firm: URS	Elevation: 3.8
Location: MW-260	Logged By: NMR	Datum: Ground Surface
Start Date: 26-Oct-2006 11:24	Drill Rig Type: Geoprobe	Total Depth: 10.0 FEET
Complete Date: 26-Oct-2006 11:35	Drilling Method: Direct Push	Boring Diameter: 2 in
Weather: 50 degrees F., Sunny	Sample Method: 5 foot Macrocore	Water Depth in Soil: 6.0 FEET:
Field Book No: NA	Hammer Weight: NA	Measured Ground Water Depth:
	Hammer Drop: NA	Date/Time GW Measured:
Screens: Type: 2inSCH40 From: 3 Size: 0.010 slot in To: 13	Annular Fill: Type: Grout From: 0 To: 2.5 Type: No0 Sand From: 2.5 To: 13.5 Type: From: To:	Remarks: MW-260 installed at same location as S2175 / H0986.

Depth FEET	Sample ID	Recovery	Blow Count (per 6 in)	OVM	USCS Code	Material Description
0				1	ML	Red Brown Sand, with silt, dry
1				7.5		
				140		
				973		
2				1531	SM	Red Brown Sand, dense, moist
				451		
3	S2175B3			2020	SM	Light Gray f-c Sand, dry
				881		
4				210	CL	Red Brown Clay, soft, dry
				381		
5				59.9	CL	Same as above, moist
6				309		
				1527	GW	Black Gravel, trace sand, saturated, staining
				879	PT	Black Peat, soft, moist
7				741	PT	Dark Brown Peat, soft, moist
				444		
8				750		
				806		
9				520		
				264		
10						
11						
12						
13						
13.5						

Well Diagram

Graphic Log

Boring GW Depth

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201809580

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: JAMES W DUFFY, MASTER LICENSE # 0001581

Permit Issued to: EAST COAST DRILLING, INC.

Company Address: 1256 N CHURCH ST MOORESTOWN, NJ 08057

PROPERTY OWNER

Name: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169

City: Houston State: Texas Zip Code: 77256

PROPOSED WELL LOCATION

Facility Name: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557485 Northing (Y): 621612
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-260R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: September 17, 2018
Expiration Date: September 17, 2019

Approved by the authority of:
Catherine R. McCabe
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
2600081463

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC

Company/Organization: Buckeye Perth Amboy Terminal, LLC

Address: P.O. Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Refinery

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.2

Easting (X): 557509 Northing (Y): 621772
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL DECOMMISSIONED: February 13, 2017

WELL USE: MONITORING

Other Use(s):

Local ID: NF5-GW5(MW-261)

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 12

Was a New Well Drilled? N

Formation Type: Unconsolidated

New Well Permit Number:

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	2	2	PVC	Sch 40
Screen	2	12	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	12	2	0	2.5	47	4
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No

Authorization Official:

Obstruction Type:

Authorization Number:

Alternative Decomm. Method? No

Authorization Date:

Method Used

ATTACHMENTS:

Sealing Driller: Andrew Mackiewicz
MONITORING
LICENSE # 690132

Company: EAST COAST DRILLING, INC.
1256 N CHURCH ST
Moorestown (Burlington), NJ 08057

MONITORING WELL CERTIFICATION-FORM A- AS-BUILT CERTIFICATION

(One form must be completed for each well)

Name of Permittee: Chevron Products Company
Name of Facility: Chervron Product Company
Location: 1200 State Street, Perth Amboy, Middlesex County. New Jersey 08861
NJDES Permit No: _____

CERTIFICATION

Well Permit Number (As assigned by NJDEP's Well Drilling Permits Section, (609-984-6831)) :	2 6 0 0 0 8 1 4 6 3
Owner's Well Number (As shown on the application or plans):	NF5-GW5 (MW-261)
Well Completion Date:	12-05-06
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	+2.50
Total Depth of Well (one-hundredth of a foot):	12.00
Depth to Top of Screen From Top of Casing (one-hundredth of a foot):	4.50
Screen Length (feet):	10'
Screen or Slot Size:	.010
Screen or Slot Material:	Sch 40 PVC
Casing Material: (PVC, Steel or Other-Specify):	Sch 40 PVC
Casing Diameter (inches):	2"
Static Water Level from Top of Casing at the Time of Installation (one-hundredth of a foot):	3.59
Yield (gallons per minutes):	2.00
Length of Time well Pumped or Bailed:	1 Hours 00 Minutes
Lithologic Log:	Attach

AUTHENTICATION

I certify under penalty of law that, where applicable, I meet the requirements as specified on the reverse of this page, that I have personally examined and am familiar with the information submitted in this document and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

James W. Duffy
Name (Type or Print)

James W Duffy
Signature

M1224
Certification or License No.

Seal

Certification by Executive Officer or Duly Authorized Representative

Robert P. Blauvelt
Name (Type or Print)

[signature]
Signature

VP Environmental Services - VRS Corporation
Title

4-20-07
Date

\\Eng4\drilling\Forms\Form A\26 81463.wpd

CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: **Chevron USA Products Company**
Name of Facility: **Chevron Perth Amboy Refinery**
Location: **200 State Street, Perth Amboy, NJ 08861**
UST Registration Number: _____ UST Case Number: ___ - ___ - ___ - _____

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.)

Owner's Well Number (as shown on application or plans): **MW-261**

Geographic Coordinate NAD 83 (to nearest 1/10 of a second):

Longitude: **West 74° 15' 53.04"** Latitude: **North 40° 32' 24.66"**

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North: 621772.8 East: 557509.3

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): **7.14'**
(Ground= 4.9', Steel= 7.59')

Source of Elevation Datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.
NGVD 29 NJ GC MON C-37 Elevation= 22.109'

Significant observations and notes:

AUTHENTICATION:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

April 13, 2007
Professional Land Surveyor's Signature Date

J. Peter Borbas, P.L.S., NJ License No. 31653
Professional Land Surveyor's Name and License Number

402 Main Street, Boonton, NJ 07005 (973) 316-8743
Professional Land Surveyor's Address and Phone Number

New Jersey Department of Environmental Protection
Bureau of Water Allocation

Well Permit Number
2600081463

MONITORING WELL RECORD

Atlas Sheet Coordinates
2641319

OWNER IDENTIFICATION CHEVRON PRODUCTS COMPANY

Address 1200 STATE STREET

City Perth Amboy State New Jersey Zip Code 08861

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** NF5-GW5 (MW-261)

County Middlesex Municipality Perth Amboy City Lot No. 1 Block No. 478.2

Address 1200 STATE STREET

WELL USE Monitoring

DATE WELL STARTED 12-5-06

DATE WELL COMPLETED 12-5-06

WELL CONSTRUCTION

Total Depth Drilled 12.5 ft.

Finished Well Depth 12 ft.

Borehole Diameter:

Top 8 in.

Bottom 8 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2.5 ft.

Steel protective casing installed? ☒ Yes ☐ No

Static Water Level after drilling 3.59 ft.

Water Level was Measured Using M-Scope

Well was developed for 1 hours

at 2 gpm

Method of development Pumping

Pump Capacity — gpm

Pump Type —

Drilling Fluid Potable water Type of Rig Auger

Health and Safety Plan Submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2.5	2	2	PVC	40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	2	12	2	PVC	40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	1.5	12.5		#0	
Grout	0	1.5		Neat Cement Bentonite	94 lbs 5 lbs

Grouting Method Tremie

Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-6" Topsoil & Gravel
6"-1.5' Dark Brn. f-c Sand
1.5'-6' Black f-c Sand & gravel
6'-12.5' Black & Brown Peat
Trace fine Sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company EAST COAST DRILLING, INC.

Well Driller (Print) Wellington Reeve

Driller's Signature Wellington Reeve

Registration No. J1455 Date 12/21/06

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING:_____ **EASTING:**_____

OR

LATITUDE: __ ° __ ' __ . _ " **LONGITUDE:** __ ° __ ' __ . _ "

ORIGINAL: DEP ***COPIES: DRILLER*** ***OWNER*** ***HEALTH DEPARTMENT***

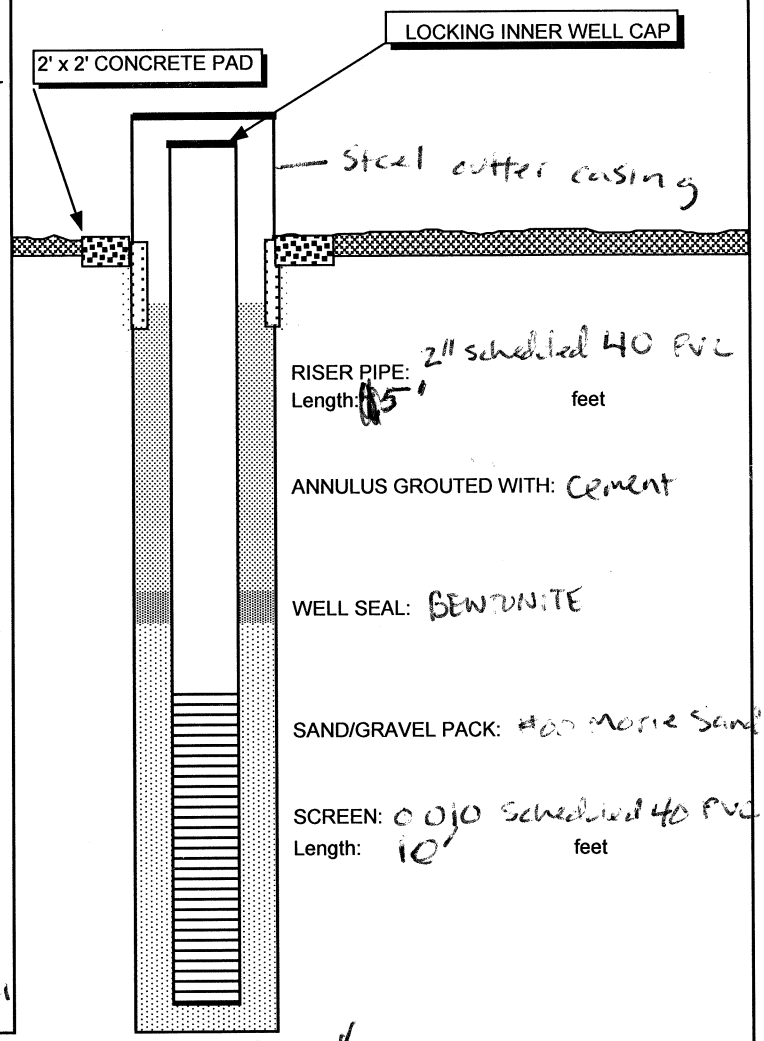
URS

INSTALLATION OF WELL NO.: 261 / S 2176

Project name and location CHEVRON - PERTH AMBOY, NJ MAIN YARD		**Surveyor**	**Elevation datum** NGVD
Drilling company ECD	**Driller** Wells Reeve / Derrick Crane	**Date surveyed**	**Ground elevation**
Date and time of completion 5 DEC 04 @ 1320		**Northing**	**Top of protective steel casing elevation**
Inspector ANDREW KOHLBECKER		**Easting**	**Top of riser pipe elevation**

A = Ground Surface
B = Top of Riser
C = Top of Seal
D = Bottom of Seal
E= Top of Sand Pack
F = Top of Screen
G = Bottom of Screen
H = Bottom of Borehole

KEY	ELEVATIONS (ft above Mean Sea Level)	DEPTHS (ft below ground, not to scale)
B		-3'
A		0.0
~~B~~		
C		.5
D		1.5
E		1.5
F		2'
G		12'
H		12.5'



RISER PIPE: 2" Scheduled 40 PVC
Length: 15' feet

ANNULUS GROUTED WITH: Cement

WELL SEAL: BENTONITE

SAND/GRAVEL PACK: #00 Morie Sand Pack

SCREEN: 0.010 Scheduled 40 PVC
Length: 10' feet

DIAMETER OF BOREHOLE: 4 1/4"

Screen placed @ 2' → 12'

Site: Chevron	Drilling Company: ECD	Northing:	
Boring/Well ID: S2176/H0987	Driller Name: Steve Moylem	Easting:	
Permit No.: —	Consulting Firm: UES	Elevation:	
Location: North Field/Main Yard	Logged By: NMR	Datum: Ground Surface	
Start Date/Time: 10-26-06 1313	Drill Rig Type: Geoprobe	Total Depth: 10'	
Complete Date/Time: 10/26/06 1326	Drilling Method: 5' MC	Boring Diameter: 2-inch	
Weather: Cloudy, 55	Sample Method: 5' MC	Observed Ground Water Depth: 4'	
Field Book No.:	Hammer Weight: —		
	Hammer Drop: —		

Remarks:

Depth (ft. bgs)	Sample ID	Recovery (in.)	XRF (ppm)	OVM (ppm)	USCS Code	Fill/Native	Material Description
							Surface - gravel / cobble
		32	20	6.2	SW	F	0-1.5 Dark brown F-C sand, loose, moist
1			183	4.5			
	S2176A3		240	256			
2			235	514	GW		1.5-5 Black gravel w/ coarse sand, saturated
			138	1938			w/ oil-like substance, sheen on water
3	S2176B2		97	1995			
			26	1143			
4			32	744			
			23	628			
5			36	380			
		45	22	700			5-6 Same as above
6			35	68.4			
			28	504	PT	N	6-10 Black + Dark brown, peat, very soft, staining, moist
<12 7			ND	448			
<12			ND	284			
<12 8			ND	103			
<14			ND	196			
<14 9			ND	79.1			
<13			ND	37.6			
<13 10			ND	49.7			
							EOB
11							10.0 — 12.5 DARK BROWN PEAT, SOFT, MOIST
12							
13							
14							
15							
16							
17							
18							
19							

2600081461
thru
2600081465

DWR-133M
5/06

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

Mail To:
NJDEP
BUREAU OF WATER SYSTEMS
AND WELL PERMITTING
PO BOX 426
TRENTON, NJ 08625-0426

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. ____________

COORD #: 26 • 41 • 319

Owner: Chevron Products Company
Address: 1200 State Street
Perth Amboy, NJ 08861

Driller: East Coast Drilling
Address: 1256 N. Church St
Moorestown, NJ 08057

Name of Facility: Chevron
Address: 1200 State Street
Perth Amboy, NJ 08861

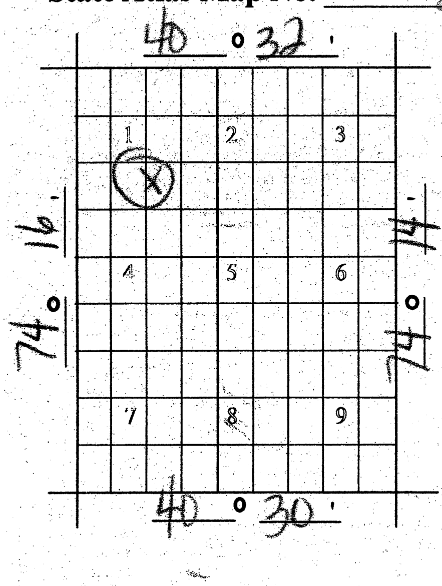
Diameter of Well(s): 2" Inches	Proposed Depth of Well(s): 20' Feet
# of Wells Applied for (max. 10): 5	Will pumping equipment be utilized? YES ☐ NO ☒
Type of Well (see reverse): Monitoring	If Yes, give pump capacity: — cumulative GPM

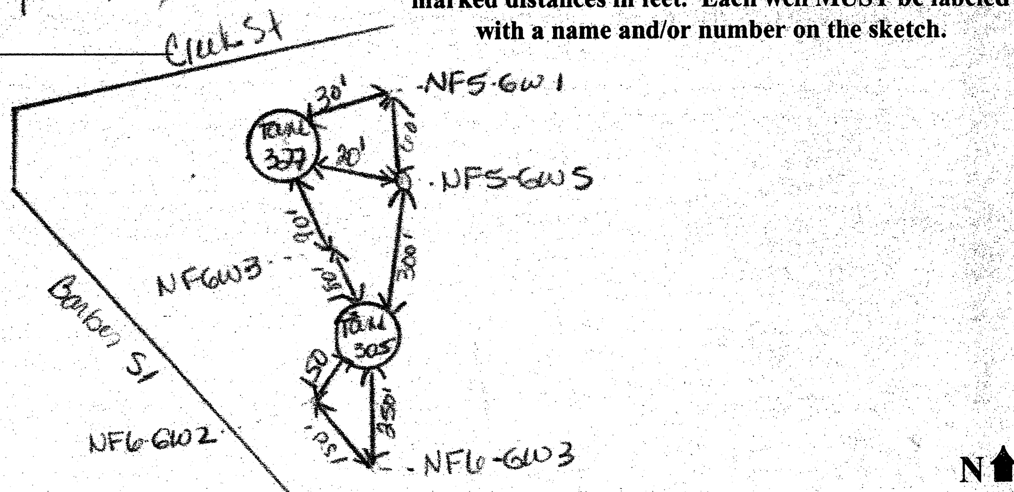
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	478.2	Perth Amboy	Middlesex

State Atlas Map No. 26

Draw sketch of well(s) nearest roads, buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.





PROPOSED WELL LOCATION (NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ________	OR	EASTING: ________
LATITUDE: __° __' __ "		LONGITUDE: __° __' __ "

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☒ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) ____________
- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site

CASE I.D. Number ____________

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J. D.E.P.
NOV 21 2006
BUREAU OF WATER SYSTEMS
& WELL PERMITTING

FOR D.E.P. USE ☐ Issuance of this permit is subject to the conditions attached. (see next page) ☒ For monitoring purposes only
☐ ____________

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT
In compliance with N.J.S.A.58:4A-14, application is made for a permit to drill a well as described above.

Date: 11/16/06 Signature of Driller: [signature] Registration No. M1224

Signature of Property Owner: Robert Lorenzo

1RSC00080

COPIES: Water Systems & Well Permitting - White Health Dept. - Yellow Owner - Blue Driller - White

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Facility MY SWMU 18

List all AKAs: Chevron Perth Amboy Refinery

Street Address: 380 Maurer Road

Municipality: Perth Amboy City (Township, Borough or City)

County: Middlesex Zip Code: 08861

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Buckeye Perth Amboy Terminal
2. Well Location (Street Address) 380 Maurer Road
3. Well Location (Municipal Block and Lot) Block# 478.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809581
2. Site Well Number as shown on application or plans): MW-261R
3. Well Completion Date: 9/26/2018
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): 3.00
5. Total Depth of Well to the nearest ½ foot: 12.00
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'): 2.00
7. Screen Length (or length of open hole) in feet: 10
8. Screen or Slot Size: .010
9. Screen or Slot Material: Sch. 40 PVC
10. Casing Material (PVC, steel, or other – specify): Sch. 40 PVC
11. Casing Diameter (inches): 2" PVC Sch 40
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 2.2
13. Yield (gallons per minute): 0
14. Development Techinque (specify): Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes): Hour 00 Minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Perth Amboy Facility
List all AKAs: Buckeye Partners
Street Address: 1200 State Street
Municipality: Perth Amboy (Township, Borough or City)
County: Middlesex Zip Code: 08861
Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address) Main Yard, 1200 State Street, Perth Amboy, NJ
3. Well Location (Municipal Block and Lot) Block # Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809581
2. Site Well Number (As shown on application or plans): MW-261R
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°32'24.65" Longitude: West 74°15'53.04"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 621772.7 East 557509.4
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 7.89
   Elevation of Top of Outer Casing: 8.30 Elevation of Ground: 5.0
   Check one: [ ] NAVD 88 [X] NGVD29 [ ] On Site Datum [ ] Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29). Benchmark: USC&GS Monument C-37, NGVD29 elevation = 22.109'
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 3/18/19
Surveyor's Name: John D. Beattie License Number: 24GS04331900
Firm Name: Borbas Surveying & Mapping, LLC Certificate of Authorization #: 24GA28056200
Mailing Address: 402 Main Street
City/Town: Boonton State: New Jersey Zip Code: 07005
Phone Number: 973-316-8743 Ext: Fax: 973-402-6627

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel 609-984-6831

Well Permit Number
E201809581

MONITORING WELL RECORD

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Company/Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557509 Northing (Y): 621772
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: September 26, 2018

DATE WELL COMPLETED: September 26, 2018

WELL USE: MONITORING

Other Use(s):

Local ID: MW-261R

WELL CONSTRUCTION

Total Depth Drilled (ft.): 12 Finished Well Depth (ft.): 12 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	12	8		
Casing	0	2	2	PVC	Sch 40
Screen	2	12	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	8	2	2.40	57	4
Gravel Pack	1	12	8	2	#0		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 2.2 ft. below land surface
Water Level Measure Tool: M-Scope
Well Development Period: 5 hrs.
Method of Development: Pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: HSA
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 12: Tan SP - Poorly graded sands and gravelly sands, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Andrew Mackiewicz, MONITORING LICENSE # 690132 Company: EAST COAST DRILLING, INC.

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621780.13
Boring/Well ID: S2176	Driller: Wellington Reeve	Easting: 557509.19
Permit No: 2600081463	Consulting Firm: URS	Elevation: 4.4
Location: MW-261	Logged By: NMR	Datum: Other
Start Date: 12/05/2006	Drill Rig Type: Auger	Total Depth: 12.5 ft
Complete Date: 12/05/2006	Drilling Method:	Boring Diameter: 2 in
Weather: 55 degrees F.. Cloudy	Sample Method: 5 foot Macrocore	Water Depth in Soil: 4.0 ft:
Field Book No: NA	Hammer Weight: NA	Measured Ground Water Depth:
	Hammer Drop: NA	Date/Time GW Measured:
Screens: Type: 2SCH40 From: 2 Size: 0.010 slot in To: 12	Annular Fill: Type: Grout From: 0 To: 1.5 Type: No0 Sand From: 1.5 To: 12.5 Type: From: To:	Remarks: MW-261 installed at same location as S2176 / H0987.

Depth ft	Sample ID	Recovery	Blow Count (per 6 in)	OVM	Well Diagram	USCS Code	Graphic Log	Material Description
0				6.2		SW		Dark Brown f-c Sand, loose, moist
				4.5				
1	S2176A3			256				
				514		GP		Black Gravel, with c-sand, saturated
2				1938				
	S2176B2			1995				
3				1143				
				744				
4				628				
				380				
5				700		GP		Same as above
				68.4				
6				504		PT		Black and Dark Brown Peat, very soft, staining, moist
				448				
7				284				
				103				
8				196				
				79.1				
9				37.6				
				49.7				
10						PT		Dark Brown Peat, soft, moist
11								
12								
12.5								

Boring GW Depth

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201809581

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: JAMES W DUFFY, MASTER LICENSE # 0001581

Permit Issued to: EAST COAST DRILLING, INC.

Company Address: 1256 N CHURCH ST MOORESTOWN, NJ 08057

PROPERTY OWNER

Name: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169

City: Houston State: Texas Zip Code: 77256

PROPOSED WELL LOCATION

Facility Name: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557509 Northing (Y): 621772
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-261R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: September 17, 2018
Expiration Date: September 17, 2019

Approved by the authority of:
Catherine R. McCabe
Commissioner

Terry D Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
2600081461

WELL DECOMMISSIONING REPORT

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC

Company/Organization: Buckeye Perth Amboy Terminal, LLC

Address: P.O. Box 56169 Houston, Texas 77256

WELL LOCATION: Former chevron Refinery

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.2

Easting (X): 557515 Northing (Y): 621844
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL DECOMMISSIONED: February 13, 2017

WELL USE: MONITORING

Other Use(s):

Local ID: NF5-GW1(MW267)

Reason for Decommissioning: No longer in use

Finished Well Depth (ft.): 15

Was a New Well Drilled? N

Formation Type: Unconsolidated

New Well Permit Number:

WELL DECOMMISSIONING INFORMATION

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole					
Casing	0	3	2	PVC	Sch 40
Screen	3	15	2	PVC	.010

MATERIALS USED

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	15	2	0	2.5	47	4
Sand/Gravel							

ADDITIONAL INFORMATION

Obstructions: No

Authorization Official:

Obstruction Type:

Authorization Number:

Alternative Decomm. Method? No

Authorization Date:

Method Used

ATTACHMENTS:

Sealing Driller: Andrew Mackiewicz
MONITORING
LICENSE # 690132

Company: EAST COAST DRILLING, INC.
1256 N CHURCH ST
Moorestown (Burlington), NJ 08057

MONITORING WELL CERTIFICATION-FORM A- AS-BUILT CERTIFICATION

(One form must be completed for each well)

Name of Permittee: Chevron Products Company
Name of Facility: Chervron Product Company
Location: 1200 State Street, Perth Amboy, Middlesex County New Jersey 08861
NJDES Permit No: _____

CERTIFICATION

Well Permit Number (As assigned by NJDEP's Well Drilling Permits Section, (609-984-6831)) :	2 6 0 0 0 8 1 4 6 1
Owner's Well Number (As shown on the application or plans):	NF5-GW1 (MW-267)
Well Completion Date:	12-08-06
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	+2.50
Total Depth of Well (one-hundredth of a foot):	15.00
Depth to Top of Screen From Top of Casing (one-hundredth of a foot):	5.50
Screen Length (feet):	12'
Screen or Slot Size:	.010
Screen or Slot Material:	Sch 40 PVC
Casing Material: (PVC, Steel or Other-Specify):	Sch 40 PVC
Casing Diameter (inches):	2"
Static Water Level from Top of Casing at the Time of Installation (one-hundredth of a foot):	3.60
Yield (gallons per minutes):	2.00
Length of Time well Pumped or Bailed:	1 Hours 00 Minutes
Lithologic Log:	Attach

AUTHENTICATION

I certify under penalty of law that, where applicable, I meet the requirements as specified on the reverse of this page, that I have personally examined and am familiar with the information submitted in this document and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

James W. Duffy
Name (Type or Print)

James W Duffy
Signature

M1224
Certification or License No.

Seal

Certification by Executive Officer or Duly Authorized Representative

ROBERT P. BLANVET
Name (Type or Print)

Signature

VP, ENVIR. SERVICES, URS CORP
Title

4-20-07
Date

\\Eng4\drilling\Forms\Form A\26 81461.wpd

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Perth Amboy Refinery
List all AKAs: Buckeye Partners
Street Address: 1200 State Street
Municipality: City of Perth Amboy (Township, Borough or City)
County: Middlesex Zip Code: 08861
Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address) Main Yard, 1200 State Street, Perth Amboy, NJ 08861
3. Well Location (Municipal Block and Lot) Block # Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):
2. Site Well Number (As shown on application or plans): MW-267
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°32'25.36" Longitude: West 74°15'52.96"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 621844.4 East 557515.5
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 7.18
   Elevation of Top of Outer Casing: 8.30 Elevation of Ground: 4.5
   Check one: [ ] NAVD 88 [X] NGVD29 [ ] On Site Datum [ ] Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29). Benchmark: USC&GS Monument C-37, NGVD29 elevation = 22.109'.
7. Significant observations and notes:
   The concrete footing of this well has heaved significantly

RESURVEYED ON 7/7/15

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date: 7/21/2015
Surveyor's Name: John D. Beattie License Number: 24GS04331900
Firm Name: Borbas Surveying & Mapping, LLC Certificate of Authorization #: 24GA28056200
Mailing Address: 402 Main Street
City/Town: Boonton State: New Jersey Zip Code: 07005
Phone Number: 973-316-8743 Ext: Fax: 973-402-6627

New Jersey Department of Environmental Protection
Bureau of Water Allocation

Well Permit Number
2600081461

MONITORING WELL RECORD

Atlas Sheet Coordinates
2641319

OWNER IDENTIFICATION CHEVRON PRODUCTS COMPANY

Address 1200 STATE STREET

City Perth Amboy State New Jersey Zip Code 08861

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** NF05-GW1 (MW267)

County Middlesex Municipality Perth Amboy City Lot No. 1 Block No. 478.2

Address 1200 STATE STREET

WELL USE Monitoring

DATE WELL STARTED 12-8-06

DATE WELL COMPLETED 12-8-06

WELL CONSTRUCTION

Total Depth Drilled 15.5 ft.

Finished Well Depth 15 ft.

Borehole Diameter:

Top 8 in.

Bottom 8 in.

Well was finished: ☒ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface 2.5 ft.

Steel protective casing installed? ☒ Yes ☐ No

Static Water Level after drilling 3.6 ft.

Water Level was Measured Using M-Scope

Well was developed for 1 hours

at 2 gpm

Method of development pumping

Pump Capacity — gpm

Pump Type —

Drilling Fluid Potable Water Type of Rig Auger

Health and Safety Plan Submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	+2.5	3	2	PVC	40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	3	15	2	PVC	40
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	2.5	15.5		#0	
Grout	0	2.5		Neat Cement Bentonite	94 lbs 5 lbs

Grouting Method Gravity

Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-1' Gravel
1-4.5' Gray-Brn. silt, trace f-m sand
4.5'-5.5' Black Peat & silt
5.5'-15.5' Gray silt & peat

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company EAST COAST DRILLING, INC.

Well Driller (Print) Wellington Reeve

Driller's Signature Wellington Reeve

Registration No. J1455 Date 12/21/06

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING:_____ **EASTING:**_____

OR

LATITUDE:___ ° ___ ' ___.__ " **LONGITUDE:**___ ° ___ ' ___.__ "

ORIGINAL: DEP ***COPIES: DRILLER*** ***OWNER*** ***HEALTH DEPARTMENT***

@ 9:50 AM

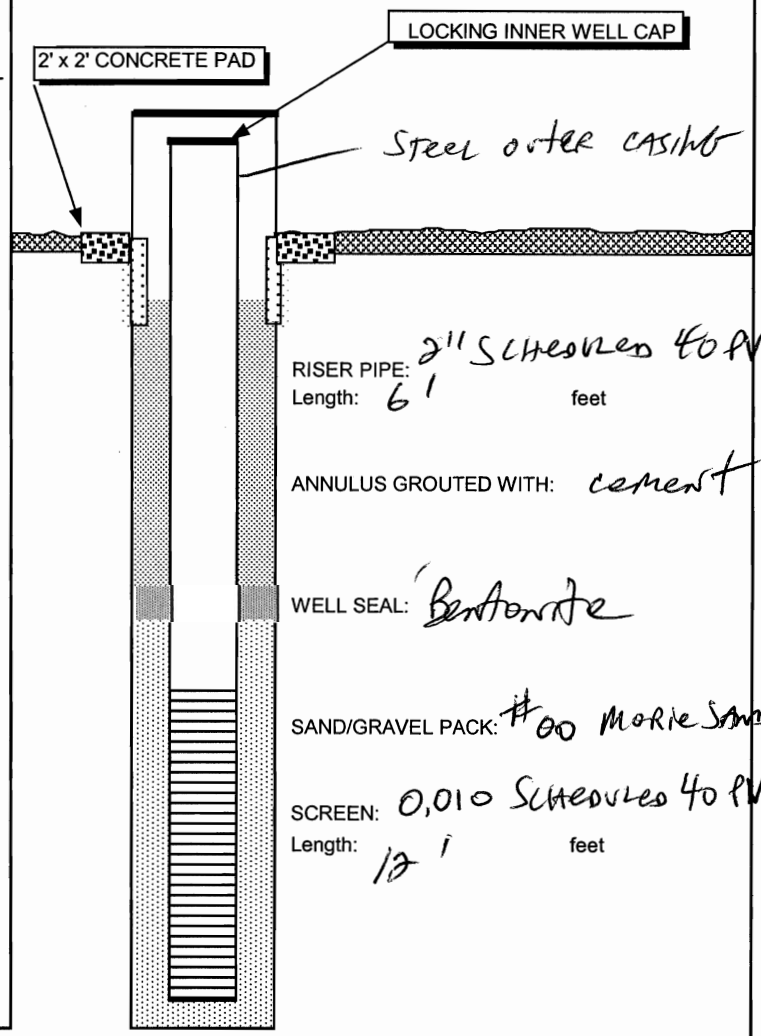
URS

INSTALLATION OF WELL NO.: MW-267 (S2174)

Project name and location CHEVRON PERTH AMBOY, MAIN YARD		**Surveyor**	**Elevation datum** NGVD
Drilling company ECD	**Driller** Wells Reese Derrick Crane	**Date surveyed**	**Ground elevation**
Date and time of completion 12/8/06 @ 10:50		**Northing**	**Top of protective steel casing elevation**
Inspector MARK REED		**Easting**	**Top of riser pipe elevation**

A = Ground Surface
B = Top of Riser
C = Top of Seal
D = Bottom of Seal
E= Top of Sand Pack
F = Top of Screen
G = Bottom of Screen
H = Bottom of Borehole

KEY	ELEVATIONS (ft above Mean Sea Level)	DEPTHS (ft below ground, not to scale)
		-3'
A		0.0
B		
C		1.5'
D		2.5'
E		2.5'
F		3'
G		15.0'
H		15.5'



RISER PIPE: 2" SCHEDULED 40 PVC
Length: 6' feet

ANNULUS GROUTED WITH: cement

WELL SEAL: Bentonite

SAND/GRAVEL PACK: #00 MORIE SAND PACK

SCREEN: 0.010 SCHEDULED 40 PVC
Length: 12' feet

DIAMETER OF BOREHOLE: 4 1/4"

SCREEN 3' → 15'

Site: Chevron	Drilling Company: FCP	Northing:
Boring/Well ID: S2174/ H0985	Driller Name: Steve Moylan	Easting:
Permit No.: —	Consulting Firm: ULS	Elevation:
Location: North Field/Main Yard	Logged By: NMR	Datum: Ground Surface
Start Date/Time: 10-26-06 / 948	Drill Rig Type: Geoprobe	Total Depth: 10'
Complete Date/Time: 10-26-06/1015	Drilling Method: 5' MC	Boring Diameter: 2-inch
Weather: Sunny, windy, ~50	Sample Method: 5' MC	Observed Ground Water
Field Book No.:	Hammer Weight: —	Depth: 5'
	Hammer Drop: —	

Remarks:

	Depth (ft. bgs)	Sample ID	Recovery (in.)	XRF (ppm)	OVM (ppm)	USCS Code	Fill/Native	Material Description
								Surface = Sand & gravel
			30	116	0	ML	F	0-1 Brown sand, trace silt, loose, moist
	1			29	0			
				18	0			1-4.5 Gray + Brown silt, trace sand, dry
<15	2			ND	3.5			
				29	0			
<15	3			ND	0.9			
				25	0.2			
	4			40	0.4			
				5611	17.7			
	5	S2174C2		10065	82.9	PT	N	4.5-5 Black peat, soft moist
			50	6771	0.7			5-5.5 Gray peat, soft, saturated
	6			269	3.8			5.5-10 Same as above, moist
				132	6.8			
	7			71	10.9			
				82	0.9			
	8			31	1.2			
				ND	2.0			
<14	9			ND	1.4			
<13				ND	1.2			
<14	10			19	0.9			
								EOB
	11							10' – 15.5' Gray peat, dry
	12							
	13							
	14							
	15							
	16							
	17							
	18							
	19							

DWR-133M
5/06

STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
TRENTON, NJ

26 00 01461 thru 26 00 01465

Mail To:
NJDEP
BUREAU OF WATER SYSTEMS
AND WELL PERMITTING
PO BOX 426
TRENTON, NJ 08625-0426

MONITORING WELL PERMIT

VALID ONLY AFTER APPROVAL BY THE D.E.P.

Permit No. _____

COORD #: 26 • 41 • 319

Owner: Chevron Products Company
Address: 200 State Street
Perth Amboy NJ 08861

Driller: East Coast Drilling
Address: 1356 N. Church St
Moorestown NJ 08057

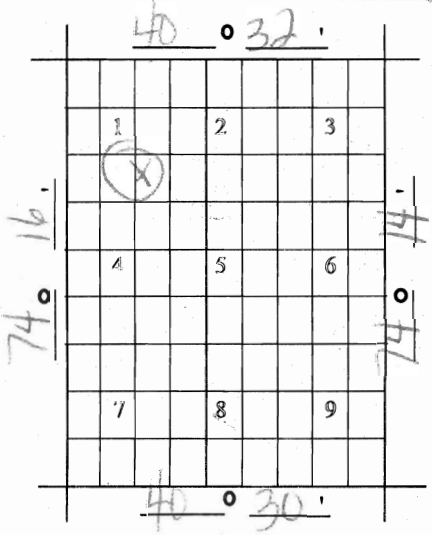
Name of Facility: Chevron
Address: 200 State Street
Perth Amboy NJ 08861

Diameter of Well(s)	2" Inches	Proposed Depth of Well(s)	20 Feet
# of Wells Applied for (max. 10)	5	Will pumping equipment be utilized?	YES ☐ NO ☒
Type of Well (see reverse)	Monitoring	If Yes, give pump capacity	____ cumulative GPM

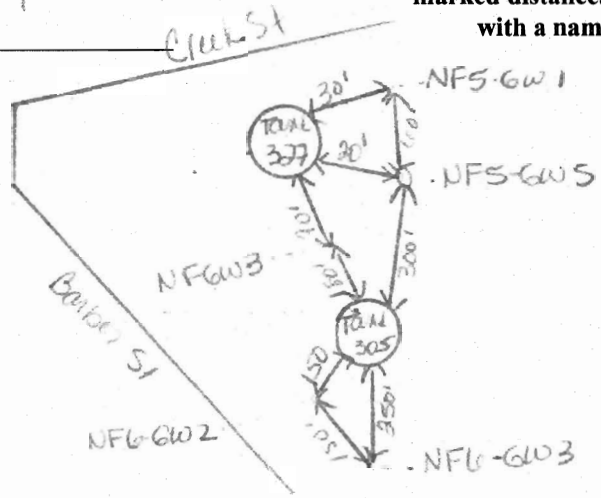
LOCATION OF WELL(S)

Lot #	Block #	Municipality	County
1	478.2	Perth Amboy	Middlesex

State Atlas Map No. 26



Draw sketch of well(s) nearest roads,buildings, etc. with marked distances in feet. Each well MUST be labeled with a name and/or number on the sketch.



N

PROPOSED WELL LOCATION (NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: _____ EASTING: _____
OR
LATITUDE: __ ° __ ' __ " LONGITUDE: __ ° __ ' __ "

FOR MONITORING WELLS, RECOVERY WELLS, OR PIEZOMETERS, THE FOLLOWING MUST BE COMPLETED BY THE APPLICANT. PLEASE INDICATE WHY THE WELLS ARE BEING INSTALLED:

- ☒ RCRA Site
- ☐ Underground Storage Tank Site
- ☐ Operational Ground Water Permit Site
- ☐ Pretreatment and Residuals Site
- ☐ Water and Hazardous Waste Enforcement Case
- ☐ Water Supply Aquifer Test Observation Well
- ☐ Other (explain) _____
- ☐ Spill Site
- ☐ ISRA Site
- ☐ CERCLA (Superfund) Site

CASE I.D. Number _____

This Space for Approval Stamp

WELL PERMIT APPROVED
N.J. D.E.P.
NOV 21 2006
BUREAU OF WATER SYSTEMS & WELL PERMITTING

FOR D.E.P. USE
☐ Issuance of this permit is subject to the conditions attached. (see next page)
☒ For monitoring purposes only
☐ _____

SEE REVERSE SIDE FOR IMPORTANT PROVISIONS PERTAINING TO THIS PERMIT.
In compliance with N.J.S.A.58:4A-14, application is made for a permit to drill a well as described above.

Date 11/16/06 Signature of Driller [signature] Registration No. 41224
Signature of Property Owner Robert Lorenzo

COPIES: Water Systems & Well Permitting - White Health Dept. - Yellow Owner - Blue Driller - White

URS000080

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Facility MY SWMU 18

List all AKAs: Chevron Perth Amboy Refinery

Street Address: 380 Maurer Road

Municipality: Perth Amboy City (Township, Borough or City)

County: Middlesex Zip Code: 08861

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Buckeye Perth Amboy Terminal
2. Well Location (Street Address) 380 Maurer Road
3. Well Location (Municipal Block and Lot) Block# 478.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201809582
2. Site Well Number as shown on application or plans):	MW-267R
3. Well Completion Date:	10/10/2018
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	3.00
5. Total Depth of Well to the nearest ½ foot:	15.00
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	3.00
7. Screen Length (or length of open hole) in feet:	12
8. Screen or Slot Size:	.010
9. Screen or Slot Material:	Sch. 40 PVC
10. Casing Material (PVC, steel, or other – specify):	Sch. 40 PVC
11. Casing Diameter (inches):	2" PVC Sch 40
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	2.6
13. Yield (gallons per minute):	1
14. Development Techinque (specify):	Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	00 Hour 30 Minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Perth Amboy Facility
List all AKAs: Buckeye Partners
Street Address: 1200 State Street
Municipality: Perth Amboy (Township, Borough or City)
County: Middlesex Zip Code: 08861
Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address) Main Yard, 1200 State Street, Perth Amboy, NJ
3. Well Location (Municipal Block and Lot) Block # Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809582
2. Site Well Number (As shown on application or plans): MW-267R
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°32'25.36" Longitude: West 74°15'52.95"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 621844.3 East 557515.6
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 7.84
   Elevation of Top of Outer Casing: 8.28 Elevation of Ground: 4.8
   Check one: [ ] NAVD 88 [X] NGVD29 [ ] On Site Datum [ ] Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29). Benchmark: USC&GS Monument C-37, NGVD29 elevation = 22.109'
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 3/18/19
Surveyor's Name: John D. Beattie License Number: 24GS04331900
Firm Name: Borbas Surveying & Mapping, LLC Certificate of Authorization #: 24GA28056200
Mailing Address: 402 Main Street
City/Town: Boonton State: New Jersey Zip Code: 07005
Phone Number: 973-316-8743 Ext: Fax: 973-402-6627

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel 609-984-6831

Well Permit Number
E201809582

MONITORING WELL RECORD

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Company/Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557515 Northing (Y): 621844
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: October 10, 2018

DATE WELL COMPLETED: October 10, 2018

WELL USE: MONITORING

Other Use(s):

Local ID: MW-267R

WELL CONSTRUCTION

Total Depth Drilled (ft.): 15 Finished Well Depth (ft.): 15 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	15	6		
Casing	0	3	2	PVC	Sch 40
Screen	3	15	4	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	1	6	2	1	20	2
Gravel Pack	1	15	6	2	#0		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 2.6 ft. below land surface
Water Level Measure Tool: M-Scope
Well Development Period: .5 hrs.
Method of Development: Pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: HSA
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 15: Tan SP - Poorly graded sands and gravelly sands, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Andrew Mackiewicz, MONITORING LICENSE # 690132 Company: EAST COAST DRILLING, INC.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201809582

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: JAMES W DUFFY, MASTER LICENSE # 0001581

Permit Issued to: EAST COAST DRILLING, INC.

Company Address: 1256 N CHURCH ST MOORESTOWN, NJ 08057

PROPERTY OWNER

Name: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169

City: Houston State: Texas Zip Code: 77256

PROPOSED WELL LOCATION

Facility Name: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557515 Northing (Y): 621844
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-267R

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: September 17, 2018
Expiration Date: September 17, 2019

Approved by the authority of:
Catherine R. McCabe
Commissioner

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621849.85
Boring/Well ID: S2174	Driller: Wellington Reeve	Easting: 557517.48
Permit No: 2600081461	Consulting Firm: URS	Elevation: 4.0
Location: MW-267	Logged By: NMR	Datum: Other
Start Date: 12/08/2006	Drill Rig Type: Auger	Total Depth: 15.5 ft
Complete Date: 12/08/2006	Drilling Method:	Boring Diameter: 8 in
Weather: 50 degrees F,Sunny, Wind	Sample Method: 5 foot Macrocore	Water Depth in Soil: 5.0 ft
Field Book No: NA	Hammer Weight: NA	Measured Ground Water Depth:
	Hammer Drop: NA	Date/Time GW Measured:
Screens: Type: 2SCH40 From: 3 Size: 0.010 slot in To: 15	Annular Fill: Type: Grout From: 0 To: 2.5 Type: No0 Sand From: 2.5 To: 12.5 Type: From: To:	Remarks: MW-267 installed at same location as S2174 / H0985.

Depth ft	Sample ID	Recovery	Blow Count (per 6 in)	OVM	USCS Code	Material Description
0				0	MH	Brown Sand, trace silt, loose, moist
1				0		
				0	MH	Gray and Brown Silt, trace sand, dry
2				3.5		
				0		
3				0.9		
				0.2		
4				0.4		
				17.7		
5	S2174C2			82.9	PT	Black Peat, soft, moist
				0.7	PT	Gray Peat, soft, saturated
6				3.8	PT	Same as above, moist
				6.8		
7				10.9		
				0.9		
8				1.2		
				2		
9				1.4		
				1.2		
10				0.9		
11					PT	Gray Peat, dry
12						
13						
14						
15						
15.5						

Well Diagram

Graphic Log

Boring GW Depth

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION

(One form must be completed for each well)

Name of Permittee: Robert Mancini
Name of Facility: Former Chevron Perth Amboy Facility
Location: Maurer Road, Perth Amboy City, Middlesex County, New Jersey
NJDES Permit No: _____

CERTIFICATION

Well Permit Number (As assigned by NJDEP's Bureau of Water Allocation):	E201318569
Owner's Well Number (As shown on the application or plans):	MW-397
Well Completion Date:	1-24-14
Distance from Top of Casing (cap off) to ground surface (One-hundredth of a foot):	3.00
Total Depth of Well to the nearest ½ foot:	12.50
Depth to Top of Screen From Top of Casing (or depth to open hole) To the nearest ½ foot:	5.50
Screen Length (pr length of open hole) in feet:	10.00'
Screen or Slot Size:	.010
Screen or Slot Material:	Sch 40 PVC
Casing Material: (PVC, Steel or Other-Specify):	Sch 40 PVC
Casing Diameter (inches):	2"
Static Water Level from Top of Casing at the Time of Installation (One-hundredth of a foot):	3.50
Yield (gallons per minutes):	1.00
Length of Time Well is Developed/Pumped or Bailed:	1 Hours 00 Minutes
Lithologic Log:	Attach

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

James W. Duffy
Name (Type or Print)

James W Duffy
Signature

M1224
Certification or License No.

Seal

_____
Certification by Executive Officer or Duly Authorized Representative

_____
Name (Type or Print)

_____
Signature

_____
Title

_____
Date

S:\Forms\FORM A - NEW\E201318569.wpd

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Perth Amboy Refinery
List all AKAs: Buckeye Partners
Street Address: 1200 State Street
Municipality: City of Perth Amboy (Township, Borough or City)
County: Middlesex Zip Code: 08861
Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address) Main Yard, 1200 State Street, Perth Amboy, NJ 08861
3. Well Location (Municipal Block and Lot) Block # Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):
2. Site Well Number (As shown on application or plans): MW-397
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°32'25.34" Longitude: West 74°15'56.51"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 621841.1 East 557240.9
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 8.74
   Elevation of Top of Outer Casing: 9.02 Elevation of Ground: 6.4
   Check one: [ ] NAVD 88 [X] NGVD29 [ ] On Site Datum [ ] Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29). Benchmark: USC&GS Monument C-37, NGVD29 elevation = 22.109'.
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

SEAL

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

Professional Land Surveyor's Signature: Date: 3/7/2014
Surveyor's Name: J. Peter Borbas License Number: 24GS03165300
Firm Name: Borbas Surveying & Mapping, LLC Certificate of Authorization #: 24GA28056200
Mailing Address: 402 Main Street
City/Town: Boonton State: New Jersey Zip Code: 07005
Phone Number: 973-316-8743 Ext: Fax: 973-402-6627

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201318569

MONITORING WELL RECORD

PROPERTY OWNER: ROBERT MANCINI

Company/Organization: Chevron Oil Company

Address: 1200 State Street Perth Amboy, New Jersey 08861

WELL LOCATION: Former Chevron Perth Amboy Facility

Address: Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557240 Northing (Y): 621841
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: January 24, 2014
DATE WELL COMPLETED: January 24, 2014

WELL USE: MONITORING

Other Use(s):

Local ID: MW-397

WELL CONSTRUCTION

Total Depth Drilled (ft.): 12.5 Finished Well Depth (ft.): 12.5 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	12.5	8		
Casing	0	2.5	2	PVC	Sch 40
Screen	2.5	12.5	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	2	8	2	2.5	47	4
Gravel Pack	2	12.5	8	2	#0		

Grouting Method: Gravity method Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 3.5 ft. below land surface
Water Level Measure Tool: M-Scope
Well Development Period: 1 hrs.
Method of Development: Pumping
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: DT6610
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG
0 - 1: Gray GP - Poorly graded gravels and gravel-sand mixtures, little or no fines
1 - 7: Red SC - Clayey sands, sand-clay mixtures
7 - 10: Gray SM - Silty sands, sand-silt mixtures
10 - 11: Black SP - Poorly graded sands and gravelly sands, little or no fines
11 - 12.5: Black OL - Organic silts and organic silty clays of low plasticity

ADDITIONAL INFORMATION:

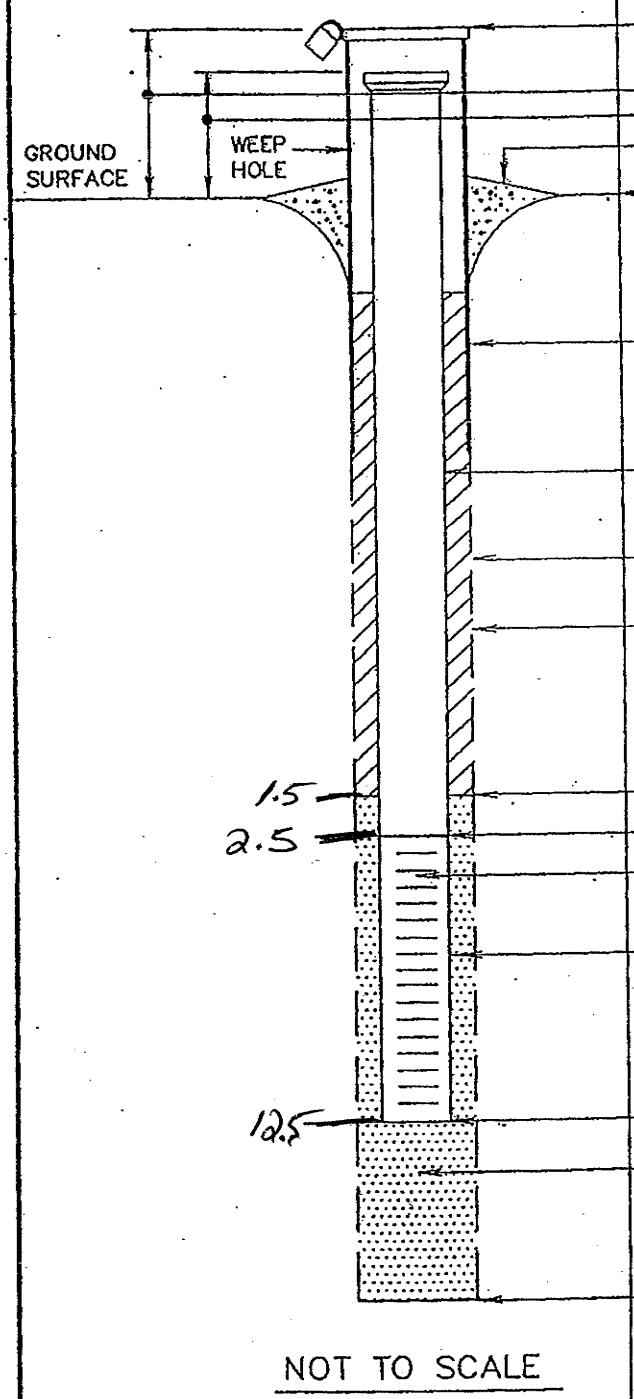
Driller of Record: Wellington Reeve, JOURNEYMAN LICENSE # 0001200 Company: EAST COAST DRILLING, INC.

APPENDIX A-6
SHALLOW
UNCONSOLIDATED
MONITORING WELL
CONSTRUCTION DIAGRAM

WELL NO. MW-397

PROJECT: CHEVRON PERTH AMBOY REFINERY
PROJECT NO. 03302
ELEVATION: _____ DATE: 1/24/14
FIELD GEOLOGIST: Scott Lewis

DRILLER: Wellington Reeve
DRILLING METHOD: HOLLOW STEM AUGER/ WATER ROTARY
DEVELOPMENT METHOD: Whale Pump



NOT TO SCALE

~~ELEVATION OF TOP OF SURFACE CASING:~~ _____

STICK-UP TOP OF SURFACE CASING: ~3 FT.

STICK-UP TOP OF RISER PIPE: ~2.5 FT.

TYPE OF SURFACE SEAL: CEMENT/BENTONITE MIX

~~GROUND SURFACE ELEVATION:~~ _____

I.D. OF SURFACE CASING: 4 inch

TYPE OF SURFACE CASING: Steel

RISER PIPE I.D. 2 inch

TYPE OF RISER PIPE: PVC Sched 40

BOREHOLE DIAMETER: 8 inch

TYPE OF BACKFILL: CEMENT/BENTONITE MIX

~~ELEVATION~~/DEPTH TOP OF SAND PACK: 1 FT. ABOVE SCREEN

~~ELEVATION~~/DEPTH TOP OF SCREEN: 2.5

TYPE OF SCREEN: PVC Sched 40

SLOT SIZE X LENGTH: 0.01 -INCH X 10 feet

TYPE OF SAND PACK: MORIE NO. ~~00~~ 0 OR EQUIVALENT

~~ELEVATION~~/DEPTH BOTTOM OF SCREEN: 12.5

~~ELEVATION~~/DEPTH BOTTOM OF SAND PACK: 12.5

TYPE OF BACKFILL BELOW OBSERVATION WELL: Native Silt, no backfill

~~ELEVATION~~/DEPTH OF HOLE 12.5

CAD FILE NAME: CUSA1.DWG DATE: 8/16/94
PLOT SCALE: 1=1 TIME: 12:01 PM

UNMW1.DWG

MW-397

S4114/H1427

Site: Chevron PA		Drilling Company: ECDI	Northing:
Boring/Well ID: ~~S4114/H1427~~		Driller Name: Joe Barnak	Easting:
Permit No.:		Consulting Firm: Parsons	Elevation:
Location: SWMU - 19		Logged By: N Mehta	Datum:
Start Date/Time: 12/2/13	1030	Drill Rig Type: Geoprobe	Total Depth: 25'
Complete Date/Time: 12/2/13	1355	Drilling Method: DPT	Boring Diameter: 2"
Weather: 45°F cloudy		Sample Method: Macrocore	Observed Ground Water
Field Book No.: 259		Hammer Weight: NA	Depth: ~7
		Hammer Drop: NA	

Remarks: 2.5-12.5 13-18 H1427B2G1 (2.5-12.5)
S4114B2MS & Dup collected for VOC's H1427G3I4 (13-18')

Depth (ft. bgs)	Sample ID	Recovery (in.)	Blow Count (per 6 in.)	OVM (ppm)	USCS Code	Graphic Log	Material Description
			0.1		ML		0-1' Brown SILT ~~very wet~~ saturated loose no stain + no odor
1		36/60	0.1				
			0.2		ML		1'-3' Light Brown ~~silty~~ CLAY, wet soft no stain + no odor some silt
2			0.1				
			0.4				3-5' No Recovery
3	S4114B2 @ 1040		2.8				
4							
5							
		50/60	1.9		SM		5-6' Brown SILT ~~with~~ some sand ~~very wet~~ saturated loose no stain + no odor
6	S4114C4 @ 1045		44.9				
			3.1		CL		6-8.5' Light Brown CLAY medium stiff moist no stain + no odor
7			1.1				
			0.5				
8			0.6				
			1.3		GM		8.5-9.2' Dark Brown ~~Sand~~ Silt ~~with some~~ some sand + fine gravel moist medium dense no stain + no odor
9			7.9				
							9.2-10' No Recovery
10							
		24/60	13.8		CL		10-12' Light Brown CLAY ~~with~~ some silt moist soft to medium stiff no stain no odor
11	S4114F2 @ 1050		136.2				
			[illegible]	12.4			12-12.5 ~~No Recovery~~ MTC GRAVEL Black ~~coarse medium gravel~~ little sand wet dense no stain + no odor
12			2.9				
		36/36	1.4		SW		
13	S4114G2 @ 1345		[illegible]	5.2	PT		12.5-15 Dark Brown PEAT with fiberous roots wet no stain + no odor
			8.8				
14			208.4				
			373.6				
15	S4114H2 @ 1350		397.2		CL		15-16' Brown CLAY ~~very wet~~ saturated very soft no stain + no odor
		40/60	5.7				
16			35.8		GM		16-17' Dark Brown to Black ~~silt~~ SILT ~~with~~ some fine to coarse gravel wet medium dense no stain + no odor
			59.0				
17	@ 1055		4.0		PT		17-18.5 Dark Brown PEAT with fiberous roots moist no stain + no odor
18	S4114I3		53.6				
			533.5				18.5-20 NR
	S4114J1 @ 11:10		1053				
19							

Not analyze B2

C4

F2

G2

H2

I3

J1

Not analyzed

Native

no

MW-397

Site: Chevron Perth Amboy		Drilling Company: ECDI	Northing:
Boring/Well ID: 84N4/H1427		Driller Name: Joe Barnak	Easting:
Permit No.:		Consulting Firm: Parsons	Elevation:
Location: SWMU-19		Logged By: NMehta	Datum:
Start Date/Time: 12/2/10	1030	Drill Rig Type: Geoprobe.	Total Depth: 25'
Complete Date/Time:	1355	Drilling Method: DPT	Boring Diameter: 2"
Weather: ~45°F	cloudy	Sample Method: Macrocore	Observed Ground Water ✓
Field Book No.:	259	Hammer Weight: —	Depth: 47
		Hammer Drop: —	
Remarks: H1427B2G1 (2.5-12.5)			
H1427G3I4 (13-18")			

Depth (ft. bgs)	Sample ID	Recovery (in.)	Blow Count (per 6 in.)	OVM (ppm)	USCS Code	Graphic Log	Material Description
20		60/60		648.8	PT	Neutral	20-22' Dark Brown PEAT with fiberous roots wet no stain + no odor
21				488.0			
				546.2			
22				76.5	CL		22-24' Gray ~~Silty~~ CLAY some silt + fine Gravel soft wet no stain + no odor ~~some fine gravel~~ towards bottom
				28			
23				158.2			
				56.9			
L4 24	S4114L4			18.0	CL		24-25' Gray CLAY medium stiff wet no stain + no odor. Some red ~~+ gray color~~ mottling at end of boring
M1	@ 1355			0.3			
ML 25				0.0			
6							EOB - 25'
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-03 PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201318569

WELL PERMIT

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: JAMES W DUFFY, MASTER LICENSE # 0001581

Permit Issued to: EAST COAST DRILLING, INC.

Company Address: 1256 N CHURCH ST MOORESTOWN, NJ 08057

PROPERTY OWNER

Name: ROBERT MANCINI

Organization: Chevron Oil Company

Address: 1200 State Street

City: Perth Amboy State: New Jersey Zip Code: 08861

PROPOSED WELL LOCATION

Facility Name: Former Chevron Perth Amboy Facility

Address: Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557111 Northing (Y): 621811
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-397

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 15

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: December 19, 2013
Expiration Date: December 19, 2014

Approved by the authority of:
Bob Martin
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Facility MY SWMU18

List all AKAs: Buckeye Perth Amboy Terminal, LLC

Street Address: 380 Maurer Road

Municipality: Perth Amboy City (Township, Borough or City)

County: Middlesex Zip Code: 08861

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Buckeye Perth Amboy Terminal, LLC
2. Well Location (Street Address) 380 Maurer Road
3. Well Location (Municipal Block and Lot) Block# 478.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing):	E201809579
2. Site Well Number as shown on application or plans):	MW-550
3. Well Completion Date:	9/24/2018
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'):	+3.00
5. Total Depth of Well to the nearest ½ foot:	25
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'):	20
7. Screen Length (or length of open hole) in feet:	5
8. Screen or Slot Size:	.010
9. Screen or Slot Material:	PVC Sch 40 .010
10. Casing Material (PVC, steel, or other – specify):	PVC Sch 40
11. Casing Diameter (inches):	6" Outer Casing x 19' & 2" Inner
12. Static Water Level from top of casing at the time of installation (nearest 0.01'):	7.4
13. Yield (gallons per minute):	0
14. Development Techinque (specify):	Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes):	0 Hour 00 Minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Perth Amboy Facility
List all AKAs: Buckeye Partners
Street Address: 1200 State Street
Municipality: Perth Amboy (Township, Borough or City)
County: Middlesex Zip Code: 08861
Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address) Main Yard, 1200 State Street, Perth Amboy, NJ
3. Well Location (Municipal Block and Lot) Block # Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809579
2. Site Well Number (As shown on application or plans): MW-550
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°32'23.95" Longitude: West 74°15'52.95"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 621701.6 East 557516.3
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 8.30
   Elevation of Top of Outer Casing: 8.83 Elevation of Ground: 5.2
   Check one: [ ] NAVD 88 [X] NGVD29 [ ] On Site Datum [ ] Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29). Benchmark: USC&GS Monument C-37, NGVD29 elevation = 22.109'
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 3/18/19
Surveyor's Name: John D. Beattie License Number: 24GS04331900
Firm Name: Borbas Surveying & Mapping, LLC Certificate of Authorization #: 24GA28056200
Mailing Address: 402 Main Street
City/Town: Boonton State: New Jersey Zip Code: 07005
Phone Number: 973-316-8743 Ext: Fax: 973-402-6627

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201809579

MONITORING WELL RECORD

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Company/Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557516 Northing (Y): 621701
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: September 21, 2018
DATE WELL COMPLETED: September 24, 2018

WELL USE: MONITORING

Other Use(s):

Local ID: MW-550

WELL CONSTRUCTION

Total Depth Drilled (ft.): 25 Finished Well Depth (ft.): 25 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	19	10		
Borehole	19	25	6		
Casing	0	20	2	PVC	Sch 40
Casing	0	19	6	PVC	Sch 40
Screen	20	25	2	PVC	010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	19	10	6	45	846	72
Grout	0	18	6	2	20	376	32
Gravel Pack	18	25	6	2	#0		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Mud Rotary

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 7.4 ft. below land surface
Water Level Measure Tool: M-Scope
Well Development Period: 1 hrs.
Method of Development: Pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: B-58
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 25: Tan GP - Poorly graded gravels and gravel-sand mixtures, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Andrew Mackiewicz, MONITORING LICENSE # 690132 Company: EAST COAST DRILLING, INC.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201809579

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: JAMES W DUFFY, MASTER LICENSE # 0001581

Permit Issued to: EAST COAST DRILLING, INC.

Company Address: 1256 N CHURCH ST MOORESTOWN, NJ 08057

PROPERTY OWNER

Name: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169

City: Houston State: Texas Zip Code: 77256

PROPOSED WELL LOCATION

Facility Name: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557516 Northing (Y): 621701
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-550

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: September 17, 2018
Expiration Date: September 17, 2019

Approved by the authority of:
Catherine R. McCabe
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

New Jersey Department of Environmental Protection
Site Remediation Program

MONITORING WELL CERTIFICATION FORM A - AS-BUILT CERTIFICATION

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Facility MY SWMU 18

List all AKAs: Chevron Perth Amboy Refinery

Street Address: 380 Maurer Road

Municipality: Perth Amboy City (Township, Borough or City)

County: Middlesex Zip Code: 08861

Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner Buckeye Perth Amboy Terminal
2. Well Location (Street Address) 380 Maurer Road
3. Well Location (Municipal Block and Lot) Block# 471.02 Lot # 1

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809578
2. Site Well Number as shown on application or plans): MW-551
3. Well Completion Date: 9/26/2018
4. Distance from Top of Casing (cap off) to ground surface (nearest 0.01'): +3.00
5. Total Depth of Well to the nearest ½ foot: 11.00
6. Depth to Top of Screen (or top of open hole) from top of casing (nearest 0.01'): 1.00
7. Screen Length (or length of open hole) in feet: 10
8. Screen or Slot Size: .010
9. Screen or Slot Material: Sch. 40 PVC
10. Casing Material (PVC, steel, or other – specify): Sch. 40 PVC
11. Casing Diameter (inches): 2" PVC Sch 40
12. Static Water Level from top of casing at the time of installation (nearest 0.01'): 2.6
13. Yield (gallons per minute): 0
14. Development Techinque (specify): Pump
15. Length of Time well is developed/pumped or bailed (hours and minutes): Hour 00 Minutes

New Jersey Department of Environmental Protection
Site Remediation Program

Monitoring Well Certification Form B - Location Certification

Date Stamp
(For Department use only)

SECTION A. SITE NAME AND LOCATION

Site Name: Former Chevron Perth Amboy Facility
List all AKAs: Buckeye Partners
Street Address: 1200 State Street
Municipality: Perth Amboy (Township, Borough or City)
County: Middlesex Zip Code: 08861
Program Interest (PI) Number(s): Case Tracking Number(s):

SECTION B. WELL OWNER AND LOCATION

1. Name of Well Owner
2. Well Location (Street Address) Main Yard, 1200 State Street, Perth Amboy, NJ
3. Well Location (Municipal Block and Lot) Block # Lot #

SECTION C. WELL LOCATION SPECIFICS

1. Well Permit Number (This number must be permanently affixed to the well casing): E201809578
2. Site Well Number (As shown on application or plans): MW-551
3. Geographic Coordinate NAD 83 to nearest 1/100 of a second:
   Latitude: North 40°32'23.95" Longitude: West 74°15'53.00"
4. New Jersey State Plane Coordinates NAD 83 datum, US survey feet units, to nearest foot:
   North 621701.6 East 557512.6
5. Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01'): 8.30
   Elevation of Top of Outer Casing: 8.87 Elevation of Ground: 5.0
   Check one: [ ] NAVD 88 [X] NGVD29 [ ] On Site Datum [ ] Other
6. Source of elevation datum (benchmark, number/description and elevation/datum). If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation (referencing NAVD 88).
   The vertical datum is the National Geodetic Vertical Datum of 1929 (NGVD29). Benchmark: USC&GS Monument C-37, NGVD29 elevation = 22.109'
7. Significant observations and notes:

SECTION D. LAND SURVEYOR'S CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

Professional Land Surveyor's Signature: Date: 3/18/19
Surveyor's Name: John D. Beattie License Number: 24GS04331900
Firm Name: Borbas Surveying & Mapping, LLC Certificate of Authorization #: 24GA28056200
Mailing Address: 402 Main Street
City/Town: Boonton State: New Jersey Zip Code: 07005
Phone Number: 973-316-8743 Ext: Fax: 973-402-6627

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel 609-984-6831

Well Permit Number
E201809578

MONITORING WELL RECORD

PROPERTY OWNER: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Company/Organization: Buckeye Perth Amboy Terminal, LLC

Address: PO Box 56169 Houston, Texas 77256

WELL LOCATION: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557512 Northing (Y): 621701
Coordinate System: NJ State Plane (NAD83) - USFEET

DATE WELL STARTED: September 26, 2018

DATE WELL COMPLETED: September 26, 2018

WELL USE: MONITORING

Other Use(s):

Local ID: MW-551

WELL CONSTRUCTION

Total Depth Drilled (ft.): 11 Finished Well Depth (ft.): 11 Well Surface: Above Grade

	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt/Rating/Screen # Used (lbs/ch no.)
Borehole	0	11	8		
Casing	0	1	2	PVC	Sch 40
Screen	1	11	2	PVC	.010

	Depth to Top (ft.)	Depth to Bottom (ft.)	Outer Diameter (in.)	Inner Diameter (in)	Material		
					Bentonite (lbs.)	Neat Cement (lbs.)	Water (gal.)
Grout	0	0.50	8	2	2.50	20	2
Gravel Pack	0.50	11	8	2	#0		

Grouting Method: Pressure method (Tremie Pipe) Drilling Method: Hollow Stem Augers

ADDITIONAL INFORMATION

Protective Casing: Yes
Static Water Level: 2.6 ft. below land surface
Water Level Measure Tool: M-Scope
Well Development Period: 0 hrs.
Method of Development: Pump
Pump Type:

Pump Capacity: _ gpm
Total Design Head: _ ft.
Drilling Fluid:
Drill Rig: HSA
Health and Safety Plan Submitted? Yes

ATTACHMENTS:

GEOLOGIC LOG

0 - 11: Tan GP - Poorly graded gravels and gravel-sand mixtures, little or no fines

ADDITIONAL INFORMATION:

Driller of Record: Andrew Mackiewicz, MONITORING LICENSE # 690132 Company: EAST COAST DRILLING, INC.

New Jersey State Department of Environmental Protection
Bureau of Water Allocation and Well Permitting
Mail Code 401-04Q PO BOX 420 Trenton, NJ 08625-0420 Tel: 609-984-6831

Well Permit Number
E201809578

WELL PERMIT

New Well

The New Jersey Department of Environmental Protection grants this permit in accordance with your application, attachments accompanying same application, and applicable laws and regulations. This permit is also subject to further conditions and stipulations enumerated in the supporting documents which are agreed to by the permittee upon acceptance of the permit

Certifying Driller: JAMES W DUFFY, MASTER LICENSE # 0001581

Permit Issued to: EAST COAST DRILLING, INC.

Company Address: 1256 N CHURCH ST MOORESTOWN, NJ 08057

PROPERTY OWNER

Name: BUCKEYE PERTH AMBOY TERMINAL, LLC.

Organization: Buckeye Perth Amboy Terminal, LLC.

Address: PO Box 56169

City: Houston State: Texas Zip Code: 77256

PROPOSED WELL LOCATION

Facility Name: Former Chevron Facility - MY-SWMU 18/AOC 23-41

Address: 380 Maurer Road

County: Middlesex Municipality: Perth Amboy City Lot: 1 Block: 478.02

Easting (X): 557512 Northing (Y): 621701
Coordinate System: NJ State Plane (NAD83) - USFEET

Local ID: MW-551

SITE CHARACTERISTICS

PROPOSED CONSTRUCTION

WELL USE: MONITORING

Other Use(s):

Diameter (in.): 2

Regulatory Program Requiring Wells/Borings:

Depth (ft.): 25

Case ID Number:

Pump Capacity (gpm): 0

Deviation Requested: N

Drilling Method: Hollow Stem Augers

Attachments:

SPECIFIC CONDITIONS/REQUIREMENTS

Approval Date: September 17, 2018
Expiration Date: September 17, 2019

Approved by the authority of:
Catherine R. McCabe
Commissioner

Terry D. Pilawski

Terry Pilawski, Chief
Bureau of Water Allocation and Well Permitting

MONITORING WELL CERTIFICATION - FORM A - AS-BUILT CERTIFICATION
(One form must be completed for each well)

Name of Permittee: Chevron USA, Inc.
Name of Facility: Chevron Perth Amboy Refinery
Location: Perth Amboy, New Jersey 08861
NJPDES Permit No: NJ 0000221

CERTIFICATION

Well Permit Number (As assigned by NJDEP's Well Drilling Permits Section (609-984-6831)):	2 6 - 2 6 7 7 1 -
Owner's Well Number (As shown on the application or plans):	P-1
Well Completion Date:	9/20/91
Distance from Top of Casing (cap off) to ground surface (one-hundredth of a foot):	2.7
Total Depth of Well (one-hundredth of a foot):	13
Depth to Top of Screen From Top of Casing (one-hundredth of a foot):	10.7 10.7 - 2.7 = screenint
Screen Length (feet):	5 8-13
Screen or Slot Size:	0.020
Screen or Slot Material:	PVC
Casing Material: (PVC, Steel or Other-Specify):	PVC
Casing Diameter (inches):	2
Static Water Level From Top of Casing at the Time of Installation (one-hundredth of a foot):	4.68 (9/27/91)
Yield (gallons per minute):	0.5
Length of Time Well Pumped or Bailed:	0 Hours 31 Minutes
Lithologic Log:	Attach

Authentication

I certify under penalty of law that, where applicable, I meet the requirements as specified on the reverse of this page, that I have personally examined and am familiar with the information submitted in this document and all attachments, and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Dan D. Raviv, Ph.D.
Name (Type or Print)

Signature
Hydrogeologist

Seal

Certification or License No.

Certification by Executive Officer or Duly Authorized Representative

Name (Type or Print)

Signature

Title

Date

THIS FORM MUST BE COMPLETED BY THE PERMITTEE OR HIS/HER AGENT

GROUND WATER MONITORING WELL CERTIFICATION-FORM B-LOCATION CERTIFICATION

Name of Permittee: Chevron USA, Inc.
Name of Facility: Chevron Perth Amboy Refinery
Location: Perth Amboy, New Jersey 08861
NJPDES Number: NJ0000221

MW IN NF/MV

LAND SURVEYOR'S CERTIFICATION

Well Permit Number (As assigned by NJDEP's Bureau of Water Allocation: 2 6 - 2 6 7 7 1 -
This number must be permanently affixed to the well casing.
Datum NAD 83
Longitude (one-tenth of a second): West 74-15-57.3
Latitude (one-tenth of a second): North 40-32-24.9
Elevation of Top of Casing (cap off) (one-hundredth of a foot): WC= 10.67 /PVC= 10.56 /GRD= 7.86
Owners Well Number (As shown on application or plans): P-1

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possiblity of fine and imprisonment.

Paul J. Emilius
PROFESSIONAL LAND SURVEYOR'S SIGNATURE

Paul J. Emilius
PROFESSIONAL LAND SURVEYOR'S NAME
(Please print or type)

SEAL

New Jersey P.L.S. License No. 11363
PROFESSIONAL LAND SURVEYOR'S LICENSE #

The Department reserves the right in cases of violation of permit specified ground water limits or Ground Water Quality Standards (N.J.A.C. 7:9-6.1 et seq.) to require that wells be resurveyed to an accuracy of one-hundredth of a second latitude and longitude. This shall not be considered to be a major modification of the NJPDES permit.

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621698.4417
Boring/Well ID: S2692	Driller: W. Reeves	Easting: 557096.637
Permit No: NA	Consulting Firm: Leidos Engineering, LLC	Elevation: 7.00
Location: PAOC 40	Logged By: Eolyta Gosk	Datum: Ground Surface
Start Date: 02/05/2013	Drill Rig Type: Geoprobe	Total Depth: 10.0 Ft
Complete Date: 02/05/2013	Drilling Method: Direct Push	Boring Diameter: NA
Weather: Sunny 35 deg F	Sample Method: MC	Water Depth in Soil: 7.0 Ft
Field Book No: 230	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: Well H1281 screened 5-10 feet

Depth Ft	Sample ID	Recovery	OVM	Recovery	Stratum	USCS Code	Graphic Log	Material Description
0	S2692A1		0.8	60	FILL	SW		Brown (7.5YR 3/4) 70 percent fine to coarse SAND, 30 percent gravel (gravelly sand), loose, moist.
			2.2					
1			3.5		FILL	SW		Black (7.5YR 2.5/1) 70 percent fine to coarse SAND, 30 percent gravel (gravelly sand), loose, moist, strong odor.
			10.2					
2			10.8					
			11.6					
3			13.3					
			21.5					
4			34.4					
			37.4					
5								No Recovery
6								
7			10.4	36	FILL	GW/SW		Very dark gray (7.5YR 3/1) fine to coarse SAND, 50 percent gravel (gravelly sand), medium loose, wet, strong petro odor.
			18.9					
8			6.9		FILL	GW/SW		Gray (7.5YR 5/1) 50 percent fine to coarse SAND, 50 percent gravel, loose, wet.
	~~S2692E2~~		139					
9			179					
	S2692E4		1.4		NATIVE	OH		Black (7.5YR 2.5/1) CLAY and SILT, organic matter Peat, soft, moist.
10.0								

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621840.7
Boring/Well ID: S4114	Driller: Joe Barnak	Easting: 557240.7
Permit No:	Consulting Firm: Parsons	Elevation: 6.1
Location: SWMU19	Logged By: N Mehta	Datum: Ground Surface
Start Date/Time: 12/02/2013	Drill Rig Type: Geoprobe	Total Depth: 25.0 Ft
Complete Date: 12/02/2013	Drilling Method: Direct Push - Tripod	Boring Diameter: 2 in
Weather: 45F, Cloudy	Sample Method: MC	Water Depth in Soil: 7.0 Ft
Field Book No: 250	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1427B2G1 (2.4-12.5), H1427G3I4 (13-18) S411B2 M/S & duplicate collected for VOCfts

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
0			0.1	FILL	CL		Brown SILT saturated, loose, no stain, no odor
			0.1				
1			0.2	FILL	CL/ML		Light brown CLAY, some Silt, wet soft no stain, no odor
			0.1				
2			0.4				
			2.8				
3							No Recovery
4							
5			1.9	FILL	SM		Brown SILT, some Sand, saturated, loose, no stain, no odor
	S4114C4		44.9				
6			3.1	FILL	CL		Light brown CLAY, medium stiff, moist, no stain, no odor
			1.1				
7			0.5				
			0.6				
8			1.3				
			7.4	FILL	GM		Dark brown SILT, some Sand and fine Gravel, moist, medium, dense, no stain, no odor
9							No Recovery
10							

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621840.7
Boring/Well ID: S4114	Driller: Joe Barnak	Easting: 557240.7
Permit No:	Consulting Firm: Parsons	Elevation: 6.1
Location: SWMU19	Logged By: N Mehta	Datum: Ground Surface
Start Date/Time: 12/02/2013	Drill Rig Type: Geoprobe	Total Depth: 25.0 Ft
Complete Date: 12/02/2013	Drilling Method: Direct Push - Tripod	Boring Diameter: 2 in
Weather: 45F, Cloudy	Sample Method: MC	Water Depth in Soil: 7.0 Ft
Field Book No: 250	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1427B2G1 (2.4-12.5), H1427G3I4 (13-18) S411B2 M/S & duplicate collected for VOCfts

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
10			13.8	FILL	CL		Light, brown CLAY, some Silt, moist, soft to medium stiff, no stain, no odor
	S4114F2		136.2				
11			12.4				
			2.9				
12			1.4	FILL	SW		Black medium to coarse GRAVEL, little Sand, wet, dense, no stain, no odor
	S4114G2		5.2	NATIVE	PT		Dark brown PEAT with fibrous roots wet, no stain, no odor
13			8.8				
			208.4				
14			373.6				
	S4114H2		397.2				
15			5.7	NATIVE	CL		Brown CLAY, saturated very soft, no stain, no odor
			35.8				
16			59	NATIVE	GM		Dark brown to black SILT, some fine to coarse Gravel, wet, medium, dense, no stain and no odor
			4				
17			53.6	NATIVE	PT		Dark brown PEAT with fibrous rods, moist, no stain, no odor
			533.5				
18	S4114J1		1053				
19							No Recovery
20							

Site: Chevron: Perth Amboy, NJ	Drilling Company: East Coast Drilling, Inc.	Northing: 621840.7
Boring/Well ID: S4114	Driller: Joe Barnak	Easting: 557240.7
Permit No:	Consulting Firm: Parsons	Elevation: 6.1
Location: SWMU19	Logged By: N Mehta	Datum: Ground Surface
Start Date/Time: 12/02/2013	Drill Rig Type: Geoprobe	Total Depth: 25.0 Ft
Complete Date: 12/02/2013	Drilling Method: Direct Push - Tripod	Boring Diameter: 2 in
Weather: 45F, Cloudy	Sample Method: MC	Water Depth in Soil: 7.0 Ft
Field Book No: 250	Hammer Weight: NA	
	Hammer Drop: NA	

Remarks: H1427B2G1 (2.4-12.5), H1427G3I4 (13-18) S411B2 M/S & duplicate collected for VOCfts

Depth Ft	Sample ID	Recovery	OVM	Stratum	USCS Code	Graphic Log	Material Description
20			698.8				Dark brown PEAT with fiber ours rods, wet, no stain, no odor
			488				
21			546.2	NATIVE	PT		
			76.5				
22			28				Grey CLAY, some Silt and fine Gravel, soft, wet, no stain, no odor
			158.2				
23			56.9	NATIVE	CL		
	S4114L4		18				
24			0.3				Grey CLAY, medium stiff, wet, some red mottling at end of boring, no stain, no odor
			0	NATIVE	CL		
25.0							