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Subject: 2020 Annual Update of UPLs for CAMU Cells 1 through 3
Former Chevron Perth Amboy Facility, Perth Amboy, New Jersey
EPA ID No. NJD081982902

On behalf of Chevron Environmental Management Company (Chevron), Parsons is submitting the Annual Update of the Upper Prediction Limits (UPLs) for the Corrective Action Management Unit (CAMU) Leak Detection Monitoring Program (LDMP) for the 2020 calendar year for the former Chevron Perth Amboy Facility (Facility) in Perth Amboy, NJ. The construction and use of a CAMU for the management of the remediation waste at the Facility was approved by the United States Environmental Protection Agency (USEPA) as part of the Hazardous and Solid Waste Amendments (HSWA) Permit Renewal in September 2013 (NJD081982902). The CAMU was constructed in a phased approach and consists of three cells (Cells 1 through 3). Cell 1 of the CAMU started operations in 2015 and Cell 2 started operations in 2017. Cell 3 was not necessary for the remediation and has not been constructed. CAMU cap construction began in July 2020 and was completed in October 2020. The details of the CAMU cap will be discussed in a Construction Completion Report (CCR) and will be submitted to New Jersery Department of Environmental Protectino (NJDEP) and USEPA in second quarter 2021.

Chevron submitted an updated LDMP and a Leachate and Groundwater Monitoring Plan (LGMP) for Cells 1 through 3 to the NJDEP in a letter dated June 9, 2017 (Chevron 2017), October 18, 2018 (Chevron 2018) and October 31, 2019 (Chevron 2019). The CAMU LDMP and LGMP (Rev 3) were approved by NJDEP in a letter dated March 6, 2020 (NJDEP 2020).

The CAMU LDMP included six compliance monitoring wells screened in the shallow water-bearing zone (MW-0057, MW-120, MW-234R, MW-322, MW-324, and MW-402) and an intra-well leak detection monitoring program (Figure 1). The UPLs included in the CAMU LDMP were calculated at 99% confidence for four constituents (lead, arsenic, benzene, and benzo(a)pyrene) at the six compliance wells assuming quarterly sampling (four times per year) and semi-annual evaluation (see Attachment C of Chevron's June 2017 letter report).

This letter includes an annual (2020) update of the UPLs in accordance with the CAMU LDMP (Chevron 2017) based on groundwater quality evaluation through fourth quarter of 2020. The statistical information for the four constituents at the six compliance monitoring wells is included in Table 1. The UPLs are summarized in Table 2. Table 3 presents groundwater analytical results for the four selected constituents (lead, arsenic, benzene

and benzo(a)pyrene) at six compliance monitoring wells since the last update of the UPLs in October 2019 (Chevron 2019) and compares the groundwater quality results to the 2019 UPLs. As noted in Table 3, the groundwater analytical results for the selected constituents do not indicate leakage from the CAMU.

CAMU cap installation was completed in October, 2020. This will be the last UPL update. Going forward, the quarterly groundwater sampling and leachate sampling results will be summarize in future Quarterly Progress Reports.

Appendices include the following information related to CAMU leachate and groundwater monitoring:

- Appendix A – Analytical results for groundwater samples collected from the monitoring wells in the CAMU area through the fourth quarter of 2020.
    - A-1 through A-4 – Groundwater samples collected for leak detection monitoring program (LDMP)
    - A-5 through A-8 – Groundwater samples collected for additional groundwater quality monitoring program (AGWMP)
- Appendix B – Field Parameters and Analytical results for leachate samples collected through fourth quarter of 2020.
    - B-1 – Field parameters for leachate
    - B-2 through B-5 – Analytical Results for VOCS, SVOCs, Metals and Ammonia for leachate samples
- Appendix C - Low flow sampling data sheets and a summary of the low flow data for water quality indicator parameters recorded at each monitoring well during low flow sampling.
- Appendix D - Summary of the monitoring well construction information for wells that are part of the CAMU LDMP and AGWMP.

Should you require any additional information, please contact me directly at (732) 738-2226.

Sincerely,

Todd Frantz
Senior Project Manager
Parsons

Encosure (as stated)

cc: Ricky Vargas, USEPA Project Manager
Brian Connors, Chevron
Brendan Leehan, Buckeye Perth Amboy Terminal, LLC
Krista Manley, Buckeye Perth Amboy Terminal, LLC

D-ID # 2021-012-32

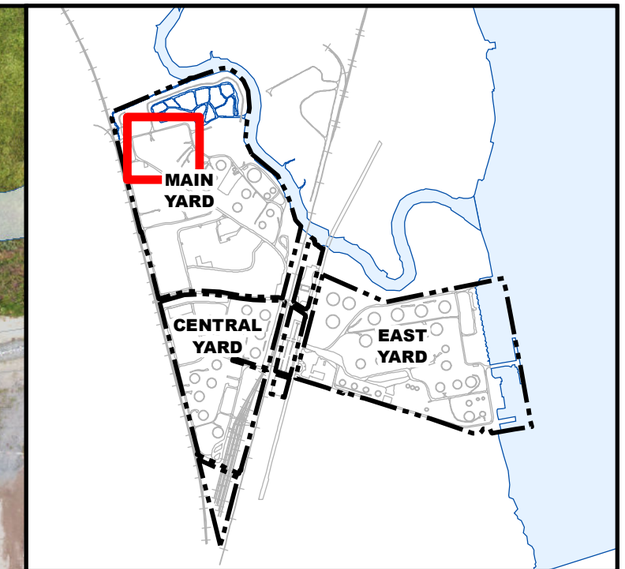
Referenced Documents

Chevron. 2017. Updated Leak Detection Monitoring Program (LDMP) and Updated Leachate and Groundwater Monitoring Plan (LGMP) for CAMU Cells 1 through 3. June 9.

Chevron. 2018. 2018 Annual Update of UPLs for CAMU Cells 1 through 3. October 18.

Chevron. 2019. 2019 Annual Update of UPLs for CAMU Cells 1 through 3. October 31.

NJDEP. 2020. Approval on 2019 Annual Update of UPLs for CAMU Cells 1 through 3 dated October 31, 2019. March 06.



LEGEND

CAMU LDMP (Cells 1-3) Monitoring Wells

- Compliance (Downgradient) Well
- Background (Upgradient) Well

Additional GW Monitoring Program (AGWMP)

- Shallow Monitoring Well
- Deep Monitoring Well
- CAMU Area

NOTE:
1. Aerial photograph dated October 2017 was provided by Parsons.

CAMU CELLS 1-3
LEAK DETECTION MONITORING PROGRAM

2020 ANNUAL UPDATE OF UPLS

CHEVRON
ENVIRONMENTAL MANAGEMENT COMPANY
PERTH AMBOY, NEW JERSEY

PROJECT #:	DATE:	DWN:	CHKD:	FIG NO.:
452501-09200	3/31/2021	ADW	RP	1

Path: C:\Projects\Chevron\DMS\Projects\CAMU\Reports\CAMU Ground Water Monitoring Plan\Figures\Figure 1 - CAMU Cells 1-3 Leak Detection Monitoring Program.mxd

Table 1 (2020 Update)

Statistical Summaries and Background 99% UPL Calculations for Wells and Constituents Selected for CAMU LDMP
(Intra-well, 6 wells, 4 constituents, Quarterly sampling, Semi-annual evaluation, 1 of 2 sampling scheme with 1 re-sample)
Updated LDMP and LGMP for Cells 1-3 through 4th Quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Well ID	Constituent	Samples	Detects	Detection Rate	Min	Max	Median	Mean	Standard Deviation	Skewness	Natural Log-Transformed		Distribution	Temporal Trend	Outliers Removed	Kappa	99% UPL
											Mean	Standard Deviation					
MW-0057	Arsenic (µg/L)	32 (31‡)	32 (31‡)	100%	0.44	5.4	2.2	2.27	1.29	0.48			Normal	No	40.6	1.85	4.7
MW-120	Arsenic (µg/L)	30† (29‡)	24 (23‡)	79%	0.51	7.3	1.1	2.14	1.84	1.58			Normal	No	16	1.86	5.6
MW-234RR	Arsenic (µg/L)	13	12	92%	<1.1	15.3	7.2	8.75	4.46	0.09			Normal	No		2.19	18.5
MW-322	Arsenic (µg/L)	39	39	100%	2.2	23.1	6.2	8.47	5.06	1.00	1.969	0.592	Lognormal	No		1.81	20.9
MW-324	Arsenic (µg/L)	32# (8‡)	31# (8‡)	100%	2.4	14.3	7.25	7.90	4.05	0.24			Normal	Decreasing	36.8, 30.8	2.56	18.3
MW-402	Arsenic (µg/L)	23# (8‡)	23# (8‡)	100%	1.9	10.0	3.0	4.29	2.79	1.41			Normal	Decreasing	23.8	2.56	11.4
MW-0057	Benzene (µg/L)	48	0	0%	<0.2	<0.5							Non-parametric	No			DQ
MW-120	Benzene (µg/L)	49	1	2%	<0.2	0.7							Non-parametric	No			0.7
MW-234RR	Benzene (µg/L)	14# (8‡)	14 (8‡)	100%	2.7	35	10.5	12.6	10.7	1.47			Normal	Decreasing		2.56	40.0
MW-322	Benzene (µg/L)	40# (18‡)	11# (0‡)	0%	<0.2	<5							Non-parametric	Decreasing			DQ
MW-324	Benzene (µg/L)	36# (18‡)	9# (0‡)	0%	<0.2	<0.5							Non-parametric	Decreasing			DQ
MW-402	Benzene (µg/L)	28# (18‡)	3 (1‡)	6%	<0.2	0.2							Non-parametric	Decreasing			0.2
MW-0057	BaP (µg/L)	38†	0	0%	<0.1	<0.1							Non-parametric	No			DQ
MW-120	BaP (µg/L)	47†	1	2%	<0.1	0.2 J							Non-parametric	No			0.2
MW-234RR	BaP (µg/L)	14	0	0%	<0.1	<0.1							Non-parametric	No			DQ
MW-322	BaP (µg/L)	37	1	3%	<0.1	0.2 J							Non-parametric	No			0.2
MW-324	BaP (µg/L)	34	0	0%	<0.1	<0.5							Non-parametric	No			DQ
MW-402	BaP (µg/L)	26	1	4%	<0.1	0.2 J							Non-parametric	No			0.2
MW-0057	Lead (µg/L)	33† (32‡)	32 (31‡)	97%	0.096	11.7	1.8	2.78	2.87	1.42	0.411	1.24	Lognormal	No	83	1.84	14.8
MW-120	Lead (µg/L)	32† (31‡)	11 (10‡)	32%	<0.071	3.0	0.16	0.68	1.0	1.92	-1.19	1.24	Lognormal	No	6.9	1.85	3.0
MW-234RR	Lead (µg/L)	13	6	46%	<0.073	1.9	0.52	0.78	0.68	1.11			Normal	No		2.14	2.2
MW-322	Lead (µg/L)	39# (8‡)	34# (7‡)	88%	0.22	12	0.80	2.82	4.31	2.10	0.173	1.36	Lognormal	Decreasing	29.7, 20.4	2.56	38.7
MW-324	Lead (µg/L)	34# (18‡)	34# (18‡)	100%	3.3	156	50.8	66.1	48.8	0.56			Non-parametric	Increasing			156
MW-402	Lead (µg/L)	24# (18‡)	24# (18‡)	100%	0.8	117	6.8	22.3	34.8	1.95			Non-parametric	Increasing			117

Notes:
† Historical non-detected samples with elevated analytical detection and reporting limits are excluded due to their impact on statistical tests.
‡ Value in parenthesis represents number of samples/detects used for statistical summaries and UPL calculations after consideration of trends and/or removal of outliers.
# As a statistically significant temporal trend is evident, only the most recent samples were utilized. The minimum number of samples is 8 for normal and lognormal distributions, or 18 for non-parametric distributions.
DQ Double quantification rule

Table 2 (2020 Update)

Background 99% UPLs for CAMU LDMP Wells and Selected Constituents
Updated LDMP and LGMP for Cells 1-3 through 4th Quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Well	Arsenic (µg/L)	Lead (µg/L)	Benzene (µg/L)	Benzo(a)pyrene (µg/L)
MW-0057	4.7	14.8	DQ	DQ
MW-120	5.6	3.0	0.7	0.2
MW-234RR	18.5	2.2	40	DQ
MW-322	20.9	9.2	DQ	0.2
MW-324	18.3	156	DQ	DQ
MW-402	11.4	121	0.2	0.2

Notes:
DQ = Double quantification rule

Table 3
Groundwater Data Comparison to UPLs for CAMU LDMP Wells
Updated LDMP and LGMP for Cells 1-3 through 4th Quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Well ID	Constituent	2019 UPL	Jul-19	Oct-19	Jan-20	Apr-20	Jul-20	Oct-20	Exceedance of UPL?
MW-0057	Arsenic (µg/L)	4.8	2.3	4.1	2.7	1.3J	0.85J	2	N
MW-120	Arsenic (µg/L)	7.4	1.8J	1.1J	3.1	0.71J	0.68J	1J	N
MW-234R	Arsenic (µg/L)	27.6	15.3	11	4.1	7.2	12	1.3J	N
MW-322	Arsenic (µg/L)	23.0	13.7/13.3	9/8.9	4/4.2	6	4.3/4.2	5.7/5.6	N
MW-324	Arsenic (µg/L)	20.4	12	3.5	2.4	14.3	10	7	N
MW-402	Arsenic (µg/L)	11.5	10	3.4	2.6	2.3	5.7	1.9J	N
MW-0057	Benzene (µg/L)	DQ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	N
MW-120	Benzene (µg/L)	0.5	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U	N
MW-234R	Benzene (µg/L)	166	19	9	6	12	2.8	2.7	N
MW-322	Benzene (µg/L)	DQ	2UJ/2U	2U	2U	2U	0.2U	2U/4U	N
MW-324	Benzene (µg/L)	DQ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	N
MW-402	Benzene (µg/L)	0.7	0.2J	0.2U	0.2U	0.2U	0.2U	0.2U	N
MW-0057	BaP (µg/L)	DQ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	N
MW-120	BaP (µg/L)	0.2	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U	N
MW-234R	BaP (µg/L)	DQ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.11U	N
MW-322	BaP (µg/L)	0.2	0.1U/0.1U	0.1U	0.1U	0.1U	0.11U	0.12U/0.1U	N
MW-324	BaP (µg/L)	DQ	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	N
MW-402	BaP (µg/L)	0.2	0.2J	0.1U	0.1U	0.1J	0.12U	0.11UJ	N
MW-0057	Lead (µg/L)	16.7	3.1	5.6	3.1	0.64	1.8	0.3J	N
MW-120	Lead (µg/L)	6.9	6.9	0.48UJ	0.56	0.071U	0.071U	0.13J	N
MW-234R	Lead (µg/L)	11.5	1.3J	0.46J	0.41UJ	0.59	0.2J	0.073U	N
MW-322	Lead (µg/L)	24.8	4.4/4.6	0.93/1.2	0.65J/0.8J	0.59	0.22J	0.63/0.71	N
MW-324	Lead (µg/L)	182	117	24.4	15.8	104	150	44	N
MW-402	Lead (µg/L)	79.8	117	16.5/16.6	9.5	1.3	70	8	N

Notes:

J = Analyte concentration estimated
UJ = Analyte not detected at estimated concentration
ID = Insufficient data at this time to calculate a UPL
U = Analyte not detected at stated concentration
DQ = Double quantification rule

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057																					
Sample Date		10/30/2002	9/28/2004	6/7/2005	11/2/2005	5/31/2006	12/1/2006	6/5/2007	7/31/2008	5/18/2009	6/8/2010	8/18/2011	3/13/2012	5/23/2012	5/24/2012	7/25/2012	7/26/2012	11/20/2012	2/20/2013	6/12/2013	9/9/2013	11/6/2013	3/5/2014
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation																					
1,1 Dichloroethene	1	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,1-Trichloroethane	30	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	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	1	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	3	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	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)	NA	2U	2U	2U	2U	2U	2U	--	--	2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	--	--	2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloropropane	0.5	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	--	--	3U	--	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	--	--	3U	--	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	--	--	3U	--	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Acetone	6000	6U	6U	6U	18J	6U	6U	--	--	6U	--	--	6U	6U	6U	6U	6U	13J	6U	8J	6U	6U	6U
Benzene	0.2	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	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromoform	4	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	50	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	NA	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chloroform	70	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	70	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	--	--	2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	2U	2U	--	--	2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Ethylbenzene	700	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Isopropylbenzene	700	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.5J	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
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	--	--	2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Toluene	600	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U
trans-1,2-Dichloroethene	100	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	0.8U	--	--	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	1	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	2U	2U	2U	2U	--	--	2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	0.08	1U	1U	1U	1U	1U	1U	--	--	1U	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Xylene (total)	1000	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Total TIC VOCS	NA	--	--	--	--	--	--	--	--	--	--	--	0	0	0	0	0	0	0	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057					MW-0057								MW-0057							
Sample Date		8/5/2014	10/23/2014	3/3/2015	5/29/2015	9/16/2015	11/13/2015	1/8/2016	4/12/2016	7/19/2016	10/17/2016	1/11/2017	4/26/2017	7/18/2017	10/9/2017	1/22/2018	4/9/2018	7/12/2018	10/23/2018	1/8/2019	4/8/2019	7/8/2019
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation					Cell 1 Operation								Cell 2 Operation							
1,1 Dichloroethene	1	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
1,1,1-Trichloroethane	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	1	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
1,1,2-Trichloroethane	3	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
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2UJ	0.2U
1,1-Dichloroethane	50	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
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	1U	1U	1U	2J	1U	1U	1U	1U	1U	1U	1U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromoethane	0.0004	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
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	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
1,2-Dichloroethane	0.3	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	0.3U	0.3U	0.3U	0.3U
1,2-Dichloropropane	0.5	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
1,3-Dichlorobenzene	600	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
1,4-Dichlorobenzene	75	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
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U
Acetone	6000	6U	54	6U	6U	6U	21	14J	6U	6U	6U	6UJ	6U	15J	6U	6U	6U	6U	22	4J	9UJ	6J
Benzene	0.2	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
Bromodichloromethane	0.6	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
Bromoform	4	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
Bromomethane (Methyl bromide)	10	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.4J	0.2U	0.2U	0.2U
Carbon Tetrachloride	0.4	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
Chlorobenzene	50	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
Chloroethane	NA	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
Chloroform	70	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
Chloromethane (Methyl chloride)	NA	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
cis-1,2-Dichloroethene	70	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
cis-1,3-Dichloropropene	0.4	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
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U
Dibromochloromethane	0.4	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
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U
Ethylbenzene	700	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	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	700	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
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U
Methyl-t-butyl ether	70	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
Methylcyclohexane	NA	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
Methylene chloride (Dichloromethane)	3	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	0.4UJ
Styrene	100	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
Tetrachloroethene	0.4	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
Toluene	600	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
trans-1,2-Dichloroethene	100	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
trans-1,3-Dichloropropene	0.4	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
Trichloroethene (Trichloroethylene)	1	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
Trichlorofluoromethane (Freon 11)	2000	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	0.2UJ
Vinyl chloride (Chloroethene)	0.08	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
Xylene (total)	1000	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	1U	1U	1U	1U
Total TIC VOCS	NA	0U	16J	0U	0U	0U	0U	0U	0U	0U	0U	10U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057					MW-114															
Sample Date		10/4/2019	1/8/2020	4/8/2020	7/13/2020	10/12/2020	10/17/2002	2/10/2003	9/10/2003	5/18/2004	9/22/2004	5/25/2005	10/26/2005	5/24/2006	11/9/2006	6/1/2007	7/30/2008	5/8/2009	4/29/2010	7/20/2011	3/16/2012	5/14/2012
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 2 Operation					Pre-CAMU Operation															
1,1 Dichloroethene	1	0.2U	0.2U	0.2U	0.26U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	--	--	--	0.8U	0.8U
1,1,1-Trichloroethane	30	0.3U	0.3U	0.3U	0.24U	0.3U	0.8U	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	1	0.2U	0.2U	0.2U	0.37U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,1,2-Trichloroethane	3	0.2U	0.2U	0.2U	0.43U	0.2U	0.8U	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)	NA	0.2U	0.2U	0.2U	-	-	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	--	--	--	--	2U	2U
1,1-Dichloroethane	50	0.2U	0.2U	0.2U	0.26U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,2,4-Trichlorobenzene	9	0.3U	0.3U	0.3U	0.37U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	0.3U	0.3U	0.3U	0.38U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	--	--	--	--	2U	2U
1,2-Dibromoethane	0.0004	0.2U	0.2U	0.2U	0.5U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	0.2U	0.2U	0.2U	0.43U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,2-Dichloroethane	0.3	0.3U	0.3U	0.3U	0.43U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,2-Dichloropropane	0.5	0.2U	0.2U	0.2U	0.35U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,3-Dichlorobenzene	600	0.2U	0.2U	0.2U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
1,4-Dichlorobenzene	75	0.2U	0.2U	0.2U	0.33U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
2-Butanone (Methyl ethyl ketone)	300	0.3U	0.3U	0.3U	1.9U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	--	--	--	--	--	3U	3U
2-Hexanone	NA	0.3U	0.3U	0.3U	1.1U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	--	--	--	--	--	3U	3U
4-Methyl-2-pentanone	NA	0.5U	0.5U	0.5U	1.3U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U	--	--	--	--	--	3U	3U
Acetone	6000	6UJ	0.7U	0.7U	4.4UJ	0.7U	6U	6U	6U	6U	6U	6U	6U	6U	6U	--	--	--	--	--	6U	6U
Benzene	0.2	0.2U	0.2U	0.2U	0.2U	0.2U	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
Bromodichloromethane	0.6	0.2U	0.2U	0.2U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Bromoform	4	1U	1U	1U	0.54U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Bromomethane (Methyl bromide)	10	0.3U	0.3U	0.3U	0.55U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Carbon disulfide	700	0.2U	0.2U	0.2UJ	0.82U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Carbon Tetrachloride	0.4	0.2U	0.2U	0.2U	0.21U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Chlorobenzene	50	0.2U	0.2U	0.2U	0.38U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	--	--	--	0.8U	0.8U
Chloroethane	NA	0.2U	0.2U	0.2U	0.32U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Chloroform	70	0.2U	0.2U	0.2U	0.33U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	--	--	--	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	0.2U	0.2U	0.2U	0.4U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
cis-1,2-Dichloroethene	70	0.2U	0.2U	0.2U	0.22U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	--	--	--	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	0.2U	0.2U	0.2U	0.22U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Cyclohexane	NA	1U	1U	1UJ	0.32U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	--	--	--	--	2U	2U
Dibromochloromethane	0.4	0.2U	0.2U	0.2UJ	0.28U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.2U	0.2U	0.2U	0.31U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	--	--	--	--	2U	2U
Ethylbenzene	700	0.4U	0.4U	0.4U	0.3U	0.4U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Isopropylbenzene	700	0.2U	0.2U	0.2U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Methyl acetate	7000	0.2U	0.2U	0.3U	0.79U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Methyl-t-butyl ether	70	0.2U	0.2U	0.2U	0.47U	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	--	--	--	--	--	0.5U	0.5U
Methylcyclohexane	NA	0.5U	0.5U	0.5U	0.26U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Methylene chloride (Dichloromethane)	3	0.3U	0.3U	0.3U	0.32U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	--	--	--	--	2U	2U
Styrene	100	0.2U	0.2U	0.2U	0.42U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Tetrachloroethene	0.4	0.2U	0.2U	0.2U	0.25U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	--	--	--	0.8U	0.8U
Toluene	600	0.2U	0.2U	0.2U	0.38U	0.2U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U
trans-1,2-Dichloroethene	100	0.2U	0.2U	0.2U	0.24U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	--	--	--	--	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	0.2U	0.2U	0.2U	0.49U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Trichloroethene (Trichloroethylene)	1	0.2U	0.2U	0.2U	0.31U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Trichlorofluoromethane (Freon 11)	2000	0.2U	0.2UJ	0.2U	0.32U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	--	--	--	--	2U	2U
Vinyl chloride (Chloroethene)	0.08	0.2U	0.2U	0.2U	0.17U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	--	--	--	--	1U	1U
Xylene (total)	1000	1U	1U	1U	0.65U	1.4U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	--	--	--	--	--	--	--	--	--	--	--	--	--	--	0	0

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114															MW-114						
Sample Date		5/15/2012	7/24/2012	7/25/2012	11/19/2012	2/19/2013	6/10/2013	9/3/2013	11/4/2013	3/5/2014	5/19/2014	8/4/2014	10/22/2014	3/24/2015	5/27/2015	9/14/2015	11/13/2015	1/5/2016	4/6/2016	7/18/2016	10/11/2016	1/11/2017	4/18/2017
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation															Cell 1 Operation						
1,1 Dichloroethene	1	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	30	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	3	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	0.5	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3UJ	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3UJ	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U
Acetone	6000	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6UJ	6U	6U	6U	6U	6U	6UJ	6U
Benzene	0.2	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	**[1]**	0.5U	0.5U
Bromodichloromethane	0.6	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	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	4	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	0.5U	0.5U	0.5U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	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	0.5UJ	0.5U	0.5U	0.5U	0.5U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	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	0.5U	0.5U	0.5U	0.5U	0.5U
Chlorobenzene	50	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroethane	NA	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	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	70	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	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	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,2-Dichloroethene	70	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	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	0.5U	0.5U	0.5U	0.5U	0.5U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	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	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Ethylbenzene	700	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Isopropylbenzene	700	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	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	0.5U	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1UJ
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	600	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	100	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	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	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	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	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	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	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	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	0.5U	0.5U	0.5U	0.5U	0.5U
Xylene (total)	1000	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Total TIC VOCS	NA	0	0	0	0	0	0U	0U	0U	0U	0U	16J	0U	0U	0U	0U	0U	0U	0U	0U	0U	19J	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114	MW-114														MW-120						
Sample Date		7/17/2017	10/9/2017	1/23/2018	4/9/2018	7/12/2018	10/18/2018	1/8/2019	4/8/2019	7/8/2019	10/4/2019	1/8/2020	4/8/2020	4/8/2020	7/14/2020	10/13/2020	11/27/2002	2/26/2003	10/1/2003	5/20/2004	9/24/2004	6/3/2005	11/4/2005
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 1 Operation	Cell 2 Operation														Pre-CAMU Operation						
1,1 Dichloroethene	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2UJ	0.26U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,1-Trichloroethane	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.5U	0.3U	0.3U	0.24U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2,2-Tetrachloroethane	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.37U	1U	1U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.43U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	2U	0.2U	-	-	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.26U	1U	1U	1U	1U	1U	1U	1U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1U	0.3U	0.3U	0.37U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	2U	0.3U	0.3U	0.38U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.5U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	0.2U	0.2U	0.43U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.5U	0.3U	0.3U	0.43U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloropropane	0.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.35U	1U	1U	1U	1U	1U	1U	1U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	0.2U	0.2U	0.34U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	0.2U	0.2U	0.33U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	3U	0.3U	0.3U	1.9U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	3U	0.3U	0.3U	1.1U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	0.5U	0.5U	1.3U	3U	3U	3U	3U	3U	3U	3U
Acetone	6000	6U	6U	6UJ	6U	6U	0.7U	0.7U	1UJ	0.7U	0.7U	0.7U	6UJ	0.7U	0.7U	4.4U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.2U	0.5U	0.5U	**[0.7J]**	0.5U	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.34U	1U	1U	1U	1U	1U	1U	1U
Bromoform	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	1U	1U	0.5U	1U	1U	0.54U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.5U	0.3U	0.3U	0.55U	1U	1U	1U	1U	1U	1U	1U
Carbon disulfide	700	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	0.2UJ	0.2U	0.82U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.21U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	50	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.38U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.32U	1U	1U	1U	1U	1U	1U	1U
Chloroform	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.33U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.4U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.22U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.22U	1U	1U	1U	1U	1U	1U	1U
Cyclohexane	NA	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U	2U	1UJ	1UJ	0.32U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2UJ	0.2U	0.28U	1U	1U	1U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.31U	2U	2U	2U	2U	2U	2U	2U
Ethylbenzene	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U	0.3U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Isopropylbenzene	700	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	0.2U	0.2U	0.34U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	0.3U	0.3U	0.79U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.47U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	1U	0.5U	0.5UJ	0.26U	1U	1U	4J	1U	2J	1U	1U
Methylene chloride (Dichloromethane)	3	2U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.4UJ	0.3U	0.3U	0.5U	0.3U	0.3U	0.32U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	0.2U	0.2U	0.42U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.5U	0.2U	0.2UJ	0.25U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Toluene	600	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.38U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U
trans-1,2-Dichloroethene	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.24U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.49U	1U	1U	1U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.31U	1U	1U	1U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2UJ	0.5U	0.2U	0.2U	0.32U	2U	2U	2U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	0.08	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.17U	1U	1U	1U	1U	1U	1U	1U
Xylene (total)	1000	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	0.5U	1U	1.4U	0.65U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	--	--	--	--	--	--	--

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120																					MW-120
Sample Date		6/1/2006	12/5/2006	6/5/2007	8/13/2008	7/1/2009	6/8/2010	6/16/2011	3/14/2012	5/29/2012	5/30/2012	7/31/2012	8/1/2012	9/6/2013	11/11/2013	3/6/2014	5/21/2014	8/6/2014	10/23/2014	3/23/2015	6/1/2015	9/15/2015	11/16/2015
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation																					Cell 1 Operation
1,1 Dichloroethene	1	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	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	30	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	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	3	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	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	--	--	--	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	--	--	--	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	0.5	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	--	--	--	--	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	--	--	--	--	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U
4-Methyl-2-pentanone	NA	3U	3U	--	--	--	--	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3U
Acetone	6000	10J	6U	--	--	--	--	--	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	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	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	4	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Carbon disulfide	700	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chlorobenzene	50	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	0.5U	0.5U	0.5U
Chloroethane	NA	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	70	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	0.5U	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,2-Dichloroethene	70	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	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Cyclohexane	NA	2U	2U	--	--	--	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	--	--	--	--	--	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	700	0.8U	0.8U	0.8U	0.8U	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	0.5U	0.5U	0.5U
Isopropylbenzene	700	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	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
Methylcyclohexane	NA	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	2U	2U	--	--	--	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	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	0.5U	0.5U	0.5U
Toluene	600	0.7U	0.7U	0.7U	0.7U	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	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	100	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	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	--	--	--	--	--	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	1U	1U	--	--	--	--	--	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Xylene (total)	1000	0.8U	0.8U	0.8U	0.8U	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	0.5U	0.5U	0.5U
Total TIC VOCS	NA	--	--	--	--	--	--	--	0	0	0	0	0	0U	0U	9J	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120							MW-120													MW-233
Sample Date		1/13/2016	4/8/2016	7/25/2016	10/21/2016	1/20/2017	4/18/2017	7/21/2017	10/12/2017	1/22/2018	4/10/2018	7/16/2018	10/30/2018	1/3/2019	4/3/2019	7/1/2019	9/25/2019	1/3/2020	4/7/2020	7/14/2020	10/12/2020	6/2/2006
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 1 Operation							Cell 2 Operation													Pre-CAMU Operation
1,1 Dichloroethene	1	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	0.2UJ	0.2U	0.26U	0.2U	0.8U
1,1,1-Trichloroethane	30	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.24U	0.3U	0.8U
1,1,2,2-Tetrachloroethane	1	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	0.37U	0.2U	1U
1,1,2-Trichloroethane	3	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	0.43U	0.2U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	-	-	2U
1,1-Dichloroethane	50	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	0.26U	0.2U	1U
1,2,4-Trichlorobenzene	9	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	0.37U	0.3U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	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	0.38U	0.3U	2U
1,2-Dibromoethane	0.0004	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	0.5U	0.2U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	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	0.43U	0.2U	1U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.43U	0.3U	1U
1,2-Dichloropropane	0.5	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	0.2UJ	0.2U	0.35U	0.2U	1U
1,3-Dichlorobenzene	600	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	0.34U	0.2U	1U
1,4-Dichlorobenzene	75	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	0.33U	0.2U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3J	0.3U	0.3U	0.3U	1.9U	0.3U	3U
2-Hexanone	NA	3UJ	3U	3UJ	3U	3UJ	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1.1U	0.3U	3U
4-Methyl-2-pentanone	NA	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	0.5U	3U
Acetone	6000	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	0.7U	0.7UJ	2UJ	2J	0.7U	0.7UJ	0.7U	4.4U	0.7U	11J
Benzene	0.2	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	0.2U	**[59]**
Bromodichloromethane	0.6	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	0.34U	0.2U	1U
Bromoform	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	0.54U	1U	1U
Bromomethane (Methyl bromide)	10	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.55U	0.3U	1U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.82U	0.2U	1U
Carbon Tetrachloride	0.4	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	0.21U	0.2U	1U
Chlorobenzene	50	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	0.38U	0.2U	0.8U
Chloroethane	NA	0.5U	0.5U	0.5UJ	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	0.32U	0.2U	1U
Chloroform	70	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	0.33U	0.2U	0.8U
Chloromethane (Methyl chloride)	NA	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.4U	0.2U	1U
cis-1,2-Dichloroethene	70	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	0.22U	0.2U	0.8U
cis-1,3-Dichloropropene	0.4	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	0.22U	0.2U	1U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1UJ	0.32U	1U	12
Dibromochloromethane	0.4	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	0.28U	0.2U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2U	2U
Ethylbenzene	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.3U	0.4U	28
Isopropylbenzene	700	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	0.34U	0.2U	4J
Methyl acetate	7000	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.3U	0.79U	0.3U	1U
Methyl-t-butyl ether	70	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	0.47U	0.2U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.26U	0.5U	10
Methylene chloride (Dichloromethane)	3	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	0.3U	0.32U	0.3U	2U
Styrene	100	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	0.42U	0.2U	1U
Tetrachloroethene	0.4	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	0.25U	0.2U	0.8U
Toluene	600	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	0.38U	0.2U	10
trans-1,2-Dichloroethene	100	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	0.24U	0.99J	0.8U
trans-1,3-Dichloropropene	0.4	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	0.49U	0.2U	1U
Trichloroethene (Trichloroethylene)	1	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	0.31U	0.2U	1U
Trichlorofluoromethane (Freon 11)	2000	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	0.32U	0.2U	2U
Vinyl chloride (Chloroethene)	0.08	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	0.17U	0.2U	1U
Xylene (total)	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	0.65U	1.4U	17
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	-	0U	0U	0U	0U	0U	--

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233																					
Sample Date		12/12/2006	5/24/2007	12/19/2007	6/24/2008	11/11/2008	5/29/2009	11/20/2009	5/14/2010	9/23/2010	6/21/2011	3/21/2012	5/24/2012	5/25/2012	7/25/2012	7/26/2012	4/25/2013	6/17/2013	6/25/2013	9/10/2013	11/12/2013	3/14/2014	7/2/2014
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation																					
1,1 Dichloroethene	1	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
1,1,1-Trichloroethane	30	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U
1,1,2,2-Tetrachloroethane	1	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,1,2-Trichloroethane	3	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	5U	4U	2U	2U	4U	4U	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1J	1U	1U	1U	1U	1U	1U	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	5U	4U	2U	2U	4U	4U	4U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,2-Dichloropropane	0.5	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	6J	11	15	4J	22J	19J	3U	21	7J	13J	6U	5J	9J	15	23	3U	19	19	9J	3U	18	5J
2-Hexanone	NA	3U	3U	3U	3U	8U	6U	3U	3U	6U	6U	6U	3J	3U	3U	7J	3U	3U	3U	3U	7J	19	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	8U	6U	3U	3U	6U	6U	6U	3U	3U	10J	4J	3U	3U	3U	3U	13	6J	3U
Acetone	6000	15J	38	45	11J	71	56	31	56	18J	40J	12U	15J	24	42	53	6U	30	49	22	6U	28	26
Benzene	0.2	**[300]**	**[350]**	**[280]**	**[540]**	**[730]**	**[1300]**	**[820]**	**[1000]**	**[280]**	**[1400]**	**[430]**	**[1300]**	**[860]**	**[270]**	**[220]**	**[370]**	**[530]**	**[160]**	**[460]**	**[84]**	**[390]**	**[57]**
Bromodichloromethane	0.6	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Bromoform	4	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	0.5U
Carbon disulfide	700	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Chlorobenzene	50	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U
Chloroethane	NA	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U
Chloroform	70	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U
Chloromethane (Methyl chloride)	NA	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U
cis-1,2-Dichloroethene	70	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U
cis-1,3-Dichloropropene	0.4	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Cyclohexane	NA	120	120	130	140	130	99	140	170	120	100	130	160	150	65	140	130	130	66	160	75	62	21
Dibromochloromethane	0.4	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	5U	4U	2U	2U	4U	4U	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U
Ethylbenzene	700	29	32	26	0.8U	57	230	12	98	20	390	45	250	100	5	12	22	21	8	77	3J	3J	0.7J
Isopropylbenzene	700	21	43	21	1U	22	25	2J	21	45	34	24	20	19	7	18	28	9	2J	21	13	1U	1U
Methyl acetate	7000	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	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
Methylcyclohexane	NA	110	110	140	150	160	110	130	210	100	140	130	150	170	63	130	160	120	98	160	94	56	17
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	5U	4U	2U	2U	4U	4U	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
Toluene	600	55	73	59	46	71	130	74	140	41	180	51	170	120	22	32	30	49	16	65	15	16	3
trans-1,2-Dichloroethene	100	0.8U	0.8U	0.8U	0.8U	2U	2U	0.8U	0.8U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U
trans-1,3-Dichloropropene	0.4	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	2U	2U	5U	4U	2U	2U	4U	4U	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U
Vinyl chloride (Chloroethene)	0.08	1U	1U	1U	1U	3U	2U	1U	1U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Xylene (total)	1000	120	110	120	240	300	460	320	480	79	600	170	540	410	28	47	49	72	35	120	29	23	4
Total TIC VOCS	NA	--	--	--	--	--	--	--	--	--	--	2300J	2300J	2300J	1400J	1800J	2300J	2100J	1100J	2000J	1700J	1300J	440J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233								MW-233										MW-233		
Sample Date		8/4/2014	8/8/2014	10/31/2014	1/16/2015	3/11/2015	6/9/2015	7/7/2015	9/21/2015	11/19/2015	12/11/2015	1/14/2016	4/14/2016	7/26/2016	12/8/2016	1/23/2017	4/28/2017	5/9/2017	7/24/2017	10/16/2017	1/26/2018	4/16/2018
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation								Cell 1 Operation										Cell 2 Operation		
1,1 Dichloroethene	1	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1U	5U
1,1,1-Trichloroethane	30	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
1,1,2,2-Tetrachloroethane	1	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
1,1,2-Trichloroethane	3	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	20UJ	20U	20U	20U	20U	2UJ	2U	10U	4UJ	4UJ	2UJ	20U	2U	2UJ	20UJ	2UJ	10U	2U	20U	4UJ	20U
1,1-Dichloroethane	50	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
1,2,4-Trichlorobenzene	9	10UJ	10U	10U	10U	10U	1UJ	1U	5U	2UJ	2UJ	1UJ	10U	1U	1UJ	10UJ	1UJ	5U	1U	10U	2UJ	10U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	20UJ	20U	20U	20U	20U	2UJ	2U	10U	4UJ	4UJ	2UJ	20U	2U	2UJ	20UJ	2UJ	10U	2U	20U	4UJ	20U
1,2-Dibromoethane	0.0004	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	10UJ	10U	10U	10U	10U	1UJ	1U	5U	2UJ	2UJ	1UJ	10U	1U	1UJ	10UJ	1UJ	5U	1U	10U	2UJ	10U
1,2-Dichloroethane	0.3	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
1,2-Dichloropropane	0.5	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
1,3-Dichlorobenzene	600	10UJ	10U	10U	10U	10U	1UJ	1U	5U	2UJ	2UJ	1UJ	10U	1U	1UJ	10UJ	1UJ	5U	1U	10U	2UJ	10U
1,4-Dichlorobenzene	75	10UJ	10U	10U	10U	10U	1UJ	1U	5U	2UJ	2UJ	1UJ	10U	1U	1UJ	10UJ	1UJ	5U	1U	10U	2UJ	10U
2-Butanone (Methyl ethyl ketone)	300	30UJ	30U	88J	35J	30U	4J	8J	15U	6UJ	6UJ	3UJ	30U	5J	3J	30UJ	3UJ	15U	3J	30U	6UJ	30U
2-Hexanone	NA	30UJ	30U	30U	30U	30U	3UJ	3U	15U	6UJ	6UJ	3UJ	30U	3U	3UJ	30UJ	3UJ	15U	3UJ	30U	6UJ	30U
4-Methyl-2-pentanone	NA	30UJ	30U	30U	30U	30U	3UJ	3U	15U	6UJ	6UJ	3UJ	30U	3U	3UJ	30UJ	3UJ	15U	3U	30U	6UJ	30U
Acetone	6000	60UJ	60U	390	60U	60U	10J	24	30U	12UJ	16J	6UJ	60U	6U	8J	60UJ	6UJ	30U	10J	60UJ	12UJ	60U
Benzene	0.2	**[140J]**	**[260]**	**[73]**	**[270]**	**[360]**	**[420J]**	**[280]**	**[270]**	**[290J]**	**[340J]**	**[340J]**	**[310]**	**[190]**	**[240J]**	**[370J]**	**[150J]**	**[260]**	**[48]**	**[360]**	**[330]**	**[360]**
Bromodichloromethane	0.6	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Bromoform	4	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Bromomethane (Methyl bromide)	10	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Carbon disulfide	700	10UJ	10U	16J	10U	10U	1J	1J	5U	2UJ	2UJ	1UJ	10U	1U	1J	10UJ	1UJ	5U	1U	10U	2UJ	10U
Carbon Tetrachloride	0.4	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Chlorobenzene	50	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Chloroethane	NA	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Chloroform	70	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Chloromethane (Methyl chloride)	NA	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5UJ	1UJ	5U
cis-1,2-Dichloroethene	70	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
cis-1,3-Dichloropropene	0.4	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Cyclohexane	NA	28J	59	22J	36J	41J	52J	61	39	52J	63J	73J	28J	57	57J	63J	26J	53	5	43J	71J	70
Dibromochloromethane	0.4	5UJ	5U	5U	5UJ	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Dichlorodifluoromethane (Freon 12)	1000	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5UJ
Ethylbenzene	700	5UJ	6J	5U	7J	5U	7J	28	13	27J	35J	24J	10	46	49J	18J	9J	12	5	22	21J	19
Isopropylbenzene	700	10UJ	10U	10U	10U	10U	1J	7	5U	5J	8J	5J	10U	11	11J	10UJ	2J	7J	1U	10U	5J	10U
Methyl acetate	7000	10UJ	10U	10U	10U	10U	1UJ	1U	5U	2UJ	2UJ	1UJ	10U	1U	1UJ	10UJ	1UJ	5U	1U	10UJ	2UJ	10U
Methyl-t-butyl ether	70	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Methylcyclohexane	NA	27J	39J	26J	38J	42J	48J	81	51	63J	81J	100J	26J	73	80J	78J	30J	51	6	56	71J	77
Methylene chloride (Dichloromethane)	3	20UJ	20U	20U	20U	20U	2UJ	2U	10U	4UJ	4UJ	2UJ	20U	2U	2UJ	20UJ	2UJ	10U	2U	5U	1UJ	5U
Styrene	100	10UJ	10U	10U	10U	10U	1UJ	1U	5U	2UJ	2UJ	1UJ	10U	1U	1UJ	10UJ	1UJ	5U	1U	10U	2UJ	10U
Tetrachloroethene	0.4	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Toluene	600	5UJ	9J	5J	9J	7J	11J	18	11	19J	21J	14J	10J	11	21J	16J	6J	16	3	13	14J	15
trans-1,2-Dichloroethene	100	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
trans-1,3-Dichloropropene	0.4	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Trichloroethene (Trichloroethylene)	1	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Trichlorofluoromethane (Freon 11)	2000	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Vinyl chloride (Chloroethene)	0.08	5UJ	5U	5U	5U	5U	0.5UJ	0.5U	3U	1UJ	1UJ	0.5UJ	5U	0.5U	0.5UJ	5UJ	0.5UJ	3U	0.5U	5U	1UJ	5U
Xylene (total)	1000	5UJ	15	8J	22	19	22J	49	25	46J	67J	44J	19	54	65J	30J	16J	27	6	31	30J	29
Total TIC VOCS	NA	730J	1300J	290J	--	1300J	1200J	2000J	1300J	1300J	1700J	1500J	980J	1500J	1100J	1300J	690J	1300J	250J	1100J	1200J	1300J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233											MW-233	MW-234								
Sample Date		7/19/2018	10/24/2018	1/7/2019	4/4/2019	7/3/2019	10/8/2019	1/7/2020	4/2/2020	7/7/2020	9/28/2020	10/12/2020	12/3/2020	6/2/2006	12/12/2006	5/24/2007	12/20/2007	6/25/2008	11/11/2008	5/19/2009	11/24/2009	5/21/2010
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 2 Operation											Post CAMU Closure	Pre-CAMU Operation								
1,1 Dichloroethene	1	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.26U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,1-Trichloroethane	30	0.5U	3U	3U	0.3U	3UJ	2UJ	3U	3U	0.24U	3U	3U	3U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2,2-Tetrachloroethane	1	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.37U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	3	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.43U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	0.2U	2UJ	1UJ	2U	2U	-	-	-	-	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.26U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2,4-Trichlorobenzene	9	1U	3U	3U	0.3U	3UJ	2UJ	3U	3U	0.37U	3U	3U	3U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	3U	3U	0.3U	3UJ	2UJ	3U	3U	0.38U	3U	3U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.5U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.43U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	0.5U	3U	3U	0.3J	3UJ	2UJ	3U	3U	0.43U	3U	3U	3U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloropropane	0.5	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.35U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,3-Dichlorobenzene	600	1U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.34U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.33U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	5J	5J	4J	3UJ	2UJ	3U	3U	1.9U	3U	3U	3U	3U	4J	3U	3U	3U	3U	6J	3U	3U
2-Hexanone	NA	3U	3U	11J	0.3U	3UJ	2UJ	3U	3U	1.1U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	5U	5U	1J	5UJ	3UJ	5U	5U	1.3U	5U	5U	5U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Acetone	6000	6U	8J	14J	12UJ	10J	4UJ	7U	7U	6	11J	7U	7U	6U	9J	6U	6U	6U	6U	17J	6U	6U
Benzene	0.2	**[380]**	**[230]**	**[200]**	**[270]**	**[240J]**	**[300J]**	**[190]**	**[190]**	**[220]**	**[220]**	**[220]**	**[230]**	**[40]**	**[120]**	**[16]**	**[30]**	**[16]**	**[8]**	**[120]**	**[12]**	**[97]**
Bromodichloromethane	0.6	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.34U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromoform	4	0.5U	2U	2U	0.2UJ	2UJ	5UJ	10U	10U	0.54U	10U	10U	10U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	0.5U	3U	3U	0.3U	3UJ	2UJ	3U	3U	0.55U	3U	3U	3U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon disulfide	700	1U	2U	2U	2J	2J	1UJ	2U	2U	1.6	3.2J	2U	2.1J	2J	1U	1U	1U	1U	1U	1J	1U	1U
Carbon Tetrachloride	0.4	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.21U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	50	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.38U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	NA	0.5U	2U	3J	0.2U	2UJ	1UJ	2U	2U	0.32U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chloroform	70	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.33U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.4U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	70	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.22U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.22U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cyclohexane	NA	59	48J	50	70	42UJ	35J	37J	29J	21	27J	10U	11J	58	48	13	20	3J	12	17	16	36
Dibromochloromethane	0.4	0.5U	2U	2U	0.2UJ	2UJ	1UJ	2U	2U	0.28U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	2UJ	2U	0.2U	2UJ	1UJ	2U	2U	0.31U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Ethylbenzene	700	22	8J	8J	8	9J	15J	17	11	12	24	9.2J	7.5J	130	280	28	77	16	0.8U	100	49	45
Isopropylbenzene	700	5	10J	10J	15	9J	6J	6J	5J	7.7	12J	12J	19J	18	30	5	10	5J	1U	16	10	18
Methyl acetate	7000	1U	2U	2U	0.2U	2UJ	1UJ	2U	3U	0.79U	3U	3U	3U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.47U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	68	47J	48J	70	36J	32J	29J	25J	22	35J	5U	8.6J	120	74	11	23	5J	16	16	17	23
Methylene chloride (Dichloromethane)	3	0.5U	3U	3U	0.3U	3UJ	2UJ	5UJ	3U	0.32U	3U	3U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.42U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.25U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Toluene	600	17	18	15	22	20J	19J	14	13	14	13	6.6J	6J	20	51	5J	13	5	3J	35	8	28
trans-1,2-Dichloroethene	100	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.24U	2U	2U	2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.49U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	1	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.31U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	2000	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.32U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	0.08	0.5U	2U	2U	0.2U	2UJ	1UJ	2U	2U	0.17U	2U	2U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Xylene (total)	1000	33	21J	23J	29	22J	23J	20J	17J	19	25J	14U	14U	230	660	65	220	58	120	290	130	180
Total TIC VOCS	NA	1400J	2200J	840J	1200J	720J	1200J	690J	530J	-	-	-	-	--	--	--	--	--	--	--	--	--

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234R									MW-234R										MW-234RR	
Sample Date		9/23/2010	6/21/2011	3/21/2012	7/26/2013	7/3/2014	8/1/2014	8/29/2014	1/16/2015	9/18/2015	11/19/2015	12/15/2015	1/13/2016	4/14/2016	7/25/2016	12/6/2016	1/23/2017	3/22/2017	4/28/2017	5/17/2017	10/16/2017	10/16/2017
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation									Cell 1 Operation										Cell 2 Operation	
1,1 Dichloroethene	1	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
1,1,1-Trichloroethane	30	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
1,1,2-Trichloroethane	3	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	-	2U	-	2U	2U
1,1-Dichloroethane	50	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5J	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	-	1U	-	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	-	2U	-	2U	2U
1,2-Dibromoethane	0.0004	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	-	1U	-	1U	1U
1,2-Dichloroethane	0.3	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
1,2-Dichloropropane	0.5	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	-	1U	-	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	-	1U	-	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	4J	3J	3J	3J	3UJ	3U	3U	3U	3U	4J	3U	3J	3UJ	3U	3U	-	3U	-	3U	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3UJ	3UJ	3U	3UJ	3U	3U	-	3U	-	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3UJ	3UJ	3U	3U	3U	3U	-	3U	-	3U	3U
Acetone	6000	6U	9J	6U	7J	6J	6UJ	6U	6U	7J	6U	7J	6U	6U	6U	6J	6U	-	6U	-	6UJ	6UJ
Benzene	0.2	**[76]**	**[83]**	**[75]**	**[36]**	**[43]**	**[45J]**	**[57]**	**[47]**	**[28]**	**[53]**	**[54]**	**[50]**	**[64]**	**[89]**	**[140]**	**[140]**	**[110]**	**[110]**	**[120]**	**[66]**	**[58]**
Bromodichloromethane	0.6	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Bromoform	4	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Bromomethane (Methyl bromide)	10	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Carbon disulfide	700	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	-	1U	-	1U	1U
Carbon Tetrachloride	0.4	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Chlorobenzene	50	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Chloroethane	NA	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Chloroform	70	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5UJ	0.5UJ
cis-1,2-Dichloroethene	70	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Cyclohexane	NA	21	36	70	28	53	52J	53	44	10	32	35	35	28	24	40	33	-	30	-	40J	32J
Dibromochloromethane	0.4	1U	1U	1U	1U	0.5U	0.5UJ	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
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	-	0.5UJ	-	0.5U	0.5U
Ethylbenzene	700	33	230	170	50	30	26J	22	24	5	11	13	12	12	12	14	13	-	16	-	5	4
Isopropylbenzene	700	12	32	30	12	28	28J	26	26	9	15	19	16	16	16	14	19	-	23	-	8J	6J
Methyl acetate	7000	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U	-	1U	-	1UJ	1UJ
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Methylcyclohexane	NA	14	52	100	30	73	76J	66	58	13	34	45	37	31	32	52	41	-	36	-	70	56
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	-	2U	-	0.5U	0.5U
Styrene	100	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	-	1U	-	1U	1U
Tetrachloroethene	0.4	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Toluene	600	19	69	31	20	49	46J	56	55	20	42	61	38	80	110	72	74	-	75	-	10	8
trans-1,2-Dichloroethene	100	0.8U	0.8U	0.8U	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	2U	2U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	1U	1U	1U	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U
Xylene (total)	1000	120	700	500	200	370	390J	330	320	84	160	170	130	150	120	120	110	-	110	-	34	29
Total TIC VOCS	NA	--	--	--	1800J	2900J	2400J	--	--	500J	910J	810J	910J	1000J	800J	770J	820J	--	1000J	--	860J	980J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234RR														MW-234RR	MW-322				
Sample Date		1/26/2018	4/16/2018	7/19/2018	10/23/2018	1/7/2019	1/7/2019	4/4/2019	7/3/2019	10/1/2019	1/7/2020	4/2/2020	7/7/2020	9/25/2020	10/13/2020	12/3/2020	3/15/2012	5/16/2012	5/17/2012	7/30/2012	7/31/2012
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 2 Operation														Post CAMU Closure	Pre-CAMU Operation				
1,1 Dichloroethene	1	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.2UJ	0.2UJ	0.2U	8U	0.8U	0.8U	0.8U	0.8U
1,1,1-Trichloroethane	30	1U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.24U	0.3UJ	0.3U	0.3U	8U	0.8U	0.8U	0.8U	0.8U
1,1,2,2-Tetrachloroethane	1	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.37U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
1,1,2-Trichloroethane	3	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2UJ	0.2U	0.2U	8U	0.8U	0.8U	0.8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	4U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	-	-	-	-	20U	2U	2U	2U	2U
1,1-Dichloroethane	50	1U	0.5U	0.5U	0.2U	0.2U	0.2J	0.2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
1,2,4-Trichlorobenzene	9	2U	1U	1U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.37U	0.3UJ	0.3U	0.3U	10U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	4U	2U	2U	0.3U	0.3U	0.3U	0.3U	**[3J]**	**[0.3U]**	**[0.3U]**	**[0.3U]**	0.38U	0.3UJ	0.3U	0.3U	20U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	2U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	1U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.43U	0.3UJ	0.3U	0.3U	10U	1U	1U	1U	1U
1,2-Dichloropropane	0.5	1U	0.5U	0.5U	0.2U	**[0.6J]**	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.35U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
1,3-Dichlorobenzene	600	2U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	2U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	6U	3U	3U	7J	2J	2J	7J	5J	0.3U	0.3U	1J	1.9U	9.9J	0.3U	0.3U	30U	3U	3U	3U	3U
2-Hexanone	NA	6U	3U	3U	0.3U	1J	1J	0.3U	0.3U	0.3U	0.3U	0.3U	1.1U	0.3UJ	0.3U	0.3U	30U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	6U	3U	3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	0.5UJ	0.5U	0.5U	30U	3U	3U	3U	3U
Acetone	6000	12U	6U	6U	15J	3J	3J	16UJ	9J	0.7U	1UJ	2J	4.4U	15J	0.7U	0.7U	60U	6U	13J	6U	6U
Benzene	0.2	**[43]**	**[33]**	**[36]**	**[16]**	**[16]**	**[16]**	**[35]**	**[19]**	**[9]**	**[6]**	**[12]**	**[2.8]**	**[14J]**	**[2.7]**	**[2]**	5U	**[9]**	**[0.7J]**	**[6]**	**[1J]**
Bromodichloromethane	0.6	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Bromoform	4	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2UJ	0.2U	1U	1U	1U	0.54U	1UJ	1U	1U	10U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	1U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.55U	0.3UJ	0.3U	0.3U	10U	1U	1U	1U	1U
Carbon disulfide	700	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.82U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	2U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.21U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Chlorobenzene	50	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.38U	0.2UJ	0.2U	0.2U	8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	NA	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Chloroform	70	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	3	0.33U	0.2UJ	0.2U	0.2U	8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.4U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
cis-1,2-Dichloroethene	70	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2UJ	0.2U	0.2U	8U	0.8U	0.8U	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Cyclohexane	NA	33	27	27	33	29	30	28	19	25	16	34	15	41J	22J+	25	20U	2U	2U	2U	2U
Dibromochloromethane	0.4	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.28U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	1UJ	0.5UJ	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2UJ	0.2U	0.2U	20U	2U	2U	2U	2U
Ethylbenzene	700	4	3	2	1	0.7J	0.7J	2	0.8J	1J	0.5J	1J	0.34J	1.2J	0.44J	0.5J	8U	0.8U	0.8U	0.8U	0.8U
Isopropylbenzene	700	14	12	19	14	8	8	14	14	13	8	12	13	20J	9.2	14	10U	1U	1U	1U	1U
Methyl acetate	7000	2U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.3U	0.3U	0.79U	0.3UJ	0.3U	0.3U	10U	1U	1U	1U	1U
Methyl-t-butyl ether	70	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.47U	0.2UJ	0.2U	0.2U	5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	62	36	33	31	28	29	42	26	23	15	26	22	54J	24J+	37	10U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	1U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.7UJ	0.9UJ	0.3U	0.32U	0.3UJ	0.3U	0.3U	20U	2U	2U	2U	2U
Styrene	100	2U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.42U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Tetrachloroethene	0.4	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.25U	0.2UJ	0.2UJ	0.2U	8U	0.8U	0.8U	0.8U	0.8U
Toluene	600	6	6	5	4	2	2	6	3	3	1	3	2.3	3.2J	1.7	1.7	7U	0.7U	0.7U	0.7U	0.7U
trans-1,2-Dichloroethene	100	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.24U	0.2UJ	0.2U	0.2U	8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.49U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	1	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	2000	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.2UJ	0.2U	0.2U	20U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	0.08	1U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.17U	0.2UJ	0.2U	0.2U	10U	1U	1U	1U	1U
Xylene (total)	1000	17	14	16	14	9	10	11	9	8	4J	7	5.6	9.7J	4J	5.6J	8U	1J	0.8U	0.8U	0.8U
Total TIC VOCS	NA	1200J	850J	960J	710J	620J	630J	870J	690J	690J	420J	600J	-	-	-	-	0	0	0	5J	0

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322												MW-322							MW-322	
Sample Date		11/19/2012	2/19/2013	6/12/2013	9/5/2013	11/7/2013	3/12/2014	5/19/2014	8/4/2014	10/29/2014	3/3/2015	6/8/2015	9/14/2015	11/18/2015	1/7/2016	10/13/2016	1/17/2017	3/17/2017	4/27/2017	7/18/2017	9/11/2017	10/13/2017
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation												Cell 1 Operation							Cell 2 Operation	
1,1 Dichloroethene	1	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,1,1-Trichloroethane	30	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,1,2,2-Tetrachloroethane	1	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,1,2-Trichloroethane	3	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	40U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	20U	2U	2U	4U	10U
1,1-Dichloroethane	50	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	40U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	20U	2U	2UJ	4U	10U
1,2-Dibromoethane	0.0004	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
1,2-Dichloroethane	0.3	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,2-Dichloropropane	0.5	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	60U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	30U	3U	3UJ	6U	15U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	60U	3U	3U	3U	3U	3UJ	3UJ	3U	3U	3U	30U	3U	3U	6U	15U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	60U	3U	3U	3U	3U	3UJ	3UJ	3U	3U	3U	30U	3U	3U	6U	15U
Acetone	6000	6U	6U	6U	6U	6U	6U	120U	6U	6U	6U	6U	6UJ	12J	7J	6UJ	6U	60U	6U	66	12U	30U
Benzene	0.2	**[5]**	**[2J]**	**[5J]**	**[4J]**	**[6]**	**[3J]**	10U	**[3]**	**[3]**	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Bromodichloromethane	0.6	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Bromoform	4	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Bromomethane (Methyl bromide)	10	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
Carbon Tetrachloride	0.4	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Chlorobenzene	50	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Chloroethane	NA	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Chloroform	70	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Chloromethane (Methyl chloride)	NA	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
cis-1,2-Dichloroethene	70	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
cis-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Cyclohexane	NA	2U	2U	2U	2U	3J	2U	40U	2U	2U	2U	2U	2UJ	2UJ	2U	2U	2U	20U	2U	2U	4U	10U
Dibromochloromethane	0.4	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	2U	2U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Ethylbenzene	700	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Isopropylbenzene	700	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1UJ	2U	5U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	40U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	20U	2U	2U	4U	3U
Styrene	100	1U	1U	1U	1U	1U	1U	20U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	10U	1U	1U	2U	5U
Tetrachloroethene	0.4	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Toluene	600	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	10U	0.5U	1	0.5U	0.5U	1J	0.5U	0.6J	2	0.5U	5U	0.5U	0.5U	1J	3U
trans-1,2-Dichloroethene	100	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
trans-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Trichloroethene (Trichloroethylene)	1	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	2U	2U	2U	2U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Vinyl chloride (Chloroethene)	0.08	1U	1U	1U	1U	1U	1U	10U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	3U
Xylene (total)	1000	1J	0.8U	2J	0.8U	1J	1J	10U	2	3	1	3	3J	2	2	9	2	5U	1	0.5U	3	3U
Total TIC VOCS	NA	0	0	0U	0U	0U	0U	0U	11J	0U	0U	0U	0UJ	7J	0U	0U	0U	--	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322																			MW-324
Sample Date		12/1/2017	1/19/2018	4/13/2018	7/13/2018	10/25/2018	1/2/2019	4/2/2019	4/2/2019	7/2/2019	7/2/2019	10/2/2019	10/2/2019	1/2/2020	1/2/2020	4/1/2020	7/6/2020	7/6/2020	10/13/2020	10/13/2020	3/13/2012
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 2 Operation																			Pre-CAMU Operation
1,1 Dichloroethene	1	0.5U	1U	0.5U	0.5U	0.2UJ	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.26U	0.26U	2UJ	4UJ	0.8U
1,1,1-Trichloroethane	30	0.5U	1U	0.5U	0.5U	0.3U	0.3U	0.6U	0.6U	3UJ	3U	3U	3U	3U	3U	3U	0.24U	0.24U	3U	6U	0.8U
1,1,2,2-Tetrachloroethane	1	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.37U	0.37U	2U	4U	1U
1,1,2-Trichloroethane	3	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.43U	0.43U	2U	4U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	4U	2U	2U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	-	-	-	-	2U
1,1-Dichloroethane	50	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.26U	0.26U	2U	4U	1U
1,2,4-Trichlorobenzene	9	1U	2U	1U	1U	0.3U	0.3U	0.6U	0.6U	3UJ	3U	3U	3U	3U	3U	3U	0.37U	0.37U	3U	6U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	4U	2U	2U	0.3U	0.3U	0.6U	0.6U	3UJ	3U	3U	3U	3U	3U	3U	0.38U	0.38U	3U	6U	2U
1,2-Dibromoethane	0.0004	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.5U	0.5U	2U	4U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.43U	0.43U	2U	4U	1U
1,2-Dichloroethane	0.3	0.5U	1U	0.5U	0.5U	0.3U	0.3U	0.6U	0.6U	3UJ	3U	3U	3U	3UJ	3UJ	3U	0.43U	0.43U	3U	6U	1U
1,2-Dichloropropane	0.5	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.35U	0.35U	2U	4U	1U
1,3-Dichlorobenzene	600	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.34U	0.34U	2U	4U	1U
1,4-Dichlorobenzene	75	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.33U	0.33U	2U	4U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	6U	3U	3U	1J	1J	0.6U	0.6U	3UJ	3U	3U	3U	3U	3U	3U	1.9U	1.9U	3U	6U	3U
2-Hexanone	NA	3U	6U	3U	3U	0.3U	0.3U	0.6U	0.6U	3UJ	3U	3U	3U	3U	3U	3U	1.1U	1.1U	3U	6U	3U
4-Methyl-2-pentanone	NA	3U	6U	3U	3U	0.5U	0.5U	1U	1U	5UJ	5U	5U	5U	5U	5U	5U	1.3U	1.3U	5U	10U	3U
Acetone	6000	11J	12U	6J	6U	17J	15J	11UJ	10UJ	7UJ	9J	13J	13J	7U	7U	12J	6.9	5.9	7U	14U	6U
Benzene	0.2	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.2U	0.2U	2U	4U	0.5U
Bromodichloromethane	0.6	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.34U	0.34U	2U	4U	1U
Bromoform	4	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	10U	10U	10U	10U	10U	0.54U	0.54U	10U	20U	1U
Bromomethane (Methyl bromide)	10	0.5U	1U	0.5U	0.5U	0.3U	0.3U	0.6U	0.6U	3UJ	3U	3U	3U	3U	3U	3U	0.55U	0.55U	3U	6U	1U
Carbon disulfide	700	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.82U	0.82U	2U	4U	1U
Carbon Tetrachloride	0.4	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.21U	0.21U	2U	4U	1U
Chlorobenzene	50	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.38U	0.38U	2U	4U	0.8U
Chloroethane	NA	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.32UJ	0.32UJ	2U	4U	1U
Chloroform	70	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.33U	0.33U	2U	4U	0.8U
Chloromethane (Methyl chloride)	NA	0.5U	1U	0.5U	0.5U	0.2UJ	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.4U	0.4U	2U	4U	1U
cis-1,2-Dichloroethene	70	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.22U	0.22U	2U	4U	0.8U
cis-1,3-Dichloropropene	0.4	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.22U	0.22U	2U	4U	1U
Cyclohexane	NA	2U	4U	2U	2U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	10U	10U	10U	10U	10U	0.32U	0.32U	10UJ	20UJ	2U
Dibromochloromethane	0.4	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.28U	0.28U	2U	4U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	1U	0.5UJ	0.5U	0.2UJ	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.31U	0.31U	2U	4U	2U
Ethylbenzene	700	0.5U	1U	0.5U	0.5U	0.4U	0.4U	0.8U	0.8U	4UJ	4U	4U	4U	4U	4U	4U	0.3U	0.3U	4U	8U	0.8U
Isopropylbenzene	700	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.35J	0.34U	2U	4U	1U
Methyl acetate	7000	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	3U	0.79U	0.79U	3U	6U	1U
Methyl-t-butyl ether	70	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.47U	0.47U	2U	4U	0.5U
Methylcyclohexane	NA	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	5U	5U	5U	5U	5U	0.26U	0.26U	5UJ	10UJ	1U
Methylene chloride (Dichloromethane)	3	0.5U	1U	0.5U	0.5U	0.3U	0.3U	0.6U	0.6U	3UJ	3U	3U	3U	3U	3U	3U	0.32U	0.32U	3U	6U	2U
Styrene	100	1U	2U	1U	1U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.42U	0.42U	2U	4U	1U
Tetrachloroethene	0.4	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.25U	0.25U	2UJ	4UJ	0.8U
Toluene	600	0.6J	1U	0.9J	0.5U	0.6J	0.5UJ	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.7J	0.45J	2U	4U	0.7U
trans-1,2-Dichloroethene	100	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.24U	0.24U	2U	4U	0.8U
trans-1,3-Dichloropropene	0.4	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.49U	0.49U	2U	4U	1U
Trichloroethene (Trichloroethylene)	1	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.31U	0.31U	2U	4U	1U
Trichlorofluoromethane (Freon 11)	2000	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.32U	0.32U	2U	4U	2U
Vinyl chloride (Chloroethene)	0.08	0.5U	1U	0.5U	0.5U	0.2U	0.2U	0.4U	0.4U	2UJ	2U	2U	2U	2U	2U	2U	0.17U	0.17U	2U	4U	1U
Xylene (total)	1000	2	1J	3	0.5U	1U	2J	2U	2U	10UJ	10U	14U	14U	14U	14U	14U	3.5	2.2	14U	28U	0.8U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324																MW-324					
Sample Date		5/17/2012	5/18/2012	7/30/2012	7/31/2012	11/21/2012	2/21/2013	6/17/2013	9/9/2013	11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015	5/28/2015	9/17/2015	11/17/2015	1/12/2016	4/7/2016	7/21/2016	1/18/2017	4/26/2017
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Pre-CAMU Operation																Cell 1 Operation					
1,1 Dichloroethene	1	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	30	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	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	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	3	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	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	0.5U	0.5U	0.5U	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	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	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	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	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	0.5	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	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3UJ	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3UJ	3U	3U	3UJ	3U
Acetone	6000	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	**[2J]**	**[4J]**	**[3J]**	**[2J]**	**[2J]**	**[1J]**	**[2J]**	**[1J]**	**[2J]**	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
Bromodichloromethane	0.6	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	0.5U	0.5U	0.5U	0.5U
Bromoform	4	1U	1U	1U	1U	1U	1UJ	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
Bromomethane (Methyl bromide)	10	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	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	0.5U	0.5U	0.5U	0.5U
Chlorobenzene	50	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroethane	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	70	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	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	0.5U	0.5U	0.5U	0.5U
cis-1,2-Dichloroethene	70	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	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	0.5U	0.5U	0.5U	0.5U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	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	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	700	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Isopropylbenzene	700	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U
Methyl-t-butyl ether	70	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	0.5U	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	600	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	100	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	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	0.5U	0.5U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	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	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	2U	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	0.5U	0.5U	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	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	0.5U	0.5U	0.5U	0.5U
Xylene (total)	1000	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Total TIC VOCS	NA	0	0	0	0	0	0	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324													MW-402					MW-402		
Sample Date		10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/24/2018	1/4/2019	4/9/2019	7/9/2019	10/7/2019	1/6/2020	4/3/2020	7/8/2020	10/12/2020	9/26/2014	10/28/2014	3/10/2015	5/28/2015	9/17/2015	11/17/2015	1/12/2016	4/7/2016
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 2 Operation													Pre-CAMU Operation					Cell 1 Operation		
1,1 Dichloroethene	1	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,1,1-Trichloroethane	30	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,1,2-Trichloroethane	3	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	-	-	2U	2U	2U	2U	10U	2UJ	2U	2U
1,1-Dichloroethane	50	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1U	1U	1U	1U	5U	1UJ	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	2U	2U	2U	2U	10U	2UJ	2U	2U
1,2-Dibromoethane	0.0004	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	5U	1UJ	1U	1U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3UJ	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,2-Dichloropropane	0.5	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	5U	1UJ	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	5U	1UJ	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3UJ	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	3U	3U	3U	3U	15U	3UJ	3U	3U
2-Hexanone	NA	3UJ	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	3U	3U	3U	3U	15U	3UJ	3UJ	3U
4-Methyl-2-pentanone	NA	3UJ	3U	3U	3U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	15U	3UJ	3UJ	3U
Acetone	6000	6U	6U	6U	6U	2J	0.7J	1UJ	3J	0.7U	0.7UJ	0.7U	1.3J	0.7U	6U	6U	6U	6U	30U	6UJ	6U	6U
Benzene	0.2	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	**[0.7J]**	0.5U	0.5U	3U	**[0.5J]**	0.5U	0.5U
Bromodichloromethane	0.6	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Bromoform	4	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5UJ	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Bromomethane (Methyl bromide)	10	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.5U	0.5U	0.5UJ	0.5U	3U	0.5UJ	0.5U	0.5UJ
Carbon disulfide	700	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	1U	1U	1U	1U	5U	1UJ	1U	1U
Carbon Tetrachloride	0.4	0.5U	0.5U	0.5U	0.5U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Chlorobenzene	50	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Chloroethane	NA	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5UJ	0.5U	0.5UJ	0.5UJ	3U	0.5UJ	0.5U	0.5U
Chloroform	70	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	0.5UJ	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
cis-1,2-Dichloroethene	70	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Cyclohexane	NA	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	2U	2U	2U	2U	10U	2UJ	2U	2U
Dibromochloromethane	0.4	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5U	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5UJ	0.5U	0.5UJ	0.5U	3U	0.5UJ	0.5U	0.5U
Ethylbenzene	700	0.5U	0.5U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Isopropylbenzene	700	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	5U	1UJ	1U	1U
Methyl acetate	7000	1UJ	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.3U	0.3U	0.3U	1U	1U	1U	1U	5U	1UJ	1U	1U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	5U	1UJ	1U	1U
Methylene chloride (Dichloromethane)	3	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.5UJ	0.3U	0.3U	0.3U	0.3U	0.3U	2U	2U	2U	2U	10U	2UJ	2U	2U
Styrene	100	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	5U	1UJ	1U	1U
Tetrachloroethene	0.4	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Toluene	600	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
trans-1,2-Dichloroethene	100	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Xylene (total)	1000	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1.4U	1.4U	0.5U	0.5U	0.5U	0.5U	3U	0.5UJ	0.5U	0.5U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	-	0U	0U	0U	0U	0U	0U	0UJ	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-1
Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-402					MW-402															MW-402
Sample Date		7/21/2016	1/19/2017	3/22/2017	4/24/2017	5/17/2017	10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/25/2018	1/4/2019	4/2/2019	7/1/2019	9/25/2019	9/25/2019	1/6/2020	4/3/2020	7/8/2020	9/24/2020	10/14/2020	12/8/2020
Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Parameter Name/Sampling Event		Cell 1 Operation					Cell 2 Operation															Post CAMU Closure
1,1 Dichloroethene	1	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2U	0.2U	0.2U	0.2U
1,1,1-Trichloroethane	30	0.5U	1UJ	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.6U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	1	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichloroethane	3	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	4U	-	2U	-	2U	2U	2U	2U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2UJ	-	-	-	-
1,1-Dichloroethane	50	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2,4-Trichlorobenzene	9	1U	2U	-	1U	-	1U	1U	1U	1U	0.3U	0.3U	0.6U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	4U	-	2U	-	2U	2U	2U	2U	0.3U	0.3U	0.6U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromoethane	0.0004	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	2U	-	1U	-	1U	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichloroethane	0.3	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.6U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dichloropropane	0.5	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-Dichlorobenzene	600	1U	2U	-	1U	-	1U	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,4-Dichlorobenzene	75	1U	2U	-	1U	-	1U	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-Butanone (Methyl ethyl ketone)	300	3U	6U	-	3U	-	3UJ	3U	3U	3U	0.3U	0.3U	0.6U	0.6J	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ
2-Hexanone	NA	3U	6U	-	3U	-	3UJ	3U	3U	3U	0.3U	0.3U	0.6U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ
4-Methyl-2-pentanone	NA	3U	6U	-	3U	-	3UJ	3U	3U	3U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Acetone	6000	6U	12U	-	6U	-	6U	6U	6U	6U	0.7U	1J	5UJ	6J	0.7U	0.7U	0.7UJ	0.7U	1.1J	1.2J	0.7U	1.9J
Benzene	0.2	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2J	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Bromodichloromethane	0.6	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Bromoform	4	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.6U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	700	1U	2U	-	1U	-	1U	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U
Carbon Tetrachloride	0.4	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2UJ	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chlorobenzene	50	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroethane	NA	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroform	70	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloromethane (Methyl chloride)	NA	0.5U	1U	-	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,2-Dichloroethene	70	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,3-Dichloropropene	0.4	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Cyclohexane	NA	2U	4U	-	2U	-	2U	2U	2U	2U	0.2U	0.2U	0.4U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Dibromochloromethane	0.4	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5UJ	0.2UJ	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Ethylbenzene	700	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.4U	0.4U	0.8U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	700	1U	2U	-	1U	-	1U	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methyl acetate	7000	1U	2U	-	1U	-	1UJ	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.3U	0.3U	0.3U	0.3U	0.3U
Methyl-t-butyl ether	70	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methylcyclohexane	NA	1U	2U	-	1U	-	1U	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylene chloride (Dichloromethane)	3	2U	4U	-	2U	-	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.6U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Styrene	100	1U	2U	-	1U	-	1U	1U	1U	1U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Tetrachloroethene	0.4	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Toluene	600	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,2-Dichloroethene	100	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U
trans-1,3-Dichloropropene	0.4	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichloroethene (Trichloroethylene)	1	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	2000	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Vinyl chloride (Chloroethene)	0.08	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Xylene (total)	1000	0.5U	1U	-	0.5U	-	0.5U	0.5U	0.5J	0.5U	1U	1U	2U	1U	1U	1U	1U	1U	1.4U	1.4U	1.4U	1.4U
Total TIC VOCS	NA	0U	0U	--	0U	--	0U	0U	0U	0U	0U	0U	0U	-	0U	0U	0U	0U	-	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Yellow shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057										
Sample Date		10/30/2002	3/13/2012	5/23/2012	5/24/2012	7/25/2012	7/26/2012	11/20/2012	2/20/2013	6/12/2013	9/9/2013	11/6/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation										
2,4,5-Trichlorophenol	700	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2,4,6-Trichlorophenol	1	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2,4-Dichlorophenol	20	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2,4-Dimethylphenol	100	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2,4-Dinitrophenol	10	21U	10UJ	11U	11U	12U	11U	10U	11U	11U	11U	11U
2,4-Dinitrotoluene	0.05	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2-Chloronaphthalene	600	1U	0.4UJ	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2-Methyl-Naphthlalene	NA	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
3,3'-Dichlorobenzidine	0.08	1U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
3-Nitroaniline	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5UJ	6U	5U	6U	5U	5U	6U	5U	6U	5U
4-Bromophenylphenylether	NA	--	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
4-Chloroaniline	30	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
4-Chlorophenyl phenyl ether	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
4-Methylphenol (p-Cresol)	NA	2U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
4-Nitroaniline	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
4-Nitrophenol	NA	10U	10UJ	11U	11U	12U	11U	10U	11U	11U	11U	11U
Acenaphthene	400	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	NA	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	2U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Anthracene	2000	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	1U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
bis(2-Chloroethyl) ether	0.03	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
bis(2-chloroisopropyl) ether	300	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5J	5UJ	6U	5U	6U	5U	5U	6U	5U	6U	5U
Carbazole	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Chrysene	5	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Diethylphthalate	6000	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Fluoranthene	300	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.02	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Hexachlorocyclopentadiene	40	5U	5UJ	6U	5U	6U	5U	5U	6U	5U	6U	5U
Hexachloroethane	2	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
N-Nitrosodi-n-propylamine	0.005	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	2U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Naphthalene	300	1U	0.1UJ	0.1J	0.1J	0.1U	0.1U	0.1U	0.1U	0.3J	0.1U	0.1U
Nitrobenzene	4	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
p-Chloro-m-cresol	NA	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Pentachlorophenol	0.3	3U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	1U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U
Pyrene	200	1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	--	77J	0	20J	0	10J	0	280J	4J	57J	16J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057						MW-0057				
Sample Date		3/5/2014	8/5/2014	10/23/2014	3/3/2015	5/29/2015	9/16/2015	11/13/2015	1/8/2016	4/12/2016	7/19/2016	10/17/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation						Cell 1 Operation				
2,4,5-Trichlorophenol	700	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2,4,6-Trichlorophenol	1	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2,4-Dichlorophenol	20	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2,4-Dimethylphenol	100	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2,4-Dinitrophenol	10	11U	10UJ	11U	10U	10U	10U	10U	10U	10U	10U	10U
2,4-Dinitrotoluene	0.05	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1.0U
2,6-Dinitrotoluene	0.05	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2-Chloronaphthalene	600	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.40U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2-Methyl-Naphthlalene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
3,3'-Dichlorobenzidine	0.08	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2.0U
3-Nitroaniline	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5U	5.0U
4-Bromophenylphenylether	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
4-Chloroaniline	30	0.5U	0.5UJ	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2.0U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3.0U
4-Nitroaniline	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
4-Nitrophenol	NA	11U	10UJ	11U	10U	10U	10U	10U	10U	10U	10U	10U
Acenaphthene	400	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Acenaphthylene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Acetophenone	700	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Anthracene	2000	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Atrazine	3	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2.0U
Benzaldehyde	NA	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1.0U
Benzo(a)anthracene	0.05	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Benzo(a)pyrene	0.005	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Benzo(b)fluoranthene	0.05	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Benzo(g,h,i)perylene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Benzo(k)fluoranthene	0.5	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
bis(2-chloroisopropyl) ether	300	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
bis(2-Ethylhexyl)phthalate	2	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2.0U
Butylbenzylphthalate	100	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2.0U
Caprolactam	NA	5U	8J	5U	5U	5U	7J	5U	5U	5U	5U	5.0U
Carbazole	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Chrysene	5	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Di-n-butylphthalate	700	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2.0U
Di-n-octylphthalate	100	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2.0U
Dibenz(a,h)anthracene	0.005	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Dibenzofuran	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Diethylphthalate	6000	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2U	2.0U
Dimethyl phthalate	NA	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2U	2.0U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Fluoranthene	300	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Fluorene	300	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Hexachlorobenzene	0.02	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Hexachlorobutadiene	0.4	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Hexachlorocyclopentadiene	40	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5U	5.0U
Hexachloroethane	2	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1.0U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Isophorone	40	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Naphthalene	300	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.14J
Nitrobenzene	4	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
p-Chloro-m-cresol	NA	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Pentachlorophenol	0.3	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1.0U
Phenanthrene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Phenol	2000	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.50U
Pyrene	200	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.10U
Total TIC SVOCS	NA	22J	170JB	13J	5J	0U	6J	5JB	4J	14JB	32JB	230J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057			MW-0057						
Sample Date		1/11/2017	4/26/2017	7/18/2017	10/9/2017	1/22/2018	4/9/2018	7/12/2018	10/23/2018	1/8/2019	4/8/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation			Cell 2 Operation						
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	3U	3U	3U	3U
2,4-Dinitrophenol	10	10U	10U	11U	10U	10UJ	10U	16U	15U	14U	14U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2U	3U	3U	3U	3U
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	5U	5U	9U	9U	8U	8U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Chloroaniline	30	2U	2U	2U	2U	2U	2U	4U	4U	4U	4U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.9U	0.9U
4-Nitrophenol	NA	10U	10U	11U	10U	10U	10U	11U	11U	10U	10U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	4U	4U	4U	4U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	3U	3U	3U	3U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	4UJ	2U	2U	6U	5U	5U	5U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5U	5U	5UJ	5U	6U	5U	5U	5U
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	6U	5U	5U	5U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5UJ	5U	5U	6U	5U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.7U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.7U	0.7U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	27J	23JB	32J	22JB	82JB	0U	0U	42JB	16JB	42JB

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057						MW-114				
Sample Date		7/8/2019	10/4/2019	1/8/2020	4/8/2020	7/13/2020	10/12/2020	10/17/2002	2/10/2003	9/10/2003	3/16/2012	5/14/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation						Pre-CAMU Operation				
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.53U	0.55UJ	1U	1U	1U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.53U	0.55UJ	1U	1U	1U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.53U	0.55UJ	1U	1U	1U	0.5U	0.5U
2,4-Dimethylphenol	100	3U	3U	3U	3U	3.2U	3.3UJ	1U	1U	1U	0.5U	0.5U
2,4-Dinitrophenol	10	14U	15U	14U	14U	15U	15UJ	20U	20U	19U	10U	11U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1.1U	1.1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.43U	0.44U	1U	1U	1U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.53U	0.55UJ	1U	1U	1U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.53U	0.55UJ	1U	1U	1U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	2U	2U	2U	2U	2.1U	2.2U	1U	1U	1U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	3U	3U	3U	3U	3.2U	3.3UJ	1U	1U	1U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	3U	3U	3U	3U	3.2U	3.3U	1U	1U	1U	2U	2U
3-Nitroaniline	NA	3U	3U	3U	3U	3.2U	3.3U	1U	1U	1U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8U	8U	8U	8U	8.5U	8.8UJ	5U	5U	5U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	--	--	1U	0.5U	0.5U
4-Chloroaniline	30	4U	4U	4U	4U	4.3U	4.4U	1U	1U	1U	0.5U	0.5U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.53U	0.55UJ	2U	2U	2U	0.5U	0.5U
4-Nitroaniline	NA	0.9U	0.9U	0.9U	0.9U	0.96U	0.99U	1U	1U	1U	0.5U	0.5U
4-Nitrophenol	NA	10U	11U	10U	10U	11U	11UJ	10U	10U	10U	10U	11U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Acetophenone	700	4U	4U	4U	4U	4.3U	4.4U	2U	2U	2U	0.5U	0.5U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2.1U	2.2U	1U	1U	1U	2U	2U
Benzaldehyde	NA	3U	3U	3U	3U	3.2U	3.3U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	5U	5U	5U	5U	5.3U	5.5U	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2.1U	2.2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5U	5U	5.3U	5.5U	5U	5U	5U	5U	5U
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2.1U	2.2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	5U	5U	5U	5U	5.3U	5.5U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2.1U	2.2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2.1U	2.2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3U	3U	3U	3.2U	3.3U	1U	1U	1U	0.5U	0.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	5.3UJ	5.5U	5U	5U	5U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1.1U	1.1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.7U	0.7U	0.7U	0.7U	0.74U	0.77U	1U	1U	1U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7U	0.7U	0.7U	0.7U	0.74U	0.77U	2U	2U	2U	0.5U	0.5U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1J	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.53U	0.55U	1U	1U	1U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	2U	1.7U	1.8UJ	1U	1U	1U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1.1U	1.1UJ	3U	3U	3U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.53U	0.55UJ	1U	1U	1U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	0.1U	0.1U
Total TIC SVOCS	NA	33JB	0U	0U	10J	-	-	--	--	--	4J	21J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114									
Sample Date		5/15/2012	7/24/2012	7/25/2012	11/19/2012	2/19/2013	6/10/2013	9/3/2013	11/4/2013	3/5/2014	5/19/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation									
2,4,5-Trichlorophenol	700	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4-Dinitrophenol	10	11U	11U	10U	10U	11U	10U	10U	11U	10U	11U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
3-Nitroaniline	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	6U	5U	5U	5U	5U	5U	6U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Chloroaniline	30	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Chlorophenyl phenyl ether	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Nitrophenol	NA	11U	11U	10U	10U	11U	10U	10U	11U	10U	11U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	6U	5U	5U	5U	5U	5U	6U	5U	5U
Carbazole	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5UJ	0.5U
Hexachlorocyclopentadiene	40	5U	6U	5U	5U	5U	5U	5U	6U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Naphthalene	300	0.3J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	100J	22J	23J	0	0	9J	42J	0U	0U	5J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA						MW-114				
Sample Date		8/4/2014	10/22/2014	3/24/2015	5/27/2015	9/14/2015	11/13/2015	1/5/2016	4/6/2016	7/18/2016	10/11/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation					Cell 1 Operation				
2,4,5-Trichlorophenol	700	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2,4,6-Trichlorophenol	1	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2,4-Dichlorophenol	20	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2,4-Dimethylphenol	100	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2,4-Dinitrophenol	10	11U	12UJ	10UJ	12U	10U	10U	10U	10U	10U	11U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.1U
2,6-Dinitrotoluene	0.05	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2-Chloronaphthalene	600	0.4U	0.5U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.43U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
2-Methylphenol (o-Cresol)	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.6UJ	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
3-Nitroaniline	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	6U	5U	6U	5U	5U	5U	5U	5U	5.4U
4-Bromophenylphenylether	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
4-Chloroaniline	30	0.5U	0.6U	0.5U	2U	2U	2U	2U	2U	2U	2.2U
4-Chlorophenyl phenyl ether	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
4-Methylphenol (p-Cresol)	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	3.2U
4-Nitroaniline	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
4-Nitrophenol	NA	11U	12U	10U	12U	10U	10U	10U	10U	10U	11U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.11U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Acetophenone	700	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
bis(2-Chloroethoxy)methane	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
bis(2-Chloroethyl) ether	0.03	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
bis(2-chloroisopropyl) ether	300	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
Caprolactam	NA	11J	6U	5U	6U	5U	5U	5U	5U	5U	5.4U
Carbazole	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Dibenzofuran	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Hexachlorobutadiene	0.4	0.5U	0.6UJ	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Hexachlorocyclopentadiene	40	5U	6UJ	5U	6U	5U	5U	5U	5U	5U	5.4U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Isophorone	40	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Nitrobenzene	4	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
p-Chloro-m-cresol	NA	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Phenol	2000	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.54U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.11U
Total TIC SVOCS	NA	52J	46J	0U	6J	5JB	12JB	5JB	18JB	30JB	4J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114			MW-114							
Sample Date		1/11/2017	4/18/2017	7/12/2017	10/9/2017	1/23/2018	4/9/2018	7/12/2018	10/18/2018	1/8/2019	4/8/2019	7/8/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation			Cell 2 Operation							
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	3U	3U	3U	3U	3U
2,4-Dinitrophenol	10	10U	10U	10U	10U	11UJ	11U	14U	16U	14U	14U	14U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	2U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	3U	3U	3U	3U	3U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	4J	2U	2U	3U	3U	3U	3U	3U
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	3U	3U	3U	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	6U	5U	8U	9U	8U	8U	8U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Chloroaniline	30	2U	2U	2U	2U	2U	2U	4U	5U	4U	4U	4U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.9U	1U	0.9U	0.9U	0.9U
4-Nitrophenol	NA	10U	10U	10U	10U	11U	11U	10U	11U	10U	10U	10U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	4U	5U	4U	4U	4U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	3U	3U	3U	3U	3U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	**[0.4J]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	**[0.5J]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	**[0.5J]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1UJ	0.1U	0.5J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.5J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2J	3UJ	2U	2U	5U	6U	5U	5U	5U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5U	5U	6UJ	5U	5U	6U	5U	5U	5U
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.5J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	5U	6U	5U	5U	5U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	**[0.5]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	3U	3U	3U	3U	3U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5UJ	6U	5U	5U	6U	5U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	**[0.6]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.7U	0.8U	0.7U	0.7U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.7U	0.8U	0.7U	0.7U	0.7U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	14J	18JB	5JB	12JB	10JB	6J	0U	5J	26JB	17JB	46JB

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114						MW-120				
Sample Date		10/4/2019	1/8/2020	4/8/2020	4/8/2020	7/14/2020	10/13/2020	11/27/2002	2/26/2003	10/1/2003	5/20/2004	9/24/2004
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation						Pre-CAMU Operation				
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
2,4-Dichlorophenol	20	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
2,4-Dimethylphenol	100	3U	3U	0.6U	3U	3.3U	3.3U	1U	1U	1U	1U	1U
2,4-Dinitrophenol	10	14U	14U	11UJ	14U	15U	15U	21U	20U	20U	20U	19U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1.1U	1.1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.44U	0.44U	1U	1U	1U	1U	1U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
2-Nitroaniline (o-Nitroaniline)	NA	2U	2U	0.6U	2U	2.2U	2.2U	1U	1U	1U	1U	1U
2-Nitrophenol (o-Nitrophenol)	NA	3U	3U	0.6U	3U	3.3U	3.3U	1U	1U	1U	1U	1U
3,3'-Dichlorobenzidine	0.08	3U	3U	2U	3U	3.3U	3.3U	1U	1U	1U	1U	1U
3-Nitroaniline	NA	3U	3U	0.6U	3U	3.3U	3.3U	1U	1U	1U	1U	1U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8U	8U	6U	8U	8.7U	8.8U	5U	5U	5U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	--	--	1U	1U	1U
4-Chloroaniline	30	4U	4U	2U	4U	4.4U	4.4U	1U	1U	1U	1U	1U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	2U	2U	2U	2U	2U
4-Nitroaniline	NA	0.9U	0.9U	0.6U	0.9U	0.98U	0.99U	1U	1U	1U	1U	1U
4-Nitrophenol	NA	10U	10U	11U	10U	11U	11U	10U	10U	10U	10U	10U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Acetophenone	700	4U	4U	0.6U	4U	4.4U	4.4U	2U	2U	2U	2U	2U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Atrazine	3	2U	2U	2U	2U	2.2U	2.2U	1U	1U	1U	1U	1U
Benzaldehyde	NA	3U	3U	1U	3U	3.3U	3.3U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
bis(2-Ethylhexyl)phthalate	2	5U	5U	2U	5U	5.5U	5.5U	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2.2U	2.2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	6UJ	5U	5.5U	5.5U	5U	5U	5U	5U	5U
Carbazole	NA	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2.2U	2.2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	5U	5U	2U	5U	5.5U	5.5U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Dibenzofuran	NA	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
Diethylphthalate	6000	2U	2U	2U	2U	2.2U	2.2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2.2U	2.2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3U	0.6U	3U	3.3U	3.3U	1U	1U	1U	1U	1U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.11U	0.35J	1U	1U	1U	1U	1U
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
Hexachlorocyclopentadiene	40	5U	5U	6U	5U	5.5UJ	5.5U	5U	5U	5U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1.1U	1.1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Isophorone	40	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
N-Nitrosodi-n-propylamine	0.005	0.7U	0.7U	0.6U	0.7U	0.76U	0.77U	1U	1U	1U	1U	1U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7U	0.7U	0.6U	0.7U	0.76U	0.77U	2U	2U	2U	2U	2U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Nitrobenzene	4	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.6U	2U	1.7U	1.8U	1U	1U	1U	1U	1U
Pentachlorophenol	0.3	1U	1U	1U	1U	1.1U	1.1U	3U	3U	3U	3U	3U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	1U	1U	1U	1U	1U
Phenol	2000	0.5U	0.5U	0.6U	0.5U	0.55U	0.55U	1U	1U	1U	1U	1U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.11U	0.4J	1U	1U	1U	1U	1U
Total TIC SVOCS	NA	0U	5J	10JB	15J	0U	-	--	--	--	--	--

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120										
Sample Date		6/3/2005	11/4/2005	6/1/2006	12/5/2006	8/13/2008	7/1/2009	6/8/2010	3/14/2012	5/29/2012	5/30/2012	7/31/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation										
2,4,5-Trichlorophenol	700	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2,4,6-Trichlorophenol	1	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2,4-Dichlorophenol	20	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2,4-Dimethylphenol	100	3U	3U	3U	3U	3UJ	4UJ	3UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2,4-Dinitrophenol	10	20U	19U	20U	20U	21UJ	24UJ	12UJ	10UJ	10UJ	11UJ	10UJ
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1UJ	1UJ	1UJ	1UJ	1UJ	1UJ	1UJ
2,6-Dinitrotoluene	0.05	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2-Chloronaphthalene	600	1U	1U	2U	2U	2UJ	2UJ	2UJ	0.4UJ	0.4UJ	0.5UJ	0.4UJ
2-Chlorophenol (o-Chlorophenol)	40	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2-Methyl-Naphthlalene	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
2-Methylphenol (o-Cresol)	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2-Nitroaniline (o-Nitroaniline)	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
2-Nitrophenol (o-Nitrophenol)	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
3-Nitroaniline	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	5UJ	6UJ	6UJ	5UJ	5UJ	6UJ	5UJ
4-Bromophenylphenylether	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
4-Chloroaniline	30	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
4-Chlorophenyl phenyl ether	NA	1U	1U	2U	2U	2UJ	2UJ	2UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
4-Methylphenol (p-Cresol)	NA	2U	2U	2U	2U	2UJ	2UJ	2UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
4-Nitroaniline	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
4-Nitrophenol	NA	10U	10U	10U	10U	10UJ	12UJ	12UJ	10UJ	10UJ	11UJ	10UJ
Acenaphthene	400	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Acenaphthylene	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Acetophenone	700	2U	2U	2U	2U	2UJ	2UJ	2UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Anthracene	2000	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Atrazine	3	1U	1U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
Benzaldehyde	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	1UJ	1UJ	1UJ	1UJ
Benzo(a)anthracene	0.05	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Benzo(a)pyrene	0.005	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Benzo(b)fluoranthene	0.05	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Benzo(g,h,i)perylene	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Benzo(k)fluoranthene	0.5	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
bis(2-Chloroethoxy)methane	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
bis(2-Chloroethyl) ether	0.03	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
bis(2-chloroisopropyl) ether	300	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
Butylbenzylphthalate	100	2U	2U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
Caprolactam	NA	5U	5U	5U	5U	5UJ	6UJ	6UJ	5UJ	5UJ	6UJ	5UJ
Carbazole	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Chrysene	5	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Di-n-butylphthalate	700	2U	2U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
Di-n-octylphthalate	100	2U	2U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
Dibenz(a,h)anthracene	0.005	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Dibenzofuran	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Diethylphthalate	6000	2U	2U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
Dimethyl phthalate	NA	2U	2U	2U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ	2UJ
Diphenyl (Biphenyl, Phenyl benzene)	400	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Fluoranthene	300	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Fluorene	300	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Hexachlorobenzene	0.02	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Hexachlorobutadiene	0.4	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	5UJ	6UJ	6UJ	5UJ	5UJ	6UJ	5UJ
Hexachloroethane	2	1U	1U	1U	1U	1UJ	1UJ	1UJ	1UJ	1UJ	1UJ	1UJ
Indeno(1,2,3-cd)Pyrene	0.05	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Isophorone	40	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
N-Nitrosodi-n-propylamine	0.005	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
N-Nitrosodiphenylamine (Diphenylamine)	7	2U	2U	2U	2U	2UJ	2UJ	2UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Naphthalene	300	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.5UJ
Nitrobenzene	4	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
p-Chloro-m-cresol	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Pentachlorophenol	0.3	3U	3U	3U	3U	3UJ	4UJ	3UJ	1UJ	1UJ	1UJ	1UJ
Phenanthrene	NA	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Phenol	2000	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.5UJ	0.5UJ	0.6UJ	0.5UJ
Pyrene	200	1U	1U	1U	1U	1UJ	1UJ	1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ
Total TIC SVOCS	NA	--	--	--	--	--	--	--	34J	21J	22J	56J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120									
Sample Date		8/1/2012	9/6/2013	11/11/2013	3/6/2014	5/21/2014	8/6/2014	10/23/2014	3/23/2015	6/1/2015	9/15/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation									
2,4,5-Trichlorophenol	700	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
2,4,6-Trichlorophenol	1	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
2,4-Dichlorophenol	20	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
2,4-Dimethylphenol	100	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
2,4-Dinitrophenol	10	10U	11UJ	12U	11UJ	11U	--	10UJ	11U	--	10UJ
2,4-Dinitrotoluene	0.05	1U	1UJ	1U	1UJ	1U	1U	1U	1U	1U	1UJ
2,6-Dinitrotoluene	0.05	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
2-Chloronaphthalene	600	0.4U	0.4UJ	0.5U	0.5UJ	0.5U	0.4U	0.4U	0.5U	0.4U	0.4UJ
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
2-Methyl-Naphthlalene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
2-Methylphenol (o-Cresol)	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
3,3'-Dichlorobenzidine	0.08	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ
3-Nitroaniline	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	6UJ	6U	6UJ	6U	--	5UJ	6U	--	5UJ
4-Bromophenylphenylether	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
4-Chloroaniline	30	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	2U	2UJ
4-Chlorophenyl phenyl ether	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
4-Methylphenol (p-Cresol)	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
4-Nitroaniline	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
4-Nitrophenol	NA	10U	11UJ	12U	11UJ	11U	--	10UJ	11U	--	10UJ
Acenaphthene	400	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Acenaphthylene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Acetophenone	700	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
Anthracene	2000	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Atrazine	3	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Benzaldehyde	NA	1U	1UJ	1U	1UJ	1U	1U	1U	1U	1U	1UJ
Benzo(a)anthracene	0.05	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(a)pyrene	0.005	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(b)fluoranthene	0.05	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(g,h,i)perylene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(k)fluoranthene	0.5	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
bis(2-Chloroethoxy)methane	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
bis(2-Chloroethyl) ether	0.03	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
bis(2-chloroisopropyl) ether	300	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
bis(2-Ethylhexyl)phthalate	2	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Butylbenzylphthalate	100	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2UJ
Caprolactam	NA	5U	6UJ	6U	6UJ	6U	5U	5U	6U	6U	5UJ
Carbazole	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
Chrysene	5	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Di-n-butylphthalate	700	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Di-n-octylphthalate	100	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Dibenz(a,h)anthracene	0.005	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Dibenzofuran	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
Diethylphthalate	6000	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2UJ
Dimethyl phthalate	NA	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2UJ
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
Fluoranthene	300	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Fluorene	300	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Hexachlorobenzene	0.02	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Hexachlorobutadiene	0.4	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
Hexachlorocyclopentadiene	40	5U	6UJ	6U	6UJ	6U	5U	5U	6U	6U	5UJ
Hexachloroethane	2	1U	1UJ	1U	1UJ	1U	1U	1U	1U	1U	1UJ
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Isophorone	40	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
N-Nitrosodi-n-propylamine	0.005	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
Naphthalene	300	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Nitrobenzene	4	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	0.5U	0.5U	0.6U	0.6U	0.5UJ
p-Chloro-m-cresol	NA	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
Pentachlorophenol	0.3	1U	1UJ	1U	1UJ	1U	--	1UJ	1U	--	1UJ
Phenanthrene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Phenol	2000	0.5U	0.6UJ	0.6U	0.6UJ	0.6U	--	0.5UJ	0.6U	--	0.5UJ
Pyrene	200	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Total TIC SVOCS	NA	85J	64J	89J	61J	68J	68J	64J	43J	72J	92J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120								MW-120		
Sample Date		11/16/2015	1/13/2016	4/8/2016	7/25/2016	10/21/2016	1/20/2017	4/18/2017	8/31/2017	10/12/2017	1/22/2018	4/10/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Cell 2 Operation		
2,4,5-Trichlorophenol	700	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U
2,4-Dinitrophenol	10	11U	--	10UJ	10U	10UJ	10UJ	10UJ	10U	10U	10UJ	10U
2,4-Dinitrotoluene	0.05	1U	1U	1UJ	1U	1.0UJ	1UJ	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4UJ	0.4U	0.40UJ	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
3-Nitroaniline	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	--	5UJ	5U	5.1UJ	5UJ	5U	5U	5U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chloroaniline	30	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitrophenol	NA	11U	--	10UJ	10U	10UJ	10UJ	10U	10U	10U	10U	10U
Acenaphthene	400	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Anthracene	2000	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1UJ	1U	1.0UJ	1UJ	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5UJ	5U	5.1UJ	5UJ	5U	5UJ	5U	5UJ	5U
Carbazole	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2UJ	2U	2.0UJ	2UJ	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Fluoranthene	300	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.2J	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5UJ	5U	5.1UJ	5UJ	5U	5UJ	5UJ	5U	5U
Hexachloroethane	2	1U	1U	1UJ	1U	1.0UJ	1UJ	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	300	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	--	1UJ	1U	1.0UJ	1UJ	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5U	--	0.5UJ	0.5U	0.51UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1UJ	0.1U	0.10UJ	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	92J	100J	0UJ	30JB	0UJ	0UJ	6J	510J	23JB	56JB	84J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120									
Sample Date		7/16/2018	10/30/2018	1/3/2019	4/3/2019	7/1/2019	9/25/2019	1/3/2020	4/7/2020	7/14/2020	10/12/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation									
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.57UJ	0.53UJ
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.57UJ	0.53UJ
2,4-Dichlorophenol	20	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.57UJ	0.53UJ
2,4-Dimethylphenol	100	3U	3U	3UJ	3UJ	3UJ	3UJ	3U	3U	3.4UJ	3.2UJ
2,4-Dinitrophenol	10	14U	15U	14UJ	14U	14UJ	15UJ	15U	15U	16UJ	15UJ
2,4-Dinitrotoluene	0.05	1U	1U	1U	1UJ	1UJ	1U	1U	1U	1.1U	1.1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
2-Chloronaphthalene	600	0.4U	0.4UJ	0.4UJ	0.4UJ	0.4UJ	0.4U	0.4U	0.4U	0.45U	0.43U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.57UJ	0.53UJ
2-Methyl-Naphthlalene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.57UJ	0.53UJ
2-Nitroaniline (o-Nitroaniline)	NA	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2.3U	2.1U
2-Nitrophenol (o-Nitrophenol)	NA	3U	3U	3UJ	3U	3UJ	3UJ	3U	3UJ	3.4UJ	3.2UJ
3,3'-Dichlorobenzidine	0.08	3U	3U	3U	3UJ	3UJ	3U	3U	3U	3.4U	3.2U
3-Nitroaniline	NA	3U	3U	3U	3UJ	3UJ	3U	3U	3U	3.4U	3.2U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8U	9U	8UJ	8U	8UJ	8UJ	8U	9U	9.1UJ	8.5UJ
4-Bromophenylphenylether	NA	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
4-Chloroaniline	30	4U	4U	4U	4UJ	4UJ	4U	4U	4U	4.5U	4.3U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5UJ	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.57UJ	0.53UJ
4-Nitroaniline	NA	0.9U	1U	0.9U	0.9UJ	0.9UJ	0.9U	0.9U	1U	1U	0.96U
4-Nitrophenol	NA	10U	11U	10U	10UJ	10UJ	11UJ	10U	11U	11UJ	11UJ
Acenaphthene	400	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Acetophenone	700	4U	4U	4U	4UJ	4UJ	4U	4U	4U	4.5U	4.3U
Anthracene	2000	0.1U	0.1J	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Atrazine	3	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2.3U	2.1U
Benzaldehyde	NA	3U	3U	3U	3UJ	3UJ	3U	3U	3U	3.4U	3.2U
Benzo(a)anthracene	0.05	0.1U	**[0.2J]**	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Benzo(a)pyrene	0.005	0.1U	**[0.2J]**	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Benzo(b)fluoranthene	0.05	0.1U	**[0.1J]**	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Benzo(g,h,i)perylene	NA	0.1U	0.2J	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Benzo(k)fluoranthene	0.5	0.1U	0.2J	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
bis(2-Ethylhexyl)phthalate	2	5U	5U	5U	5UJ	5UJ	5U	5U	5U	5.7U	5.3U
Butylbenzylphthalate	100	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2.3U	2.1U
Caprolactam	NA	5U	5U	5U	5UJ	5UJ	5U	5U	5U	5.7U	5.3U
Carbazole	NA	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
Chrysene	5	0.1U	0.2J	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Di-n-butylphthalate	700	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2.3U	2.1U
Di-n-octylphthalate	100	5U	5U	5U	5UJ	5UJ	5U	5U	5U	5.7U	5.3U
Dibenz(a,h)anthracene	0.005	0.1U	**[0.1J]**	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Dibenzofuran	NA	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
Diethylphthalate	6000	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2.3U	2.1U
Dimethyl phthalate	NA	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2.3U	2.1U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3UJ	3U	3UJ	3UJ	3U	3U	3U	3.4U	3.2U
Fluoranthene	300	0.1U	0.1J	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Fluorene	300	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
Hexachlorocyclopentadiene	40	5U	-	5U	5UJ	5UJ	5U	5U	5U	5.7UJ	5.3U
Hexachloroethane	2	1U	1U	1U	1UJ	1UJ	1U	1U	1U	1.1U	1.1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	**[0.1J]**	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Isophorone	40	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
N-Nitrosodi-n-propylamine	0.005	0.7U	0.7U	0.7U	0.7UJ	0.7UJ	0.7U	0.7U	0.8U	0.8U	0.75U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7U	0.7U	0.7U	0.7UJ	0.7UJ	0.7U	0.7U	0.8U	0.8U	0.75U
Naphthalene	300	0.1U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.57U	0.53U
p-Chloro-m-cresol	NA	0.5U	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	2U	1.8UJ	1.7UJ
Pentachlorophenol	0.3	1U	1U	1UJ	1U	1UJ	1UJ	1U	1U	1.1UJ	1.1UJ
Phenanthrene	NA	0.1U	0.2J	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Phenol	2000	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.57UJ	0.53UJ
Pyrene	200	0.1U	0.2J	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U	0.11U	0.11U
Total TIC SVOCS	NA	9J	23J	91J	24JB	-	110J	32J	0U	-	-

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-211								
Sample Date		6/26/2013	5/22/2014	8/5/2014	9/26/2014	10/30/2014	3/12/2015	3/24/2015	6/8/2015	9/16/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation								
2,4,5-Trichlorophenol	700	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4-Dichlorophenol	20	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4-Dimethylphenol	100	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2,4-Dinitrophenol	10	11U	11U	11U	11U	10U	10U	11UJ	10U	10U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Chloronaphthalene	600	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	1	0.1U	0.8	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2U	2U	2U	2U
3-Nitroaniline	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	6U	6U	6U	5U	5U	5U	6U	5U	5U
4-Bromophenylphenylether	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Chloroaniline	30	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Nitroaniline	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
4-Nitrophenol	NA	11U	11U	11U	11U	10U	10U	11U	10U	10U
Acenaphthene	400	50	23	81	32	23	31	27	30	33
Acenaphthylene	NA	0.3J	0.1U	1	0.2J	0.2J	0.1J	0.2J	0.2J	0.1U
Acetophenone	700	0.6U	0.6U	0.8J	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Anthracene	2000	6	2	54	5	4	4	3	3	3
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1UJ	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	**[0.5J]**	0.1U	**[80]**	**[0.1J]**	**[0.1J]**	**[0.1J]**	0.1U	0.1U	**[0.1J]**
Benzo(a)pyrene	0.005	**[0.3J]**	0.1U	**[55]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	**[0.3J]**	0.1U	**[58]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1UJ	0.1U	25	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.2J	0.1U	**[25]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	**[12]**	2U	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	6U	6U	6U	5U	9J	5U	6U	5U	5U
Carbazole	NA	16	5	9	7	2	3	4	7	8
Chrysene	5	0.5J	0.1U	**[72]**	0.1J	0.1J	0.1J	0.1U	0.1U	0.2J
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	**[9]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	21	9	39	13	9	12	11	13	14
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Fluoranthene	300	4	1	190	4	3	3	2	2	2
Fluorene	300	27	12	55	18	14	17	15	17	17
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.6U	0.6U	0.6U	0.5U	0.5UJ	0.5U	0.6U	0.5U	0.5U
Hexachlorocyclopentadiene	40	6U	6U	6U	5U	5U	5U	6U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	**[25]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Naphthalene	300	1J	0.7	1	0.1U	0.1U	0.4J	1	0.5J	0.3J
Nitrobenzene	4	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	14	0.5J	74	0.1U	0.1U	0.5	0.6J	4	3
Phenol	2000	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U
Pyrene	200	3	1	130	2	2	2	1	1	1
Total TIC SVOCS	NA	280J	360J	260J	220J	58J	--	330J	340J	110J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-211								MW-233	
Sample Date		11/16/2015	12/17/2015	1/14/2016	4/8/2016	7/22/2016	12/8/2016	1/19/2017	4/18/2017	3/21/2012	5/24/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Pre-CAMU Operation	
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2,4-Dimethylphenol	100	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2,4-Dinitrophenol	10	10U	10U	10U	10UJ	10U	9U	11UJ	10U	9U	11UJ
2,4-Dinitrotoluene	0.05	1U	1U	1U	1UJ	1U	0.9U	1U	1U	0.9U	1UJ
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2-Methyl-Naphthlalene	NA	0.1U	0.3J	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	12	10J
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2UJ
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	6UJ
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Chloroaniline	30	2U	2U	2U	2UJ	2U	2U	2U	2U	0.5U	0.6UJ
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Nitrophenol	NA	10U	10U	10U	10UJ	10U	9U	11UJ	10U	9U	11UJ
Acenaphthene	400	29	56	36	33J	44	47	52	59	2	2J
Acenaphthylene	NA	0.2J	0.3J	0.2J	0.2J	0.1U	0.4J	0.4J	0.5J	0.09U	0.1UJ
Acetophenone	700	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Anthracene	2000	3	5	3	3J	3	4	5	5	0.2J	0.1UJ
Atrazine	3	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Benzaldehyde	NA	1U	1U	1U	1UJ	1U	0.9U	1U	1U	0.9U	4J
Benzo(a)anthracene	0.05	**[0.2J]**	**[0.3J]**	0.1U	**[0.2J]**	0.1U	**[0.1J]**	**[0.2J]**	0.1J	0.09U	0.1UJ
Benzo(a)pyrene	0.005	0.1U	**[0.2J]**	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.09U	0.1UJ
Benzo(b)fluoranthene	0.05	0.1U	**[0.2J]**	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.09U	0.1UJ
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.09U	0.1UJ
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.09U	0.1UJ
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	**[4J]**	2U	2U	2U	2U	2U	2UJ
Butylbenzylphthalate	100	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Caprolactam	NA	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	6UJ
Carbazole	NA	10	9	6	12J	16	0.5U	11	10	0.5U	0.6UJ
Chrysene	5	0.2J	0.3J	0.1U	0.2J	0.1U	0.09U	0.2J	0.1U	0.09U	0.1UJ
Di-n-butylphthalate	700	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Di-n-octylphthalate	100	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2UJ
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.09U	0.1UJ
Dibenzofuran	NA	12	21	15	14J	19	19	19	25	0.5U	0.6J
Diethylphthalate	6000	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	5J
Dimethyl phthalate	NA	2U	2U	2UJ	2UJ	2U	2U	2U	2U	2U	2UJ
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Fluoranthene	300	3	4	2	3J	3	4	4	3	0.1J	0.1UJ
Fluorene	300	15	29	19	19J	23	24	29	34	1	1J
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.09U	0.1UJ
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Hexachlorocyclopentadiene	40	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	6UJ
Hexachloroethane	2	1U	1U	1U	1UJ	1U	0.9U	1U	1U	0.9U	1UJ
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.09U	0.1UJ
Isophorone	40	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Naphthalene	300	0.3J	2	0.2J	0.3J	0.6	0.09U	1	1	16	10J
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Pentachlorophenol	0.3	1U	1U	1U	1UJ	1U	0.9U	1U	1U	0.9U	1UJ
Phenanthrene	NA	0.9	8	3	1J	0.5J	0.8	0.9	4	1	1J
Phenol	2000	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	13J
Pyrene	200	2	2	1	2J	2	2	2	2	0.09U	0.1UJ
Total TIC SVOCS	NA	100J	--	160J	140J	170JB	140JB	200JB	320JB	160J	130J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233										
Sample Date		5/25/2012	7/25/2012	7/26/2012	4/25/2013	6/17/2013	6/25/2013	9/10/2013	11/12/2013	3/14/2014	8/4/2014	8/8/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation										
2,4,5-Trichlorophenol	700	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U
2,4,6-Trichlorophenol	1	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U
2,4-Dichlorophenol	20	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U
2,4-Dimethylphenol	100	33	1	5U	0.5U	0.6U	4	1J	2	0.6U	4	0.6U
2,4-Dinitrophenol	10	9U	10U	110U	10U	11U	11U	11U	12U	13U	12U	11U
2,4-Dinitrotoluene	0.05	0.9U	1U	11U	1U	1U	1U	1U	1U	1U	1UJ	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
2-Chloronaphthalene	600	0.4U	0.4U	4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.5U	0.5UJ	0.5U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U
2-Methyl-Naphthlalene	NA	20	0.1U	2J	0.1U	0.1U	0.1U	6	4	6	1J-	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	4	3	0.6U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U
3,3'-Dichlorobenzidine	0.08	2U	2U	21U	2U	2U	2U	2U	2U	3U	2UJ	2U
3-Nitroaniline	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	53U	5U	6U	5U	5U	6U	6U	6U	6U
4-Bromophenylphenylether	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
4-Chloroaniline	30	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	4	10	23	0.6U
4-Nitroaniline	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
4-Nitrophenol	NA	9U	10U	110U	10U	11U	11U	11U	12U	13U	12U	11U
Acenaphthene	400	3	0.9	3J	0.9	0.7	0.5J	4	2	1	0.8J-	0.1U
Acenaphthylene	NA	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Acetophenone	700	2	0.5U	5U	0.5U	0.6U	0.5U	0.5U	18	0.6U	14J-	0.6U
Anthracene	2000	0.4J	0.1U	1U	0.1U	0.1U	0.1U	1	0.1J	0.2J	0.2J-	0.1U
Atrazine	3	2U	2U	21U	2U	2U	2U	2U	2U	3U	2UJ	2U
Benzaldehyde	NA	0.9U	1U	11U	1U	1U	1U	1U	1U	1U	1UJ	1U
Benzo(a)anthracene	0.05	0.09U	0.1U	1U	0.1U	0.1U	0.1U	**[0.2J]**	0.1U	0.1U	0.1UJ	0.1U
Benzo(a)pyrene	0.005	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Benzo(b)fluoranthene	0.05	**[0.1J]**	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Benzo(g,h,i)perylene	NA	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Benzo(k)fluoranthene	0.5	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U
bis(2-Ethylhexyl)phthalate	2	2U	2U	21U	**[9]**	2U	**[5]**	2U	2U	**[4J]**	**[3J-]**	2U
Butylbenzylphthalate	100	2U	2U	21U	2U	2U	2U	2U	2U	3U	2UJ	2U
Caprolactam	NA	5U	5U	53U	5U	6U	5U	5U	6U	6U	6UJ	6U
Carbazole	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
Chrysene	5	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1UJ	0.1U
Di-n-butylphthalate	700	2U	2U	21U	2U	2U	2U	2U	2U	3U	2UJ	2U
Di-n-octylphthalate	100	2U	2U	21U	2U	2U	2U	2U	2U	3U	2UJ	2U
Dibenz(a,h)anthracene	0.005	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Dibenzofuran	NA	0.9J	0.5U	5U	0.5U	0.6U	0.5U	1J	0.6U	0.6U	0.6UJ	0.6U
Diethylphthalate	6000	2U	2U	21U	2U	2U	2U	2UJ	2U	3U	2UJ	2U
Dimethyl phthalate	NA	2U	2U	21U	2U	2U	2U	2UJ	2U	3U	2UJ	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
Fluoranthene	300	0.3J	0.1U	1J	0.1J	0.1U	0.2J	1	0.2J	0.1J	0.1UJ	0.1U
Fluorene	300	2	0.6	3J	0.4J	0.5J	0.2J	3	1	0.5J	0.4J-	0.1U
Hexachlorobenzene	0.02	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
Hexachlorocyclopentadiene	40	5U	5U	53U	5U	6U	5U	5U	6U	6U	6UJ	6U
Hexachloroethane	2	0.9U	1U	11U	1U	1U	1U	1U	1U	1U	1UJ	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.09U	0.1U	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U
Isophorone	40	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
Naphthalene	300	17	0.1U	1U	6	0.1U	4J	31	13	15	4J-	0.1U
Nitrobenzene	4	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6UJ	0.6U
p-Chloro-m-cresol	NA	0.5U	0.5U	5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U
Pentachlorophenol	0.3	0.9U	1U	11U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	2	0.1U	4J	0.1U	0.1U	0.1U	3	0.7	0.4J	0.6J-	0.1U
Phenol	2000	28	6	7J	11	0.6U	3	3	0.6U	11	130	0.6U
Pyrene	200	0.3J	0.1J	2J	0.2J	0.1U	0.3J	1	0.2J	0.1J	0.1UJ	0.1U
Total TIC SVOCS	NA	450J	890J	1100J	820J	1100J	610J	960J	1400J	1900J	1500J	1300J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233					MW-233					
Sample Date		10/31/2014	1/16/2015	3/11/2015	6/9/2015	9/21/2015	11/19/2015	12/11/2015	1/14/2016	4/14/2016	7/26/2016	12/8/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation					Cell 1 Operation					
2,4,5-Trichlorophenol	700	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
2,4,6-Trichlorophenol	1	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
2,4-Dichlorophenol	20	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
2,4-Dimethylphenol	100	5U	5	5	2	0.8J	2	0.5U	0.5U	0.5U	5U	5U
2,4-Dinitrophenol	10	100U	11U	11U	10U	10U	11U	10U	10U	10U	100U	94U
2,4-Dinitrotoluene	0.05	10U	1U	1U	1U	1U	1U	1U	1U	1U	10U	9U
2,6-Dinitrotoluene	0.05	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
2-Chloronaphthalene	600	4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	4U	4U
2-Chlorophenol (o-Chlorophenol)	40	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
2-Methyl-Naphthlalene	NA	1J	0.9	1	0.2J	0.1U	2	2	0.5	0.2J	1U	3J
2-Methylphenol (o-Cresol)	NA	5U	4	5	0.5U	0.5U	0.6U	1J	0.5U	0.5U	5U	5U
2-Nitroaniline (o-Nitroaniline)	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
2-Nitrophenol (o-Nitrophenol)	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
3,3'-Dichlorobenzidine	0.08	20U	2U	2U	2U	2U	2U	2U	2U	2U	20U	19U
3-Nitroaniline	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	50U	5U	5U	5U	5U	6U	5U	5U	5U	51U	47U
4-Bromophenylphenylether	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
4-Chloroaniline	30	5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	20U	19U
4-Chlorophenyl phenyl ether	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
4-Methylphenol (p-Cresol)	NA	27	5	2	0.5U	0.5U	0.8J	0.6J	0.5U	0.5U	5U	5U
4-Nitroaniline	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
4-Nitrophenol	NA	100U	11U	11U	10U	10U	11U	10U	10U	10U	100U	94U
Acenaphthene	400	1U	2	1	2	3	2	3	2	2	3J	2J
Acenaphthylene	NA	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Acetophenone	700	5U	0.5U	0.5U	0.5U	0.5U	38	0.5U	0.5U	0.5U	5U	5U
Anthracene	2000	1U	0.2J	0.2J	0.1J	0.3J	0.3J	0.3J	0.1U	0.2J	1U	0.9U
Atrazine	3	20U	2U	2U	2U	2U	2U	2U	2U	2U	20U	19U
Benzaldehyde	NA	10U	1U	1U	1U	3J	3J	1U	1U	1U	10U	9U
Benzo(a)anthracene	0.05	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Benzo(a)pyrene	0.005	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Benzo(b)fluoranthene	0.05	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Benzo(g,h,i)perylene	NA	1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Benzo(k)fluoranthene	0.5	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
bis(2-Chloroethoxy)methane	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
bis(2-Chloroethyl) ether	0.03	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
bis(2-chloroisopropyl) ether	300	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
bis(2-Ethylhexyl)phthalate	2	20U	**[3J]**	**[3J]**	2U	2U	**[2J]**	**[6]**	2U	**[5J]**	20U	19U
Butylbenzylphthalate	100	20U	2U	2U	2U	2U	2U	2U	2U	2U	20U	19U
Caprolactam	NA	50U	5U	5U	5U	5U	6U	5U	5U	5U	51U	47U
Carbazole	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
Chrysene	5	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Di-n-butylphthalate	700	20U	2U	2U	2U	2U	2U	2U	2U	2U	20U	19U
Di-n-octylphthalate	100	20U	2U	2U	2U	2U	2U	2U	2U	2U	20U	19U
Dibenz(a,h)anthracene	0.005	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Dibenzofuran	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6J	0.7J	0.5U	0.5U	5U	5U
Diethylphthalate	6000	20U	2U	2U	2U	2U	2U	2U	2U	2U	20U	19U
Dimethyl phthalate	NA	20U	2U	2U	2U	2U	2U	2U	2UJ	2U	20U	19U
Diphenyl (Biphenyl, Phenyl benzene)	400	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
Fluoranthene	300	1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.4J	0.1J	0.1U	1U	0.9U
Fluorene	300	1U	1	0.9	1	2	2	2	2	1	2J	0.9U
Hexachlorobenzene	0.02	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Hexachlorobutadiene	0.4	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
Hexachlorocyclopentadiene	40	50U	5U	5U	5U	5U	6U	5U	5U	5U	51U	47U
Hexachloroethane	2	10U	1U	1U	1U	1U	1U	1U	1U	1U	10U	9U
Indeno(1,2,3-cd)Pyrene	0.05	1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1U	0.9U
Isophorone	40	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
N-Nitrosodi-n-propylamine	0.005	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
N-Nitrosodiphenylamine (Diphenylamine)	7	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
Naphthalene	300	4J	12	10	11	7	13	21	19	8	19	18
Nitrobenzene	4	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
p-Chloro-m-cresol	NA	5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
Pentachlorophenol	0.3	10U	1U	1U	1U	1U	1U	1U	1U	1U	10U	9U
Phenanthrene	NA	2J	1	0.6	0.8	1	1	0.1U	0.1U	0.5	2J	1J
Phenol	2000	55	9	4	4	0.5U	0.6U	0.5U	0.5U	0.5U	5U	5U
Pyrene	200	1U	0.2J	0.2J	0.1J	0.2J	0.3J	0.4J	0.2J	0.2J	1U	0.9U
Total TIC SVOCS	NA	930J	--	810J	2800J	3200J	2600J	1500J	1900J	2900J	3000J	2600J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233			MW-233						
Sample Date		1/23/2017	4/28/2017	7/24/2017	10/12/2017	1/26/2018	4/16/2018	7/19/2018	10/24/2018	1/7/2019	4/4/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation			Cell 2 Operation						
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	0.6J	1	0.5U	5UJ	0.5J	3UJ	3U	3U	3U
2,4-Dinitrophenol	10	10U	10U	11U	10U	100UJ	10U	14UJ	14U	14U	15U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	10UJ	1U	1UJ	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	4UJ	0.4U	0.4UJ	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.3J	0.4J	0.1U	0.1U	45J	0.1U	0.1UJ	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.9J	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	2UJ	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	3UJ	3U	3U	3U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	20UJ	2U	3UJ	3U	3U	3U
3-Nitroaniline	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	3UJ	3U	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	6U	5U	50UJ	5U	8UJ	8U	8U	8U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
4-Chloroaniline	30	2U	2U	2U	2U	20UJ	2U	4UJ	4U	4U	4U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.9UJ	0.9U	0.9U	0.9U
4-Nitrophenol	NA	10U	10U	11U	10U	100UJ	10U	10UJ	10U	10U	11U
Acenaphthene	400	2	3	1	4	2J	2	2J	1	1	1
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	4UJ	4U	4U	4U
Anthracene	2000	0.1U	0.4J	0.3J	1	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.4J
Atrazine	3	2U	2U	2U	2U	20UJ	2U	2UJ	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	10UJ	1U	3UJ	3U	3U	3U
Benzo(a)anthracene	0.05	0.1U	0.1J	0.1U	**[0.3J]**	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1J	0.1U	**[0.2J]**	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1J	0.1U	**[0.2J]**	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.2J
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1J	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	**[20]**	**[9]**	**[15]**	**[24J]**	2U	5UJ	5U	5U	5U
Butylbenzylphthalate	100	2U	2U	2U	2U	20UJ	2U	2UJ	2U	2U	2U
Caprolactam	NA	5U	5UJ	6U	5U	50UJ	5U	5UJ	5U	5U	5U
Carbazole	NA	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.2J	0.1U	0.4J	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	20UJ	2U	2UJ	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	20UJ	2U	5UJ	5U	5U	5U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	**[0.2J]**
Dibenzofuran	NA	0.5U	0.7J	0.6U	1	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	20UJ	2U	2UJ	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	20UJ	2U	2UJ	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	3UJ	3U	3U	3U
Fluoranthene	300	0.2J	0.6	0.4J	2	5UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
Fluorene	300	1	2	0.9	3	3J	0.9	1J	0.7	0.7	0.7
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	6U	5UJ	50UJ	5U	5UJ	5R	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	10UJ	1U	1UJ	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	**[0.2J]**
Isophorone	40	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.7UJ	0.7U	0.7U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.7UJ	0.7U	0.7U	0.7U
Naphthalene	300	6	0.1U	1	0.1U	28J	2	3J	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.6U	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	1	0.5U	5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	10UJ	1U	1UJ	1U	1U	1U
Phenanthrene	NA	0.7	1	0.7	5	4J	0.5	0.1UJ	0.7	0.1U	0.6
Phenol	2000	0.5U	0.5U	2	0.5U	5UJ	0.5U	0.5UJ	1J	0.5U	0.5U
Pyrene	200	0.1J	0.8	0.4J	2	5UJ	0.3J	0.1UJ	0.3J	0.1U	0.1U
Total TIC SVOCS	NA	2400JB	1200J	660J	--	2200J	2200J	3100J	820J	920J	1200J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233						MW-233	MW-234R			
Sample Date		7/3/2019	10/8/2019	1/7/2020	4/2/2020	7/7/2020	10/12/2020	12/3/2020	7/26/2013	8/1/2014	1/16/2015	9/18/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation						Post CAMU Closure	Pre-CAMU Operation			
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
2,4-Dimethylphenol	100	3U	3U	3U	3U	3.4U	3.2U	3U	2	2	2	1J
2,4-Dinitrophenol	10	14U	14U	15U	15U	16U	15U	14U	11U	13U	11U	10U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1.1U	1.1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.45U	0.42U	0.4U	0.5U	0.5U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.23J	0.11U	0.1U	10	0.8	0.4J	0.1J
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.7J	0.6J
2-Nitroaniline (o-Nitroaniline)	NA	2U	2U	2U	2U	2.3U	2.1U	2U	0.6U	0.7U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	3U	3U	3U	3U	3.4U	3.2U	3U	0.6U	0.7U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	3U	3U	3U	3U	3.4U	3.2U	3UJ	2U	3U	2U	2U
3-Nitroaniline	NA	3U	3U	3U	3U	3.4U	3.2U	3U	0.6U	0.7U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8U	8U	9U	8U	9.1U	8.4U	8UJ	6U	7U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5UJ	0.6U	0.7U	0.5U	0.5U
4-Chloroaniline	30	4U	4U	4U	4U	4.5U	4.2U	4U	0.6U	0.7U	0.5U	2U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.8J	0.5U	1.4J	0.53U	0.5U	2	0.7U	0.8J	0.7J
4-Nitroaniline	NA	0.9U	0.9U	1U	1U	1U	0.95U	0.9U	0.6U	0.7U	0.5U	0.5U
4-Nitrophenol	NA	10U	10U	11U	11U	11U	11U	10U	11U	13U	11U	10U
Acenaphthene	400	1	2	1	2	1.5	1.6	2.3	0.5J	0.6J	0.5J	0.3J
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	4U	4U	21	4U	4.5U	4.2U	4U	0.6U	0.7U	0.5U	1
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1UJ	0.1J	0.2J	0.3J	0.2J
Atrazine	3	2U	2U	2U	2U	2.3U	2.1U	2UJ	2U	3U	2U	2U
Benzaldehyde	NA	3U	3U	3U	3U	3.4U	3.2U	3U	1U	1U	1U	5
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1UJ	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5UJ	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	5U	**6J**	5U	5U	5.7U	5.3U	5UJ	2U	3U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2.3U	2.1U	2UJ	2U	3U	2U	2U
Caprolactam	NA	5U	5U	5U	5U	5.7U	5.3U	5U	6U	7U	5U	5U
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5UJ	0.7J	1J	0.8J	0.8J
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1UJ	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2.3U	2.1U	2UJ	2U	3U	2U	2U
Di-n-octylphthalate	100	5U	5U	5U	5U	5.7U	5.3U	5U	2U	3U	2U	3J
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.8J	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2.3U	2.1U	2U	2U	3U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2.3U	2.1U	2U	2U	3U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3U	3U	3U	3.4U	3.2U	3U	0.6U	0.7U	0.5U	0.5U
Fluoranthene	300	0.1U	0.4J	0.3J	0.1U	0.11U	0.11U	0.1UJ	0.1U	0.1U	0.2J	0.2J
Fluorene	300	0.8	2	0.8	0.5	0.93	0.95	1.5	0.4J	0.5J	0.4J	0.4J
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1UJ	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	5.7U	5.3U	5U	6U	7U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1.1U	1.1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.7U	0.7U	0.8U	0.7U	0.8U	0.74U	0.7U	0.6U	0.7U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7U	0.7U	0.8U	0.7U	0.8U	0.74U	0.7UJ	0.6U	0.7U	0.5U	0.5U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.11U	0.11U	0.1U	54	3	0.1U	1
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.57U	0.53U	0.5U	0.6U	0.7U	0.5U	**[4]**
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	2U	1.8U	1.7U	1.6U	0.6U	0.7U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1.1U	1.1U	1UJ	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.8	0.11U	0.11U	1.3J	0.3J	0.3J	0.4J	0.1J
Phenol	2000	0.5U	0.5U	7	0.5U	20	0.53U	0.5U	0.6U	1J	1	1
Pyrene	200	0.1U	0.8	0.3J	0.1U	0.21J	0.11U	0.1UJ	0.1U	0.1U	0.2J	0.2J
Total TIC SVOCS	NA	1900J	1600J	650J	2200J	-	-	-	1000J	440J	--	610J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234R									
Sample Date		11/19/2015	12/15/2015	1/13/2016	4/14/2016	7/25/2016	12/6/2016	1/23/2017	3/22/2017	4/28/2017	5/17/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation									
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
2,4-Dimethylphenol	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
2,4-Dinitrophenol	10	11U	10U	11U	10U	10U	10UJ	10UJ	-	11U	-
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1UJ	1UJ	-	1U	-
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4UJ	-	0.4U	-
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.3J	1	0.2J	0.1J	-	0.5J	-
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	1	0.5J	0.9J	2J	-	0.8J	-
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	5U	5UJ	5UJ	-	5U	-
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
4-Chloroaniline	30	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
4-Methylphenol (p-Cresol)	NA	0.8J	0.5U	0.5U	2	0.8J	0.5UJ	5J	-	2	-
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
4-Nitrophenol	NA	11U	10U	11U	10U	10U	10UJ	10UJ	-	11U	-
Acenaphthene	400	0.4J	0.6	0.5J	0.5J	0.6	0.5J	0.3J	-	0.4J	-
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Acetophenone	700	2	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
Anthracene	2000	0.2J	0.3J	0.2J	0.2J	0.2J	0.1J	0.1J	-	0.1J	-
Atrazine	3	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
Benzaldehyde	NA	13	1U	1U	1U	1U	1UJ	1UJ	-	1U	-
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
Caprolactam	NA	5U	5U	5U	5U	5U	5UJ	5UJ	-	5UJ	-
Carbazole	NA	0.8J	0.9J	0.8J	0.8J	1	0.7J	0.5UJ	-	0.6J	-
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
Diethylphthalate	6000	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2UJ	2UJ	-	2U	-
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
Fluoranthene	300	0.1U	0.2J	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Fluorene	300	0.3J	0.6	0.3J	0.3J	0.5J	0.3J	0.2J	-	0.3J	-
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	5U	5UJ	5UJ	-	5U	-
Hexachloroethane	2	1U	1U	1U	1U	1U	1UJ	1UJ	-	1U	-
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	-	0.1U	-
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
Naphthalene	300	2	0.1U	0.1U	0.1U	0.1U	0.1UJ	2J	-	0.1U	-
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	-	0.5U	-
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1UJ	1UJ	-	1U	-
Phenanthrene	NA	0.1J	0.6	0.2J	0.2J	0.2J	0.1UJ	0.1UJ	-	0.2J	-
Phenol	2000	0.5U	0.7J	0.5U	0.5U	1	0.5UJ	6J	-	3	-
Pyrene	200	0.1U	0.2J	0.1U	0.1U	0.1U	0.1UJ	0.1J	-	0.1U	-
Total TIC SVOCS	NA	780J	--	740J	1200J	1300J	680JB	720J	--	600J	--

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234RR									
Sample Date		10/16/2017	10/16/2017	1/26/2018	4/16/2018	7/19/2018	10/23/2018	1/7/2019	1/7/2019	4/4/2019	7/3/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation									
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	0.5U	0.5U	0.5U	3UJ	-	3U	3U	3U	3U
2,4-Dinitrophenol	10	10U	10U	10U	10U	14UJ	-	14U	14U	14U	14U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.4J	0.4J	0.1J	0.1U	0.2J	0.4J	0.1U	0.1U	0.1U	0.1J
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.5U	2UJ	2U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	3UJ	-	3U	3U	3U	3U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	3UJ	3U	3U	3U	3U	3U
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	3UJ	3U	3U	3UJ	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	8UJ	-	8U	8U	8U	8U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chloroaniline	30	2U	2U	2U	2U	4UJ	4U	4U	4UJ	4U	4U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5J	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.9UJ	0.9U	0.9U	0.9UJ	0.9U	0.9U
4-Nitrophenol	NA	10U	10U	10U	10U	10UJ	-	10U	10U	10U	10U
Acenaphthene	400	0.5J	0.4J	0.5	0.4J	0.7J	0.5	0.5	0.5	0.5	0.5J
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.5U	0.5U	4UJ	4U	4U	4U	4U	4U
Anthracene	2000	0.1U	0.1U	0.1J	0.1U	0.2J	0.2J	0.1J	0.1U	0.2J	0.1U
Atrazine	3	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	3UJ	3U	3U	3U	3U	3U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	5UJ	5U	5U	5U	5U	5U
Butylbenzylphthalate	100	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5U	5UJ	5UJ	5U	5U	5U	5U	5U
Carbazole	NA	0.6J	0.7J	0.5U	0.5U	0.5J	0.5U	0.5U	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	5UJ	5U	5U	5U	5U	5U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.5U	3UJ	3U	3U	3U	3U	3U
Fluoranthene	300	0.1U	0.1U	0.5U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.3J	0.3J	0.3J	0.3J	0.4J	0.5J	0.3J	0.3J	0.3J	0.3J
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5UJ	5UJ	5U	5U	5UJ	5U	5U	5U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.5U	0.7UJ	0.7U	0.7U	0.7U	0.7U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.5U	0.7UJ	0.7U	0.7U	0.7U	0.7U	0.7U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	2J	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1UJ	-	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.2J	0.3J	0.1J	0.1U	0.2J	0.1U
Phenol	2000	3J	2J	2	0.5U	0.5UJ	-	0.5U	0.5U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.5U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	590J	640JB	620J	280J	260JB	330JB	270JB	180JB	180J	350J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234RR					MW-234RR	MW-322				
Sample Date		10/1/2019	1/7/2020	4/2/2020	7/7/2020	10/13/2020	12/3/2020	3/15/2012	5/16/2012	5/17/2012	7/30/2012	7/31/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation					Post CAMU Closure	Pre-CAMU Operation				
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
2,4-Dimethylphenol	100	3U	3U	3U	3UJ	3.2U	3.1U	5U	5U	0.5U	5U	5U
2,4-Dinitrophenol	10	15U	15U	14U	14UJ	15U	14U	100U	100U	10U	100U	98U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1UJ	1.1U	1U	10U	10U	1U	10U	10U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4UJ	0.42U	0.41U	4U	4U	0.4U	4U	4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
2-Nitroaniline (o-Nitroaniline)	NA	2U	2U	2U	2UJ	2.1U	2.1U	5U	5U	0.5U	5U	5U
2-Nitrophenol (o-Nitrophenol)	NA	3U	3U	3U	3UJ	3.2U	3.1U	5U	5U	0.5U	5U	5U
3,3'-Dichlorobenzidine	0.08	3U	3U	3U	3UJ	3.2U	3.1U	20U	20U	2U	20U	20U
3-Nitroaniline	NA	3U	3U	3U	3UJ	3.2U	3.1U	5U	5U	0.5U	5U	5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	9U	8U	8U	8.1UJ	8.4U	8.2U	51U	50U	5U	50U	49U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
4-Chloroaniline	30	4U	4U	4U	4UJ	4.2U	4.1U	5U	5U	0.5U	5U	5U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
4-Nitroaniline	NA	1U	0.9U	0.9U	0.91UJ	0.95U	0.93U	5U	5U	0.5U	5U	5U
4-Nitrophenol	NA	11U	11U	10U	10UJ	11U	10U	100U	100U	10U	100U	98U
Acenaphthene	400	0.4J	0.4J	0.4J	0.49J	0.53	0.7	1U	1U	0.1U	1U	1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Acetophenone	700	4U	4U	4U	4UJ	4.2U	4.1U	5U	5U	0.5U	5U	5U
Anthracene	2000	0.1U	0.1U	0.1U	0.14J	0.11U	0.19J	1U	1U	0.1U	1U	1U
Atrazine	3	2U	2U	2U	2UJ	2.1U	2.1U	20U	20U	2U	20U	20U
Benzaldehyde	NA	3U	3U	3U	3UJ	3.2U	3.1U	10U	10U	1U	10U	10U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5UJ	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
bis(2-Ethylhexyl)phthalate	2	5U	5U	5U	5UJ	5.3U	5.2U	20U	20U	2U	20U	20U
Butylbenzylphthalate	100	2U	2U	2U	2UJ	2.1U	2.1U	20U	49J	2U	33J	20U
Caprolactam	NA	5U	5U	5U	5UJ	5.3U	5.2U	51U	50U	5U	50U	49U
Carbazole	NA	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
Chrysene	5	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Di-n-butylphthalate	700	2U	2U	2U	2UJ	2.1U	2.1U	20U	20U	2U	20U	20U
Di-n-octylphthalate	100	5U	5U	5U	5UJ	5.3U	5.2U	20U	20U	2U	20U	20U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
Diethylphthalate	6000	2U	2U	2U	2UJ	2.1U	2.1U	20U	20U	2U	20U	20U
Dimethyl phthalate	NA	2U	2U	2U	2UJ	2.1U	2.1U	20U	20U	2U	20U	20U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3U	3U	3UJ	3.2U	3.1U	5U	5U	0.5U	5U	5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Fluorene	300	0.3J	0.2J	0.3J	0.32J	0.33J	0.31J	1U	1U	0.1U	1U	1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
Hexachlorocyclopentadiene	40	5U	5U	5U	-	5.3U	5.2U	51U	50U	5U	50U	49U
Hexachloroethane	2	1U	1U	1U	1UJ	1.1U	1U	10U	10U	1U	10U	10U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Isophorone	40	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
N-Nitrosodi-n-propylamine	0.005	0.8U	0.7U	0.7U	0.71UJ	0.74U	0.72U	5U	5U	0.5U	5U	5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.8U	0.7U	0.7U	0.71UJ	0.74U	0.72U	5U	5U	0.5U	5U	5U
Naphthalene	300	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	2J	0.1U	1U	1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
p-Chloro-m-cresol	NA	0.5U	0.5U	2U	1.6UJ	1.7U	1.6U	5U	5U	0.5U	5U	5U
Pentachlorophenol	0.3	1U	1U	1U	1UJ	1.1U	1U	10U	10U	1U	10U	10U
Phenanthrene	NA	0.1U	0.1U	0.2J	0.1UJ	0.11U	0.21J	1U	1U	0.1U	1U	1U
Phenol	2000	0.5U	0.5U	0.5U	0.5UJ	0.53U	0.52U	5U	5U	0.5U	5U	5U
Pyrene	200	0.1U	0.1U	0.1U	0.1UJ	0.11U	0.1U	1U	1U	0.1U	1U	1U
Total TIC SVOCS	NA	86J	220J	450J	-	-	-	160J	320J	220J	290J	500J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322											
Sample Date		11/19/2012	2/19/2013	6/12/2013	9/5/2013	11/7/2013	3/12/2014	5/19/2014	8/4/2014	10/29/2014	3/3/2015	6/8/2015	9/14/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation											
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	1	1	1	1	2	0.6U	0.7J	0.8J	1J	0.5U	0.5U	0.6J
2,4-Dinitrophenol	10	11U	11U	11U	11U	11U	11U	11U	11U	11U	10U	11U	11U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	6U	6U	6U	5U	6U	5U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Chloroaniline	30	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.7J	0.5U	0.6U	0.6U	0.6U	3	0.6U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
4-Nitrophenol	NA	11U	11U	11U	11U	11U	11U	11U	11U	11U	10U	11U	11U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1J	0.1U	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.1J]**	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.2J]**	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.1J]**	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5U	5U	6U	6U	6U	80	30	5U	5U	5U
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1U	0.1U	0.1U
Fluorene	300	0.1U	0.1U	0.1J	0.1U	0.1U	0.1J	0.1U	0.1U	0.3J	0.2J	0.1U	0.2J
Hexachlorobenzene	0.02	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	0.4	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	6U	6U	6U	5U	6U	5U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Naphthalene	300	0.1U	0.1J	0.2J	0.3J	0.3J	0.2J	0.1J	0.1U	0.8	0.1J	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1J	0.1U	0.1U
Total TIC SVOCS	NA	640J	95JB	67J	200J	190J	280J	100J	110J	310J	120JB	5J	73JB

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322								MW-322	
Sample Date		11/18/2015	1/7/2016	4/6/2016	7/20/2016	10/13/2016	1/17/2017	4/27/2017	7/18/2017	10/13/2017	1/19/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Cell 2 Operation	
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	0.5J	0.5U	0.5U	0.5J	0.5U	0.5U	0.5J	0.5J	0.6J
2,4-Dinitrophenol	10	11U	10U	10U	11U	10U	10U	10U	10U	10U	10U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chloroaniline	30	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	5	3U	0.5U	2	2	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitrophenol	NA	11U	10U	10U	11U	10U	10U	10U	10U	10U	10U
Acenaphthene	400	0.2J	0.2J	0.1J	0.1J	0.2J	0.1U	0.1U	0.1J	0.2J	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2U	2U	**[12]**	2U	**[5J]**
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.1J	0.2J	0.2J	0.1J	0.3J	0.1U	0.2J	0.2J	0.4J	0.2J
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	300	0.1J	0.1U	0.1U	0.2J	0.5J	0.1U	0.1U	0.1U	0.2U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pyrene	200	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	44JB	170J	11J	20JB	74J	300J	100J	58J	190J	270J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322									
Sample Date		4/13/2018	7/13/2018	10/25/2018	1/2/2019	4/2/2019	4/2/2019	7/2/2019	7/2/2019	10/2/2019	10/2/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation									
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
2,4-Dimethylphenol	100	0.5J	3U	3U	3U	3U	3U	3U	3U	4U	3U
2,4-Dinitrophenol	10	10U	15U	16U	14U	14U	14U	15U	15U	16U	15U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.6	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	3U	3U	3U	3U	3U	3U	3U	4U	3U
3,3'-Dichlorobenzidine	0.08	2U	3U	3U	3U	3U	3U	3U	3U	4U	3U
3-Nitroaniline	NA	0.5U	3U	3U	3U	3U	3U	3U	3U	4U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	8U	9U	8U	8U	8U	8U	8U	9U	8U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
4-Chloroaniline	30	2U	4U	4U	4U	4U	4U	4U	4U	5U	4U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5J	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
4-Nitroaniline	NA	0.5U	0.9U	1U	0.9U	0.9U	0.9U	0.9U	0.9U	1U	0.9U
4-Nitrophenol	NA	10U	10U	11U	10U	10U	10U	10U	10U	12U	10U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	4U	4U	4U	4U	4U	4U	4U	5U	4U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	3U	3U	3U	3U	3U	3U	3U	4U	3U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	5U	6U	5U	5U	5U	5U	5U	6U	5U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	6U	5U	5U	5U	5U	5U	6U	5U
Carbazole	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	5U	6U	5U	5U	5U	5U	5U	6U	5U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	3U	3U	3U	3U	3U	3U	3U	4U	3U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.3J	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	6U	5U	5U	5U	5U	5U	6U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.7U	0.8U	0.7U	0.7U	0.7U	0.7U	0.7U	0.8U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.7U	0.8U	0.7U	0.7U	0.7U	0.7U	0.7U	0.8U	0.7U
Naphthalene	300	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	120J	410J	230JB	140J	400JB	550JB	410J	320J	310J	310J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322							MW-324			
Sample Date		1/2/2020	1/2/2020	4/1/2020	7/6/2020	7/6/2020	10/13/2020	10/13/2020	3/13/2012	5/17/2012	5/18/2012	7/30/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation							Pre-CAMU Operation			
2,4,5-Trichlorophenol	700	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
2,4-Dichlorophenol	20	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
2,4-Dimethylphenol	100	4U	4U	3U	3.2U	3.2U	3.5U	3.1U	0.5U	0.6U	0.5U	0.5U
2,4-Dinitrophenol	10	17U	17U	16U	15U	15U	16U	15U	10U	11U	10U	11U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1.1U	1.1U	1.2U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
2-Chloronaphthalene	600	0.5U	0.5U	0.4U	0.43U	0.42U	0.46U	0.42U	0.4U	0.5U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	2U	2U	2U	2.1U	2.1U	2.3U	2.1U	0.5U	0.6U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	4U	4U	3U	3.2U	3.2U	3.5U	3.1U	0.5U	0.6U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	4U	4U	3U	3.2U	3.2U	3.5U	3.1U	2U	2U	2U	2U
3-Nitroaniline	NA	4U	4U	3U	3.2U	3.2U	3.5U	3.1U	0.5U	0.6U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	9U	10U	9U	8.5U	8.4U	9.3U	8.4U	5U	6U	5U	5U
4-Bromophenylphenylether	NA	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
4-Chloroaniline	30	5U	5U	4U	4.3U	4.2U	4.6U	4.2U	0.5U	0.6U	0.5U	0.5U
4-Chlorophenyl phenyl ether	NA	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
4-Nitroaniline	NA	1U	1U	1U	0.96U	0.95U	1U	0.94U	0.5U	0.6U	0.5U	0.5U
4-Nitrophenol	NA	12U	12U	11U	11U	11U	12U	10U	10U	11U	10U	11U
Acenaphthene	400	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.3J	0.6	0.5J
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	5U	5U	4U	4.3U	4.2U	4.6U	4.2U	0.5U	0.6U	0.5U	0.5U
Anthracene	2000	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2.1U	2.1U	2.3U	2.1U	2U	2U	2U	2U
Benzaldehyde	NA	4U	4U	3U	3.2U	3.2U	3.5U	3.1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5UJ	0.5U
bis(2-Ethylhexyl)phthalate	2	6U	6U	6U	5.3U	5.3U	5.8U	5.2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2.1U	2.1U	2.3U	2.1U	2U	2U	2U	2U
Caprolactam	NA	6U	6U	6U	5.3U	5.3U	5.8U	5.2U	5U	6U	5U	5U
Carbazole	NA	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2.1U	2.1U	2.3U	2.1U	2U	2U	2U	2U
Di-n-octylphthalate	100	6U	6U	6U	5.3U	5.3U	5.8U	5.2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2.1U	2.1U	2.3U	2.1U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2.1U	2.1U	2.3U	2.1U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	4U	4U	3U	3.2U	3.2U	3.5U	3.1U	0.5U	0.6U	0.5U	0.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.2J	0.1J
Fluorene	300	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.2J	0.3J	0.3J
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
Hexachlorocyclopentadiene	40	6U	6U	6U	5.3U	5.3U	5.8U	5.2U	5U	6U	5U	5U
Hexachloroethane	2	1U	1U	1U	1.1U	1.1U	1.2U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.8U	0.9U	0.8U	0.74U	0.74U	0.81U	0.73U	0.5U	0.6U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.8U	0.9U	0.8U	0.74U	0.74U	0.81U	0.73U	0.5U	0.6U	0.5U	0.5U
Naphthalene	300	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.2J	0.1U	0.3J	0.2J
Nitrobenzene	4	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.6U	0.6U	2U	1.7U	1.7U	1.9U	1.7U	0.5U	0.6U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	1U	1.1U	1.1U	1.2U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.2J	0.1J
Phenol	2000	0.6U	0.6U	0.6U	0.53U	0.53U	0.58U	0.52U	0.5U	0.6U	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.11U	0.11U	0.12U	0.1U	0.1U	0.1U	0.2J	0.1J
Total TIC SVOCS	NA	290J	330J	560J	-	-	-	-	8J	23J	300JB	12J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324										
Sample Date		7/31/2012	11/21/2012	2/21/2013	6/17/2013	9/9/2013	11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation										
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2,4-Dichlorophenol	20	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2,4-Dimethylphenol	100	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2,4-Dinitrophenol	10	10U	10U	11U	11U	10U	12U	11U	11U	11U	11U	11U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2-Chloronaphthalene	600	0.4U	0.4U	0.5U	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4U	0.5U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
3-Nitroaniline	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	6U	5U	5U	6U	6U	5U	6U	5U	6U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
4-Chloroaniline	30	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
4-Nitroaniline	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
4-Nitrophenol	NA	10U	10U	11U	11U	10U	12U	11U	11U	11U	11U	11U
Acenaphthene	400	0.4J	0.6	0.1U	0.3J	0.3J	0.2J	0.2J	0.2J	0.2J	0.1J	0.1U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	6U	5U	5U	6U	6U	71	25	12J	6U
Carbazole	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Fluoranthene	300	0.1J	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.3J	0.3J	0.1U	0.2J	0.2J	0.1U	0.1U	0.1J	0.1J	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Hexachlorocyclopentadiene	40	5U	5U	6U	5U	5U	6U	6U	5U	6U	5U	6U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Naphthalene	300	0.2J	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.2J	0.2J	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.6U	0.5U	0.6U	0.5U	0.6U
Pyrene	200	0.2J	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	21J	5J	0	0U	0U	7J	0U	0U	5J	0U	37J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324		MW-324			MW-324					
Sample Date		5/28/2015	9/17/2015	11/17/2015	1/12/2016	4/26/2017	10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/24/2018	1/4/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation		Cell 1 Operation			Cell 2 Operation					
2,4,5-Trichlorophenol	700	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	--	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.6U	0.5U	3U	3U	3U
2,4-Dinitrophenol	10	--	11U	11U	10U	10U	10U	11U	10U	14U	15U	14U
2,4-Dinitrotoluene	0.05	1U	1U	1U	--	1U	1U	1U	1U	1U	-	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	--	0.4U	0.4U	0.4U	0.4U	0.4U	-	0.4U
2-Chlorophenol (o-Chlorophenol)	40	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.2J
2-Methylphenol (o-Cresol)	NA	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	2U	-	2U
2-Nitrophenol (o-Nitrophenol)	NA	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	3U	3U	3U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	--	2U	2U	2U	2U	3U	-	3U
3-Nitroaniline	NA	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	3U	-	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	--	5U	5U	5U	5U	5U	6U	5U	8U	9U	8U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
4-Chloroaniline	30	2U	2U	2U	--	2U	2U	2U	2U	4U	-	4U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	--	0.5UJ	0.5U	0.6U	0.5U	0.5U	-	0.5U
4-Methylphenol (p-Cresol)	NA	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.9U	-	0.9U
4-Nitrophenol	NA	--	11U	11U	10U	10U	10U	11U	10U	10U	11U	10U
Acenaphthene	400	0.1U	0.1J	0.1U	0.1J	0.1J	0.1U	0.1U	0.1U	0.1U	-	0.2J
Acenaphthylene	NA	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1J
Acetophenone	700	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	4U	-	4U
Anthracene	2000	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.2J
Atrazine	3	2U	2U	2U	--	2U	2U	2U	2U	2U	-	2U
Benzaldehyde	NA	1U	1U	1U	--	1U	1U	1U	1U	-	-	3U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	**[0.2J]**
Benzo(a)pyrene	0.005	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	**[0.2J]**
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1J	0.1U	-	0.3J
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.2J
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	--	2U	2U	**[5J]**	2U	5U	-	5U
Butylbenzylphthalate	100	2U	2U	2U	--	2U	2U	2U	2U	2U	-	2U
Caprolactam	NA	5U	5U	5U	--	5UJ	5U	6U	5UJ	5U	-	5U
Carbazole	NA	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
Chrysene	5	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.3J
Di-n-butylphthalate	700	2U	2U	2U	--	2U	2U	2U	2U	2U	-	2U
Di-n-octylphthalate	100	2U	2U	2U	--	2U	2U	2U	2U	5U	-	5U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	**0.2J**
Dibenzofuran	NA	0.5UJ	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
Diethylphthalate	6000	2U	2U	2U	--	2U	2U	2U	2U	2U	-	2U
Dimethyl phthalate	NA	2U	2U	2U	--	2U	2U	2U	2U	2U	-	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	3U	-	3U
Fluoranthene	300	0.1J	0.1J	0.1U	0.2J	0.1J	0.1U	0.1U	0.1U	0.1U	-	0.2J
Fluorene	300	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.2J
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	--	5U	5U	6U	5U	-	-	5U
Hexachloroethane	2	1U	1U	1U	--	1U	1U	1U	1U	1U	-	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U
Isophorone	40	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.7U	-	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.7U	-	0.7U
Naphthalene	300	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	--	0.5U	0.5U	0.6U	0.5U	0.5U	-	0.5U
p-Chloro-m-cresol	NA	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	--	0.1U	0.1U	0.1U	0.1U	0.1U	-	0.3J
Phenol	2000	--	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U
Pyrene	200	0.1J	0.2J	0.1U	0.2J	0.1J	0.1U	0.1J	0.1J	0.1U	-	0.3J
Total TIC SVOCS	NA	49J	10J	15J	--	0U	0U	0U	40JB	5JB	-	26J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324							MW-402				
Sample Date		4/9/2019	7/9/2019	10/7/2019	1/6/2020	4/3/2020	7/8/2020	10/12/2020	9/26/2014	10/28/2014	3/10/2015	5/28/2015	9/17/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation							Pre-CAMU Operation				
2,4,5-Trichlorophenol	700	0.5U	3U	0.5UJ	0.6U	0.5U	0.5UJ	0.53U	0.5U	0.6U	0.6U	--	0.5U
2,4,6-Trichlorophenol	1	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53U	0.5U	0.6U	0.6U	--	0.5U
2,4-Dichlorophenol	20	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53U	0.5U	0.6U	0.6U	--	0.5U
2,4-Dimethylphenol	100	3U	15U	3UJ	3U	3U	3UJ	3.2U	0.5U	0.6U	0.6U	--	0.5U
2,4-Dinitrophenol	10	14U	71U	15UJ	16U	14U	14UJ	15U	11U	11U	12U	--	10U
2,4-Dinitrotoluene	0.05	1U	5U	1UJ	1U	1UJ	1UJ	1.1UJ	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	2U	0.4UJ	0.4U	0.4UJ	0.4UJ	0.42UJ	0.4U	0.4U	0.5U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53U	0.5U	0.6U	0.6U	--	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1J	0.2J	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53U	0.5U	0.6U	0.6U	--	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	2U	10U	2UJ	2U	2UJ	2UJ	2.1UJ	0.5U	0.6U	0.6U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	3U	15U	3UJ	3U	3UJ	3UJ	3.2U	0.5U	0.6U	0.6U	--	0.5U
3,3'-Dichlorobenzidine	0.08	3U	15U	3UJ	3U	3UJ	3UJ	3.2UJ	2U	2U	2U	2U	2U
3-Nitroaniline	NA	3U	15U	3UJ	3U	3UJ	3UJ	3.2UJ	0.5U	0.6U	0.6U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8U	40U	9UJ	9U	8U	8UJ	8.4U	5U	6U	6U	--	5U
4-Bromophenylphenylether	NA	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
4-Chloroaniline	30	4U	20U	4UJ	4U	4UJ	4UJ	4.2UJ	0.5U	0.6U	0.6U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	3U	0.5UJ	0.6U	0.5U	0.5UJ	0.53U	0.5U	0.6U	0.6U	--	0.5U
4-Nitroaniline	NA	0.9U	5U	1UJ	1U	0.9UJ	0.9UJ	0.95UJ	0.5U	0.6U	0.6U	0.5U	0.5U
4-Nitrophenol	NA	10U	51U	11UJ	11U	10U	10UJ	11U	11U	11U	12U	--	10U
Acenaphthene	400	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.2J	0.1U	0.2J	0.1J
Acenaphthylene	NA	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	4U	20U	4UJ	4U	4UJ	4UJ	4.2UJ	0.5U	0.6U	0.6U	0.5U	0.5U
Anthracene	2000	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	2U	10U	2UJ	2U	2UJ	2UJ	2.1UJ	2U	2U	2U	2U	2U
Benzaldehyde	NA	3U	15U	3UJ	3U	3UJ	3UJ	3.2UJ	1UJ	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	**[0.12J]**	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	5U	25U	5UJ	6U	5UJ	5UJ	5.3UJ	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2U	10U	2UJ	2U	2UJ	2UJ	2.1UJ	2U	2U	2U	2U	2U
Caprolactam	NA	5U	25U	22J	6U	5UJ	5UJ	5.3UJ	18	11J	6U	5U	5U
Carbazole	NA	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
Chrysene	5	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11J	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	10U	2UJ	2U	2UJ	2UJ	2.1UJ	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	5U	25U	5UJ	6U	5UJ	5UJ	5.3UJ	2U	2U	3J	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5UJ	0.5U
Diethylphthalate	6000	2U	10U	2UJ	2U	2UJ	2UJ	2.1UJ	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	10U	2UJ	2U	2UJ	2UJ	2.1UJ	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	15U	3UJ	3U	3UJ	3UJ	3.2UJ	0.5U	0.6U	0.6U	0.5U	0.5U
Fluoranthene	300	0.1J	0.5U	0.1UJ	0.1U	0.2J	0.1UJ	0.12J	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.2J	0.3J	0.1J	0.2J	0.3J
Hexachlorobenzene	0.02	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	25U	5UJ	6U	5UJ	5UJ	5.3UJ	5U	6U	6U	5U	5U
Hexachloroethane	2	1U	5U	1UJ	1U	1UJ	1UJ	1.1UJ	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.7U	4U	0.7UJ	0.8U	0.7UJ	0.7UJ	0.74UJ	0.5U	0.6U	0.6U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7U	4U	0.7UJ	0.8U	0.7UJ	0.7UJ	0.74UJ	0.5U	0.6U	0.6U	0.5U	0.5U
Naphthalene	300	0.1U	0.5U	0.1UJ	0.1U	0.1UJ	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1J	0.1U
Nitrobenzene	4	0.5U	3U	0.5UJ	0.6U	0.5UJ	0.5UJ	0.53UJ	0.5U	0.6U	0.6U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	3U	0.5UJ	0.6U	2U	1.6UJ	1.7U	0.5U	0.6U	0.6U	--	0.5U
Pentachlorophenol	0.3	1U	5U	1UJ	1U	1U	1UJ	1.1U	1U	1U	1U	--	1U
Phenanthrene	NA	0.1U	0.5U	0.1UJ	0.1U	0.2J	0.1UJ	0.11J	0.8	0.8	0.4J	0.4J	0.5J
Phenol	2000	0.5U	3U	0.5UJ	0.6U	0.5U	0.5UJ	0.53U	0.5U	0.6U	0.6U	--	0.5U
Pyrene	200	0.1J	0.5U	0.1UJ	0.1U	0.2J	0.1UJ	0.11UJ	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	58JB	60J	9J	5J	23J	-	-	27J	18JB	0U	86JB	26J

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-402								MW-402		
Sample Date		11/17/2015	1/12/2016	4/7/2016	7/21/2016	1/19/2017	3/22/2017	4/24/2017	5/17/2017	10/11/2017	1/24/2018	4/11/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Cell 2 Operation		
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2,4-Dinitrophenol	10	10U	10U	10U	10U	10UJ	-	10U	-	10U	10U	11U
2,4-Dinitrotoluene	0.05	1U	--	1UJ	1U	1U	-	1U	-	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	--	0.4UJ	0.4U	0.4U	-	0.4U	-	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1J
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
3-Nitroaniline	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	5U	-	5U	-	5U	5U	5U
4-Bromophenylphenylether	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
4-Chloroaniline	30	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
4-Nitrophenol	NA	10U	10U	10U	10U	10UJ	-	10U	-	10U	10U	11U
Acenaphthene	400	0.2J	--	0.1UJ	0.2J	0.1J	-	0.1J	-	0.2J	0.2J	0.1U
Acenaphthylene	NA	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Acetophenone	700	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Anthracene	2000	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Atrazine	3	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
Benzaldehyde	NA	1U	--	1UJ	1U	1U	-	1U	-	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.005	0.1U	--	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	--	2UJ	**[3J]**	2U	-	2U	-	2U	**[4J]**	**[4J]**
Butylbenzylphthalate	100	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
Caprolactam	NA	5U	--	5UJ	5U	5U	-	5U	-	5U	5U	5U
Carbazole	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Chrysene	5	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
Di-n-octylphthalate	100	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
Dimethyl phthalate	NA	2U	--	2UJ	2U	2U	-	2U	-	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Fluoranthene	300	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Fluorene	300	0.3J	0.3J	0.2J	0.3J	0.2J	-	0.1J	-	0.2J	0.2J	0.1J
Hexachlorobenzene	0.02	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	--	5UJ	5U	5U	-	5U	-	5U	5U	5U
Hexachloroethane	2	1U	--	1UJ	1U	1U	-	1U	-	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Isophorone	40	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Naphthalene	300	0.1J	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1J
Nitrobenzene	4	0.5U	--	0.5UJ	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1U	**[5J]**	1U	1U	-	1U	-	1U	1U	1U
Phenanthrene	NA	0.4J	0.5J	0.2J	0.2J	0.1U	-	0.1U	-	0.1U	0.1U	0.1U
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	-	0.5U	0.5U	0.5U
Pyrene	200	0.1U	--	0.1UJ	0.1U	0.1U	-	0.1U	-	0.1U	0.1U	0.1J
Total TIC SVOCS	NA	9JB	10J	22J	43JB	10J	--	0U	--	0U	21J	4J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-2
Semi-Volatile Organic Compound Results for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-402											MW-402
Sample Date		7/17/2018	10/25/2018	1/4/2019	4/2/2019	7/1/2019	9/25/2019	9/25/2019	1/6/2020	4/3/2020	7/8/2020	10/14/2020	12/8/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation											Post CAMU Closure
2,4,5-Trichlorophenol	700	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5U	0.62U	0.54UJ	0.55U
2,4,6-Trichlorophenol	1	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
2,4-Dichlorophenol	20	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
2,4-Dimethylphenol	100	3U	3UJ	4U	3UJ	3U	4U	3U	3U	3U	3.7U	3.2UJ	3.3U
2,4-Dinitrophenol	10	15U	15UJ	17U	14UJ	14U	17U	16U	14U	15U	17U	15UJ	15U
2,4-Dinitrotoluene	0.05	1U	1UJ	1U	1UJ	1U	1U	1U	1U	1UJ	1.2U	1.1UJ	1.1U
2,6-Dinitrotoluene	0.05	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
2-Chloronaphthalene	600	0.4U	0.4UJ	0.5U	0.4UJ	0.4U	0.5U	0.5U	0.4U	0.4UJ	0.5U	0.43UJ	0.44U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
2-Methyl-Naphthlalene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.12U	0.11UJ	0.11U
2-Methylphenol (o-Cresol)	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
2-Nitroaniline (o-Nitroaniline)	NA	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2.5U	2.2UJ	2.2U
2-Nitrophenol (o-Nitrophenol)	NA	3U	3UJ	4U	3UJ	3U	4U	3U	3U	3UJ	3.7U	3.2UJ	3.3U
3,3'-Dichlorobenzidine	0.08	3U	3UJ	4U	3UJ	3U	4U	3U	3U	3UJ	3.7U	3.2UJ	3.3U
3-Nitroaniline	NA	3U	3UJ	4U	3UJ	3U	4U	3U	3U	3UJ	3.7U	3.2UJ	3.3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8U	9UJ	10U	8UJ	8U	10U	9U	8U	9U	10U	8.7UJ	8.7U
4-Bromophenylphenylether	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
4-Chloroaniline	30	4U	4UJ	5U	4UJ	4U	5U	5U	4U	4UJ	5U	4.3UJ	4.4U
4-Chlorophenyl phenyl ether	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
4-Methylphenol (p-Cresol)	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.7J	0.6U	0.6U	0.5U	0.5U	0.62U	0.54UJ	0.55U
4-Nitroaniline	NA	0.9U	1UJ	1U	0.9UJ	0.9U	1U	1U	0.9U	1UJ	1.1U	0.97UJ	0.98U
4-Nitrophenol	NA	10U	11UJ	12U	10UJ	10U	12U	11U	10U	11U	12U	11UJ	11U
Acenaphthene	400	0.3J	0.1J	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.3J	0.16J	0.11UJ	0.11U
Acenaphthylene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.2J	0.12U	0.11UJ	0.11U
Acetophenone	700	4U	4UJ	5U	4UJ	4U	5U	5U	4U	4UJ	5U	4.3UJ	4.4U
Anthracene	2000	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.3J	0.12U	0.11UJ	0.11U
Atrazine	3	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2.5U	2.2UJ	2.2U
Benzaldehyde	NA	-	3UJ	4U	3UJ	3U	4U	3U	3U	3UJ	3.7U	3.2UJ	3.3U
Benzo(a)anthracene	0.05	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	**0.2J**	0.12U	0.11UJ	0.11U
Benzo(a)pyrene	0.005	0.1U	0.1UJ	0.1U	0.1UJ	**[0.2J]**	0.1U	0.1U	0.1U	**0.1J**	0.12U	0.11UJ	0.11U
Benzo(b)fluoranthene	0.05	0.1U	0.1UJ	**[0.1J]**	0.1UJ	**[0.2J]**	0.1U	0.1U	0.1U	0.1UJ	0.12U	0.11UJ	0.11U
Benzo(g,h,i)perylene	NA	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.2J	0.12U	0.11UJ	0.11U
Benzo(k)fluoranthene	0.5	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.12U	0.11UJ	0.11U
bis(2-Chloroethoxy)methane	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
bis(2-Chloroethyl) ether	0.03	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
bis(2-chloroisopropyl) ether	300	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
bis(2-Ethylhexyl)phthalate	2	5U	6UJ	6U	5UJ	5U	6U	6U	5U	5UJ	6.2U	5.4UJ	5.5U
Butylbenzylphthalate	100	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2.5U	2.2UJ	2.2U
Caprolactam	NA	5U	6UJ	6U	5UJ	5U	6U	6U	5U	5UJ	6.2U	5.4UJ	5.5U
Carbazole	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
Chrysene	5	0.1U	0.1UJ	0.1U	0.1UJ	0.2J	0.1U	0.1U	0.1U	0.2J	0.12U	0.11UJ	0.11U
Di-n-butylphthalate	700	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2.5U	2.2UJ	2.2U
Di-n-octylphthalate	100	5U	6UJ	6U	5UJ	5U	6U	6U	5U	5UJ	6.2U	5.4UJ	5.5U
Dibenz(a,h)anthracene	0.005	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	**0.2J**	0.12U	0.11UJ	0.11U
Dibenzofuran	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
Diethylphthalate	6000	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2.5U	2.2UJ	2.2U
Dimethyl phthalate	NA	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2.5U	2.2UJ	2.2U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3UJ	4U	3UJ	3U	4U	3U	3U	3UJ	3.7U	3.2UJ	3.3U
Fluoranthene	300	0.1U	0.1J	0.1U	0.1UJ	0.2J	0.1U	0.1U	0.1U	0.4J	0.12U	0.11UJ	0.11U
Fluorene	300	0.2J	0.2J	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.4J	0.16J	0.11UJ	0.11U
Hexachlorobenzene	0.02	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.12U	0.11UJ	0.11U
Hexachlorobutadiene	0.4	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
Hexachlorocyclopentadiene	40	-	6UJ	6U	5UJ	5U	6U	6U	5U	5UJ	6.2UJ	5.4UJ	5.5U
Hexachloroethane	2	1U	1UJ	1U	1UJ	1U	1U	1U	1U	1UJ	1.2U	1.1UJ	1.1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	**0.2J**	0.12U	0.11UJ	0.11U
Isophorone	40	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
N-Nitrosodi-n-propylamine	0.005	0.7U	0.8UJ	0.9U	0.7UJ	0.7U	0.8U	0.8U	0.7U	0.8UJ	0.87U	0.76UJ	0.77U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7U	0.8UJ	0.9U	0.7UJ	0.7U	0.8U	0.8U	0.7U	0.8UJ	0.87U	0.76UJ	0.77U
Naphthalene	300	0.1U	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.2J	0.12U	0.11UJ	0.11U
Nitrobenzene	4	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5UJ	0.62U	0.54UJ	0.55U
p-Chloro-m-cresol	NA	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	2U	2U	1.7UJ	1.7U
Pentachlorophenol	0.3	1U	1UJ	1U	1UJ	1U	1U	1U	1U	1U	1.2U	1.1UJ	1.1U
Phenanthrene	NA	0.1U	0.1J	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.3J	0.12U	0.11UJ	0.11U
Phenol	2000	0.5U	0.6UJ	0.6U	0.5UJ	0.5U	0.6U	0.6U	0.5U	0.5U	0.62U	0.54UJ	0.55U
Pyrene	200	0.1U	0.1UJ	0.1U	0.1UJ	0.2J	0.1U	0.1U	0.1U	0.1UJ	0.12J	0.11UJ	0.11U
Total TIC SVOCS	NA	5JB	4J	84J	110JB	-	10J	0U	0U	0U	-	-	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057																
Sample Date		9/27/2004	6/6/2005	11/1/2005	5/30/2006	11/30/2006	6/4/2007	7/30/2008	5/18/2009	6/7/2010	8/17/2011	3/12/2012	5/23/2012	7/25/2012	11/20/2012	11/20/2012	2/20/2013	6/12/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation																
Aluminum	200	-	-	-	-	-	-	**3230**	**1960**	-	-	**251**	**7520**	**1110**	81.9J	75.3J	74.3U	**4040**
Antimony	6	-	-	-	-	-	-	9.7U	9.7U	-	-	5.8U	5.8U	3.5U	3.5U	3.5U	0.33U	1.4
Arsenic	0.02	-	-	-	-	-	-	10.2U	10.0U	7.2U	5.1U	5.1U	5.1U	6.8U	**1.9J**	**2.2**	**0.44J**	**3.4**
Barium	6000	-	-	-	-	-	-	133	254	-	-	157	118	149	278	283	92.0	63.1
Beryllium	1	-	-	-	-	-	-	0.90U	0.90U	-	-	0.24U	0.24U	0.67U	0.67U	0.67U	0.67U	0.67U
Cadmium	4	-	-	-	-	-	-	2.0U	2.0U	-	-	0.27U	1.5J	0.36U	0.36U	0.36U	0.36U	0.36U
Calcium	NA	-	-	-	-	-	-	40200	128000	-	-	96700	43500	57600	65400	67900	51200	17500
Chromium	70	-	-	-	-	-	-	5.5J	3.9J	-	-	1.5J	13.2J	3.5J	1.1U	1.1U	1.1U	6.9J
Cobalt	NA	-	-	-	-	-	-	3.9J	2.4J	2.1U	1.3J	1.8J	4.1J	2.7J	10.0	10.3	0.66U	1.9J
Copper	1300	-	-	-	-	-	-	27.8	17.2	-	-	4.3J	37.1	12.9	2.1U	2.1U	5.9J	25.9
Iron	300	**8960**	**2850**	**11600**	**1890**	**12900J**	**6140**	**14600**	**4430**	**3170**	-	**5850**	**11000**	**4330**	**28700**	**29800**	**3400**	**7090**
Lead	5	-	-	-	-	-	-	6.9U	6.9U	6.9U	3.3J	2.2U	**7.7J**	5.1U	25.5U	25.5U	0.096J	**7.6**
Magnesium	NA	-	-	-	-	-	-	11200	25900	-	-	28700	13400	16100	21400	22400	15400	4730
Manganese	50	-	-	-	-	-	-	**1750**	**622**	-	-	**255**	**1040**	**456**	**3580**	**3690**	**101**	**819**
Mercury	2	-	-	-	-	-	-	0.056U	0.056U	-	-	0.026U	0.035J	0.029J	0.070U	0.070U	0.070U	0.070U
Nickel	100	-	-	-	-	-	-	6.0J	5.6U	-	-	2.5J	10.8	3.6J	5.1J	4.3J	1.1U	5.8J
Potassium	NA	-	-	-	-	-	-	9930	7330	-	-	6400	5340	7370	5800	6000	3910	3530
Selenium	40	-	-	-	-	-	-	10.7U	10.7U	-	-	6.9U	6.9U	7.5U	7.5U	7.5U	7.5U	7.5U
Silver	40	-	-	-	-	-	-	2.2U	2.2U	-	-	0.91U	0.91U	1.2U	1.2U	1.2U	1.2U	1.2U
Sodium	50000	-	-	-	-	-	-	**516000**	**846000**	-	-	**564000**	**345000**	**494000**	**501000**	**485000**	**401000**	**222000**
Thallium	0.5	-	-	-	-	-	-	14.0U	14.0U	14.0U	4.2U	**7.1J**	4.2U	5.7U	5.7U	5.7U	0.15U	0.15U
Vanadium	NA	-	-	-	-	-	-	15.0	4.6J	-	-	1.4J	20.3	6.3	1.3U	1.3U	1.3U	11.3
Zinc	2000	-	-	-	-	-	-	22.2	21.6	-	-	3.2U	37.8	12.0J	5.8J	5.7J	3.8J	25.9

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057										MW-0057						
Sample Date		9/9/2013	9/9/2013	11/6/2013	3/5/2014	8/5/2014	8/5/2014	10/23/2014	3/3/2015	5/29/2015	9/16/2015	11/13/2015	1/8/2016	4/12/2016	7/19/2016	10/17/2016	1/11/2017	4/26/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation										Cell 1 Operation						
Aluminum	200	136J	112J	82.8U	**205**	186U	182U	**1400**	**1630**	**758**	**215**	**1580**	**323**	102J	**620**	117J	87.9J	**4130**
Antimony	6	0.34U	0.34U	0.34U	0.34U	0.33U	0.33U	0.55J	0.62J	0.54J	0.33U	0.83J	0.33U	0.47J	0.48U	0.48U	0.48U	1.4
Arsenic	0.02	**2.8**	**3.4**	**4.2**	**1.4J**	**5.6**	**5.4**	**4.1**	**2.2**	**1.0J**	**3.2**	**3.2**	**2.9**	**0.63J**	**1.3J**	**3.1**	**1.5J**	**2.3**
Barium	6000	179	180	312	92.9	311	271	349	198	152	173	178	163	136	107	173	200J	88.5
Beryllium	1	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.70U	0.70U	1.1U	1.1U	0.67U	0.67U	0.67U	0.70J
Cadmium	4	0.76U	0.76U	0.76U	0.76U	0.33U	0.33U	0.33U	0.33U	0.33U	0.30U	0.30U	0.64U	0.64U	0.49U	0.70J	0.49U	0.49U
Calcium	NA	48500	49300	73000	43200	74900	74800	52100	79600	59500	63800	59300	67600	94800	49900	80800	103000	92300
Chromium	70	1.6U	1.6U	1.6U	1.6U	1.3U	1.3U	2.8J	4.0J	1.6J	2.1J	4.3J	2.0U	2.0U	2.6J	1.8U	1.8U	4.9UJ
Cobalt	NA	2.6J	2.7J	5.0	1.6J	2.9J	1.9J	1.4J	2.1J	1.5J	3.1J	2.5J	1.4J	1.8J	2.8J	1.9U	1.9U	1.9U
Copper	1300	3.7J	2.7U	2.7U	2.7U	2.8U	2.8U	12.1	12.0	11.2J	3.9U	11.3	3.2UJ	4.3UJ	4.1U	4.1U	4.1U	28.3J
Iron	300	**15100**	**15100**	**31600**	**6170**	**38400**	**38800**	**25800**	**9990**	**2210**	**22800**	**15200**	**22800**	**3060**	**3700**	**12900**	**6170**	**4870**
Lead	5	0.38J	0.34J	0.31J	0.95J	0.53J	0.50J	3.9	4.9	1.8	0.48J	3.9	0.98J	0.89J	1.5	0.24J	1.1	**11.7**
Magnesium	NA	13500	13800	23600	12100	24900	24900	16500	20700	14400	18700	17500	19800	22200	10400	22700	27700	20000
Manganese	50	**7840**	**7870**	**11500**	**1210**	**5950**	**5130**	**2530**	**966**	**198**	**1120**	**858**	**868**	**133**	**851**	**809**	**575**	**173**
Mercury	2	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.050U	0.050U	0.050UJ	0.050U	0.050UJ	0.050UJ	0.050U	0.050U	0.050U	0.050UJ
Nickel	100	4.2J	3.8J	4.3J	1.5U	1.6U	1.6U	4.6J	3.3J	3.1J	2.1J	2.4J	2.5U	2.5U	2.8U	2.8U	2.8U	4.4J
Potassium	NA	5610	5740	6660	3750	5410	5410	5020	4580	5990	5850	5130	4940	5780	4920	6870	5140	5040
Selenium	40	8.4U	8.4U	8.4U	8.4U	4.8U	4.8U	4.8U	4.8U	4.8U	8.2U	8.2U	8.2U	9.7U	9.7UJ	9.7U	9.7U	9.7U
Silver	40	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	1.8U	1.8U	1.8U	1.4U	1.4U	1.8U	1.8U	1.9U	1.9U	1.9U	1.9U
Sodium	50000	**408000**	**408000**	**492000**	**348000**	**432000**	**430000**	**384000**	**476000**	**475000**	**539000**	**411000**	**419000**	**630000**	**533000**	**589000**	**501000**	**447000**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U	0.16U	0.16U	0.16U
Vanadium	NA	2.0U	2.3J	2.0U	2.0U	1.9U	2.2J	7.7J	7.4	3.8J	2.0J	5.4	3.1J	2.3U	3.3J	1.9J	1.8J	10.9J
Zinc	2000	2.0J	2.1J	6.7J	5.0J	5.2U	2.0U	15.7J	17.0J	7.8J	3.9UJ	10.8J	3.9U	4.2U	7.9J	5.4U	5.4U	28.5

Notes:

Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057	MW-0057													MW-114		
Sample Date		7/18/2017	10/9/2017	1/22/2018	4/9/2018	7/12/2018	10/23/2018	1/8/2019	4/8/2019	7/8/2019	10/4/2019	1/8/2020	4/8/2020	7/13/2020	10/12/2020	10/17/2002	2/10/2003	9/10/2003
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation	Cell 2 Operation													Pre-CAMU Operation		
Aluminum	200	**801**	89.4U	**272**	**1840**	184J	**21600**	**3240**	**1020**	**1590**	**2120J**	**1570**	**336**	-	-	47.7U	**440**	**793**
Antimony	6	0.75J	0.47J	0.45U	0.51J	0.55J	4.4U	0.86J	0.41U	0.41J	1.1J-	0.68UJ	0.53UJ	0.41U	0.41U	9.9U	9.9U	8.5U
Arsenic	0.02	**2.5**	**1.4J**	**0.78J**	**0.85J**	**0.75J**	**40.6**	**3.8**	**1.1J**	**2.3**	**4.1**	**2.7**	**1.3J**	**0.85J**	**2**	4.9U	4.9U	**7.0J**
Barium	6000	141	107	91.5	80.1	43.7	251	62.8	44.4	37.5	36	49.1	34	77	200	191	190	183
Beryllium	1	2.0U	2.0U	2.0U	2.0U	1.0UJ	1.0U	1U	1U	1U	1U	1U	1U	1U	1U	0.50U	0.50U	0.34U
Cadmium	4	1.8U	1.8U	1.8U	1.8U	1.0U	1.0U	1U	1U	1U	1U	1U	1U	1U	1U	0.94U	0.94U	0.87U
Calcium	NA	100000	76100	94800	81400	34100	47100	42400	36400	22600	20500	32300	30600	51000	59000	93400	90700	80200
Chromium	70	3.3U	3.3U	3.3U	4.5J	5.3U	39.9	5.3U	5.3U	5.3U	4.2UJ	4.3J	1.6U	-	-	2.0U	2.0U	2.2U
Cobalt	NA	1.7U	2.5J	1.7U	1.7U	1.5U	10.2	2.4UJ	1.5U	1.8UJ	1.8J	1.5U	1.5U	1.5U	3.1J	4.8J	4.2J	3.8J
Copper	1300	8.2J	4.0U	4.0U	10.0U	7.9J	169	18J	6.4J	14.2UJ	17.8J	12U	12U	14J	12U	2.6U	2.6U	2.1U
Iron	300	**3600**	**1200**	**2720**	**3470**	**1150**	**129000**	**11000**	**4100**	**3890**	**8850**	**6160**	**2500**	-	-	**5170**	**6000**	**8760**
Lead	5	2.6	0.32J	0.83J	**5.8**	1.1U	**83.0**	**7.5**	2.5J	3.1	**5.6**	3.1	0.64	1.8	0.3J	8.9U	8.9U	9.3U
Magnesium	NA	24100	17800	24400	21600	8050	15400	11300	10100	5480	5000	8790	8200	14000	18000	26000	27300	23300
Manganese	50	**912**	**1020**	**61.5**	**201**	**828**	**1600**	**371**	**196**	**583**	**1320**	**544**	**250**	-	-	**5430**	**4700**	**4090**
Mercury	2	0.050U	0.050U	0.050U	0.050U	0.050UJ	0.16J	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.079U	0.079U	0.079J	0.080U	0.16U
Nickel	100	4.0U	4.0U	4.0U	4.0U	3.1U	38.9	4.1J	3.1U	3.1U	5.2UJ	2.7J	3J	4.3J	4.6J	4.4J	5.6J	3.8U
Potassium	NA	6970	6090	4310	4670	4020	6020	3490	3110	3180	3340	2810	2870	3800	5000	4160	2800	4050
Selenium	40	9.3U	9.3U	9.3U	9.3U	21.0U	23.6J	21U	21U	21U	16U	16U	16U	-	-	4.8U	4.8U	4.7U
Silver	40	2.4U	2.4U	2.4U	2.4U	5.0U	5.0U	5U	5U	5U	5U	5U	5U	5U	5U	1.4U	1.4U	1.8U
Sodium	50000	**633000**	**592000**	**430000**	**428000**	**383000**	**337000**	**255000**	**259000**	**239000**	**270000**	**240000**	**227000**	**310000**	**350000**	**69300**	**62000**	**62400**
Thallium	0.5	0.12U	0.12U	0.12U	0.12U	0.11U	0.23J	0.11U	0.11U	0.11U	0.13U	0.13U	0.13U	0.13U	0.13U	9.5U	9.5U	8.9U
Vanadium	NA	5.6	1.8J	1.9J	4.0J	3.0U	101	9.9J	4.8J	6.8UJ	9.7J	10.2	5.5UJ	5.2J	1.9U	1.7U	1.7U	2.3J
Zinc	2000	6.5U	7.6UJ	6.5U	14.4J	6.4J	203	20.4	6.3J	15.8UJ	21.8	8UJ	3.7U	5.6J	3.7U	4.9U	6.9J	4.1U

Notes:

Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114															
Sample Date		7/29/2008	3/15/2012	5/14/2012	7/24/2012	11/19/2012	2/19/2013	6/10/2013	9/3/2013	11/4/2013	3/5/2014	5/19/2014	8/4/2014	10/22/2014	3/24/2015	5/27/2015	9/14/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation															
Aluminum	200	-	80.1U	173J	74.3U	74.3U	140J	193J	82.8U	82.8U	106J	82.8U	67.4U	107J	163J	**357**	119J
Antimony	6	-	5.8U	5.8U	3.5U	3.5U	0.33U	0.34U	0.34U	0.34U	0.34U	0.34U	0.33U	0.33U	0.33U	0.33U	0.33U
Arsenic	0.02	10.2U	5.1U	5.1U	6.8U	0.40U	0.40U	0.42U	0.42U	0.78U	0.78U	0.78U	0.82U	0.82U	0.95U	0.82U	0.54U
Barium	6000	-	60.9	66.7	54.2	49.3	44.3	67.4	53.6	52.8	61.5	60.1	57.9	60.5	54.8	52.7	48.0
Beryllium	1	0.90U	0.24U	0.24U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.70U
Cadmium	4	2.0U	0.27U	0.91J	0.36U	0.36U	0.36U	0.36U	0.76U	0.76U	0.76U	0.76U	0.33U	1.4U	0.33U	0.33U	0.30U
Calcium	NA	-	81900	82000	81400	87100	76100	86700	90700	89900	89900	92600	94500	94900	94600	111000	92600
Chromium	70	-	1.5J	1.1U	1.1U	1.1U	1.1U	2.0J	1.6U	1.6U	1.6U	1.6U	1.3U	1.3U	1.3U	2.1J	1.5U
Cobalt	NA	-	1.2J	0.62U	0.66U	0.66U	0.66U	0.66U	1.3U	1.3U	1.3U	1.3U	1.0U	1.0U	1.0U	1.0U	0.90U
Copper	1300	-	0.94U	1.8J	2.1U	2.1U	2.1U	2.1U	2.7U	2.7U	2.7U	2.7U	2.8U	2.8U	2.8U	2.8U	3.1U
Iron	300	-	52.7J	**710**	89.0J	51.3J	159J	**382**	43.0U	75.1J	120J	161J	82.2J	208	**303**	**807**	228
Lead	5	-	2.2U	2.2U	5.1U	5.1U	0.079J	0.28J	0.085U	0.087J	0.21J	0.085U	0.17UJ	0.31J	0.25U	0.34J	0.13U
Magnesium	NA	-	21200	22200	20900	22400	18800	21900	22700	22400	20900	22500	22700	23700	23000	26400	22000
Manganese	50	-	**288**	**590**	**535**	47.7	**153**	**450**	**336**	**184**	**68.6**	**216**	**240**	**295**	**108**	**153**	**141**
Mercury	2	-	0.026U	0.026U	0.066J	0.070U	0.070U	0.070U	0.060U	0.060U	0.060U	0.060UJ	0.060U	0.12U	0.071U	0.050U	0.050U
Nickel	100	-	3.3J	4.1J	3.6J	1.3J	1.7J	3.8J	4.9J	2.2J	2.5J	2.6J	5.0J	3.9J	2.8J	4.4J	4.2J
Potassium	NA	-	1410	1580	1510	1710	1620	1630	1690	1690	1800	1560	1690	1740	1550	2030	1800
Selenium	40	-	6.9U	6.9U	7.5U	7.5U	7.5U	7.5U	8.4U	8.4U	8.4U	8.4U	4.8U	4.8U	4.8U	4.8U	8.2U
Silver	40	-	0.91U	1.8J	1.2U	1.2U	1.2U	1.2U	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	1.8U	1.8U	1.4U
Sodium	50000	-	**69400**	**71000**	**70300**	**71100**	**59400**	**69300**	**73500**	**70900**	**67100**	**71400**	**73500**	**75300**	**70400**	**82000**	**78500**
Thallium	0.5	-	4.2U	4.2U	5.7U	5.7U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	-	0.96U	0.96U	1.3U	1.3U	1.3U	1.3U	2.0U	2.0U	2.0U	2.0U	1.9U	1.9U	1.9U	1.9U	1.4U
Zinc	2000	-	3.2U	6.2J	5.7J	2.0U	2.1J	9.3J	4.5J	2.0U	4.0J	3.0J	8.2UJ	14.8J	4.2U	4.0U	3.9U

Notes:

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Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114								MW-114								
Sample Date		11/13/2015	1/5/2016	4/6/2016	7/18/2016	10/11/2016	1/11/2017	4/18/2017	7/17/2017	10/9/2017	1/23/2018	4/9/2018	7/12/2018	10/18/2018	1/8/2019	4/8/2019	7/8/2019	10/4/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Cell 2 Operation								
Aluminum	200	84.1U	92.9U	96.9J	86.8U	86.8U	188J	86.8U	**1980**	89.4U	89.4U	**278U**	153U	**218J**	**4740**	**2030**	**1520**	164J
Antimony	6	0.33U	0.33U	0.33U	0.48U	0.48UJ	0.48U	0.48U	0.45U	0.45U	0.45U	0.45U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U
Arsenic	0.02	**0.81J**	0.54U	**0.86J**	0.68U	0.68U	0.68U	0.68U	**0.87J**	0.72U	0.72U	0.72U	0.68U	0.68U	**4.9**	**1.3J**	**1.3J**	0.68U
Barium	6000	42.7	37.6	44.1	41.7	45.4J	132J	42.9	60.0	41.9	38.9	37.2	41.3	44.8	103	46.1	45.7	37.6
Beryllium	1	0.70U	1.1U	1.1U	0.67U	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	2.0U	**1.2UJ**	1.0U	1U	1U	1U	1U
Cadmium	4	0.30U	0.64U	0.64U	0.49U	0.49U	0.49U	0.63UJ	1.8U	1.8U	1.8U	1.8U	1.0U	1.0U	1U	1U	1U	1U
Calcium	NA	96500	99000	100000	100000	97000	96500	107000	104000	107000	104000	102000	109000	111000	101000	93600	90100	102000
Chromium	70	1.9J	2.0U	2.0U	1.8U	1.8U	1.8U	1.8U	5.7J	3.3U	3.3U	3.3U	5.3U	5.3U	7.6UJ	5.3U	5.3U	1.6U
Cobalt	NA	0.90U	0.90U	0.90U	1.9U	1.9U	1.9U	1.9U	3.0J	2.2J	1.7U	1.7U	1.5U	1.5U	10.4	2.3J	1.8J	1.5U
Copper	1300	2.5U	3.2UJ	3.2U	4.1U	4.1U	4.1U	4.1U	6.6J	4.0U	4.0U	4.0U	6.2U	6.2U	12.2J	6.2U	6.2U	12U
Iron	300	169J	100J	81.1J	130J	93.5J	**307**	181J	**3330**	228	218	80.5U	89.1J	**313**	**11100**	**3680**	**2770**	**333**
Lead	5	0.29J	0.13U	0.15J	0.090U	0.22J	0.64J	0.23UJ	1.2	0.20J	0.61J	0.11U	1.1U	1.1U	**5.3**	1.7J	2.2J	0.27J
Magnesium	NA	23500	24600	23300	23400	22800	23000	25800	25300	25500	24100	24600	26000	26300	25100	22900	21600	23300
Manganese	50	**56.1**	**76.4**	**81.5**	**160**	**99.1**	**187**	**97.5**	**661**	**107**	**94.4**	**58.7**	**85.7**	**144**	**1300**	**164**	**193**	**128**
Mercury	2	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.051J	0.050UJ	0.05U	0.05U	0.05U	0.05U
Nickel	100	1.6J	3.3J	3.1J	3.7J	4.2J	2.9J	3.1J	8.5J	4.3J	4.1J	4.0U	3.4J	6.3J	12.8	5.6J	5.2UJ	5.5J
Potassium	NA	1850	1750	1650	1900	2050	1950	1910	2640	2040	1870	1710	1980	2290	3140	2350	2260	1990
Selenium	40	8.2U	8.2U	8.2U	9.7U	9.7U	9.7U	9.7U	9.3U	9.3U	9.3U	9.3U	21.0U	21.0U	21U	21U	21U	16U
Silver	40	1.4U	1.8U	1.8U	1.9U	1.9U	1.9U	1.9U	2.4U	2.4U	2.4U	2.4U	5.0U	5.0U	5U	5U	5U	5U
Sodium	50000	**81000**	**82900**	**82000**	**82400**	**83300**	**84100**	**90200**	**90600**	**90300**	**85400**	**86700**	**96700**	**96200**	**86400**	**81900**	**79900**	**88400**
Thallium	0.5	0.15U	0.15U	0.15U	0.16U	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U	0.11U	0.11U	0.13U
Vanadium	NA	1.4U	2.3U	2.3U	1.6U	1.6U	1.6U	2.5UJ	6.1	1.6U	1.6U	1.6U	3.0U	3.0U	12.4	5.8J	6.1UJ	2.4J
Zinc	2000	3.9U	3.9U	4.4J	7.7J	5.7J	5.4U	5.4U	13.6J	15.2UJ	6.5U	6.5U	7.3J	11.3J	24.7	10.2J	17.1UJ	7.1J

Notes:

Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114				MW-120												
Sample Date		1/8/2020	4/8/2020	4/8/2020	7/14/2020	11/27/2002	2/25/2003	10/1/2003	5/19/2004	9/24/2004	6/2/2005	11/3/2005	5/31/2006	12/4/2006	6/4/2007	8/12/2008	6/30/2009	6/7/2010
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation				Pre-CAMU Operation												
Aluminum	200	**760**	89.4U	**272**	-	47.7U	48U	74.0J	-	-	-	-	-	-	-	-	-	-
Antimony	6	0.41U	0.45U	0.41U	0.41U	9.9U	9.9U	8.5U	-	-	-	-	-	-	-	-	-	-
Arsenic	0.02	0.68U	0.72U	0.68U	0.68U	4.9U	4.9U	4.9U	-	-	-	-	-	-	-	-	-	-
Barium	6000	39.2	38.9	32.5	37	136	130	159	-	-	-	-	-	-	-	-	-	-
Beryllium	1	1U	2.0U	1U	1U	0.50U	0.50U	0.34U	-	-	-	-	-	-	-	-	-	-
Cadmium	4	1U	1.8U	1U	1U	0.94U	0.94U	0.87U	-	-	-	-	-	-	-	-	-	-
Calcium	NA	96300	104000	92300	93000	42600	46200	58800	-	-	-	-	-	-	-	-	-	-
Chromium	70	3.3UJ	3.3U	1.6U	-	2.0U	2.0U	2.2U	-	-	-	-	-	-	-	-	-	-
Cobalt	NA	1.5U	1.7U	1.5U	1.5U	9.6J	10J	11.6	-	-	-	-	-	-	-	14.2	13.1	14.7
Copper	1300	12U	4.0U	12U	12U	2.6U	2.6U	2.1U	-	-	-	-	-	-	-	-	-	-
Iron	300	**1120**	218	**351**	-	**5000**	**3700**	**7260**	-	-	-	-	-	-	-	-	-	-
Lead	5	0.76	0.61J	0.24UJ	4.9	8.9U	8.9U	9.3U	10.0U	10.0U	8.4U	8.4U	6.9U	6.9U	6.9U	6.9U	6.9U	6.9U
Magnesium	NA	22900	24100	21800	22000	34100	35500	41300	-	-	-	-	-	-	-	-	-	-
Manganese	50	**164**	**94.4**	**117**	-	**3630**	**3600**	**3660**	-	-	-	-	-	-	-	-	-	-
Mercury	2	0.05U	0.050U	0.05U	0.079U	0.079U	0.080U	0.16U	-	-	-	-	-	-	-	-	-	-
Nickel	100	5.2J	4.1J	4.9J	5.8J	2.2J	3.6J	3.8U	-	-	-	-	-	-	-	-	-	-
Potassium	NA	2050	1870	1760	2100	3220	3000	3220	-	-	-	-	-	-	-	-	-	-
Selenium	40	16U	9.3U	16U	-	4.8U	4.8U	4.7U	-	-	-	-	-	-	-	-	-	-
Silver	40	5U	2.4U	5U	5U	1.4U	1.4U	1.8U	-	-	-	-	-	-	-	-	-	-
Sodium	50000	**84600**	**85400**	**81000**	**83000**	48800	46200	48700	-	-	-	-	-	-	-	-	-	-
Thallium	0.5	0.13U	0.12U	0.13U	0.13U	**13.8J**	9.5U	8.9U	-	-	-	-	-	-	-	14.0U	**14.2J**	14.0U
Vanadium	NA	1.9U	1.6U	1.9U	3.8J	1.7U	1.7U	1.7U	-	-	-	-	-	-	-	-	-	-
Zinc	2000	6.7UJ	6.5U	3.7U	12J	4.9U	4.9U	6.9J	-	-	-	-	-	-	-	-	-	-

Notes:
Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120													MW-120			
Sample Date		6/15/2011	3/13/2012	5/29/2012	7/31/2012	9/6/2013	11/11/2013	3/6/2014	5/21/2014	8/6/2014	10/23/2014	3/23/2015	6/1/2015	9/15/2015	11/16/2015	1/13/2016	4/8/2016	7/25/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation													Cell 1 Operation			
Aluminum	200	-	80.1U	80.1U	74.3U	82.8U	82.8U	82.8U	82.8U	67.4U	94.8J	67.4U	111J	84.1U	84.1U	106J	92.9U	86.8U
Antimony	6	-	5.8U	5.8U	3.5U	0.34U	0.34U	0.34U	0.34U	0.33U	0.33U	0.33U	0.33U	0.33U	0.33U	0.33U	0.35U	0.48U
Arsenic	0.02	-	5.1U	5.1U	6.8U	**0.51J**	0.78U	0.78U	0.78U	0.82U	**3.8**	**7.3**	0.82U	**0.95J**	**1.1J**	0.54U	**1.4J**	**1.9J**
Barium	6000	-	267	244	234	144	149	145	144	147	165	170	157	158	169	185	182	192
Beryllium	1	-	0.24U	0.24U	0.67U	0.67U	0.67U	0.81J	0.67U	0.67U	0.67U	0.67U	0.67U	0.70U	0.70U	1.1U	1.1U	0.67U
Cadmium	4	-	0.77J	0.27U	0.36U	0.76U	0.76U	0.76U	0.76U	0.48U	0.33U	0.33U	0.33U	0.30U	0.60UJ	0.64U	0.64U	0.56UJ
Calcium	NA	-	110000	104000	103000	107000	113000	115000	112000	112000	118000	116000	122000	111000	120000	126000	122000	120000
Chromium	70	-	1.1U	2J	1.1U	1.6U	1.6U	1.6U	1.6U	1.3U	1.3U	2.0J	2.0J	1.5U	1.5U	4.2J	2.9J	2.6J
Cobalt	NA	14.5	14.4	14.6	14.4	13.5	14.2	15.3	14.9	14.1	15.1	15.8	16.7	14.4	16.0	17.4	15.9	15.8
Copper	1300	-	0.94U	1.3J	2.1U	2.7U	2.7U	2.7U	2.7U	2.8U	2.8U	2.8U	2.8U	2.5U	2.5U	3.2J	3.2U	4.1U
Iron	300	-	**18300**	**3120**	**2160**	**2490**	**2300**	**3050**	**3430**	**2950**	**14600**	**32200**	**2510**	**4670**	**6420**	**3970**	**11900**	**9690**
Lead	5	2.2U	3.0J	2.2U	5.1U	0.085U	0.17J	0.093J	0.14U	0.082U	0.41J	0.31U	0.15J	0.13U	0.13U	0.13U	0.13U	0.16J
Magnesium	NA	-	54600	54400	52000	55000	55900	66100	57000	55900	59600	57100	61100	54700	59500	65200	60600	59700
Manganese	50	-	**5190**	**5220**	**5020**	**5220**	**5640**	**6050**	**5740**	**5640**	**5930**	**5880**	**5910**	**5680**	**6010**	**6610**	**6260**	**6450**
Mercury	2	-	0.026U	0.026U	0.0081U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.050U	0.050U	0.050UJ	0.050U	0.050U	0.050U	0.050U
Nickel	100	-	6.1J	4.4J	5.5J	5.0J	5.2J	5.3J	4.8J	5.4J	6.8J	6.2J	6.0J	6.1J	6.0J	5.9J	7.4J	6.2J
Potassium	NA	-	2970	3260	3490	3600	3700	3200	3070	3510	3650	3010	3190	3330	3600	3920	3190	3580
Selenium	40	-	6.9U	6.9U	7.5U	8.4U	8.4U	8.4U	8.4U	4.8U	4.8U	12.9J	4.8U	8.2U	8.2U	8.2U	9.7U	9.7U
Silver	40	-	0.91U	0.91U	1.2U	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	1.9J	1.8U	1.4U	1.4U	1.8U	1.8U	1.9U
Sodium	50000	-	**78700**	**74200**	**73400**	**83400**	**84900**	**82400**	**83000**	**84600**	**79000**	**83000**	**88100**	**83700**	**89700**	**97500**	**87900**	**91600**
Thallium	0.5	**4.7J**	4.2U	4.2U	5.7U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U
Vanadium	NA	-	1.3J	0.96U	1.3U	2.0U	2.0U	2.0U	2.0U	1.9U	1.9U	1.9U	1.9U	1.4U	1.4U	2.3U	2.3U	1.6U
Zinc	2000	-	4.6J	4.9J	5.7J	6.4J	6.8J	8.3J	5.9U	7.3U	11.5J	6.3J	6.0J	7.7J	6.7J	271	4.6J	9.0J

Notes:

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Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120				MW-120												
Sample Date		10/21/2016	1/20/2017	4/18/2017	7/17/2017	10/12/2017	1/22/2018	4/10/2018	7/16/2018	10/30/2018	1/3/2019	4/3/2019	7/1/2019	9/25/2019	12/16/2019	1/3/2020	4/7/2020	7/14/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation				Cell 2 Operation												
Aluminum	200	86.8U	86.8U	86.8U	89.4U	89.4U	89.4U	89.4UJ	153U	153U	153U	**294J**	**509**	-	19.7U	71.2	19.7U	-
Antimony	6	0.48U	0.48U	0.48U	0.45U	0.45U	0.45U	0.45U	0.41U	0.56UJ	0.41U	0.51J	4.1U	-	0.41U	0.41U	0.41U	0.41U
Arsenic	0.02	**0.88J**	**3.6**	**1.0J**	**0.98J**	**0.81J**	**3.9**	**1.7J**	**0.99J**	**6.2**	**3.7**	**16**	**1.8J**	-	**1.1J**	**3.1**	**0.71J**	**0.68J**
Barium	6000	199	252J	185	176	184	208	215	191	214	213	295	218	-	209	231	201	190
Beryllium	1	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	2.0U	1.0U	1.0U	1U	1U	1U	-	1U	1U	1U	1U
Cadmium	4	0.49U	0.49U	0.49U	1.8U	1.8U	1.8U	1.8U	1.0U	1.0U	1U	1U	1U	-	1U	1U	1U	1U
Calcium	NA	129000	120000	124000	121000	121000	126000	127000	126000	128000	130000	125000	129000	-	129000	136000	132000	120000
Chromium	70	3.6J	2.2J	3.5J	3.3U	3.3U	3.3U	3.3U	5.3U	5.3U	5.3U	5.3U	6.3J	-	1.6U	3J	1.6U	-
Cobalt	NA	15.7	17.4	16.6	17.9J	**15.4J**	17.3	**17.5**	16.8	16.5	18.8	19.9	18.4	-	16.1	17.9	16.8	15
Copper	1300	4.1U	4.1U	4.1U	4.0U	4.0U	4.0U	5.1J	6.2U	6.2U	6.2U	6.2U	6.2U	-	12U	12U	12U	12U
Iron	300	**3370**	**21500**	**4580**	**4070**	**4070**	**28000**	**12300**	**5670**	**20700**	**15100**	**95500**	**9520**	-	**9270**	**18100**	**5940**	-
Lead	5	0.090U	0.090U	0.090U	0.11U	0.11U	0.11U	0.11U	1.1U	1.1U	1.1U	2J	**6.9**	0.48UJ	0.1J	0.56	0.071U	0.071U
Magnesium	NA	62300	66600	63000	60600	60100	61500	63200	61300	60100	59900	60600J	61900	-	61900	65400	64100	60000
Manganese	50	**6910**	**6610**	**6480**	**6340**	**6470**	**6790**	**7420**	**6710**	**6540**	**6730**	**7020**	**7080**	-	**6920**	**7170**	**7080**	-
Mercury	2	0.050U	0.050UJ	0.050U	0.050U	0.050UJ	0.050U	0.050U	0.050U	0.050U	0.05U	0.05U	0.05U	-	0.05U	0.05U	0.05U	0.079U
Nickel	100	6.5J	5.8J	5.3J	6.7J	6.6J	5.1J	6.3J	6.9J	8.9J	6.3J	9.7UJ	7.2J	-	5.7UJ	7.6J	8.7J	6.4J
Potassium	NA	3920	3670	3480	3550	3580	3360	3410	3480	4010	3650	3150	4060	-	3710	3460	3280	3400
Selenium	40	9.7U	9.7U	9.7U	9.3U	9.3UJ	9.3U	9.3U	21.0U	21.0U	21U	21U	21U	-	16U	16U	16U	-
Silver	40	1.9U	1.9U	1.9U	2.4U	2.4UJ	2.4U	2.4UJ	5.0U	5.0U	5U	5U	5U	-	5U	5U	5U	5U
Sodium	50000	**93600**	**100000**	**93100**	**90500**	**93900**	**95500**	**101000**	**96200**	**96800**	**95800**	**92400**	**142000**	-	**101000**	**99200**	**102000**	**100000**
Thallium	0.5	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11J	0.25J	0.11U	-	0.13U	0.13U	0.13U	0.13U
Vanadium	NA	1.6U	1.6U	1.6U	1.6U	1.6U	1.6U	1.6U	3.0U	3.0U	3U	3U	27.1	-	1.9U	1.9U	1.9U	1.9U
Zinc	2000	6.6J	8.7J	6.4J	6.5U	7.5J	8.9J	6.5U	7.9J	8.2J	7.2J	13.9J	12.8J	-	11.5J	15.7J	5.5J	6.8J

Notes:

Organge shaded cells shows data collected pre-CAMU operati
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Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120	MW-233														
Sample Date		10/12/2020	6/1/2006	12/11/2006	5/23/2007	12/18/2007	6/23/2008	11/10/2008	5/28/2009	11/19/2009	5/13/2010	9/23/2010	3/20/2012	5/24/2012	7/25/2012	4/25/2013	6/17/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation	Pre-CAMU Operation														
Aluminum	200	-	-	-	-	-	-	-	-	-	-	-	80.1U	80.1U	74.3U	**244**	82.8U
Antimony	6	0.41U	-	-	-	-	-	-	-	-	-	-	5.8U	5.8U	3.5U	0.33U	1U
Arsenic	0.02	**1J**	-	-	-	-	-	-	-	-	-	-	**6.9J**	**6.1J**	**14.4J**	**1.7J**	**3.8**
Barium	6000	200	-	-	-	-	-	-	-	-	-	-	151	175	203	473	346
Beryllium	1	1U	-	-	-	-	-	-	-	-	-	-	0.24U	0.24U	0.67U	0.67U	0.67U
Cadmium	4	1U	-	-	-	-	-	-	-	-	-	-	0.27U	1.7J	0.36U	0.36U	0.76U
Calcium	NA	120000	-	-	-	-	-	-	-	-	-	-	59700	63400	78600	173000	142000
Chromium	70	-	-	-	-	-	-	-	-	-	-	-	1.3J	1.1U	1.6J	1.1U	1.6U
Cobalt	NA	17	-	-	-	-	-	-	-	-	-	-	0.62U	0.62U	0.66U	0.66U	1.3U
Copper	1300	12U	-	-	-	-	-	-	-	-	-	-	2.3J	0.94U	2.1U	2.1U	2.7U
Iron	300	-	**17000**	**12500J**	**15500**	**22000**	**12400**	**17700**	**12400**	**12600**	**15800**	**17800**	**21000**	**17100**	**25000**	**22700**	**42500**
Lead	5	0.13J	-	-	-	-	-	-	-	-	-	-	2.2U	2.2U	5.1U	2.9	0.63J
Magnesium	NA	59000	-	-	-	-	-	-	-	-	-	-	18200	18600	24900	78300	49200
Manganese	50	-	-	-	-	-	-	-	-	-	-	-	**1420**	**1630**	**1910**	**3280**	**2400**
Mercury	2	0.079U	-	-	-	-	-	-	-	-	-	-	0.037J	0.026U	0.012J	0.070U	0.070U
Nickel	100	5.8J	-	-	-	-	-	-	-	-	-	-	0.95U	0.95U	1.4J	1.1U	1.5U
Potassium	NA	3300	-	-	-	-	-	-	-	-	-	-	6170	7270	8340	19000	13400
Selenium	40	-	-	-	-	-	-	-	-	-	-	-	6.9U	6.9U	7.5U	7.5U	8.4U
Silver	40	5U	-	-	-	-	-	-	-	-	-	-	0.91U	0.91U	1.2U	1.2U	2.1U
Sodium	50000	**99000**	-	-	-	-	-	-	-	-	-	-	**113000**	**107000**	**161000**	**619000**	**350000**
Thallium	0.5	0.13U	-	-	-	-	-	-	-	-	-	-	**5.4J**	4.2U	5.7U	0.15U	0.15U
Vanadium	NA	1.9U	-	-	-	-	-	-	-	-	-	-	1.4J	1.1J	3.5J	1.3U	2.0U
Zinc	2000	13J	-	-	-	-	-	-	-	-	-	-	3.2U	3.2U	2.0U	8.3J	3.4J

Notes:
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Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
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Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233														MW-233		
Sample Date		6/25/2013	9/10/2013	11/12/2013	3/14/2014	7/2/2014	7/2/2014	8/4/2014	8/8/2014	10/31/2014	1/16/2015	3/11/2015	6/9/2015	7/6/2015	9/21/2015	11/19/2015	12/11/2015	1/14/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation														Cell 1 Operation		
Aluminum	200	122J	82.8U	82.8U	82.8U	**465**	**545**	**228**	67.4U	**3480**	103J	134U	81.1J	126J	84.1U	108J	142UJ	92.9U
Antimony	6	0.34U	0.34U	0.51J	0.97J	**37.2**	**41.9**	2.8	1.8	**27**	2.4	1.8	1.4	1.7	2.5	5.1J	2.1	1.2
Arsenic	0.02	**1.6J**	**2.5**	**6.6**	**11.2**	**157**	**170**	**39.3**	**33.2**	**172**	**40.0**	**17.7**	**19.1**	**22.3**	**41.4**	**40.7**	**29.7**	**15.9**
Barium	6000	432	174	345	183	116	120	93.5	124	192	61.5	46.2	44.5	47.3	73.2	56.9	76.4J	70.3
Beryllium	1	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67J	0.67U	0.67U	0.67U	0.67U	0.70U	0.77J	1.1U	1.1U
Cadmium	4	0.76U	0.76U	0.76U	0.76U	0.77J	0.72J	0.33J	0.33U	0.48J	0.33U	0.33U	0.33U	0.33U	0.30U	0.30U	0.64U	0.64U
Calcium	NA	155000	139000	118000	237000	202000	199000	218000	189000	198000	92100	165000	55100	63800	49200	80600	51800J	48100
Chromium	70	1.6U	2.1J	1.6U	2.0J	14.7UJ	14.5UJ	12.5J	2.5J	30.0	7.1UJ	7.5J	5.5J	6.7UJ	**628J**	8.3J	5.3J	3.8J
Cobalt	NA	1.3U	1.3U	1.3U	1.3U	2.7J	2.8J	3.1J	1.0U	5.7	3.7J	2.1J	1.9J	1.3J	49.6J	1.3J	1.2J	0.90U
Copper	1300	2.7U	2.7U	4.1J	2.7U	4.6J	5.5J	2.8U	2.8U	33.3	2.8U	5.9U	3.0U	2.8U	28.5J	2.5U	3.2U	3.2U
Iron	300	**23400**	**32700**	**21600**	**121000**	**37400**	**37300**	**15400**	**2560**	**8960**	**962**	**39400**	**365**	**1660**	**5050J**	**419**	149UJ	140J
Lead	5	0.94J	0.27J	0.96J	3.0	1.3	1.4	1.3	1.6	**13.8**	1.7	1.0	1.0	1.3	1.1	1.2	1	0.71J
Magnesium	NA	68500	55000	47000	63500	48100	47700	51100	49600	76400	26300	49000	18400	25100	16000	33800J	17500J	14300
Manganese	50	**2770**	**2540**	**2440**	**4880**	**2790**	**2750**	**2980**	**1960**	**498**	**818**	**3870**	**432**	**727**	**809J**	**492**	**274J**	**190**
Mercury	2	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.050U	0.050U	0.050U	0.050UJ	0.050U	0.05U	0.050U
Nickel	100	1.5U	1.5U	1.5U	1.5U	58.7	62.7	14.5	2.9J	**119**	5.0J	7.1J	2.9J	5.4UJ	**2210J**	1.9J	2.5U	2.5U
Potassium	NA	17000	16000	13700	17200	83700	87100	62900	31300	69100	28200	63300	30400	35900	18800	42500	20600J	14500
Selenium	40	8.4U	8.4U	8.4U	8.4U	**66.9**	**82.7**	9.4UJ	4.8UJ	**97.7**	4.8U	11.7J	4.8U	4.8U	8.2U	8.2U	8.2U	8.2U
Silver	40	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.4U	1.4U	1.8U	1.8U
Sodium	50000	**560000**	**429000**	**340000**	**576000**	**15600000**	**15100000**	**9680000**	**2840000**	**16300000**	**3300000**	**8090000**	**2320000**	**4700000**	**2290000**	**4420000**	**1800000J**	**1600000**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	2.0U	2.0U	2.0U	3.7J	206	217	101	21.1	275	39.1	66.2	27.9	52.5	30.3	52.5	27.4J	17.4
Zinc	2000	4.3J	2.0U	17.8J	5.1J	41.0	43.8	6.3J	4.7U	118	11.3J	5.1J	2.0U	2.3J	14.7J	16.0J	3.9U	43.0

Notes:

Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233							MW-233									
Sample Date		4/14/2016	7/26/2016	12/8/2016	1/23/2017	4/28/2017	5/9/2017	7/24/2017	10/16/2017	1/26/2018	4/16/2018	7/19/2018	10/24/2018	1/7/2019	4/4/2019	7/3/2019	10/8/2019	1/7/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation							Cell 2 Operation									
Aluminum	200	92.9U	86.8U	126J	177J	86.8U	86.8U	89.4U	89.4U	89.4U	89.4U	153U	**2610**	153U	186J	**396**	190	**390**
Antimony	6	1.3J	0.81J	1.4J	**8.5J**	2.5	2.5	1.8	0.45U	4.4	2.2	2.3J	3.8	3.3	6.7UJ	203U	**8.5**	1.3
Arsenic	0.02	**13.8**	**17.2**	**27.3**	**51.8J**	**20.8**	**20.9**	**28.1**	1.6UJ	**23.6**	**14.4**	**21.9**	**37.1**	**41.2**	**31.6**	**30.1**	**59.8**	**16.3**
Barium	6000	57.8	98.8	90.9	42.8	58.9	81.2	110	98	57	58	75.7	73.5	51.8	46.7	64.6	75.3	36.7
Beryllium	1	1.1U	0.67U	0.67U	0.67U	0.67U	0.67U	2.0U	2.0U	2U	2.0U	1.0U	1.0U	1U	1U	1U	1U	1U
Cadmium	4	0.64U	0.49U	0.49U	0.49U	0.49U	0.49U	1.8U	1.8U	1.8U	1.8U	1.0U	1.0U	1U	1U	1U	1U	1U
Calcium	NA	53100	48100	44300	64000	39400	43200	53900	60200	49000	39800	46700	169000	104000	98100	109000	76300	24300
Chromium	70	4.8J	2.5J	3.0J	7.6J	6.6J	6.1J	3.3U	8.1J	5.2UJ	5.2J	5.8J	13.9J	7.5J	6.1J	5.9UJ	6.4J	4.5UJ
Cobalt	NA	0.90UJ	1.9U	1.9U	2.0J	1.9U	1.9U	1.7U	1.7U	2.4J	1.7U	2.3J	4.2J	7.5U	5.7	2.6J	1.5U	1.5U
Copper	1300	3.5J	4.1U	4.1U	4.1U	4.1U	4.1U	8.2J	9.2UJ	25.3J	10.6	6.2U	48.8	11.7J	35.6	21.4	16.6J	15.5J
Iron	300	131J	74.7U	107J	286	138J	127J	**699**	**1950**	131J	99.4J	121UJ	**5930**	**995**	**887**	**1560**	165J	**1170**
Lead	5	0.71UJ	0.37J	0.35J	0.42J	0.93J	0.69J	1.7	0.17UJ	3.6	0.60J	1.1U	**11.5**	1.1U	4.4	3.3	3.4	**5.3**
Magnesium	NA	19300	13400	14300	33400	16700	16800	17300	25800	23000	17400	22900	81500	55400	52800J	57700	40800	14500
Manganese	50	**276**	**154**	**201**	**573**	**166**	**180**	**201**	**260**	**196**	**146**	**200**	**1430**	**735**	**761**	**864**	**373**	**183**
Mercury	2	0.050U	0.050U	0.050U	0.050U	0.050UJ	0.05U	0.050UJ	0.050U	0.05U	0.050UJ	0.050U	0.050U	0.25U	0.05U	0.05U	0.05U	0.05U
Nickel	100	2.5U	2.8U	3.4J	9.1J	4.5J	4.5J	6.7J	6.9J	5.7J	5.7J	4.3J	18.6	11.4	7.3UJ	3.8UJ	5.8UJ	5.3J
Potassium	NA	19300	10500	17600	39800	24000	20300	14700	30400	25000	20600	28900	54000	41900J	43400J	47700	38800	16400
Selenium	40	9.7U	9.7U	9.7U	9.7U	9.7U	9.7U	9.3U	9.3U	9.3U	9.3U	21.0U	21.0U	21U	21U	21U	16U	16U
Silver	40	1.8U	1.9U	1.9U	1.9U	1.9U	1.9U	2.4U	2.4U	2.4U	2.4U	5.0U	5.0U	5U	5U	5U	5U	5U
Sodium	50000	**2520000**	**704000**	**1670000**	**5320000**	**2680000**	**2360000**	**1530000**	**3780000**	**3090000**	**2620000**	**3370000**	**7370000**	**5580000**	**5790000J**	**5280000**	**3880000**	**1480000**
Thallium	0.5	0.15U	0.16U	0.16U	0.16UJ	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.14J	0.11U	0.11U	0.11U	0.11U	0.13U	0.13U
Vanadium	NA	34.4	9.8	35.6	85.3	53.1	44.4	21.2	53.7	43.9	43.4	57.4	73.6	58	63.3	62.5	52.3	38.2
Zinc	2000	13.0J	5.4U	9.6J	5.4U	5.9J	5.4U	64.5	31.2	28.3	8.6J	8.2J	57.6	51.6	18.8J	52.4	54	32.7

Notes:

Organge shaded cells shows data collected pre-CAMU operati
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Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233					MW-233	MW-234									
Sample Date		4/2/2020	7/7/2020	9/28/2020	9/28/2020	10/12/2020	12/3/2020	6/1/2006	12/11/2006	5/23/2007	12/19/2007	6/24/2008	11/10/2008	5/19/2009	11/23/2009	5/20/2010	9/23/2010
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation					Post CAMU Closure	Pre-CAMU Operation									
Aluminum	200	54.5	-	-	-	-	-	-	-	-	80.2U	-	-	-	-	-	-
Antimony	6	1.4	1.6	-	-	**6.4**	-	-	-	-	9.7U	-	-	-	-	-	-
Arsenic	0.02	**24.9**	**16**	-	-	**43**	-	-	-	-	10.0U	-	-	-	-	-	-
Barium	6000	43.6	61	-	-	67	-	-	-	-	0.60U	-	-	-	-	-	-
Beryllium	1	1U	1U	-	-	1U	-	-	-	-	0.90U	-	-	-	-	-	-
Cadmium	4	1U	1U	-	-	1U	-	-	-	-	0.90U	-	-	-	-	-	-
Calcium	NA	37200	53000	-	-	74000	-	-	-	-	63.2U	-	-	-	-	-	-
Chromium	70	6.8UJ	-	-	-	-	-	-	-	-	2.3U	-	-	-	-	-	-
Cobalt	NA	1.5U	4.8J	-	-	2J	-	-	-	-	2.1U	-	-	-	-	-	-
Copper	1300	12U	12U	-	-	12U	-	-	-	-	2.2U	-	-	-	-	-	-
Iron	300	112J	-	210	-	-	66UJ	**1930**	**1460J**	**793**	52.2U	**1120**	**548**	**577**	**810**	**1230**	**318**
Lead	5	1.5	0.65	-	-	0.7	-	-	-	-	6.9U	-	-	-	-	-	-
Magnesium	NA	22400	31000	-	-	43000	-	-	-	-	13.5U	-	-	-	-	-	-
Manganese	50	**242**	-	-	-	-	-	-	-	-	**6770**	-	-	-	-	-	-
Mercury	2	0.05U	0.079U	-	-	0.079U	-	-	-	-	0.056U	-	-	-	-	-	-
Nickel	100	3J	7.8J	-	-	5.4J	-	-	-	-	5.6U	-	-	-	-	-	-
Potassium	NA	17600	23000	-	-	43000	-	-	-	-	86.3J	-	-	-	-	-	-
Selenium	40	16U	-	-	-	-	-	-	-	-	9.4U	-	-	-	-	-	-
Silver	40	5U	5U	-	-	5U	-	-	-	-	1.6U	-	-	-	-	-	-
Sodium	50000	**1860000**	**2600000**	-	-	**740000**	-	-	-	-	433U	-	-	-	-	-	-
Thallium	0.5	0.13U	0.13U	-	-	0.13U	-	-	-	-	10.5U	-	-	-	-	-	-
Vanadium	NA	37.8	38	-	-	54	-	-	-	-	1.5U	-	-	-	-	-	-
Zinc	2000	12.7J	9.2J	-	-	8.3J	-	-	-	-	8.1U	-	-	-	-	-	-

Notes:
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Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234R						MW-234R								MW-234RR	
Sample Date		9/23/2010	7/26/2013	7/3/2014	8/1/2014	1/16/2015	9/18/2015	11/19/2015	12/10/2015	1/13/2016	4/14/2016	7/25/2016	12/6/2016	1/23/2017	4/28/2017	10/16/2017	10/16/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation						Cell 1 Operation								Cell 2 Operation	
Aluminum	200	-	159J	**664**	**754**	**643**	**5720**	132J	**213**	**1730**	154J	**243**	86.8U	**830**	**288**	**291**	96.1J
Antimony	6	-	0.58J	**6.6**	4.7	3.0	**14.5**	1.4	1.6	1.3	0.73UJ	1.1	0.48U	2.5J	1.1	0.45U	0.45U
Arsenic	0.02	-	**4.4**	**45.7**	**34.3**	**17.7**	**26.7**	**9.9**	**10.4**	**9.4**	**7.2**	**15.9**	**7.5**	**17.7J**	**9.8**	0.72U	1.1UJ
Barium	6000	-	181	282	263	251	332	254	222	239	232	267	231	313	248	429	454
Beryllium	1	-	0.67U	0.67U	0.67U	0.67U	0.70U	0.70U	1.1U	1.1U	1.1U	0.67U	0.67U	0.67U	0.67U	2.0U	2.0U
Cadmium	4	-	0.76U	0.33U	0.54J	0.33U	0.95J	0.30U	0.64U	0.64U	0.64U	0.49U	0.49U	0.86J	0.49U	1.8U	1.8U
Calcium	NA	-	135000	197000	154000	155000	142000	137000	149000	151000	132000	120000	124000	129000	131000	177000	187000
Chromium	70	-	2.0J	3.0J	2.7J	3.7UJ	10.9J	3.5J	2.5J	5.3J	2.0U	3.2J	1.8U	1.8U	3.1J	3.3U	3.3U
Cobalt	NA	-	2.3J	1.0U	1.0U	1.0U	2.0J	0.90U	0.9U	1.1J	0.90UJ	1.9U	1.9U	1.9U	1.9U	2.4J	2.5J
Copper	1300	-	2.7U	5.2J	3.2J	2.8U	32.5J	2.5U	3.2U	15.7	3.5J	4.1U	4.1U	5.1UJ	4.6J	4.0U	4.0U
Iron	300	**325**	**23000**	**26200**	**28200**	**29500**	**35400**	**18300**	**15600**	**23400**	**26400**	**32100**	**24300**	**52800**	**29700**	**14100**	**14600**
Lead	5	-	2.8J	**17.0**	**10.3**	**11.5**	**60.9**	4.4	3	**10.9**	1.8J	2.3	0.65J	**9.6J**	5.0	0.11U	0.23UJ
Magnesium	NA	-	53300	61600	54400	57800	53200	51600J	49800	55200	53000	47700	50000	52500	51300	53400	56100
Manganese	50	-	**3550**	**3770**	**3670**	**4030**	**3110**	**2920**	**2710**	**3250**	**3230**	**2820**	**3020**	**3060**	**2880**	**6060**	**6390**
Mercury	2	-	0.060U	0.060U	0.060U	0.060U	0.14U	0.050U	0.05U	0.050U	0.18J	0.050U	0.050U	0.050U	0.050UJ	0.050U	0.050U
Nickel	100	-	3.4J	2.0J	2.4J	1.6U	5.4J	1.3U	2.5U	2.5U	2.5U	2.8U	2.8U	2.8U	2.8U	4.0U	4.0U
Potassium	NA	-	11500	12100	10900	8280	12000	10000	9540	9760	7770	9300	9000	7980	8130	8320	8600
Selenium	40	-	8.4U	4.8U	4.8U	24.0U	9.5J	8.2U	8.2U	8.2U	9.7U	9.7U	9.7U	9.7U	9.7U	9.3U	9.3U
Silver	40	-	2.1U	1.8U	1.8U	1.8U	1.4U	1.4U	1.8U	1.8U	1.8U	1.9U	1.9U	1.9U	1.9U	2.4U	2.4U
Sodium	50000	-	**285000**	**261000**	**255000**	**228000**	**253000**	**257000**	**256000**	**260000**	**224000**	**217000**	**220000**	**228000**	**214000**	**147000**	**152000**
Thallium	0.5	-	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U	0.16U	0.16UJ	0.16U	0.12U	0.12U
Vanadium	NA	-	2.0U	2.2J	4.3J	3.5J	18.7	1.4U	2.3U	6.6	2.3U	1.6U	1.6U	4.6J	2.0J	1.6U	1.6U
Zinc	2000	-	5.2J	7.6J	9.0J	11.7J	54.9	4.8UJ	3.9U	186	4.2U	5.4U	5.4U	8.1UJ	5.4U	6.5U	11.3J

Notes:

Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234RR																MW-234RR
Sample Date		10/18/2017	1/26/2018	4/16/2018	7/19/2018	10/23/2018	1/7/2019	1/7/2019	4/4/2019	7/3/2019	10/1/2019	1/7/2020	4/2/2020	7/7/2020	9/25/2020	9/25/2020	10/13/2020	12/3/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation																Post CAMU Closure
Aluminum	200	--	666	176J	**231J**	**257J**	**743**	**711**	**447**	**554**	155	169	**249**	-	-	-	160U	-
Antimony	6	--	0.45U	0.45U	0.41U K3	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	-	-	0.42U	-
Arsenic	0.02	--	**6.4J**	**6.9**	**14.8**	**13.4**	**5.4**	0.68U	**7.2**	**15.3**	**11**	**4.1**	**7.2**	**12**	-	-	1.3J	-
Barium	6000	--	379	330	443	404	469	446	354	383	376	302	336	370	-	-	310	-
Beryllium	1	--	2U	2.0U	1.0U	1.0U	1U	1U	1U	1U	1U	1U	1U	1U	-	-	1U	-
Cadmium	4	--	1.8U	1.8U	1.0U	1.0U	1U	1.8UJ	1U	1U	1U	1U	1U	1U	-	-	1U	-
Calcium	NA	--	193000	180000	183000	171000	186000	181000	175000	187000	183000	172000	175000	160000	-	-	170000	-
Chromium	70	--	3.3U	3.3U	5.3U	5.3U	5.3U	5.3U	5.3U	5.3U	2J	1.9J	2.4UJ	-	-	-	1.6U	-
Cobalt	NA	--	2.1J	1.7U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	-	-	1.5U	-
Copper	1300	--	4U	4.0U	6.2U	6.2U	6.2U	6.2U	6.2U	6.2U	12U	12U	12U	12U	-	-	12U	-
Iron	300	--	**13700**	**14100**	**18800**	**16400**	**40600**	**40000**	**20400**	**26200**	**14600**	**8020**	**19100**	-	**20000**	-	41U	**10000**
Lead	5	0.26J	1.9	0.25J	1.1U	1.1U	1.1U	1.1U	1.1U	1.3J	0.46J	0.41UJ	0.59	0.2J	-	-	0.073U	-
Magnesium	NA	--	55100	51800	52500	47500	52500	51100	50600J	52900	51300	48700	51100	45000	-	-	49000	-
Manganese	50	--	**8050**	**6830**	**6430**	**6310**	**6900**	**6680**	**6480**	**6380**	**7160**	**6540**	**6750**	-	-	-	**6100**	-
Mercury	2	--	0.050U	0.050UJ	0.050U	0.050U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.079U	-	-	0.079U	-
Nickel	100	--	4U	4.0U	3.1U	3.1U	3.1U	3.1U	3.1UJ	3.1U	2.1U	2.1U	2.1U	3.6J	-	-	2.2U	-
Potassium	NA	--	5120	4960	7680	6210	4960	4800	4940	6070	5060J	4410	4280	5200	-	-	5300	-
Selenium	40	--	9.3U	9.3U	21.0U	21.0U	32.8UJ	21U	21U	21U	16U	16U	16U	-	-	-	16U	-
Silver	40	--	2.4U	2.4U	5.0U	5.0U	5U	5U	5U	5U	5U	5U	5U	5U	-	-	5.2U	-
Sodium	50000	--	**149000**	**134000**	**146000**	**124000**	**125000**	**122000**	**117000**	**133000**	**128000**	**121000**	**128000**	**120000**	-	-	**130000**	-
Thallium	0.5	--	0.12U	0.12U	0.11U	0.11U	0.11U	0.11U	0.11U	0.11U	0.13U	0.13U	0.13U	0.13U	-	-	0.13U	-
Vanadium	NA	--	2.3J	1.6U	3.0U	3.0U K2	3U	3U	3U	3U	1.9U	1.9U	1.9U	1.9U	-	-	2U	-
Zinc	2000	--	15.4J	36.8	3.9J	6.1J	15.3J	15J	5.4J	12.9UJ	5.7J	4.5J	3.7U	3.7U	-	-	3.8U	-

Notes:
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Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322															MW-322	
Sample Date		3/14/2012	5/16/2012	7/30/2012	11/19/2012	2/19/2013	6/12/2013	9/5/2013	11/7/2013	3/12/2014	5/19/2014	8/4/2014	10/29/2014	3/3/2015	6/8/2015	9/14/2015	11/18/2015	1/7/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation															Cell 1 Operation	
Aluminum	200	**388**	99.8J	74.3U	**615**	**1050**	**263**	82.8U	82.8U	**362**	**228**	**330**	**3030**	**5700**	**557J**	97.8J	**219**	**910J**
Antimony	6	5.8U	5.8U	3.5U	3.5U	0.69J	0.55J	0.34J	0.50J	0.39J	0.34U	0.33U	1.4	1.9	0.35J	0.33U	0.33U	0.50J
Arsenic	0.02	**23.1**	**16.8J**	**14.2J**	**11.7**	**14.4**	**13.3**	**14.2**	**15.0**	**4.2**	**5.5**	**8.9**	**10.8**	**6.0**	**2.5**	**4.3**	**4.8**	**4.8**
Barium	6000	54.4	75.5	115	116	79.2	163	218	241	94.7	122	168	209	144	124	191	199	200
Beryllium	1	0.24U	0.24U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.70U	0.70U	1.1U
Cadmium	4	1.4J	0.27U	0.36U	0.36U	0.92J	0.36U	0.76U	1.0J	0.76U	0.76U	0.33U	0.42J	0.33U	0.33U	0.30U	0.41J	0.64U
Calcium	NA	83000	84600	140000	74600	58200	91800	129000	141000	52800	76500	108000	109000	62000	75300	110000	122000	103000
Chromium	70	5.2J	5.1J	4.2J	4.3J	5.3J	5.9J	4.3J	4.0J	1.9J	3.5J	4.2J	9.9J	11.5J	3.9J	2.9J	6.8J	5.3J
Cobalt	NA	1.7J	0.62U	0.66U	0.69J	2.3J	2.2J	1.3U	1.3J	1.3U	1.3U	1.0U	2.2J	2.6J	1.0U	0.90U	2.5UJ	1.4J
Copper	1300	3.1J	0.94U	8.4J	7.0J	6.0J	2.1U	2.7U	2.7U	2.7U	2.7U	4.5J	18.0	23.2	3.8J	5.2U	2.5U	5.1J
Iron	300	**55700**	**67300**	**91900**	**45100**	**80200**	**98400**	**89700**	**80100**	**29100**	**49200**	**63800**	**68600**	**33700**	**32700**	**39900**	**32200**	**46600**
Lead	5	3.2J	11.0U	**8.9J**	5.1U	3.7	0.86J	0.42J	0.63J	1.5	0.73J	1.9	**13.0**	**20.4**	2.5	0.44J	2.3	3.8
Magnesium	NA	78600	87500	100000	86400	76500	91100	93700	94800	28000	61100	71900	79800	29200	38600	55300	51400	65100
Manganese	50	**886**	**784**	**1520**	**559**	**561**	**732**	**928**	**1070**	**350**	**574**	**813**	**800**	**414**	**523**	**675**	**837**	**746**
Mercury	2	0.026U	0.026U	0.0081U	0.070U	0.70U	0.070U	0.060U	0.30U	0.060U	0.060UJ	0.060U	0.060U	0.074J	0.050U	0.050U	0.050U	0.050U
Nickel	100	16.7	11.4	1.1U	3.5J	1.1U	1.1U	1.5U	1.5U	1.5U	1.5U	1.6U	10.8	8.2J	1.6U	1.5J	1.3U	2.5U
Potassium	NA	36200	36400	32100	42100	43700	38000	32700	31400	14200	30500	29100	34800	13500	19300	22800	17000	27700
Selenium	40	6.9U	6.9U	7.5U	7.5U	7.5U	8.6J	8.4U	8.4U	8.4U	8.4U	4.8J	4.8U	4.8U	8.4U	8.2U	12.6J	8.2U
Silver	40	0.91U	0.95J	1.2U	1.2U	1.2U	1.2U	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	1.8U	1.8U	1.4U	1.4U	1.8U
Sodium	50000	**455000**	**470000**	**549000**	**527000**	**432000**	**523000**	**545000**	**530000**	**255000**	**378000**	**430000**	**461000**	**261000**	**295000**	**359000**	**357000**	**408000**
Thallium	0.5	**5.1J**	**8.7J**	**12.2J**	5.7U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	11.5	9.3	7.5	12.4	20.9	15.1	9.7	7.9	4.9J	9.4	8.0	24.3	26.9	4.1J	3.8J	3.7J	10.9
Zinc	2000	11.2J	8.3J	4.2J	13.0J	11.7J	2.0U	2.0U	11.2J	4.0J	4.1J	3.7UJ	24.8	34.4J	2.7J	3.9U	3.9U	7.9J

Notes:

Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322							MW-322								
Sample Date		4/6/2016	7/20/2016	10/13/2016	1/17/2017	3/16/2017	4/27/2017	7/18/2017	9/11/2017	10/13/2017	12/1/2017	1/19/2018	4/13/2018	4/20/2018	7/13/2018	10/25/2018	1/2/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation							Cell 2 Operation								
Aluminum	200	**3770**	**482**	**208**	**398**	**9530**	**266**	**1380**	**222**	**158J**	**310**	89.4U	178J	89.4U	153U	**3230**	153U
Antimony	6	1.3	0.48U	0.52J	0.54UJ	3.3	0.48U	2.8	0.45U	0.54J	0.51J	0.47J	0.45U	0.67J	0.41U	1.1UJ	0.62UJ
Arsenic	0.02	**2.2**	**3.5**	**5.0**	**2.5**	**7.3**	**5.6**	**6.9**	**5.5**	**7.6**	**8.1**	**8.5**	**6.2**	**17.6**	**16.7**	**9.0**	**4.3**
Barium	6000	121	145	181	178	200	151	163	177	190	179	201	193	173	216	178	204
Beryllium	1	1.1U	0.67U	0.67U	0.67U	0.67U	0.67U	2.0U	2U	2.0U	2U	2.0U	2.0U	2.0U	1.0U	1.0U	1U
Cadmium	4	1.0J	0.49U	0.53J	0.49U	1.4J	0.49U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.1UJ	1.0U	1U
Calcium	NA	67100	96400	105000	97000	95100	91000	89900	90700	92500	88100	106000	101000	93600	99600	98000	110000
Chromium	70	7.9J	2.8J	3.8J	1.8U	15	4.1J	4.4J	3.3U	4.7J	3.4J	3.3U	3.3U	3.3U	5.3U	12.5J	5.3U
Cobalt	NA	1.6J	1.9U	1.9U	1.9U	3.5J	1.9U	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U	1.7U	1.5U	3.3J	1.8UJ
Copper	1300	22.4J	5.4J	4.1U	4.4UJ	40	4.1U	14.0	4U	4.0U	4.8J	4.0U	4.0U	4.0U	6.2U	13.5J	6.2U
Iron	300	**19800**	**31900**	**47300**	**30200**	**50300**	**49500**	**52800**	**57700**	**64100**	**57900**	**64700**	**61600**	**27000**	**60700**	**50400**	**51400**
Lead	5	**11.3**	3.4	4.5	1.4	**29.7**	1.2	7.6	1.1	1.2	2.5	0.42J	0.76J	0.11U	1.1U	**9.9**	1.1U
Magnesium	NA	22900	38600	67900	54100	63400	67600	68800	74700	74000	74000	83000	77900	74300	87700	80200	79300
Manganese	50	**381**	**599**	**665**	**544**	**670**	**598**	**636**	**623**	**586**	**591**	**650**	**720**	**519**	**576**	**613**	**669**
Mercury	2	0.050U	0.050U	0.050U	0.050U	0.075J	0.050UJ	0.050U	0.05U	0.050U	0.05U	0.050U	0.050U	0.050U	0.050U	0.050U	0.05U
Nickel	100	7.2J	2.8U	2.8U	2.8U	12	2.8U	4.0U	4U	4.0U	4U	4.0U	4.0U	5.0J	3.1U	8.3J	3.1U
Potassium	NA	8900	12400	30500	25600	27900	33100	29500	29600	31900	33200	34600	32000	32200	34100	33300	33800
Selenium	40	8.2U	9.7U	9.7U	9.7U	9.7U	9.7U	9.3U	9.3U	9.3U	9.3U	9.3U	9.3U	9.3U	21.0U	21.0U	21U
Silver	40	1.8U	1.9U	1.9U	1.9U	1.9U	1.9U	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U	25.0U	5.0U	5U
Sodium	50000	**294000**	**287000**	**420000**	**339000**	**384000**	**409000**	**393000**	**432000**	**443000**	**434000**	**494000**	**442000**	**463000**	**514000**	**502000**	**455000**
Thallium	0.5	0.15U	0.16U	0.16U	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U
Vanadium	NA	12.6	5.7	7.8	6.1	41.2	9.3	17.5	9.0	10.8	9.5	8.7	9.9	8.6	9.4J	26.2	7.2J
Zinc	2000	24.8	5.8J	5.4U	5.4U	53.4	5.4U	13.5J	6.5U	6.5U	422	6.5U	8.3J	6.5U	9.0J	21.8	16.2J

Notes:

Organge shaded cells shows data collected pre-CAMU operati
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Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322													MW-324			
Sample Date		4/2/2019	4/2/2019	7/2/2019	7/2/2019	10/2/2019	10/2/2019	1/2/2020	1/2/2020	4/1/2020	7/6/2020	7/6/2020	10/13/2020	10/13/2020	3/12/2012	5/17/2012	7/30/2012	11/21/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation													Pre-CAMU Operation			
Aluminum	200	**1580**	**1850**	**657**	**543**	136J	**225J**	92.9	93.1	86.5	150U	150U	-	-	**946**	**3340**	**1490**	**2120**
Antimony	6	1.4J	1.3J	0.69J	0.75J	0.61J	0.7J	0.75UJ	0.94UJ	0.75J	0.41U	0.41U	0.41U	0.41U	5.8U	5.8U	5.9J	**10.4J**
Arsenic	0.02	**5.9**	**6.3**	**13.7**	**13.3**	**9**	**8.9**	**4**	**4.2**	**6**	**4.3**	**4.2**	**5.7**	**5.6**	**36.8**	5.1U	**11.8J**	**30.8**
Barium	6000	198	197	215	214	315	274	281	289	215	240	240	310	360	667	404	367	278
Beryllium	1	1U	1U	1U	1U	1U	1U	1U	1U	1U	**1.2J**	**1.2J**	1U	1U	0.24U	0.24U	0.67U	0.67U
Cadmium	4	1U	1U	1U	1U	3.9J	**4.2J**	1U	1U	1.7J	1U	1U	1U	1U	3.1J	3.9J	0.36U	1.8U
Calcium	NA	93600	93000	91900	91000	129000	116000	150000	152000	118000	120000	120000	120000	140000	185000	175000	166000	175000
Chromium	70	5.5J	7.4UJ	5.3U	5.3U	2.8J	1.9J	3.7UJ	5.6UJ	2.4J	1.7J	1.9J	-	-	4.9J	9.6J	8.2J	5.9J
Cobalt	NA	2.8J	3J	2.4J	2.3J	1.7UJ	2.7UJ	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	99.9	238	306	228
Copper	1300	11UJ	13.8J	6.4J	6.2U	12U	12U	12U	12U	12U	12U	12U	12U	12U	3.4J	9.8J	39.5	37.6
Iron	300	**59000**	**58900**	**71500**	**70800**	**72400**	**73900**	**50900**	**51300**	**62000**	**70000**	**69000**	-	-	**144000**	**292000**	**391000**	**375000**
Lead	5	**11.2**	**12**	4.4	4.6	0.93	1.2	0.65J	0.8J	0.59	0.22J	0.22J	0.63	0.71	**6.4J**	**8.4J**	**16.4**	**12.6J**
Magnesium	NA	80000	79000	80900	80200	99900	96700	99700	101000	85800	89000	87000	85000	88000	155000	133000	129000	129000
Manganese	50	**658**	**649**	**669**	**664**	**781**	**731**	**862**	**875**	**698**	**740**	**720**	-	-	**5110**	**12600**	**18600**	**14500**
Mercury	2	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.079U	0.079UJ	0.079U	0.079U	0.026U	0.026U	0.0081U	0.080J
Nickel	100	3.2J	3.1U	3.1U	3.1U	3J	3.8J	2.1UJ	3.6UJ	2.1U	2.1U	2.1U	2.1U	2.1U	38.4	71.8	91.6	60.4
Potassium	NA	36200	34900	37100	36800	35000	35500	34700	35100	32900	34000	34000	33000	32000	29000	21600	17900	18900
Selenium	40	21U	21U	21U	21U	16U	16U	16U	16U	16U	16U	16U	-	-	21.9	**51.5**	7.5U	24.0
Silver	40	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U	1.3J	2.3J	1.2U	1.2U
Sodium	50000	**460000**	**462000**	**484000**	**457000**	**556000**	**501000**	**505000**	**510000**	**472000**	**500000**	**510000**	**480000**	**510000**	**1280000**	**802000**	**764000**	**784000**
Thallium	0.5	0.11U	0.11U	0.11U	0.11U	0.13U	0.13U	0.13U	0.13U	0.13U	0.13U	0.13U	0.13U	0.13U	4.2U	4.2U	**46.5**	5.7U
Vanadium	NA	24.9	25.6	16.5	14.9	12.5	14	6.8J	7.7J	9.3J	8.6J	9.1J	7.9J	6.4J	7.3	14.6	3.1J	2.2J
Zinc	2000	21.9	22.8	12.5UJ	49J	7.4J	6.7J	8.2J	8.3J	3.7U	3.7U	3.7U	54	35	134	281	324	103

Notes:
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Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324												MW-324				
Sample Date		2/21/2013	6/17/2013	9/9/2013	11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015	3/10/2015	5/28/2015	9/17/2015	11/17/2015	11/17/2015	1/12/2016	4/7/2016	7/21/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation												Cell 1 Operation				
Aluminum	200	74.3U	**214**	128J	**245**	**385**	**573**	**499**	**10600**	**7820**	**8480**	**3440**	**7370**	**2350**	**4330**	**13300**	**6070**	434U
Antimony	6	0.33U	1U	0.34U	0.34U	0.34U	0.49J	0.44J	2.8	1.6	2.1	1.8	1.5	3.6	3.6	0.95J	1.6	0.48U
Arsenic	0.02	**16.1**	**22.8**	**22.8**	**21.2**	**6.9**	**12.3**	**10**	**14.5**	**8.6**	**10.1**	**9.4**	**11.2**	**12.6**	**11.4**	**13.3**	**12.0**	**7.3**
Barium	6000	61.5	116	93.7	91.7	72.7	94.9	81.1	113	88.6	91.6	55.2	81.1	41.5	58.9	114	94.4	37.6
Beryllium	1	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	3.5U	0.70U	0.70U	**1.5J**	**2.8J**	3.4U
Cadmium	4	1.8U	1.2J	**6.3J**	3.8U	0.76U	1.1J	1.7U	1.7U	**7.8J**	**7.5J**	1.7U	2.2J	2.2J	**4.5J**	3.2U	**14.8J**	2.5U
Calcium	NA	135000	154000	145000	140000	123000	120000	126000	76200	71600	70200	48000	95700	71000	68100	98700	96400	73200
Chromium	70	1.1U	3.2J	4.0J	4.9J	3.2J	3.8J	3.4J	20.4	23.9	24.4	11.3J	30.5J	4.4J	8.5J	50.5	23.5	11.8J
Cobalt	NA	369	142	243	178	160	108	175	163	94.9	98.9	153	72.3	179	178	64.8	45.9	132
Copper	1300	10.5U	5.6J	7.9J	27.8	14.7	2.7U	16.7	10.1	33.7	37.2	39.6	26.0J	37.7	44.7	107	28.2J	54.9
Iron	300	**592000**	**483000**	**557000**	**499000**	**457000**	**403000**	**497000**	**478000**	**426000**	**434000**	**509000**	**568000**	**599000**	**610000**	**492000**	**458000**	**839000**
Lead	5	0.31J	1.9	0.53J	1.0	1.9	3.3	2.6	**39.0**	**27.2**	**34.4**	**15.0**	**27.1**	**50.6**	**47.9J**	**156**	**32.6**	3.3
Magnesium	NA	108000	130000	119000	117000	94800	88100	89800	63800	52300	51200	46200	74000	67800	65600	88500	84500	77900
Manganese	50	**23600**	**14800**	**20700**	**17200**	**15700**	**13500**	**15800**	**18000**	**15600**	**15800**	**18900**	**19400**	**24400**	**24300**	**15800**	**14300**	**26400**
Mercury	2	0.070U	0.070U	0.060U	0.060U	0.17J	0.060U	0.060U	0.066J	0.050U	0.050U	0.47U	0.050UJ	0.050U	0.050U	0.25	0.11J	0.050U
Nickel	100	**101**	1.5U	54.2	22.5	30.0	11.3	20.2	38.8	23.1	25.7	71.6	17.3J	51.2	51.8	39.5	17.6	14.0U
Potassium	NA	11800	20400	16400	19400	10300	11100	8770	8340	6670	6620	4900	9200	6680	6580	14200	11800	6260
Selenium	40	**55.4**	23.7	42.0U	8.4U	8.4U	9.6J	24.0U	18.3J	**77.7**	**74.0**	4.8U	41.0U	8.2U	8.2U	8.2U	48.5U	**104**
Silver	40	3.3J	5U	7.5	21.0U	3.1J	3.1J	1.8U	1.8U	1.8U	1.8U	1.8U	7.0U	31.8	24.5	32.4	15.4	9.5U
Sodium	50000	**554000**	**927000**	**693000**	**782000**	**656000**	**570000**	**515000**	**311000**	**251000**	**248000**	**220000**	**342000**	**306000**	**293000**	**641000**	**578000**	**352000**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U
Vanadium	NA	4.5J	2.0U	2.0U	2.1J	9.9	3.0J	4.3J	28.0	26.4	28.9	8.4	19.1J	20.6	28.1	74.4	23.4	8.7J
Zinc	2000	40.1	2.0U	9.2J	2.2J	43.7	19.0J	77.0	110	42.7	55.1	21.3	24.1J	112	120	1110	29.6	27.0U

Notes:

Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324		MW-324													MW-402	
Sample Date		1/18/2017	4/24/2017	10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/24/2018	1/4/2019	4/9/2019	7/9/2019	10/7/2019	1/6/2020	4/3/2020	7/8/2020	10/12/2020	9/26/2014	10/28/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation		Cell 2 Operation													Pre-CAMU Operation	
Aluminum	200	**8700**	**4970**	**30800**	**14200**	**18900**	**3570**	**2540J**	**22700**	**24700**	**29900**	**8100J**	**3630**	**31000**	-	-	**7920**	**2870**
Antimony	6	2.4U	2.3	2.6	2.0	2.2	1.6J	0.93J	2.8	3.8	3.9	1	0.8J	3.7	4.5	2.5	1.7U	0.91J
Arsenic	0.02	**9.8**	**11.1**	**18.4**	**11.9**	**7.5**	**10.3**	**11.0**	**6.5**	**7.5**	**12**	**3.5**	**2.4**	**14.3**	**10**	**7**	**23.8**	**18.1**
Barium	6000	92.6	110	179	99.6	182.0	92.0	76.2	126	252	384	84	51.8	147	230	97	133	96.6
Beryllium	1	0.73J	0.74J	2.0U	2.0U	2.0U	1.0U	1.0U	1U	1J	**1.2J**	1U	1U	**1.2J**	**1.3J**	1U	0.67U	0.67U
Cadmium	4	3.5J	0.49U	9.0U	3.9J	2.1J	5.0U	5.0U	1U	1U	1.3J	5U	5U	**11.4J**	1U	1U	0.33U	1.7U
Calcium	NA	88900	113000	61600	55800	51100	56400	77600	21800	63000	78300	50900	59400	61700	110000	74000	174000	162000
Chromium	70	15.3U	7.2UJ	**82.6**	25.9	32.3	9.5J	5.3U	59.1	**72.3**	**94.5**	18.2	6.6J	69.6	-	-	18.7	9.8J
Cobalt	NA	26.4	14.0	**136.0**	120	**93.4**	17.3	22.6	23.2	95.3	142	145	180	189	99	280	3.1J	5.1
Copper	1300	26.2	24.0J	104	21.4	71.4	11.5J	31.0U	110	154	189	60U	60U	169	160	25	22.3	2.8U
Iron	300	**559000**	**388000**	**586000**	**494000**	**204000**	**215000**	**362000J**	**41500**	**165000**	**263000**	**263000**	**425000**	**475000**	-	-	**159000**	**262000**
Lead	5	**47.4**	**43.1**	**114.0**	**54.2**	**60.3**	**20.1**	**10.6**	**72**	**121**	**117**	**24.4**	**15.8**	**104**	**150**	**44**	**21.3**	**9.6**
Magnesium	NA	80600	101000	60500	51600	32700	30600	49900	12400	33200	43500	32000	47400	57300	48000	61000	135000	116000
Manganese	50	**17900**	**9740**	**20300**	**15500**	**8760**	**7670**	**15400J**	**794**	**8150**	**12000**	**11900**	**17200**	**18500**	-	-	**7150**	**11000**
Mercury	2	0.050U	0.050UJ	0.050U	0.050U	0.050UJ	0.069J	0.050U	0.09J	0.13J	0.12J	0.05U	0.05U	0.095UJ	0.14J	0.11J	0.060U	0.06U
Nickel	100	2.8U	2.8U	85.2	61.8	54.7	5.5J	15.5U	47	93.1	**127**	81.7	65.6	92.2	85	100	15.9	4J
Potassium	NA	10500	16800	13500	8910	8770	6450	7240	7750	11000	15400	7040	6320	13100	16000	9300	42300	27600
Selenium	40	**93.0**	9.7U	39.8	**86.2J**	20.1	105U	105U	21U	21U	21U	80U	80U	16U	-	-	4.8U	9.8U
Silver	40	10.2	1.9U	23.1	31.8	9.7	5.0U	25.0U	5U	5U	5U	25U	25U	25U	5U	**45**	1.8U	1.8U
Sodium	50000	**491000**	**867000**	**211000**	**204000**	**148000**	**171000**	**246000**	14400	**135000**	**121000**	**105000**	**165000**	**171000**	**93000**	**200000**	**559000**	**443000**
Thallium	0.5	0.16U	0.16U	0.31J	0.32J	0.37J	0.12J	0.11U	0.32J	**0.58**	**0.55**	0.19J	0.13U	**0.52**	0.33J	0.23J	0.15U	0.15U
Vanadium	NA	29.9	27.0	107.0	43.6	50.6	16.7J	15.0U	103	136	150	40.3J	22.7J	132	120	53	196	105
Zinc	2000	80.2	25.5	279.0	192	404	72.3J	64.6J	144	389	423	363	362	399	300	410	56.2	29.4J

Notes:

Organge shaded cells shows data collected pre-CAMU operati
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Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-402			MW-402						MW-402						
Sample Date		3/10/2015	5/28/2015	9/17/2015	11/17/2015	1/12/2016	4/7/2016	7/21/2016	1/19/2017	4/24/2017	10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/25/2018	1/4/2019	4/2/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation			Cell 1 Operation						Cell 2 Operation						
Aluminum	200	**393**	112J	84.1U	84.1U	186J	**805**	138J	**638**	**4910**	**670**	349U	**3930.0**	**376J**	**1310**	**11100**	**620**
Antimony	6	0.33U	0.33U	0.33U	0.33U	0.33U	0.33U	0.48U	0.48U	0.79J	0.45U	0.45U	0.91J	0.41U K3 K4	0.57UJ	**6.5**	0.77J
Arsenic	0.02	**8.5**	**4.7**	**10.5**	**6.7**	**6.4**	**4.4**	**7.9**	**4.9**	**3.3**	**7.3**	**3.9**	**4.2**	**3.8J**	**4.5**	**6**	**2.4**
Barium	6000	76.9	63.8	81.2	75.1	87.0	52.6	82.2	70.2	87.2	72.8	103	144	124	114	180	142
Beryllium	1	0.67U	0.67U	**1.1J**	0.70U	**1.2J**	**1.9J**	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	1.0U	**2.8J**	1U	1U
Cadmium	4	0.33U	0.33U	0.30U	2.1J	0.64U	0.64U	2.5U	0.49U	0.49U	1.9J	3.4J	1.8U	5.0U	2.0J	1U	5U
Calcium	NA	197000	159000	169000	163000	181000	117000	175000	157000	154000	142000	141000	105000	119000	120000	106000	110000
Chromium	70	4.7J	4.7J	5.1J	1.5U	8.0J	5.4J	8.7J	1.9J	7.4J	6.4J	3.3U	7.4J	5.3U	5.3U	27.8	5.3U
Cobalt	NA	11.3	22.7	7.2	6.8	5.2	9.1	2.4J	1.9U	40.7	2.3J	1.7U	**6.6**	1.5U	1.5U	9.3	1.5U
Copper	1300	4.6J	9.7J	5.2U	9.4J	10.6	7.2J	19.4	4.1U	29.8	4.0U	4.0U	18.3	6.2U	6.2U	68.9	31U
Iron	300	**194000**	**353000**	**278000**	**223000**	**186000**	**131000**	**284000**	**183000**	**233000**	**287000**	**196000**	**73000**	**292000**	**207000**	**75500**	**180000**
Lead	5	1.9	0.49J	0.53J	0.44J	0.80J	3.4	1.8	2.8	36.3	4.1	1.8	**18.9**	1.8J	**8.7**	**92.9**	**5.5**
Magnesium	NA	117000	101000	113000	106000	116000	54400	108000	100000	68200	83200	86400	59600	61100	56800	65700	56700
Manganese	50	**8250**	**14500**	**11100**	**10100**	**8230**	**5940**	**10900**	**7570**	**9980**	**11300**	**7560**	**4550**	**9910**	**8410**	**4120**	**6610**
Mercury	2	0.050U	0.11U	0.050UJ	0.050U	0.050U	0.050U	0.050U	0.050U	0.060UJ	0.050U	0.050U	0.050UJ	0.050U	0.050U	0.05U	0.05U
Nickel	100	15.7	37.5	11.2J	14.2	10.1	12.7	2.8U	2.8U	71.4	4.0U	4.0U	7.2J	3.1U	6.5J	17.3	15.5U
Potassium	NA	34000	20800	25200	25300	31000	18900	22800	31700	18400	18900	22500	19400	16100	15200	24700	16400
Selenium	40	27.8	4.8U	**71.4**	8.2U	8.2U	8.2U	**48.3**	9.7U	18.8J	18.3J	30.9U	9.3U	105U	26.1J	41.3UJ	105U
Silver	40	1.8U	1.8U	13.1	2.2J	1.8U	2.0J	3.3J	8.0	9.5U	7.9	9.4	2.9J	5.0U	5.0U	5U	25U
Sodium	50000	**533000**	**376000**	**399000**	**415000**	**431000**	**345000**	**381000**	**424000**	**367000**	**346000**	**376000**	**265000**	**247000**	**249000**	**275000**	**295000**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.11U	0.11U	0.17J	0.11U
Vanadium	NA	117	90.5	300	559	246	211	231	238	163	**170**	114.0	**192.0**	123	123	303	133
Zinc	2000	25.0	34.0	22.5	10.9J	840	19.0J	5.4U	17.3J	64.9	14.3J	6.5U	26.9	15.0U	21.2	100	15U

Notes:
Organge shaded cells shows data collected pre-CAMU operati
Green shaded cells shows data collected during Cell 1 operati
Blue shaded cells shows data collected during Cell 2 operatior
Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-3
TAL Metals for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-402								MW-402
Sample Date		7/1/2019	9/25/2019	9/25/2019	1/6/2020	4/3/2020	7/8/2020	9/24/2020	10/14/2020	12/8/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation								Post CAMU Closure
Aluminum	200	**10500**	**1800**	**1630J**	**609**	**247**	-	-	-	-
Antimony	6	4.5	0.98J	1.1	0.55J	0.41U	3	-	0.57J	-
Arsenic	0.02	**10**	**3.4**	**3.4**	**2.6**	**2.3**	**5.7**	-	**1.9J**	-
Barium	6000	331	144	154	171	157	240	-	170	-
Beryllium	1	1U	1U	1U	5U	1U	1U	-	1U	-
Cadmium	4	1U	1U	5U	5U	**6.2**	1U	-	2.5J	-
Calcium	NA	140000	118000	124000	121000	111000	130000	-	120000	-
Chromium	70	25.5	8.2UJ	1.6U	8U	1.6U	-	-	-	-
Cobalt	NA	11.4	1.5U	2.6J	1.5U	1.5U	5.8	-	2.5J	-
Copper	1300	55	14.4J	12U	60U	12U	65	-	12U	-
Iron	300	**200000**	**269000**	**268000**	**185000**	**261000**	-	**300000**	-	**120000**
Lead	5	**117**	**16.5**	**16.6**	**9.5**	1.3	**70**	-	**8**	-
Magnesium	NA	69900	63400	63800	74200	67000	76000	-	65000	-
Manganese	50	**8050**	**9110**	**9360**	**7690**	**8280**	-	-	-	-
Mercury	2	0.05U	0.05U	0.05U	0.05U	0.05U	0.079U	-	0.079U	-
Nickel	100	8.4J	4.7UJ	15.1J	2.2UJ	2.1U	22	-	8.1J	-
Potassium	NA	18400	15600	15200	20600	16800	18000	-	16000	-
Selenium	40	21U	16U	16U	80U	16U	-	-	-	-
Silver	40	5.8J	5U	25U	25U	6.7J	5U	-	5U	-
Sodium	50000	**274000**	**263000**	**271000**	**330000**	**267000**	**280000**	-	**260000**	-
Thallium	0.5	0.17J	0.13U	0.13U	0.13U	0.13U	0.13U	-	0.13U	-
Vanadium	NA	88.3	84.5	83.3	88.8	45	110	-	50	-
Zinc	2000	106	20.1	32J	20.7J	3.7U	14J	-	3.7U	-

Notes:
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Organge shaded cells shows data collected post CAMU Closu
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-0057**													
Sample Date		**9/28/2004**	**6/7/2005**	**11/2/2005**	**5/31/2006**	**12/1/2006**	**6/5/2007**	**7/31/2008**	**5/18/2009**	**3/13/2012**	**5/23/2012**	**5/24/2012**	**7/25/2012**	**7/26/2012**	**11/20/2012**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Pre-CAMU Operation**													
Ammonia Nitrogen As N	3000	120J	110U	340J	210J	200U	220J	200U	200U	200U	200U	200U	200U	340J	300J
Total Phosphorus as PO4 water	NA	-	-	-	-	-	-	-	-	250U	250J	250J	250U	250U	250U

Notes:

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Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057													MW-0057
Sample Date		11/20/2012	2/20/2013	6/12/2013	9/9/2013	9/9/2013	11/6/2013	3/5/2014	8/5/2014	8/5/2014	10/23/2014	3/3/2015	5/29/2015	9/16/2015	11/13/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation													Cell 1 Operation
Ammonia Nitrogen As N	3000	200U	200U	200U	860	1600	870	200U	2600	2200	900	380J	200U	680	200U
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-0057**							**MW-0057**							
Sample Date		**1/8/2016**	**4/12/2016**	**7/19/2016**	**10/17/2016**	**1/11/2017**	**4/26/2017**	**7/18/2017**	**10/9/2017**	**1/22/2018**	**4/9/2018**	**7/12/2018**	**10/23/2018**	**1/8/2019**	**4/8/2019**	**7/8/2019**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**							**Cell 2 Operation**							
Ammonia Nitrogen As N	3000	200U	200U	200U	660	200U	200U	360J	250U	--	--	360J	720J	850	250U	250U
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	2100	390	250U	250U

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-0057					MW-114								
Sample Date		10/4/2019	1/8/2020	4/8/2020	7/13/2020	10/12/2020	2/10/2003	9/10/2003	5/18/2004	9/22/2004	5/25/2005	10/26/2005	5/24/2006	11/9/2006	6/1/2007
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation					Pre-CAMU Operation								
Ammonia Nitrogen As N	3000	250U	750U	260UJ	430J	1100	1600	**3000**	110U	790J	380J	630	200U	200U	770
Total Phosphorus as PO4 water	NA	250U	250U	250U	100U	250U	-	-	-	-	-	-	-	-	-

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114													
Sample Date		7/30/2008	5/8/2009	3/16/2012	5/14/2012	5/15/2012	7/24/2012	7/25/2012	11/19/2012	2/19/2013	6/10/2013	9/3/2013	11/4/2013	3/5/2014	5/19/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation													
Ammonia Nitrogen As N	3000	680	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U
Total Phosphorus as PO4 water	NA	-	-	250U	250U	250U	250U	250U	250U	250U	250U	250J	250U	250U	250U

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114					MW-114							
Sample Date		8/4/2014	10/22/2014	3/24/2015	5/27/2015	9/14/2015	11/13/2015	1/5/2016	4/6/2016	7/18/2016	10/11/2016	1/11/2017	4/18/2017	7/17/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation					Cell 1 Operation							
Ammonia Nitrogen As N	3000	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	250U	260J	250U	250U	250U	320	250U	250U	410

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-114													
Sample Date		10/9/2017	1/23/2018	4/9/2018	7/12/2018	10/18/2018	1/8/2019	4/8/2019	7/8/2019	10/4/2019	1/8/2020	4/8/2020	4/8/2020	4/8/2020	7/14/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation													
Ammonia Nitrogen As N	3000	250U	--	--	250U	250U	250U	600J	250U	250U	750U	260UJ	-	260UJ	250U
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	250U	390	350	420	270J	300J	250U	250U	250U	47UJ

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-114**	**MW-120**											
Sample Date		**10/13/2020**	**2/26/2003**	**10/1/2003**	**5/20/2004**	**9/24/2004**	**6/3/2005**	**11/4/2005**	**6/1/2006**	**12/5/2006**	**6/5/2007**	**8/13/2008**	**7/1/2009**	**3/14/2012**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 2 Operation**	**Pre-CAMU Operation**											
Ammonia Nitrogen As N	3000	360U	150J	800J	510J	670J	420J	150J	200U	200U	**19700**	200U	200U	200U
Total Phosphorus as PO4 water	NA	320	-	-	-	-	-	-	-	-	-	-	-	250U

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120												
Sample Date		5/29/2012	5/30/2012	7/31/2012	8/1/2012	9/6/2013	11/11/2013	3/6/2014	5/21/2014	8/6/2014	10/23/2014	3/23/2015	6/1/2015	9/15/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation												
Ammonia Nitrogen As N	3000	340J	200U	200U	200U	200U	200U	200U	200U	200U	200U	260J	260J	200U
Total Phosphorus as PO4 water	NA	400	300J	250U	250U	250U	250U	250U	270J	250U	2200	4300	250U	250U

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120								MW-120					
Sample Date		11/16/2015	1/13/2016	4/8/2016	7/25/2016	10/21/2016	1/20/2017	4/18/2017	7/21/2017	10/12/2017	1/22/2018	4/10/2018	7/16/2018	10/30/2018	1/3/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Cell 2 Operation					
Ammonia Nitrogen As N	3000	200U	200U	280J	200U	200U	200U	210J	250U	250U	--	--	250U	250U	360J
Total Phosphorus as PO4 water	NA	700	250U	770	1100	430	1200	250U	250U	250U	2500	1400	650	4800	5500

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-120							MW-233						
Sample Date		4/3/2019	7/1/2019	9/25/2019	1/3/2020	4/7/2020	7/14/2020	10/12/2020	3/21/2012	5/24/2012	5/25/2012	7/25/2012	7/26/2012	6/17/2013	9/10/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation							Pre-CAMU Operation						
Ammonia Nitrogen As N	3000	250U	620J	250U	310J	250U	250U	360U	1800	200U	1200	2100	510J	**7800**	**6300**
Total Phosphorus as PO4 water	NA	15900	1800	1500	2800	520	110	1100	410	350	340	480	700	250U	670

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-233							MW-233					
Sample Date		11/12/2013	3/14/2014	8/8/2014	10/31/2014	3/11/2015	6/9/2015	9/21/2015	11/19/2015	1/14/2016	4/14/2016	7/26/2016	12/8/2016	1/23/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation							Cell 1 Operation					
Ammonia Nitrogen As N	3000	**3600**	**4300**	**13800**	**34200**	**19200**	**6700**	**16500**	**10000**	**19600**	**3200**	**7600**	**10100**	**11300**
Total Phosphorus as PO4 water	NA	430	250U	940	12900	3000	1500J	2600	4300	1900	2700	1100	3100	6200

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-233**		**MW-233**											
Sample Date		**4/28/2017**	**7/24/2017**	**10/16/2017**	**1/26/2018**	**4/16/2018**	**7/19/2018**	**10/24/2018**	**1/7/2019**	**4/4/2019**	**7/3/2019**	**10/8/2019**	**1/7/2020**	**4/2/2020**	**7/7/2020**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**		**Cell 2 Operation**											
Ammonia Nitrogen As N	3000	**6400**	**5100**	**17800**	--	--	**10300**	**19000**	**11900**	**15000**	**21700**	**16400**	**9200**	**5300**	**20000J**
Total Phosphorus as PO4 water	NA	3600	1800	4200	4400	4600	5900	7400	6000	7000	6900	5300	4400	4600	1500

Notes:

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Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-233**		**MW-233**	**MW-234R**	**MW-234R**						**MW-234RR**		
Sample Date		**9/28/2020**	**10/12/2020**	**12/3/2020**	**9/18/2015**	**11/19/2015**	**1/13/2016**	**4/14/2016**	**7/25/2016**	**12/6/2016**	**1/23/2017**	**10/16/2017**	**10/16/2017**	**1/26/2018**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 2 Operation**		**Post CAMU Closure**	**Pre-CAMU Operation**	**Cell 1 Operation**						**Cell 2 Operation**		
Ammonia Nitrogen As N	3000	-	**4800**	-	2700	2300	1600	2800	1100	2100	**5100**	1200	1400	--
Total Phosphorus as PO4 water	NA	1100	5100E	4800E	250U	250U	250U	250U	250U	250U	510	250U	250U	250U

Notes:

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Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-234RR												
Sample Date		4/16/2018	7/19/2018	10/23/2018	1/7/2019	1/7/2019	4/4/2019	7/3/2019	10/1/2019	1/7/2020	4/2/2020	7/7/2020	9/25/2020	10/13/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation												
Ammonia Nitrogen As N	3000	--	1100	1200	810	770	2200	1700	2100	1700	930	890	-	1200
Total Phosphorus as PO4 water	NA	250U	250U	320	1300U	1300U	250U	1200	320	250U	250U	230J	950	250U

Notes:

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Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-234RR**	**MW-322**											
Sample Date		**12/3/2020**	**3/15/2012**	**5/16/2012**	**5/17/2012**	**7/30/2012**	**7/31/2012**	**11/19/2012**	**2/19/2013**	**6/12/2013**	**9/5/2013**	**11/7/2013**	**3/12/2014**	**5/19/2014**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Post CAMU Closure**	**Pre-CAMU Operation**											
Ammonia Nitrogen As N	3000	-	**13000**	**13900**	**15000**	**17400**	**15200**	**15300**	**16800**	**18800**	**15200**	**13500**	**5600**	**11200**
Total Phosphorus as PO4 water	NA	290J	750	280J	560	320	300J	250U	3100	2500	1700	1400	860	2700

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Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-322**					**MW-322**							
Sample Date		**8/4/2014**	**10/29/2014**	**3/3/2015**	**6/8/2015**	**9/14/2015**	**11/18/2015**	**1/7/2016**	**4/6/2016**	**7/20/2016**	**10/13/2016**	**1/17/2017**	**4/27/2017**	**7/18/2017**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Pre-CAMU Operation**					**Cell 1 Operation**							
Ammonia Nitrogen As N	3000	**8400**	**12200**	**8300**	**7100**	**8200**	**6300**	**9200**	**4200**	**7200**	**10600**	**8100**	**9900**	**13900**
Total Phosphorus as PO4 water	NA	2000	2700	690	1200	1300	920	1800	860	930	2700	1800	3300	3600

Notes:

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Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322													
Sample Date		10/13/2007	1/19/2018	4/13/2018	7/13/2018	10/25/2018	1/2/2019	4/2/2019	4/2/2019	7/2/2019	7/2/2019	10/2/2019	10/2/2019	1/2/2020	1/2/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation													
Ammonia Nitrogen As N	3000	**13900**	--	--	**12800**	**16400**	**14900**	**21000J+**	**16100J+**	**14400**	**15900**	**14900**	**15000**	**17800**	**17300**
Total Phosphorus as PO4 water	NA	3600	2700	3000	1700	2400	2600	3500	3400	4200	4100	3300	3300	1700	1700

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-322					MW-324								
Sample Date		4/1/2020	7/6/2020	7/6/2020	10/13/2020	10/13/2020	3/13/2012	5/17/2012	5/18/2012	7/30/2012	7/31/2012	11/21/2012	2/21/2013	6/17/2013	9/9/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation					Pre-CAMU Operation								
Ammonia Nitrogen As N	3000	**12900**	**20000J**	**29000J**	**13000**	**15000**	2400	**7800**	**8300**	**5400**	**6400**	**9300**	**7900**	**6300**	**3800**
Total Phosphorus as PO4 water	NA	2500	1100	1100	3500J	3700J	250U	250U	360	250U	250U	250U	250U	250U	250U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-324									MW-324				
Sample Date		11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015	3/10/2015	5/28/2015	9/17/2015	11/17/2015	11/17/2015	1/12/2016	4/7/2016	7/21/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation									Cell 1 Operation				
Ammonia Nitrogen As N	3000	**4000**	**4800**	**9400**	**6600**	2200	2300	370J	**8700**	1700	2300	**3200**	**3300**	**5200**	**3500**
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	280J	250U	250U	250U	250U	250U	250U	300J	400	250U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-324**		**MW-324**											
Sample Date		**1/18/2017**	**4/24/2017**	**10/11/2017**	**1/24/2018**	**4/11/2018**	**7/17/2018**	**10/24/2018**	**1/4/2019**	**4/9/2019**	**7/9/2019**	**10/7/2019**	**1/6/2020**	**4/3/2020**	**7/8/2020**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**		**Cell 2 Operation**											
Ammonia Nitrogen As N	3000	**3200**	**15400**	2900	--	--	1800	2500	380J	1700	2000	2000	2100	1400	1700J
Total Phosphorus as PO4 water	NA	300J	290J	1600	700	1100	250U	550	1300J	1800	3400	500	250U	780	1600

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-324**	**MW-402**					**MW-402**					
Sample Date		**10/12/2020**	**9/26/2014**	**10/28/2014**	**3/10/2015**	**5/28/2015**	**9/17/2015**	**11/17/2015**	**1/12/2016**	**4/7/2016**	**7/21/2016**	**1/19/2017**	**4/24/2017**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 2 Operation**	**Pre-CAMU Operation**					**Cell 1 Operation**					
Ammonia Nitrogen As N	3000	**5000**	**11100**	**9500**	1400	**8900**	**7600**	**5300**	**6200**	**3700**	**5000**	**8400**	**4000**
Total Phosphorus as PO4 water	NA	470	2000	740	1400	740	760	930	960	690	850	1400	770

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-402											
Sample Date		10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/25/2018	1/4/2019	4/2/2019	7/1/2019	9/25/2019	9/25/2019	1/6/2020	4/3/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation											
Ammonia Nitrogen As N	3000	**9000**	--	--	**12100**	**5300**	**5300**	**4500**	-	**3900**	**4100**	**3400**	**5200**
Total Phosphorus as PO4 water	NA	630	920	1100	290J	850	2100	560	1300	500	490	590	250U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-4
Additional Parameters for Leak Detection Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-402**			**MW-402**
Sample Date		**7/8/2020**	**9/24/2020**	**10/14/2020**	**12/8/2020**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 2 Operation**			**Post CAMU Closure**
Ammonia Nitrogen As N	3000	**4700**	-	**4300**	-
Total Phosphorus as PO4 water	NA	350J	240	290J	6700E

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-234
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-115																							
Sample Date		10/22/2002	2/26/2003	9/9/2003	7/31/2008	11/6/2008	5/8/2009	11/6/2009	4/29/2010	7/20/2011	3/16/2012	5/14/2012	5/15/2012	7/24/2012	7/25/2012	11/19/2012	2/19/2013	6/12/2013	9/3/2013	11/4/2013	3/5/2014	5/19/2014	8/4/2014	10/22/2014	3/2/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation																							
1,1 Dichloroethene	1	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
1,1,1-Trichloroethane	30	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
1,1,2,2-Tetrachloroethane	1	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	3	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	2U	2U	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	0.5	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1J	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	3U	3U	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	3U	3U	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	3U	3U	--	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Acetone	6000	6U	6U	6U	6U	6U	6U	6U	6U	--	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	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	0.5U	0.5U	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	**[6]**	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Bromoform	4	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5UJ
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Chlorobenzene	50	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
Chloroethane	NA	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5UJ
Chloroform	70	24	1J	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
Chloromethane (Methyl chloride)	NA	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
cis-1,2-Dichloroethene	70	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
cis-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	2U	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	**[1J]**	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	2U	2U	2U	2U	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5UJ
Ethylbenzene	700	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	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
Isopropylbenzene	700	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	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	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	2U	2U	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
Toluene	600	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	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
trans-1,2-Dichloroethene	100	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	--	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
trans-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	2U	2U	2U	2U	2U	2U	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	1U	1U	1U	1U	1U	1U	1U	1U	--	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U
Xylene (total)	1000	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	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
Total TIC VOCS	NA	--	--	--	--	--	--	--	--	--	0	0	0	0	0	0	0	0U	0U	0U	0U	0U	6J	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-115		MW-115								MW-115													MW-211	
Sample Date		5/27/2015	9/14/2015	11/13/2015	1/5/2016	4/6/2016	7/18/2016	10/11/2016	1/11/2017	4/18/2017	7/17/2017	10/9/2017	1/23/2018	4/9/2018	7/12/2018	10/18/2018	1/8/2019	4/8/2019	7/8/2019	10/4/2019	1/9/2020	4/8/2020	7/14/2020	10/13/2020	2/1/2005	6/1/2005
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation		Cell 1 Operation								Cell 2 Operation													Pre-CAMU Operation	
1,1 Dichloroethene	1	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	0.26U	0.2UJ	0.8U	0.8U
1,1,1-Trichloroethane	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	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.24U	0.3UJ	0.8U	0.8U
1,1,2,2-Tetrachloroethane	1	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	0.37U	0.2UJ	1U	1U
1,1,2-Trichloroethane	3	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	0.43U	0.2UJ	0.8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	--	--	2U	2U
1,1-Dichloroethane	50	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	0.26U	0.2UJ	1U	1U
1,2,4-Trichlorobenzene	9	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	0.37U	0.3UJ	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.38U	0.3UJ	2U	2U
1,2-Dibromoethane	0.0004	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	0.5U	0.2UJ	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	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	0.43U	0.2UJ	1U	1U
1,2-Dichloroethane	0.3	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	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.43U	0.3UJ	1U	1U
1,2-Dichloropropane	0.5	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	0.35U	0.2UJ	1U	1U
1,3-Dichlorobenzene	600	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	0.34U	0.2UJ	1U	1U
1,4-Dichlorobenzene	75	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	0.33U	0.2UJ	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3UJ	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1.9U	0.3UJ	3U	3U
2-Hexanone	NA	3U	3UJ	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1.1U	0.3UJ	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	0.5UJ	3U	3U
Acetone	6000	6U	6UJ	6U	6U	6U	6U	6U	6UJ	6U	6U	6U	6U	6U	6U	0.7U	0.7U	2UJ	0.7U	0.7U	0.7U	8J	4.4U	2.7UJ	7J	7J
Benzene	0.2	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	[2]	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	0.2UJ	0.5U	0.5U
Bromodichloromethane	0.6	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	0.34U	0.2UJ	1U	1U
Bromoform	4	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	1U	1U	1U	0.54U	1UJ	1U	1U
Bromomethane (Methyl bromide)	10	0.5U	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	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.55U	0.3UJ	1U	1U
Carbon disulfide	700	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	0.2UJ	0.82U	0.2UJ	1U	1U
Carbon Tetrachloride	0.4	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	0.21U	0.2UJ	1U	1U
Chlorobenzene	50	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	0.38U	0.2UJ	0.8U	0.8U
Chloroethane	NA	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	0.32U	0.2UJ	1U	1U
Chloroform	70	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	0.33U	0.2UJ	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	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	0.4U	0.2UJ	1U	1U
cis-1,2-Dichloroethene	70	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	0.22U	0.2UJ	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	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	0.22U	0.2UJ	1U	1U
Cyclohexane	NA	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1UJ	0.32U	1UJ	2U	2U
Dibromochloromethane	0.4	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	0.2UJ	0.28U	0.2UJ	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2UJ	2U	2U
Ethylbenzene	700	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	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.3U	0.4UJ	1J	0.8U
Isopropylbenzene	700	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	0.34U	0.2UJ	53	1U
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.3U	0.3U	0.79U	0.3UJ	1U	1U
Methyl-t-butyl ether	70	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	0.47U	0.2UJ	0.5U	0.5U
Methylcyclohexane	NA	1U	1UJ	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.26U	0.5UJ	2J	1U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3UJ	0.3U	0.3U	0.3U	0.32U	0.3UJ	2U	2U
Styrene	100	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	0.42U	0.2UJ	1U	1U
Tetrachloroethene	0.4	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	0.2UJ	0.2U	0.2U	0.25U	0.2UJ	0.8U	0.8U
Toluene	600	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5J	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	0.38U	0.2UJ	0.7U	0.7U
trans-1,2-Dichloroethene	100	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	0.24U	0.2UJ	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	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	0.49U	0.2UJ	1U	1U
Trichloroethene (Trichloroethylene)	1	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	0.31U	0.2UJ	1U	1U
Trichlorofluoromethane (Freon 11)	2000	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	0.2UJ	0.2U	0.2U	0.2U	0.32U	0.2UJ	2U	2U
Vinyl chloride (Chloroethene)	0.08	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	0.17U	0.2UJ	1U	1U
Xylene (total)	1000	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	1U	1U	1U	1U	1U	1U	1U	0.65U	1.4UJ	1J	0.8U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	40J	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0UJ	--	--

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-211																						
Sample Date		10/27/2005	5/25/2006	11/7/2006	5/24/2007	12/18/2007	6/24/2008	10/30/2008	5/19/2009	11/24/2009	6/8/2010	9/23/2010	6/16/2011	3/14/2012	6/26/2013	5/22/2014	7/2/2014	8/5/2014	9/26/2014	10/30/2014	3/12/2015	3/24/2015	6/8/2015	9/16/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation																						
1,1 Dichloroethene	1	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	30	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichloroethane	3	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	2U	--	--	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	2U	--	--	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,2-Dichloropropane	0.5	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	4J	3U	3U	3U	3U	3U	3U	30U	3U	3U	3U	--	--	3U	3U	3U	3UJ	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	3U	30U	3U	3U	3U	--	--	3U	3U	3U	3UJ	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	3U	30U	3U	3U	3U	--	--	3U	3U	3U	3UJ	3U	3U	3U	3U	3U	3U
Acetone	6000	52	21	18J	15J	10J	8J	6U	60U	12J	11J	11J	--	--	6U	6U	14J	13J	6U	6U	6J	9J	6U	26J
Benzene	0.2	**[0.9J]**	0.5U	0.5U	**[0.5J]**	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	**[0.6J]**	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromoform	4	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chlorobenzene	50	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroethane	NA	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroform	70	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,2-Dichloroethene	70	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	2U	--	--	2U	2U	2U	2UJ	2U	2U	2U	2U	4J	2U
Dibromochloromethane	0.4	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	2U	--	--	2U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	700	4J	2J	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Isopropylbenzene	700	3J	10	34	30	52	3J	16	10U	22	11	7	--	--	27	38	5J	11J	1U	1U	24	24	39	7
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.5U	--	--	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1J	1U	1U	1UJ	1U	1U	1U	1U	1J	1U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	2U	--	--	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	600	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.6J	0.5U	0.6J	0.5U
trans-1,2-Dichloroethene	100	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	--	--	0.8U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	2U	--	--	2U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	1U	--	--	1U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Xylene (total)	1000	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	8U	0.8U	0.8U	0.8U	0.8U	0.9J	1J	0.6J	0.8J	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.7J	0.5U
Total TIC VOCS	NA	--	--	--	--	--	--	--	--	--	--	--	--	--	380J	230J	240J	140J	17J	12J	200J	180J	230J	130J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-211								MW-315			MW-323												
Sample Date		11/16/2015	12/17/2015	1/14/2016	4/8/2016	7/22/2016	12/8/2016	1/19/2017	4/18/2017	6/24/2010	7/8/2010	3/21/2012	3/15/2012	5/16/2012	5/17/2012	7/30/2012	7/31/2012	11/20/2012	2/20/2013	6/12/2013	9/5/2013	11/5/2013	3/12/2014	8/5/2014	10/29/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Pre-CAMU Operation			Pre-CAMU Operation												
1,1 Dichloroethene	1	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
1,1,1-Trichloroethane	30	3U	0.5U	0.5UJ	0.5U	0.5U	0.5U	1UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,1,2-Trichloroethane	3	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	10U	2U	2U	2U	2U	2U	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,2,4-Trichlorobenzene	9	5U	1U	1U	1U	1U	1U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	10U	2U	2U	2U	2U	2U	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	5U	1U	1U	1U	1U	1U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,2-Dichloropropane	0.5	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
1,3-Dichlorobenzene	600	5U	1U	1U	1U	1U	1U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	5U	1U	1U	1U	1U	1U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	15U	3U	3U	3U	5J	3UJ	6U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	15U	3U	3UJ	3U	3U	3UJ	6U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	15U	3U	3UJ	3U	3U	3UJ	6U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Acetone	6000	30U	12J	6U	6U	6U	6U	12U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	3U	0.5U	0.5U	0.5U	0.5U	0.5U	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	0.5U	0.5U	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Bromoform	4	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	3U	0.5U	0.5U	0.5UJ	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Carbon disulfide	700	5U	1U	1U	1U	1U	1U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1J	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Chlorobenzene	50	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
Chloroethane	NA	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Chloroform	70	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
cis-1,2-Dichloroethene	70	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Cyclohexane	NA	10U	2U	2U	2U	2U	2UJ	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Dichlorodifluoromethane (Freon 12)	1000	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U
Ethylbenzene	700	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
Isopropylbenzene	700	5U	32	1U	2J	1U	1U	2U	7	7	7	7	7	7	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	5U	1U	1U	1U	1U	1U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	3U	0.5U	0.5U	0.5U	0.5U	0.5U	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	0.5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	5U	1J	1U	1U	1UJ	1J	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	10U	2U	2U	2U	2U	2UJ	4U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	5U	1U	1U	1U	1U	1U	2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
Toluene	600	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.5U	0.5U
trans-1,2-Dichloroethene	100	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Trichloroethene (Trichloroethylene)	1	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Trichlorofluoromethane (Freon 11)	2000	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	3U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U
Xylene (total)	1000	3U	0.6J	0.5U	0.5U	0.5U	0.5U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U
Total TIC VOCS	NA	0U	--	42J	100J	40J	140J	140J	290J	--	--	--	0	0	0	50J	0	0	0	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-323			MW-323								MW-323												
Sample Date		3/3/2015	6/8/2015	9/15/2015	11/18/2015	1/7/2016	7/22/2016	10/13/2016	1/17/2017	3/17/2017	4/27/2017	7/18/2017	9/5/2017	10/13/2017	12/1/2017	1/19/2018	4/13/2018	4/13/2018	7/13/2018	10/26/2018	1/2/2019	4/9/2019	7/9/2019	10/7/2019	1/2/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation			Cell 1 Operation								Cell 2 Operation												
1,1 Dichloroethene	1	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
1,1,1-Trichloroethane	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	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	1	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
1,1,2-Trichloroethane	3	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
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1-Dichloroethane	50	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
1,2,4-Trichlorobenzene	9	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	0.5J
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromoethane	0.0004	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
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	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
1,2-Dichloroethane	0.3	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	0.3U	0.3U	0.3U	0.3U	0.3U	0.3UJ
1,2-Dichloropropane	0.5	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
1,3-Dichlorobenzene	600	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
1,4-Dichlorobenzene	75	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
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	6J	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
2-Hexanone	NA	3U	3U	3UJ	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3UJ	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
Acetone	6000	6U	6U	6U	12J	6UJ	6U	6UJ	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	0.7U	0.7UJ	0.7U	2J	0.7U	0.7U
Benzene	0.2	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
Bromodichloromethane	0.6	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
Bromoform	4	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	1U	1U
Bromomethane (Methyl bromide)	10	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	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	700	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
Carbon Tetrachloride	0.4	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
Chlorobenzene	50	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
Chloroethane	NA	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	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U
Chloroform	70	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
Chloromethane (Methyl chloride)	NA	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
cis-1,2-Dichloroethene	70	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	0.3J	0.3J	0.2J	0.2U	0.3J	0.3J
cis-1,3-Dichloropropene	0.4	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
Cyclohexane	NA	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U
Dibromochloromethane	0.4	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
Dichlorodifluoromethane (Freon 12)	1000	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	0.5UJ	0.5UJ	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Ethylbenzene	700	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	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	700	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
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methyl-t-butyl ether	70	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
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.4UJ	0.3U	0.3U
Styrene	100	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
Tetrachloroethene	0.4	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
Toluene	600	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
trans-1,2-Dichloroethene	100	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
trans-1,3-Dichloropropene	0.4	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
Trichloroethene (Trichloroethylene)	1	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
Trichlorofluoromethane (Freon 11)	2000	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	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U
Vinyl chloride (Chloroethene)	0.08	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
Xylene (total)	1000	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	1U	1U	1U	1U	1U	1U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-323				MW-325																	MW-325		
Sample Date		4/1/2020	4/1/2020	7/6/2020	10/13/2020	3/13/2012	5/17/2012	5/18/2012	7/26/2012	7/27/2012	11/21/2012	2/21/2013	6/14/2013	9/9/2013	11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015	5/28/2015	9/17/2015	11/17/2015	1/12/2016	4/7/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation				Pre-CAMU Operation																	Cell 1 Operation		
1,1 Dichloroethene	1	0.2U	0.2U	0.26U	0.2UJ	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,1-Trichloroethane	30	0.3U	0.3U	0.24U	0.3U	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2,2-Tetrachloroethane	1	0.2U	0.2U	0.37U	0.2U	1U	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	0.5U
1,1,2-Trichloroethane	3	0.2U	0.2U	0.43U	0.2U	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	0.5U	0.5U	0.5U	0.5U	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	0.2U	0.2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	0.2U	0.2U	0.26U	0.2U	1U	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	0.5U
1,2,4-Trichlorobenzene	9	0.3U	0.3U	0.37U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	0.3U	0.3U	0.38U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	0.2U	0.2U	0.5U	0.2U	1U	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	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	0.2U	0.2U	0.43U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	0.3U	0.3U	0.43U	0.3U	1U	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	0.5U
1,2-Dichloropropane	0.5	0.2U	0.2U	0.35U	0.2U	1U	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	0.5U
1,3-Dichlorobenzene	600	0.2U	0.2U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	0.2U	0.2U	0.33U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	0.3U	0.3U	1.9U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	0.3U	0.3U	1.1U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3UJ	3U
4-Methyl-2-pentanone	NA	0.5U	0.5U	1.3U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3UJ	3U
Acetone	6000	0.7U	0.7U	4.4U	0.7U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	7J	6U	6U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	0.2U	0.2U	0.2U	0.2U	**[4J]**	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
Bromodichloromethane	0.6	0.2U	0.2U	0.34U	0.2U	1U	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	0.5U
Bromoform	4	1U	1U	0.54U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	0.3U	0.3U	0.55U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
Carbon disulfide	700	0.2U	0.2U	0.82U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	0.2U	0.2U	0.21U	0.2U	1U	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	0.5U
Chlorobenzene	50	0.2U	0.2U	0.38U	0.2U	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	0.5U	0.5U	0.5U	0.5U	0.5U
Chloroethane	NA	0.2U	0.2U	0.32UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U
Chloroform	70	0.2U	0.2U	0.33U	0.2U	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	0.5U	0.5U	0.5U	0.5U	0.5U
Chloromethane (Methyl chloride)	NA	0.2U	0.2U	0.4U	0.2U	1U	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	0.5U
cis-1,2-Dichloroethene	70	0.3J	0.3J	0.28J	0.2U	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	0.5U	0.5U	0.5U	0.5U	0.5U
cis-1,3-Dichloropropene	0.4	0.2U	0.2U	0.22U	0.2U	1U	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	0.5U
Cyclohexane	NA	1U	1U	0.32U	1UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	0.2U	0.2U	0.28U	0.2U	1U	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	0.5U
Dichlorodifluoromethane (Freon 12)	1000	0.2U	0.2U	0.31U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Ethylbenzene	700	0.4U	0.4U	0.3U	0.4U	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	0.5U	0.5U	0.5U	0.5U	0.5U
Isopropylbenzene	700	0.2U	0.2U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	0.3U	0.3U	0.79U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.2U	0.2U	0.47U	0.2U	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	0.5U
Methylcyclohexane	NA	0.5U	0.5U	0.26U	0.5UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	0.3U	0.3U	0.32U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	0.2U	0.2U	0.42U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.2U	0.2U	0.25U	0.2UJ	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	0.5U	0.5U	0.5U	0.5U	0.5U
Toluene	600	0.2U	0.2U	0.38U	0.2U	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	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,2-Dichloroethene	100	0.2U	0.2U	0.24U	1.1J	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	0.5U	0.5U	0.5U	0.5U	0.5U
trans-1,3-Dichloropropene	0.4	0.2U	0.2U	0.49U	0.2U	1U	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	0.5U
Trichloroethene (Trichloroethylene)	1	0.2U	0.2U	0.31U	0.2U	1U	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	0.5U
Trichlorofluoromethane (Freon 11)	2000	0.2U	0.2U	0.32U	0.2U	2U	2U	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	0.5U
Vinyl chloride (Chloroethene)	0.08	0.2U	0.2U	0.17U	0.2U	1U	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	0.5U
Xylene (total)	1000	1U	1U	0.65U	1.4U	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	0.5U	0.5U	0.5U	0.5U	0.5U
Total TIC VOCS	NA	0U	0U	0U	0U	0	0	0	0	0	0	0	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-325			MW-325													MW-326							
Sample Date		7/21/2016	1/18/2017	4/26/2017	10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/24/2018	1/4/2019	4/9/2019	7/9/2019	10/7/2019	1/6/2020	4/3/2020	7/8/2020	10/12/2020	3/13/2012	5/23/2012	5/24/2012	7/26/2012	7/27/2012	11/20/2012	2/20/2013	6/13/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation			Cell 2 Operation													Pre-CAMU Operation							
1,1 Dichloroethene	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,1-Trichloroethane	30	0.5U	0.5U	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	0.3U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2,2-Tetrachloroethane	1	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	3	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	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	--	--	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	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	0.2U	8	6	5J	5	4J	3J	2J	1U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	1U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3UJ	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloropropane	0.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3UJ	3U	3UJ	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	3U	3UJ	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3UJ	3U	3UJ	3U	3U	3U	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
Acetone	6000	6U	6U	6U	6U	6U	6U	6U	0.7U	0.7U	0.7U	2J	0.7U	0.7UJ	0.7U	0.7U	0.7U	15J	6U	16J	6U	6U	10J	6U	6U
Benzene	0.2	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	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Bromoform	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	0.5U	0.5U	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	0.3U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	50	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	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	NA	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Chloroform	70	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	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	70	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	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U
Ethylbenzene	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Isopropylbenzene	700	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1UJ	1U	1UJ	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.3U	0.3U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.4UJ	0.3U	0.3U	0.3U	0.3U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	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	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Toluene	600	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	0.2U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U
trans-1,2-Dichloroethene	100	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	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	1	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	2000	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	0.2U	2U	2U	2U	2U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	0.08	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	0.2U	1U	1U	1U	1U	1U	1U	1U	1U
Xylene (total)	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	1.4U	1.4U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	-	0U	0	0	0	0	0	0	0	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-326							MW-326							MW-326									
Sample Date		9/5/2013	11/6/2013	3/10/2014	8/5/2014	3/23/2015	5/29/2015	9/18/2015	11/18/2015	1/11/2016	4/12/2016	7/19/2016	10/13/2016	1/17/2017	4/21/2017	10/10/2017	1/23/2018	4/10/2018	7/16/2018	10/29/2018	1/3/2019	4/3/2019	7/2/2019	10/2/2019	1/3/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation							Cell 1 Operation							Cell 2 Operation									
1,1 Dichloroethene	1	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,1-Trichloroethane	30	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	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	1	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichloroethane	3	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1-Dichloroethane	50	1U	1U	1U	0.5U	2	0.8J	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
1,2,4-Trichlorobenzene	9	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
1,2-Dibromo-3-chloropropane (DBCP)	0.02	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
1,2-Dibromoethane	0.0004	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	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
1,2-Dichloroethane	0.3	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	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dichloropropane	0.5	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-Dichlorobenzene	600	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
1,4-Dichlorobenzene	75	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
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	5J	3U	3U	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	1J	0.4J	0.3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	0.7J	0.3U	0.3U	0.3U	0.3U	0.3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3UJ	3U	3U	3UJ	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Acetone	6000	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6UJ	6U	6U	6U	91J	6U	6U	2J	2J	14UJ	17J	6J	5J
Benzene	0.2	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	**[0.3J]**	0.2U
Bromodichloromethane	0.6	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Bromoform	4	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	0.5U	0.5UJ	0.5U	0.2U	0.2U	0.2U	0.2U	1U	1U
Bromomethane (Methyl bromide)	10	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	700	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
Carbon Tetrachloride	0.4	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chlorobenzene	50	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroethane	NA	1U	1U	1U	0.5U	1	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	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroform	70	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloromethane (Methyl chloride)	NA	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	0.5UJ	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,2-Dichloroethene	70	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,3-Dichloropropene	0.4	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Cyclohexane	NA	2U	2U	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U
Dibromochloromethane	0.4	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Dichlorodifluoromethane (Freon 12)	1000	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	0.5U	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U
Ethylbenzene	700	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	0.5U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	700	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
Methyl acetate	7000	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
Methyl-t-butyl ether	70	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
Methylcyclohexane	NA	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U
Methylene chloride (Dichloromethane)	3	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
Styrene	100	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
Tetrachloroethene	0.4	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Toluene	600	0.7U	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,2-Dichloroethene	100	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,3-Dichloropropene	0.4	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichloroethene (Trichloroethylene)	1	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	2000	2U	2U	2U	0.5U	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	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Vinyl chloride (Chloroethene)	0.08	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	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Xylene (total)	1000	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	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	13J	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-326			MW-327													MW-327							
Sample Date		4/7/2020	7/13/2020	10/14/2020	3/14/2012	5/18/2012	5/18/2012	7/31/2012	8/1/2012	9/6/2013	11/11/2013	3/11/2014	8/7/2014	10/23/2014	3/23/2015	6/1/2015	9/15/2015	11/16/2015	1/11/2016	4/12/2016	10/21/2016	1/20/2017	4/18/2017	4/18/2017	7/21/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation			Pre-CAMU Operation													Cell 1 Operation							
1,1 Dichloroethene	1	0.2U	0.26U	0.2U	0.8U	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	0.5U
1,1,1-Trichloroethane	30	0.3U	0.24U	0.3U	0.8U	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	0.5U
1,1,2,2-Tetrachloroethane	1	0.2U	0.37U	0.2U	1U	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	0.5U
1,1,2-Trichloroethane	3	0.2U	0.43U	0.2U	0.8U	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	0.5U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	0.2U	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	0.2U	0.26U	0.2U	1U	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	0.5U
1,2,4-Trichlorobenzene	9	0.3U	0.37U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	0.3U	0.38U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	0.2U	0.5U	0.2U	1U	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	0.5U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	0.2U	0.43U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	0.3U	0.43U	0.3U	1U	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	0.5U
1,2-Dichloropropane	0.5	0.2U	0.35U	0.2U	1U	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	0.5U
1,3-Dichlorobenzene	600	0.2U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	0.2U	0.33U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	0.3U	1.9U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	0.3U	1.1U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3UJ	3U	3UJ	3U	3U	3U
4-Methyl-2-pentanone	NA	0.5U	1.3U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3UJ	3U	3U	3U	3U	3U
Acetone	6000	0.9J	22J	0.7U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	0.2U	0.2U	0.2U	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	0.5U	0.5U
Bromodichloromethane	0.6	0.2U	0.34U	0.2U	1U	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	0.5U
Bromoform	4	1U	0.54U	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	0.5U	0.5U	0.5U	0.5U	0.5U
Bromomethane (Methyl bromide)	10	0.3U	0.55U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U
Carbon disulfide	700	0.2UJ	0.82U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ
Carbon Tetrachloride	0.4	0.2U	0.21U	0.2U	1U	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	0.5U
Chlorobenzene	50	0.2U	0.38U	0.2U	0.8U	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	0.5U
Chloroethane	NA	0.2U	0.32U	0.2U	1U	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	0.5U
Chloroform	70	0.2U	0.33U	0.2U	3J	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	0.5U
Chloromethane (Methyl chloride)	NA	0.2U	0.4U	0.2U	1U	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	0.5UJ
cis-1,2-Dichloroethene	70	0.2U	0.22U	0.2U	0.8U	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	0.5U
cis-1,3-Dichloropropene	0.4	0.2U	0.22U	0.2U	1U	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	0.5U
Cyclohexane	NA	1UJ	0.32U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	0.2UJ	0.28U	0.2U	1U	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	0.5U
Dichlorodifluoromethane (Freon 12)	1000	0.2U	0.31U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U
Ethylbenzene	700	0.4U	0.3U	0.4U	0.8U	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	0.5U
Isopropylbenzene	700	0.2U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	0.3U	0.79U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.2U	0.47U	0.2U	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	0.5U	0.5U
Methylcyclohexane	NA	0.5U	0.26U	0.5U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1UJ	1UJ	1U
Methylene chloride (Dichloromethane)	3	0.3U	0.32U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	0.2U	0.42U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.2U	0.25U	0.2U	0.8U	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	0.5U
Toluene	600	0.2U	0.38U	0.2U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	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	0.5U
trans-1,2-Dichloroethene	100	0.2U	0.24U	0.2U	0.8U	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	0.5U
trans-1,3-Dichloropropene	0.4	0.2U	0.49U	0.2U	1U	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	0.5U
Trichloroethene (Trichloroethylene)	1	0.2U	0.31U	0.2U	1U	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	0.5U
Trichlorofluoromethane (Freon 11)	2000	0.2U	0.32U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Vinyl chloride (Chloroethene)	0.08	0.2U	0.17U	0.2U	1U	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	0.5U
Xylene (total)	1000	1U	0.65U	1.4U	0.8U	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	0.5U
Total TIC VOCS	NA	0U	0U	0U	0	0	0	0	0	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-327															MW-328									
Sample Date		10/12/2017	1/22/2018	4/10/2018	7/16/2018	7/16/2018	10/29/2018	1/3/2019	4/3/2019	7/2/2019	10/2/2019	1/3/2020	4/7/2020	7/10/2020	7/10/2020	10/12/2020	3/21/2012	5/23/2012	5/24/2012	7/25/2012	7/26/2012	4/25/2013	6/17/2013	6/25/2013	9/10/2013	11/12/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation															Pre-CAMU Operation									
1,1 Dichloroethene	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.26U	0.26U	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	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.24U	0.24U	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	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.37U	0.37U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.43U	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)	NA	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	-	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.26U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.37U	0.37U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.38U	0.38U	0.3U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.43U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.43U	0.43U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloropropane	0.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.2U	0.35U	0.35U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.33U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1.9U	1.9U	0.3U	3U	9J	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	3U	3U	3U	3U	3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1.1U	1.1U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	1.3U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Acetone	6000	6U	6U	6U	6U	6U	0.7U	0.7UJ	0.7U	0.9J	0.7U	0.7UJ	0.7U	4.4U	4.4U	0.7U	6U	6U	6U	6U	6U	6U	6U	6U	6U	6U
Benzene	0.2	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	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Bromodichloromethane	0.6	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromoform	4	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	1U	1U	1U	0.54U	0.54U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.55U	0.55U	0.3U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U
Carbon disulfide	700	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.82U	0.82U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.21U	0.21U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chlorobenzene	50	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.38U	0.38U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.32U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Chloroform	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.33U	0.2U	14	1J	2J	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.4UJ	0.4UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.22U	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	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.22U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Cyclohexane	NA	2U	2U	2U	2U	2U	0.2U	0.2U	0.2U	0.2U	1U	1U	1UJ	0.32U	0.32U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dibromochloromethane	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2UJ	0.28U	0.28U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.31U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Ethylbenzene	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.3U	0.3U	0.4U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Isopropylbenzene	700	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.34U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl acetate	7000	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.3U	0.79U	0.79U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.47U	0.47U	0.2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylcyclohexane	NA	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U	0.5U	0.26U	0.26U	0.5U	1U	4J	1U	1U	2J	1U	1U	1U	1U	1U
Methylene chloride (Dichloromethane)	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.32U	0.32U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	1U	1U	1U	1U	1U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.42U	0.42U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.25U	0.25U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Toluene	600	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.38U	0.38U	0.2U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U
trans-1,2-Dichloroethene	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.24U	0.24U	0.71J	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.49U	0.49U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.31U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.32U	0.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	0.08	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.17UJ	0.17UJ	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Xylene (total)	1000	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U	1U	1U	0.65U	0.65U	1.4U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U	0.8U
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	-	-	0U	0	19J	0	18J	19J	0	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
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Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
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UJ- Analyte not detected above the approximate reported sample
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Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328									MW-328									MW-328					
Sample Date		3/14/2014	7/2/2014	8/1/2014	8/8/2014	10/29/2014	1/16/2015	3/2/2015	6/1/2015	9/16/2015	11/19/2015	12/15/2015	1/13/2016	4/14/2016	7/25/2016	12/6/2016	1/23/2017	4/27/2017	7/24/2017	10/12/2017	1/25/2018	4/12/2018	7/18/2018	10/29/2018	1/9/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation									Cell 1 Operation									Cell 2 Operations					
1,1 Dichloroethene	1	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
1,1,1-Trichloroethane	30	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	1	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
1,1,2-Trichloroethane	3	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	0.2U	0.2U
1,1-Dichloroethane	50	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
1,2,4-Trichlorobenzene	9	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.3U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	0.3U	0.3U
1,2-Dibromoethane	0.0004	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.3U	0.3U
1,2-Dichloropropane	0.5	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
1,3-Dichlorobenzene	600	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
1,4-Dichlorobenzene	75	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3UJ	3U	3U	3UJ	3U	3U	3U	3U	3U	30U	3U	3U	0.3U	0.3U
2-Hexanone	NA	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3UJ	3UJ	3U	3UJ	3U	3U	3U	3UJ	3U	30U	3U	3U	0.3U	0.3U
4-Methyl-2-pentanone	NA	3U	3U	3UJ	3U	3U	3U	3U	3U	3U	3U	3UJ	3UJ	3U	3U	3U	3U	3U	3U	3U	30U	3U	3U	0.5U	0.5U
Acetone	6000	6U	6U	6UJ	6U	6U	6U	6U	6U	6U	6U	6UJ	6U	6U	6U	6U	6U	6U	6U	6U	60U	6U	6U	0.7U	0.7U
Benzene	0.2	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	**[5J]**	0.5U	0.5U	0.2U	0.2U
Bromodichloromethane	0.6	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Bromoform	4	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Bromomethane (Methyl bromide)	10	1U	0.5U	0.5UJ	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	5U	0.5U	0.5U	0.3U	0.3U
Carbon disulfide	700	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
Carbon Tetrachloride	0.4	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Chlorobenzene	50	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Chloroethane	NA	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Chloroform	70	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Chloromethane (Methyl chloride)	NA	1U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
cis-1,2-Dichloroethene	70	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
cis-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Cyclohexane	NA	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	20U	2U	2U	0.2U	0.2U
Dibromochloromethane	0.4	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Dichlorodifluoromethane (Freon 12)	1000	2U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2UJ	0.2U
Ethylbenzene	700	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5J	0.5U	0.5U	0.4U	0.4U
Isopropylbenzene	700	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
Methyl acetate	7000	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Methylcyclohexane	NA	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
Methylene chloride (Dichloromethane)	3	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	0.5U	5U	0.5U	0.5U	0.3U	0.3U
Styrene	100	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	10U	1U	1U	0.2U	0.2U
Tetrachloroethene	0.4	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Toluene	600	0.7U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
trans-1,2-Dichloroethene	100	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
trans-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Trichloroethene (Trichloroethylene)	1	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	2000	2U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Vinyl chloride (Chloroethene)	0.08	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U
Xylene (total)	1000	0.8U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	5U	0.5U	0.5U	1U	1U
Total TIC VOCS	NA	0U	0U	0UJ	0U	0U	0U	0U	0U	0U	0U	0UJ	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328									MW-328	MW-333						MW-334								
Sample Date		4/5/2019	7/5/2019	10/3/2019	10/3/2019	1/9/2020	4/6/2020	7/9/2020	9/25/2020	10/12/2020	12/2/2020	5/16/2012	5/17/2012	7/24/2012	7/25/2012	3/10/2014	5/22/2014	8/6/2014	10/30/2014	3/9/2015	6/3/2015	5/17/2012	5/18/2012	7/31/2012	8/1/2012	3/10/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operations									Post CAMU Closure	Pre-CAMU Operation						Pre-CAMU Operation								
1,1 Dichloroethene	1	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.2U	0.2U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,1-Trichloroethane	30	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.24U	0.3U	0.3U	0.3U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2,2-Tetrachloroethane	1	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.37U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
1,1,2-Trichloroethane	3	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2U	0.2U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	--	--	--	--	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,1-Dichloroethane	50	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
1,2,4-Trichlorobenzene	9	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.37U	0.3U	0.3U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.38U	0.3U	0.3U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
1,2-Dibromoethane	0.0004	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,2-Dichloroethane	0.3	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.43U	0.3U	0.3U	0.3U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
1,2-Dichloropropane	0.5	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.35U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
1,3-Dichlorobenzene	600	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
1,4-Dichlorobenzene	75	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
2-Butanone (Methyl ethyl ketone)	300	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1.9U	0.3U	0.3U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
2-Hexanone	NA	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	1.1U	0.3U	0.3U	0.3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
4-Methyl-2-pentanone	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1.3U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U	3U
Acetone	6000	0.7U	1J	0.7U	0.7U	0.7U	0.7U	4.4UJ	0.7U	0.7U	0.7U	22	21	10J	6U	6U	9J	6U	7J	6U	6U	6U	7J	6U	6U	6U
Benzene	0.2	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	**[0.45J]**	0.2U	**[0.9J]**	0.5U	**[0.7J]**	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	**[69]**	**[57]**	**[14]**	**[27]**	**[18]**
Bromodichloromethane	0.6	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Bromoform	4	0.2U	0.2U	1U	1U	1U	1U	0.54U	1U	1U	1U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	10	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.55U	0.3U	0.3U	0.3U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Carbon disulfide	700	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.82U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Carbon Tetrachloride	0.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.21U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Chlorobenzene	50	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.38U	0.2U	0.2U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloroethane	NA	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Chloroform	70	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.2U	0.2U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
Chloromethane (Methyl chloride)	NA	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.4U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
cis-1,2-Dichloroethene	70	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2U	0.2U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
cis-1,3-Dichloropropene	0.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Cyclohexane	NA	0.2U	0.2UJ	1U	1U	1U	1U	0.32U	1U	1U	1U	6	4J	2U	2U	2U	2U	2U	2U	2U	2U	6	4J	2U	3J	2U
Dibromochloromethane	0.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.28U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Dichlorodifluoromethane (Freon 12)	1000	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2U	0.2U	0.2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U
Ethylbenzene	700	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.3U	0.4U	0.4U	0.4U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	4J	2J	0.8U	2J	0.8U
Isopropylbenzene	700	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U	0.2U	0.2U	2J	2J	1U	1J	1U	1U	1U	1U	1U	1U	2J	1J	1U	1U	1U
Methyl acetate	7000	0.2U	0.2U	0.2U	0.2U	0.3U	0.3U	0.79U	0.3U	0.3U	0.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Methyl-t-butyl ether	70	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.47U	0.2U	0.2U	0.2U	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
Methylcyclohexane	NA	0.2U	0.2U	0.5U	0.5U	0.5U	0.5U	0.26U	0.5U	0.5U	0.5U	4J	3J	1U	2J	1U	1U	1U	1U	1U	1U	4J	2J	1U	2J	1J
Methylene chloride (Dichloromethane)	3	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.32U	0.3U	0.3U	0.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Styrene	100	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.42U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Tetrachloroethene	0.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.25U	0.2U	0.2U	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
Toluene	600	0.2U	0.3UJ	0.2U	0.2U	0.2U	0.2U	0.38U	0.2U	0.2U	0.2U	0.7U	0.7U	0.7U	0.7U	0.7U	0.5U	0.5U	0.5U	0.5U	0.5U	9	6	2J	3J	3J
trans-1,2-Dichloroethene	100	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.24U	0.2U	1.1J	0.2U	0.8U	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	0.8U	0.8U	0.8U	0.8U	0.8U
trans-1,3-Dichloropropene	0.4	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.49U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Trichloroethene (Trichloroethylene)	1	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Trichlorofluoromethane (Freon 11)	2000	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.2U	0.2U	0.2U	2U	2U	2U	2U	2U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U
Vinyl chloride (Chloroethene)	0.08	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.17U	0.2U	0.2U	0.2U	1U	1U	1U	1U	1U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	1U	1U	1U
Xylene (total)	1000	1U	1U	1U	1U	1U	1U	0.65U	1.4U	1.4U	1.4U	1J	0.8U	0.8U	0.8U	0.8U	0.5U	0.5U	0.5U	0.5U	0.5U	10	10	2J	5	2J
Total TIC VOCS	NA	0U	0U	0U	0U	0U	0U	--	0U	0U	0U	30J	34J	0	28J	0U	0U	0U	0U	0U	0U	130J	210J	7J	67J	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-334					MW-334	MW-334R				MW-334R													
Sample Date		5/22/2014	8/6/2014	10/30/2014	5/29/2015	3/9/2015	1/15/2016	7/20/2016	10/17/2016	1/19/2017	4/21/2017	10/10/2017	1/25/2018	1/25/2018	4/12/2018	7/18/2018	10/26/2018	1/9/2019	4/5/2019	7/5/2019	10/3/2019	1/9/2020	4/6/2020	7/9/2020	10/14/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation					Cell 1 Operation					Cell 2 Operation													
1,1 Dichloroethene	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2UJ	0.26U	0.2U
1,1,1-Trichloroethane	30	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1UJ	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.24U	0.3U
1,1,2,2-Tetrachloroethane	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.37U	0.2U
1,1,2-Trichloroethane	3	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	2U	2U	2U	2U	4U	4U	2U	2U	20UJ	20UJ	2U	2U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	--	--
1,1-Dichloroethane	50	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.2U
1,2,4-Trichlorobenzene	9	1U	1U	1U	1U	1U	1U	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.37U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	2U	2U	2UJ	2U	4U	4U	2U	2U	20UJ	20UJ	2U	2U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.38U	0.3U
1,2-Dibromoethane	0.0004	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	1U	1U	1U	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.43U	0.3U
1,2-Dichloropropane	0.5	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.35U	0.2U
1,3-Dichlorobenzene	600	1U	1U	1U	1U	1U	1U	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U
1,4-Dichlorobenzene	75	1U	1U	1U	1U	1U	1U	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.2U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	3U	3U	3U	3U	6U	6U	3U	3U	30UJ	30UJ	3U	3U	0.3U	0.3U	3U	0.5J	0.3U	0.3U	0.3U	1.9U	0.3U
2-Hexanone	NA	3U	3U	3U	3U	3U	3U	3U	6U	6U	3U	3U	30UJ	30UJ	3U	3U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	1.1U	0.3U
4-Methyl-2-pentanone	NA	3U	3U	3U	3U	3U	3U	3U	6U	6U	3U	3U	30UJ	30UJ	3U	3U	0.5U	0.5U	5U	0.5U	0.5U	0.5U	0.5U	1.3U	0.5U
Acetone	6000	6U	6U	6U	6U	6U	6UJ	6U	12U	12U	6U	6U	60UJ	60UJ	6U	6U	2J	2J	7U	4J	1J	0.7U	0.9J	4.4UJ	0.7U
Benzene	0.2	**[56]**	**[5]**	**[5]**	**[4]**	**[29]**	**[30]**	**[12]**	**[13]**	**[1J]**	**[2]**	0.8J	5UJ	5UJ	**[5]**	**[8]**	**[4]**	**[3]**	**[4J]**	**[1]**	**[1]**	**[0.7J]**	**[2]**	**[0.48J]**	**[0.41J]**
Bromodichloromethane	0.6	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U
Bromoform	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	1U	1U	1U	0.54U	1U
Bromomethane (Methyl bromide)	10	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.55U	0.3U
Carbon disulfide	700	1U	1U	1U	1U	1U	1U	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2UJ	0.82U	0.2U
Carbon Tetrachloride	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.21U	0.2U
Chlorobenzene	50	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.38U	0.2U
Chloroethane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.2U
Chloroform	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.2U
Chloromethane (Methyl chloride)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5UJ	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.4U	0.2U
cis-1,2-Dichloroethene	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2U
cis-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2U
Cyclohexane	NA	2U	2U	2U	2U	2J	5J	4J	4U	4U	2U	2U	20UJ	20UJ	4J	6	3J	2J	2U	4UJ	2J	2J	5J	2.5	2.8J
Dibromochloromethane	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.28U	0.2U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2U
Ethylbenzene	700	1	0.5U	0.5U	0.5U	0.6J	3	2	1J	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.4U	0.4U	4U	0.4U	0.4U	0.4U	0.4U	0.3U	0.4U
Isopropylbenzene	700	1U	1U	1U	1U	1U	1J	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.9J	0.7J	2U	0.7J	0.8J	0.8J	0.9J	0.74J	0.79J
Methyl acetate	7000	1U	1U	1U	1U	1U	1U	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.3U	0.3U	0.79U	0.3U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.47U	0.2U
Methylcyclohexane	NA	1U	1U	1U	1U	1J	4J	3J	2U	2U	1J	1U	10UJ	10UJ	4J	4J	2J	2J	2U	3J	2J	2J	3J	2.7	2.1J
Methylene chloride (Dichloromethane)	3	2U	2U	2U	2U	2U	2U	2U	4U	4U	2U	0.5U	5UJ	5UJ	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.32U	0.3U
Styrene	100	1U	1U	1U	1U	1U	1U	1U	2U	2U	1U	1U	10UJ	10UJ	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.42U	0.2U
Tetrachloroethene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.25U	0.2U
Toluene	600	17	2	0.9J	0.8J	6	1J	0.6J	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.3J	0.2J	2U	0.2U	0.2U	0.2J	0.3J	0.38U	0.2U
trans-1,2-Dichloroethene	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.24U	0.2U
trans-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.49U	0.2U
Trichloroethene (Trichloroethylene)	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2U
Trichlorofluoromethane (Freon 11)	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.2U
Vinyl chloride (Chloroethene)	0.08	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U	1U	0.5U	0.5U	5UJ	5UJ	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.17U	0.2U
Xylene (total)	1000	6	1	1	2	4	5	4	3	1U	2	1	5UJ	5UJ	2	3	3J	1J	10U	1J	1U	1U	1U	1.8J	1.4U
Total TIC VOCS	NA	25J	0U	0U	30J	35J	100J	39J	0U	0U	5J	0U	0UJ	0UJ	45J	51J	28J	53J	0U	38J	57J	83J	97J	--	--

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-5
Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-474					MW-474												
Sample Date		1/8/2016	7/20/2016	10/17/2016	1/19/2017	4/18/2017	10/10/2017	1/25/2018	4/12/2018	7/18/2018	10/26/2018	1/9/2019	4/5/2019	7/5/2019	10/3/2019	1/8/2020	4/6/2020	7/9/2020	10/12/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation					Cell 2 Operation												
1,1 Dichloroethene	1	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.2U
1,1,1-Trichloroethane	30	0.5U	0.5U	0.5U	1UJ	0.5U	0.5U	5U	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.24U	0.3U
1,1,2,2-Tetrachloroethane	1	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.37U	0.2U
1,1,2-Trichloroethane	3	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	NA	2U	2U	2U	4U	2U	2U	20U	2U	2U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	--	--
1,1-Dichloroethane	50	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.26U	0.2U
1,2,4-Trichlorobenzene	9	1U	1U	1U	2U	1U	1U	10U	1U	1U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.37U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.02	2U	2U	2U	4U	2U	2U	20U	2U	2U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.38U	0.3U
1,2-Dibromoethane	0.0004	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	600	1U	1U	1U	2U	1U	1U	10U	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.43U	0.2U
1,2-Dichloroethane	0.3	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.43U	0.3U
1,2-Dichloropropane	0.5	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.35U	0.2U
1,3-Dichlorobenzene	600	1U	1U	1U	2U	1U	1U	10U	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U
1,4-Dichlorobenzene	75	1U	1U	1U	2U	1U	1U	10U	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.2U
2-Butanone (Methyl ethyl ketone)	300	3U	3U	3U	6U	3U	3U	30U	3U	3U	0.3U	0.3U	3U	1J	0.3U	0.3U	0.3U	1.9U	0.3U
2-Hexanone	NA	3U	3U	3U	6U	3U	3U	30U	3U	3U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	1.1U	0.3U
4-Methyl-2-pentanone	NA	3U	3U	3U	6U	3U	3U	30U	3U	3U	0.5U	0.5U	5U	0.5U	0.5U	0.5U	0.5U	1.3U	0.5U
Acetone	6000	6U	6U	6U	12U	6U	6U	60U	6U	6U	0.7U	0.7U	7U	5J	0.7U	0.7U	0.7U	4.4UJ	1.1J
Benzene	0.2	**[17]**	**[9]**	**[23]**	**[3]**	**[4]**	**[6]**	5U	**[3]**	**[5]**	**[7]**	**[5]**	**[3J]**	**[4]**	**[6]**	**[1J]**	**[2]**	**[1.4]**	**[0.85J]**
Bromodichloromethane	0.6	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.34U	0.2U
Bromoform	4	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	1U	1U	1U	0.54U	1U
Bromomethane (Methyl bromide)	10	0.5U	0.5UJ	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.55U	0.3U
Carbon disulfide	700	1U	1U	1U	2U	1U	1U	10U	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.82U	0.2U
Carbon Tetrachloride	0.4	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.21U	0.2U
Chlorobenzene	50	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.38U	0.2U
Chloroethane	NA	0.5U	0.5UJ	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.32U	0.2U
Chloroform	70	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.33U	0.2U
Chloromethane (Methyl chloride)	NA	0.5U	0.5U	0.5U	1U	0.5U	0.5UJ	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.4U	0.2U
cis-1,2-Dichloroethene	70	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2U
cis-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.22U	0.2U
Cyclohexane	NA	20	14	20	6J	14	21	22J	23	19	15	13	9J	14	15	10	14	10	16
Dibromochloromethane	0.4	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.28U	0.2U
Dichlorodifluoromethane (Freon 12)	1000	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2U
Ethylbenzene	700	10	7	9	2J	6	5	5U	1	4	3	2	4U	3	3	0.4J	0.7J	0.6J	0.67J
Isopropylbenzene	700	2J	1J	2J	2U	2J	2J	10U	2J	2J	2J	2J	2U	2J	2J	2J	2J	1.6	1.6J
Methyl acetate	7000	1U	1U	1U	2U	1U	1U	10U	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.3U	0.3U	0.79U	0.3U
Methyl-t-butyl ether	70	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.47U	0.2U
Methylcyclohexane	NA	9	5	8	4J	7	9	11J	7	9	8	6	3J	6	8	5J	6	5.3	7.8
Methylene chloride (Dichloromethane)	3	2U	2U	2U	4U	2U	0.5U	5U	0.5U	0.5U	0.3U	0.3U	3U	0.3U	0.3U	0.3U	0.3U	0.32U	0.3U
Styrene	100	1U	1U	1U	2U	1U	1U	10U	1U	1U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.42U	0.2U
Tetrachloroethene	0.4	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.25U	0.2U
Toluene	600	23	17	11	1J	3	27	5U	8	24	13	7	5J	18	14	3	5	5	4.6
trans-1,2-Dichloroethene	100	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.24U	0.2U
trans-1,3-Dichloropropene	0.4	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.49U	0.2U
Trichloroethene (Trichloroethylene)	1	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.31U	0.2U
Trichlorofluoromethane (Freon 11)	2000	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2UJ	0.2U	0.32U	0.2U
Vinyl chloride (Chloroethene)	0.08	0.5U	0.5U	0.5U	1U	0.5U	0.5U	5U	0.5U	0.5U	0.2U	0.2U	2U	0.2U	0.2U	0.2U	0.2U	0.17U	0.2U
Xylene (total)	1000	57	37	40	9	23	58	18	24	52	46	29	21J	37	45	14	17	19	17
Total TIC VOCS	NA	480J	230J	230J	46J	180J	310J	79J	180J	310J	260J	420J	160J	260J	450J	190J	220J	--	--

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure

Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA
NA- No action level limit available for this parameter
Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-115																		MW-115								MW-115		
Sample Date		2/26/2003	9/9/2003	3/16/2012	5/14/2012	5/15/2012	7/24/2012	7/25/2012	11/19/2012	2/19/2013	6/12/2013	9/3/2013	11/4/2013	3/5/2014	5/19/2014	8/4/2014	10/22/2014	3/2/2015	5/27/2015	9/14/2015	11/13/2015	1/5/2016	4/6/2016	7/18/2016	10/11/2016	1/11/2017	4/18/2017	7/17/2017	10/9/2017	1/23/2018	4/9/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation																			Cell 1 Operation								Cell 2 Operation		
2,4,5-Trichlorophenol	700	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U
2,4-Dinitrophenol	10	20U	21U	10U	11U	10U	12U	10U	10U	10U	11U	11U	11U	12U	10U	11U	11UJ	11U	11U	10U	10U	10U	10U	11U	11U	10U	10U	10U	10U	10UJ	10U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.05	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	1U	1U	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4U	0.5U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.44U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	1U	1U	0.1U	0.1U	0.1U	0.1U	0.1J	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	0.1U	0.1U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	1U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	4J	2U	2U
3-Nitroaniline	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	5U	6U	5U	5U	5U	6U	6U	6U	6U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5.5U	5U	5U	5U	5U	5U	5U
4-Bromophenylphenylether	NA	--	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chloroaniline	30	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	2U	2U	2U
4-Chlorophenyl phenyl ether	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	2U	2U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3.3U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitrophenol	NA	10U	10U	10U	11U	10U	12U	10U	10U	10U	11U	11U	11U	12U	10U	11U	11U	11U	11U	10U	10U	10U	10U	11U	11U	10U	10U	10U	10U	10U	10U
Acenaphthene	400	1U	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	0.1UJ	0.1U	0.1U	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	NA	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	700	2U	2U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Anthracene	2000	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	3	1U	1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1.1U	1U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	1U	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	0.11U	0.1U	0.1U	0.1U	**[0.2J]**	**[0.4J]**	0.1U
Benzo(a)pyrene	0.1	1U	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	0.11U	0.1U	0.1U	0.1U	**[0.3J]**	**[0.5]**	0.1U
Benzo(b)fluoranthene	0.05	1U	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	0.11U	0.1U	0.1U	0.1U	**[0.3J]**	**[0.8]**	0.1U
Benzo(g,h,i)perylene	NA	1U	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	0.11U	0.1U	0.1UJ	0.1U	0.3J	0.4J	0.1U
Benzo(k)fluoranthene	0.5	1U	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	0.11U	0.1U	0.1U	0.1U	0.4J	0.4J	0.1U
bis(2-Chloroethoxy)methane	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	**[45]**	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	3UJ	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	2U	2U	2U
Caprolactam	NA	5U	5U	5U	5U	5U	6U	5U	5U	5U	6U	6U	6U	6U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5.5U	5U	5U	5U	5U	5UJ	5U
Carbazole	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chrysene	5	1U	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	0.11U	0.1U	0.1U	0.1U	0.3J	0.7	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	1U	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	0.11U	0.1U	0.1U	0.1U	**[0.4J]**	**[0.1J]**	0.1U
Dibenzofuran	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2.2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Fluoranthene	300	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	1	0.1U
Fluorene	300	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.02	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.6U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	5U	6U	5U	5U	5U	6U	6U	6U	6U	5U	6U	5UJ	5U	5U	5U	5U	5U	5U	5U	5.5U	5U	5U	5U	5UJ	5U	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	1U	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	0.11U	0.1U	0.1U	0.1U	**[0.5J]**	**[0.4J]**	0.1U
Isophorone	40	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	2U	2U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	300	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	3U	3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	**[5]**	1U	1.1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	0.6	0.1U
Phenol	2000	1U	1U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.6U	0.6U	0.6U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.55U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pyrene	200	1U	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	0.11U	0.1U	0.1U	0.1U	0.1U	0.9	0.1U
Total TIC SVOCS	NA	--	--	99J	32JB	84J	11J	13J	27J	0	0U	6J	0U	0U	0U	11JB	40J	0U	15J	6JB	12JB	5JB	18JB	35JB	0U	51JB	23JB	5JB	18JB	17J	9J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-115										MW-211									MW-211								MW-315	MW-323	
Sample Date		7/12/2018	10/18/2018	1/8/2019	4/8/2019	7/8/2019	10/4/2019	1/9/2020	4/8/2020	7/14/2020	10/13/2020	6/26/2013	5/22/2014	8/5/2014	9/26/2014	10/30/2014	3/12/2015	3/24/2015	6/8/2015	9/16/2015	11/16/2015	12/17/2015	1/14/2016	4/8/2016	7/22/2016	12/8/2016	1/19/2017	4/18/2017	3/21/2012	3/15/2012	5/16/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation										Pre-CAMU Operation									Cell 1 Operation								Pre-CAMU Operation	Pre-CAMU Operation	
2,4,5-Trichlorophenol	700	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2,4,6-Trichlorophenol	1	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2,4-Dichlorophenol	20	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2,4-Dimethylphenol	100	3U	3U	3U	3U	3U	3U	3U	3U	3U	3.1U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	39	0.5U	0.6UJ
2,4-Dinitrophenol	10	15U	14U	14U	15U	14U	15U	15U	14U	14U	15U	11U	11U	11U	11U	10U	10U	11UJ	10U	10U	10U	10U	10U	10UJ	10U	9U	11UJ	10U	10U	10U	11UJ
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	0.9U	1U	1U	1U	1U	1UJ
2,6-Dinitrotoluene	0.05	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.42U	0.5U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5UJ
2-Chlorophenol (o-Chlorophenol)	40	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1	0.1U	0.8	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
2-Methylphenol (o-Cresol)	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.7J	0.5U	0.6UJ
2-Nitroaniline (o-Nitroaniline)	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
2-Nitrophenol (o-Nitrophenol)	NA	3U	3U	3U	3U	3U	3U	3U	3U	3U	3.1U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
3,3'-Dichlorobenzidine	0.08	3U	3U	3U	3U	3U	3U	3U	3U	3U	3.1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
3-Nitroaniline	NA	3U	3U	3U	3U	3U	3U	3U	3U	3U	3.1U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	9U	8U	8U	9U	8U	9U	8U	8U	8.1U	8.4U	6U	6U	6U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	5U	6UJ
4-Bromophenylphenylether	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	-	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Chloroaniline	30	4U	4U	4U	4U	4U	4U	4U	4U	4U	4.2U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	0.5U	0.5U	0.6UJ
4-Chlorophenyl phenyl ether	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Methylphenol (p-Cresol)	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Nitroaniline	NA	1U	0.9U	0.9U	1U	0.9U	1U	0.9U	0.9U	0.91U	0.94U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
4-Nitrophenol	NA	11U	10U	10U	11U	10U	11U	11U	10U	10U	10U	11U	11U	11U	11U	10U	10U	11U	10U	10U	10U	10U	10U	10UJ	10U	9U	11UJ	10U	10U	10U	11UJ
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	50	23	81	32	23	31	27	30	33	29	56	36	33J	44	47	52	59	0.3J	0.1U	0.1UJ
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1U	1	0.2J	0.2J	0.1J	0.2J	0.2J	0.1U	0.2J	0.3J	0.2J	0.2J	0.1U	0.4J	0.4J	0.5J	0.1U	0.1U	0.1UJ
Acetophenone	700	4U	4U	4U	4U	4U	4U	4U	4U	4U	4.2U	0.6U	0.6U	0.8J	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	1J	0.6UJ
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	6	2	54	5	4	4	3	3	3	3	5	3	3J	3	4	5	5	0.2J	0.1U	0.1UJ
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Benzaldehyde	NA	3U	3U	3U	3U	3U	3U	3U	3U	3U	3.1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	0.9U	1U	1U	1U	1U	1UJ
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.5J]**	0.1U	**[80]**	**[0.1J]**	**[0.1J]**	**[0.1J]**	0.1U	0.1U	**[0.1J]**	**[0.2J]**	**[0.3J]**	0.1U	**[0.2J]**	0.1U	**[0.1J]**	**[0.2J]**	0.1J	**[0.1J]**	0.1U	0.1UJ
Benzo(a)pyrene	0.1	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.3J]**	0.1U	**[55]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.2J]**	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.3J]**	0.1U	**[58]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[0.2J]**	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	25	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	**[25]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
bis(2-Chloroethoxy)methane	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
bis(2-Chloroethyl) ether	0.03	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
bis(2-chloroisopropyl) ether	300	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
bis(2-Ethylhexyl)phthalate	2	6U	5U	5U	5U	5U	5U	5U	5U	5.1U	5.2U	2U	2U	**[12]**	2U	2U	2U	2U	2U	2U	2U	2U	2U	**[4J]**	2U	2U	2U	2U	2U	2U	2UJ
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Caprolactam	NA	6U	5U	5U	5U	5U	5U	5U	5U	5.1U	5.2U	6U	6U	6U	5U	9J	5U	6U	5U	5U	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	5U	6UJ
Carbazole	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	16	5	9	7	2	3	4	7	8	10	9	6	12J	16	0.5U	11	10	0.6J	0.5U	0.6UJ
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.5J	0.1U	**[72]**	0.1J	0.1J	0.1J	0.1U	0.1U	0.2J	0.2J	0.3J	0.1U	0.2J	0.1U	0.09U	0.2J	0.1U	0.2J	0.1U	0.1UJ
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Di-n-octylphthalate	100	6U	5U	5U	5U	5U	5U	5U	5U	5.1U	5.2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[9]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Dibenzofuran	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	21	9	39	13	9	12	11	13	14	12	21	15	14J	19	19	19	25	0.6J	0.5U	0.6UJ
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3U	3U	3U	3U	3U	3U	3U	3U	3.1U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	4	1	190	4	3	3	2	2	2	3	4	2	3J	3	4	4	3	0.3J	0.1U	0.1UJ
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	27	12	55	18	14	17	15	17	17	15	29	19	19J	23	24	29	34	0.6	0.1U	0.1UJ
Hexachlorobenzene	0.02	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	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Hexachlorobutadiene	0.4	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5UJ	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Hexachlorocyclopentadiene	40	6U	5U	5U	5U	5U	5U	5U	5U	5.1UJ	5.2U	6U	6U	6U	5U	5U	5U	6U	5U	5U	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	5U	6UJ
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	0.9U	1U	1U	1U	1U	1UJ
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	**[25]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Isophorone	40	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
N-Nitrosodi-n-propylamine	0.005	0.8U	0.7U	0.7U	0.7U	0.7U	0.8U	0.7U	0.7U	0.71U	0.73U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
N-Nitrosodiphenylamine (Diphenylamine)	7	0.8U	0.7U	0.7U	0.7U	0.7U	0.8U	0.7U	0.7U	0.71U	0.73U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Naphthalene	300	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	1J	0.7	1	0.1U	0.1U	0.4J	1	0.5J	0.3J	0.3J	2	0.2J	0.3J	0.6	0.09U	1	1	0.4J	0.1U	0.1UJ
Nitrobenzene	4	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
p-Chloro-m-cresol	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	1.6U	1.7U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	0.9U	1U	1U	1U	1U	1UJ
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	14	0.5J	74	0.1U	0.1U	0.5	0.6J	4	3	0.9	8	3	1J	0.5J	0.8	0.9	4	0.2J	0.1U	0.1UJ
Phenol	2000	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.51U	0.52U	0.6U	0.6U	0.6U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	1	0.5U	0.6UJ
Pyrene	200	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	3	1	130	2	2	2	1	1	1	2	2	1	2J	2	2	2	2	0.6	0.1U	0.1UJ
Total TIC SVOCS	NA	5J	12JB	6J	9JB	150JB	0U	35JB	18J	0U	--	280J	360J	260J	220J	58J	--	330J	340J	110J	100J	--	160J	140J	170JB	140JB	200J	320J	--	79J	51J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-323														MW-323							MW-323								
Sample Date		5/17/2012	7/30/2012	7/31/2012	11/20/2012	2/20/2013	6/12/2013	9/5/2013	11/5/2013	3/12/2014	8/5/2014	10/29/2014	3/3/2015	6/8/2015	9/15/2015	11/18/2015	1/7/2016	7/22/2016	10/13/2016	1/17/2017	4/27/2017	7/18/2017	12/1/2017	1/19/2018	4/13/2018	4/13/2018	7/13/2018	10/26/2018	1/2/2019	4/9/2019	7/9/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation														Cell 1 Operation							Cell 2 Operation								
2,4,5-Trichlorophenol	700	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
2,4,6-Trichlorophenol	1	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
2,4-Dichlorophenol	20	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
2,4-Dimethylphenol	100	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	3U	3U	3UJ	3U	3UJ
2,4-Dinitrophenol	10	10UJ	15U	10U	10UJ	10UJ	11UJ	11UJ	11UJ	11U	11UJ	11UJ	11U	10U	10UJ	11U	10U	11UJ	10U	10U	10U	-	10UJ	11U	10U	11U	15U	14U	14UJ	15U	14UJ
2,4-Dinitrotoluene	0.05	1UJ	2U	1U	1UJ	1UJ	1UJ	1UJ	1UJ	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ
2,6-Dinitrotoluene	0.05	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
2-Chloronaphthalene	600	0.4UJ	0.6U	0.4U	0.4UJ	0.4UJ	0.4UJ	0.4UJ	0.4UJ	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ
2-Chlorophenol (o-Chlorophenol)	40	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
2-Methyl-Naphthlalene	NA	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
2-Methylphenol (o-Cresol)	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
2-Nitroaniline (o-Nitroaniline)	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	2U	2U	2U	2U	2UJ
2-Nitrophenol (o-Nitrophenol)	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	3U	3U	3UJ	3U	3UJ
3,3'-Dichlorobenzidine	0.08	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	3U	3U	3U	3U	3UJ
3-Nitroaniline	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	3U	3U	3U	3U	3UJ
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5UJ	8U	5U	5UJ	5UJ	6UJ	5UJ	5UJ	5U	5UJ	5UJ	5U	5U	5UJ	5U	5U	5UJ	5U	5U	5U	-	5UJ	5U	5U	5U	8U	8U	8UJ	9U	8UJ
4-Bromophenylphenylether	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
4-Chloroaniline	30	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	2U	2UJ	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	4U	4U	4U	4U	4UJ
4-Chlorophenyl phenyl ether	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
4-Methylphenol (p-Cresol)	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	3U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
4-Nitroaniline	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.9U	0.9U	0.9U	1U	0.9UJ
4-Nitrophenol	NA	10UJ	15U	10U	10UJ	10UJ	11UJ	11UJ	11UJ	11U	11UJ	11UJ	11U	10U	10UJ	11U	10U	11UJ	10U	10U	10U	-	10UJ	11U	10U	11U	10U	10U	10UJ	11U	10UJ
Acenaphthene	400	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Acenaphthylene	NA	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Acetophenone	700	0.5UJ	0.8U	0.7J	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	4U	4U	4U	4U	4UJ
Anthracene	2000	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Atrazine	3	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ
Benzaldehyde	NA	2J	2U	1U	1UJ	1UJ	1UJ	1UJ	1UJ	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	3U	3U	3U	3U	3UJ
Benzo(a)anthracene	0.05	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	**[0.2J]**	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(a)pyrene	0.1	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	**[0.2J]**	**[0.1J]**	0.1UJ	0.1U	0.1U	0.1UJ	**[0.2J]**	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(b)fluoranthene	0.05	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	**[0.1J]**	**[0.1J]**	0.1UJ	0.1U	0.1U	0.1UJ	**[0.2J]**	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(g,h,i)perylene	NA	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.2J	0.1J	0.1UJ	0.1U	0.1U	0.1UJ	0.1J	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(k)fluoranthene	0.5	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
bis(2-Chloroethoxy)methane	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
bis(2-Chloroethyl) ether	0.03	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
bis(2-chloroisopropyl) ether	300	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
bis(2-Ethylhexyl)phthalate	2	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	**[3J]**	2U	2UJ	2U	2U	2UJ	**[3J]**	2U	2U	2U	2UJ	2U	2U	2U	5U	5U	5U	5U	5UJ
Butylbenzylphthalate	100	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ
Caprolactam	NA	5UJ	8U	5U	5UJ	5UJ	6UJ	5UJ	5UJ	5U	5UJ	5U	5U	5U	5UJ	5U	5U	5UJ	5U	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5UJ
Carbazole	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
Chrysene	5	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.2J	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.3J	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Di-n-butylphthalate	700	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ
Di-n-octylphthalate	100	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	2U	2U	2UJ	2U	2U	2UJ	2U	2U	6	2U	2UJ	2U	2U	2U	5U	5U	5U	5U	5UJ
Dibenz(a,h)anthracene	0.005	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Dibenzofuran	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
Diethylphthalate	6000	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ
Dimethyl phthalate	NA	2UJ	3U	2U	2UJ	2UJ	2UJ	2UJ	2UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2UJ	2U	--	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2UJ
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	3U	3U	3U	3U	3UJ
Fluoranthene	300	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.2J	0.1J	0.1UJ	0.1U	0.1U	0.1UJ	0.3J	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Fluorene	300	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Hexachlorobenzene	0.02	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Hexachlorobutadiene	0.4	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
Hexachlorocyclopentadiene	40	5UJ	8U	5U	5UJ	5UJ	6UJ	5UJ	5UJ	5U	5UJ	5U	5U	5U	5UJ	5U	5U	5UJ	5U	5U	-	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5UJ
Hexachloroethane	2	1UJ	2U	1U	1UJ	1UJ	1UJ	1UJ	1UJ	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1U	1U	1U	1U	1U	1U	1UJ
Indeno(1,2,3-cd)Pyrene	0.05	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	**[0.1J]**	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Isophorone	40	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
N-Nitrosodi-n-propylamine	0.005	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.7U	0.7U	0.7U	0.8U	0.7UJ
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.7U	0.7U	0.7U	0.8U	0.7UJ
Naphthalene	300	0.3J	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.2J	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Nitrobenzene	4	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ
p-Chloro-m-cresol	NA	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
Pentachlorophenol	0.3	1UJ	2U	1U	1UJ	1UJ	1UJ	1UJ	1UJ	1U	1UJ	1UJ	1U	1U	1UJ	1U	1U	1UJ	1U	1U	1U	-	1UJ	1U	1U	1U	1U	1U	1UJ	1U	1UJ
Phenanthrene	NA	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1J	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.2J	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Phenol	2000	0.5UJ	0.8U	0.5U	0.5UJ	0.5UJ	0.6UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ
Pyrene	200	0.1UJ	0.2U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1J	0.1U	0.3J	0.2J	0.1UJ	0.1U	0.1U	0.1UJ	0.4J	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Total TIC SVOCS	NA	93J	59J	89J	--	--	47J	98J	87J	88J	10J	8J	69JB	36J	18J	40J	34J	18JB	31J	19JB	0U	62JB	--	46JB	12J	0U	13J	59J	91J	12J	67JB

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-323					MW-325																MW-325						MW-325	
Sample Date		10/7/2019	1/2/2020	4/1/2020	4/1/2020	7/6/2020	3/13/2012	5/17/2012	5/18/2012	7/26/2012	7/27/2012	11/21/2012	2/21/2013	6/14/2013	9/9/2013	11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015	5/28/2015	9/17/2015	11/17/2015	1/12/2016	4/7/2016	7/21/2016	1/18/2017	4/26/2017	10/11/2017	1/25/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation					Pre-CAMU Operation																	Cell 1 Operation						Cell 2 Operation	
2,4,5-Trichlorophenol	700	0.5UJ	0.6U	0.5U	0.5U	0.59UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5UJ	0.6U	0.5U	0.5U	0.59UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5UJ	0.6U	0.5U	0.5U	0.59UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	3UJ	3U	3U	3U	3.5UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dinitrophenol	10	15UJ	16U	15U	15U	16UJ	10U	12U	9U	11U	10U	10U	12U	10U	11U	11U	11U	11U	12U	10U	11U	10UJ	10U	10U	10UJ	10U	10U	10U	10U	10U	10U
2,4-Dinitrotoluene	0.05	1UJ	1U	1U	1U	1.2U	1U	1U	0.9U	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	0.05	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4UJ	0.5U	0.4U	0.4U	0.47U	0.4U	0.5U	0.4U	0.5U	0.4U	0.4U	0.5U	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	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5UJ	0.6U	0.5U	0.5U	0.59UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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
2-Methylphenol (o-Cresol)	NA	0.5UJ	0.6U	0.5U	0.5U	0.59UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	2UJ	2U	2U	2U	2.3U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	3UJ	3U	3U	3U	3.5UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	3UJ	3U	3U	3U	3.5U	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
3-Nitroaniline	NA	3UJ	3U	3U	3U	3.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8UJ	9U	8U	8U	9.4U	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5U	5U	6U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
4-Bromophenylphenylether	NA	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chloroaniline	30	4UJ	5U	4U	4U	4.7U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5UJ	0.6U	0.5U	0.5U	0.59UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.9UJ	1U	1U	0.9U	1.1U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitrophenol	NA	11UJ	11U	11U	10U	12UJ	10U	12U	9U	11U	10U	10U	12U	10U	11U	11U	11U	11U	12U	10U	11U	10U	10U	10U	10U	10U	10U	10U	10U	10U	10U
Acenaphthene	400	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.6	0.1U	0.09U	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
Acenaphthylene	NA	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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
Acetophenone	700	4UJ	5U	4U	4U	4.7U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Anthracene	2000	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.2J	0.1U	0.09U	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
Atrazine	3	2UJ	2U	2U	2U	2.3U	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
Benzaldehyde	NA	3UJ	3U	3U	3U	3.5U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1UJ	0.1U	0.1U	0.1U	0.12U	**[0.1J]**	0.1U	0.09U	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]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.1	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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
Benzo(b)fluoranthene	0.05	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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]**	**[0.1J]**	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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
Benzo(k)fluoranthene	0.5	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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
bis(2-Chloroethoxy)methane	NA	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5UJ	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	5UJ	6U	5U	5U	5.9U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	**[2J]**	2U	2U	2U	2U	2U
Butylbenzylphthalate	100	2UJ	2U	2U	2U	2.3U	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	NA	5UJ	6U	5U	5U	5.9U	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5U	5U	6U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Carbazole	NA	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chrysene	5	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.2J	0.1U	0.09U	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	0.2J	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2UJ	2U	2U	2U	2.3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	100	5UJ	6U	5U	5U	5.9U	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
Dibenz(a,h)anthracene	0.005	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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
Dibenzofuran	NA	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Diethylphthalate	6000	2UJ	2U	2U	2U	2.3U	2U	2U	2U	2J	2J	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	NA	2UJ	2U	2U	2U	2.3U	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)	400	3UJ	3U	3U	3U	3.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Fluoranthene	300	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.4J	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.8	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	300	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.4J	0.1U	0.09U	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
Hexachlorobenzene	0.02	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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	0.4	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5UJ	6U	5U	5U	5.9U	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5U	5U	6U	5U	6U	5U	5U	5U	5U	5U	5U	5U	5U	5U	5U
Hexachloroethane	2	1UJ	1U	1U	1U	1.2U	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.1U	0.1U	0.09U	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
Isophorone	40	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.7UJ	0.8U	0.7U	0.7U	0.82U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7UJ	0.8U	0.7U	0.7U	0.82U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Naphthalene	300	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.4J	0.1U	0.09U	0.1U	0.1U	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	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	4	0.5UJ	0.6U	0.5U	0.5U	0.59U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	0.5UJ	0.6U	2U	2U	1.9UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1UJ	1U	1U	1U	1.2UJ	1U	1U	0.9U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	NA	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.4J	0.1U	0.09U	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	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	2000	0.5UJ	0.6U	0.5U	0.5U	0.59UJ	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pyrene	200	0.1UJ	0.1U	0.1U	0.1U	0.12U	0.4J	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1U	0.1U	0.5J	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Total TIC SVOCS	NA	0UJ	0U	0U	0U	--	13J	19J	10J	7J	56J	0	8J	0U	0U	5J	0U	0U	0U	6JB	20J	6J	750J	5JB	6J	13J	21JB	190JB	11JB	5J	0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-325										
Sample Date		4/11/2018	7/17/2018	10/24/2018	1/4/2019	4/9/2019	7/9/2019	10/7/2019	1/6/2020	4/3/2020	7/8/2020	10/12/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation										
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
2,4-Dimethylphenol	100	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.2U	3.5U
2,4-Dinitrophenol	10	10U	14U	14U	14U	13U	14U	14U	15U	15U	15U	17U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1.1U	1.2U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.42U	0.47U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2.4U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.2U	3.5U
3,3'-Dichlorobenzidine	0.08	2U	3U	3U	3U	3U	3U	3U	3U	3U	3.2U	3.5U
3-Nitroaniline	NA	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.2U	3.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	8U	8U	8U	7U	8U	8U	9U	8U	8.4U	9.4U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
4-Chloroaniline	30	2U	4U	4U	4U	4U	4U	4U	4U	4U	4.2U	4.7U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
4-Nitroaniline	NA	0.5U	0.9U	0.9U	0.9U	0.8U	0.9U	0.9U	1U	0.9U	0.95U	1.1U
4-Nitrophenol	NA	10U	10U	10U	10U	9U	10U	10U	11U	11U	11U	12U
Acenaphthene	400	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Acetophenone	700	0.5U	4U	4U	4U	4U	4U	4U	4U	4U	4.2U	4.7U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2.4U
Benzaldehyde	NA	1U	3U	3U	3U	3U	3U	3U	3U	3U	3.2U	3.5U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Benzo(a)pyrene	0.1	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	**[0.12J]**
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	**[0.13J]**
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.13J
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
bis(2-Ethylhexyl)phthalate	2	2U	5U	5U	5U	5U	5U	5U	5U	5U	5.3U	5.9U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2.4U
Caprolactam	NA	5U	5U	5U	5U	5U	5U	5U	5U	5U	5.3U	5.9U
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2.4U
Di-n-octylphthalate	100	2U	5U	5U	5U	5U	5U	5U	5U	5U	5.3U	5.9U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2.4U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.1U	2.4U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.2U	3.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12J
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
Hexachlorocyclopentadiene	40	5U	5U	5R	5U	5U	5U	5U	5U	5U	5.3UJ	5.9U
Hexachloroethane	2	1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1.1U	1.2U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.7U	0.7U	0.7U	0.6U	0.7U	0.7U	0.8U	0.7U	0.74U	0.83U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.7U	0.7U	0.7U	0.6U	0.7U	0.7U	0.8U	0.7U	0.74U	0.83U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	1.7U	1.9U
Pentachlorophenol	0.3	1U	1U	1U	1U	0.9U	1U	1U	1U	1U	1.1U	1.2U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.53U	0.59U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.09U	0.1U	0.1U	0.1U	0.1U	0.11U	0.12U
Total TIC SVOCS	NA	0U	26J	97J	16J	2300J	140JB	0U	10JB	25J	--	--

Location ID	MW-326														
Sample Date	3/13/2012	5/23/2012	5/24/2012	7/26/2012	7/27/2012	11/20/2012	2/20/2013	6/13/2013	9/5/2013	11/6/2013	3/10/2014	8/5/2014	3/23/2015	5/29/2015	9/18/2015
Parameter Name/Report Units	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event	Pre-CAMU Operation														
2,4,5-Trichlorophenol	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
2,4,6-Trichlorophenol	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
2,4-Dichlorophenol	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
2,4-Dimethylphenol	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
2,4-Dinitrophenol	10U	11U	100UJ	11U	100UJ	10U	11UJ	11U	11U	11U	11U	11UJ	11U	11UJ	10U
2,4-Dinitrotoluene	1U	1U	10UJ	1U	10UJ	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1UJ	--
2,6-Dinitrotoluene	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
2-Chloronaphthalene	0.4U	0.4U	4UJ	0.4U	4UJ	0.4U	0.4UJ	0.5U	0.4U	0.5U	0.4U	0.4UJ	0.4U	0.5UJ	--
2-Chlorophenol (o-Chlorophenol)	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
2-Methyl-Naphthlalene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
2-Methylphenol (o-Cresol)	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
2-Nitroaniline (o-Nitroaniline)	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
2-Nitrophenol (o-Nitrophenol)	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
3,3'-Dichlorobenzidine	2U	2U	20UJ	2U	20UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
3-Nitroaniline	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	5U	6U	50UJ	5U	50UJ	5U	5UJ	6U	5U	6U	5U	6UJ	5U	6UJ	5U
4-Bromophenylphenylether	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
4-Chloroaniline	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	2UJ	--
4-Chlorophenyl phenyl ether	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
4-Methylphenol (p-Cresol)	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
4-Nitroaniline	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
4-Nitrophenol	10U	11U	100UJ	11U	100UJ	10U	11UJ	11U	11U	11U	11U	11UJ	11U	11UJ	10U
Acenaphthene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Acenaphthylene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Acetophenone	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
Anthracene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Atrazine	2U	2U	20UJ	2U	20UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
Benzaldehyde	1U	1U	10UJ	1U	10UJ	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1UJ	--
Benzo(a)anthracene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Benzo(a)pyrene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Benzo(b)fluoranthene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Benzo(g,h,i)perylene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Benzo(k)fluoranthene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
bis(2-Chloroethoxy)methane	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
bis(2-Chloroethyl) ether	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
bis(2-chloroisopropyl) ether	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
bis(2-Ethylhexyl)phthalate	2U	2U	20UJ	2U	20UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
Butylbenzylphthalate	2U	2U	20UJ	2U	88J	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
Caprolactam	5U	6U	50UJ	5U	50UJ	5U	5UJ	6U	5U	6U	5U	6UJ	5U	6UJ	--
Carbazole	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
Chrysene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Di-n-butylphthalate	2U	2U	20UJ	2U	20UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
Di-n-octylphthalate	2U	2U	20UJ	2U	20UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
Dibenz(a,h)anthracene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Dibenzofuran	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
Diethylphthalate	2U	2U	20UJ	2U	20UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
Dimethyl phthalate	2U	2U	20UJ	2U	20UJ	2U	2UJ	2U	2U	2U	2U	2UJ	2U	2UJ	--
Diphenyl (Biphenyl, Phenyl benzene)	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
Fluoranthene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Fluorene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Hexachlorobenzene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Hexachlorobutadiene	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
Hexachlorocyclopentadiene	5U	6U	50UJ	5U	50UJ	5U	5UJ	6U	5U	6U	5U	6UJ	5U	6UJ	--
Hexachloroethane	1U	1U	10UJ	1U	10UJ	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1UJ	--
Indeno(1,2,3-cd)Pyrene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Isophorone	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
N-Nitrosodi-n-propylamine	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
N-Nitrosodiphenylamine (Diphenylamine)	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
Naphthalene	0.5	0.2J	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Nitrobenzene	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	--
p-Chloro-m-cresol	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
Pentachlorophenol	1U	1U	10UJ	1U	10UJ	1U	1UJ	1U	1U	1U	1U	1UJ	1U	1UJ	1U
Phenanthrene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Phenol	0.5U	0.6U	5UJ	0.5U	5UJ	0.5U	0.5UJ	0.6U	0.5U	0.6U	0.5U	0.6UJ	0.5U	0.6UJ	0.5U
Pyrene	0.1U	0.1U	1UJ	0.1U	1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	--
Total TIC SVOCS	100J	180J	160J	85J	1300J	4J	--	24J	20J	45J	30J	18J	6J	34J	32J

Location ID	MW-326			
Sample Date	11/18/2015	1/11/2016	4/12/2016	10/13/2016
Parameter Name/Report Units	ug/L	ug/L	ug/L	ug/L
Sampling Event	Cell 1 Operation			
2,4,5-Trichlorophenol	0.5U	0.5U	0.5UJ	0.5U
2,4,6-Trichlorophenol	0.5U	0.5U	0.5UJ	0.5U
2,4-Dichlorophenol	0.5U	0.5U	0.5UJ	0.5U
2,4-Dimethylphenol	0.5U	0.5U	0.5UJ	0.5U
2,4-Dinitrophenol	10U	10U	10UJ	10U
2,4-Dinitrotoluene	1U	1U	1UJ	--
2,6-Dinitrotoluene	0.5U	0.5U	0.5UJ	--
2-Chloronaphthalene	0.4U	0.4U	0.4UJ	--
2-Chlorophenol (o-Chlorophenol)	0.5U	0.5U	0.5UJ	0.5U
2-Methyl-Naphthlalene	0.1U	0.1U	0.1UJ	--
2-Methylphenol (o-Cresol)	0.5U	0.5U	0.5UJ	0.5U
2-Nitroaniline (o-Nitroaniline)	0.5U	0.5U	0.5UJ	--
2-Nitrophenol (o-Nitrophenol)	0.5U	0.5U	0.5UJ	0.5U
3,3'-Dichlorobenzidine	2U	2U	2UJ	--
3-Nitroaniline	0.5U	0.5U	0.5UJ	--
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	5U	5U	5UJ	5U
4-Bromophenylphenylether	0.5U	0.5U	0.5UJ	--
4-Chloroaniline	2U	2U	2UJ	--
4-Chlorophenyl phenyl ether	0.5U	0.5U	0.5UJ	--
4-Methylphenol (p-Cresol)	0.5U	0.5U	0.5UJ	0.5U
4-Nitroaniline	0.5U	0.5U	0.5UJ	--
4-Nitrophenol	10U	10U	10UJ	10U
Acenaphthene	0.1U	0.1U	0.1UJ	--
Acenaphthylene	0.1U	0.1U	0.1UJ	--
Acetophenone	0.5U	0.5U	0.5UJ	--
Anthracene	0.1U	0.1U	0.1UJ	--
Atrazine	2U	2U	2UJ	--
Benzaldehyde	1U	1U	1UJ	--
Benzo(a)anthracene	0.1U	0.1U	0.1UJ	--
Benzo(a)pyrene	0.1U	0.1U	0.1UJ	--
Benzo(b)fluoranthene	0.1U	0.1U	0.1UJ	--
Benzo(g,h,i)perylene	0.1U	0.1U	0.1UJ	--
Benzo(k)fluoranthene	0.1U	0.1U	0.1UJ	--
bis(2-Chloroethoxy)methane	0.5U	0.5U	0.5UJ	--
bis(2-Chloroethyl) ether	0.5U	0.5U	0.5UJ	--
bis(2-chloroisopropyl) ether	0.5U	0.5U	0.5UJ	--
bis(2-Ethylhexyl)phthalate	2U	**[6]**	**[13J]**	**[2J]**
Butylbenzylphthalate	2U	2U	2UJ	--
Caprolactam	5U	5U	5UJ	--
Carbazole	0.5U	0.5U	0.5UJ	--
Chrysene	0.1U	0.1U	0.1UJ	--
Di-n-butylphthalate	2U	2U	2UJ	--
Di-n-octylphthalate	2U	2U	2UJ	--
Dibenz(a,h)anthracene	0.1U	0.1U	0.1UJ	--
Dibenzofuran	0.5U	0.5U	0.5UJ	--
Diethylphthalate	2U	2U	2UJ	--
Dimethyl phthalate	2U	2U	2UJ	--
Diphenyl (Biphenyl, Phenyl benzene)	0.5U	0.5U	0.5UJ	--
Fluoranthene	0.1U	0.1U	0.1UJ	--
Fluorene	0.1U	0.1U	0.1UJ	--
Hexachlorobenzene	0.1U	0.1U	0.1UJ	--
Hexachlorobutadiene	0.5U	0.5U	0.5UJ	--
Hexachlorocyclopentadiene	5U	5U	5UJ	--
Hexachloroethane	1U	1U	1UJ	--
Indeno(1,2,3-cd)Pyrene	0.1U	0.1U	0.1UJ	--
Isophorone	0.5U	0.5U	0.5UJ	--
N-Nitrosodi-n-propylamine	0.5U	0.5U	0.5UJ	--
N-Nitrosodiphenylamine (Diphenylamine)	0.5U	0.5U	0.5UJ	--
Naphthalene	0.1U	0.1U	0.1UJ	--
Nitrobenzene	0.5U	0.5U	0.5UJ	--
p-Chloro-m-cresol	0.5U	0.5U	0.5UJ	0.5U
Pentachlorophenol	1U	**[4J]**	1UJ	1U
Phenanthrene	0.1U	0.1U	0.1UJ	--
Phenol	0.5U	0.5U	0.5UJ	0.5U
Pyrene	0.1U	0.1U	0.1UJ	--
Total TIC SVOCS	55JB	67J	14J	--

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-326			MW-326													MW-327												
Sample Date		1/17/2017	4/21/2017	8/31/2017	10/10/2017	1/23/2018	4/10/2018	7/16/2018	10/29/2018	1/3/2019	4/3/2019	7/2/2019	10/2/2019	1/3/2020	4/7/2020	7/13/2020	10/14/2020	3/14/2012	5/18/2012	5/18/2012	7/31/2012	8/1/2012	9/6/2013	11/11/2013	3/11/2014	8/7/2014	10/23/2014	3/23/2015	6/1/2015	9/15/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation			Cell 2 Operation													Pre-CAMU Operation												
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
2,4-Dimethylphenol	100	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3UJ	3U	3U	3U	3.7UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
2,4-Dinitrophenol	10	10U	10U	10U	10U	11UJ	10U	14U	14U	14U	15U	15U	16UJ	15U	15U	14U	17UJ	10U	10UJ	10U	11UJ	9U	10UJ	11U	11U	12U	12U	11U	--	10UJ
2,4-Dinitrotoluene	0.05	1U	-	1U	1U	1U	1U	1U	1U	-	1U	1U	1UJ	1U	1U	1U	1.2UJ	1U	1UJ	1U	1UJ	0.9U	1UJ	1U	1U	1U	1U	1U	1U	1UJ
2,6-Dinitrotoluene	0.05	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
2-Chloronaphthalene	600	0.4U	-	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ	-	0.4UJ	0.4U	0.5UJ	0.4U	0.4U	0.4U	0.49UJ	0.4U	0.4UJ	0.4U	0.4UJ	0.4U	0.4UJ	0.4U	0.4U	0.5U	0.5U	0.4U	0.4U	0.4UJ
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
2-Methyl-Naphthlalene	NA	0.1U	-	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	-	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	2U	2U	-	2U	2U	2UJ	2U	2U	2U	2.4UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3U	3.7UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
3,3'-Dichlorobenzidine	0.08	2U	-	2U	2U	2U	2U	3U	3U	-	3U	3U	3UJ	3U	3U	3U	3.7UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
3-Nitroaniline	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	3U	3U	-	3U	3U	3UJ	3U	3U	3U	3.7UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	5U	5U	5U	8U	8U	8U	8U	8U	9UJ	8U	9U	8U	9.8UJ	5U	5UJ	5U	5UJ	5U	5UJ	5U	5U	6U	6U	6U	--	5UJ
4-Bromophenylphenylether	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5UJ	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
4-Chloroaniline	30	2U	-	2U	2U	2U	2U	4U	4U	-	4U	4U	5UJ	4U	4U	4U	4.9UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	2U	2UJ
4-Chlorophenyl phenyl ether	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5UJ	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
4-Nitroaniline	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.9U	0.9U	-	0.9U	0.9U	1UJ	0.9U	1U	0.9U	1.1UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
4-Nitrophenol	NA	10U	10U	10U	10U	11U	10U	10U	10U	-	10U	10U	12UJ	11U	11U	10U	12UJ	10U	10UJ	10U	11UJ	9U	10UJ	11U	11U	12U	12U	11U	--	10UJ
Acenaphthene	400	0.1U	-	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	-	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Acenaphthylene	NA	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Acetophenone	700	0.5U	-	0.5U	0.5U	0.5U	0.5U	4U	4U	-	4U	4U	5UJ	4U	4U	4U	4.9UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
Anthracene	2000	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Atrazine	3	2U	-	2U	2U	2U	2U	2U	2U	-	2U	2U	2UJ	2U	2U	2U	2.4UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Benzaldehyde	NA	1U	-	1U	1U	1U	1U	3U	3U	-	3U	3U	3UJ	3U	3U	3U	3.7UJ	1U	1UJ	1U	1UJ	0.9U	1UJ	1U	1U	1U	1U	1U	1U	1UJ
Benzo(a)anthracene	0.05	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(a)pyrene	0.1	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(b)fluoranthene	0.05	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(g,h,i)perylene	NA	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Benzo(k)fluoranthene	0.5	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
bis(2-Chloroethoxy)methane	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
bis(2-Chloroethyl) ether	0.03	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
bis(2-chloroisopropyl) ether	300	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
bis(2-Ethylhexyl)phthalate	2	2U	-	2U	2U	**[7]**	2U	5U	5U	-	5U	5U	6UJ	5U	5U	5U	6.1UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Butylbenzylphthalate	100	2U	-	2U	2U	2U	2U	2U	2U	-	2U	2U	2UJ	2U	2U	2U	2.4UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ	2UJ
Caprolactam	NA	5U	-	5UJ	5U	5UJ	5U	5U	5U	-	5U	5U	6UJ	5U	5U	5U	6.1UJ	5U	5UJ	5U	5UJ	5U	5UJ	5U	5U	6U	6U	6U	5U	5UJ
Carbazole	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
Chrysene	5	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Di-n-butylphthalate	700	2U	-	2U	2U	2U	2U	2U	2U	-	2U	2U	2UJ	2U	2U	2U	2.4UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Di-n-octylphthalate	100	2U	-	2U	2U	2U	2U	5U	5U	-	5U	5U	6UJ	5U	5U	5U	6.1UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2U	2UJ
Dibenz(a,h)anthracene	0.005	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Dibenzofuran	NA	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	-	0.5UJ	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
Diethylphthalate	6000	2U	-	2U	2U	2U	2U	2U	2U	-	2U	2U	2UJ	2U	2U	2U	2.4UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ	2UJ
Dimethyl phthalate	NA	--	-	2U	2U	2U	2U	2U	2U	-	2U	2U	2UJ	2U	2U	2U	2.4UJ	2U	2UJ	2U	2UJ	2U	2UJ	2U	2U	2U	2U	2U	2UJ	2UJ
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	-	0.5U	0.5U	0.5U	0.5U	3U	3UJ	-	3UJ	3U	3UJ	3U	3U	3U	3.7UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
Fluoranthene	300	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Fluorene	300	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Hexachlorobenzene	0.02	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Hexachlorobutadiene	0.4	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
Hexachlorocyclopentadiene	40	5U	-	5UJ	5U	5U	5U	5U	-	-	5U	5U	6UJ	5U	5U	5UJ	6.1UJ	5U	5UJ	5U	5UJ	5U	5UJ	5U	5U	6U	6U	6U	5U	5UJ
Hexachloroethane	2	1U	-	1U	1U	1U	1U	1U	1U	-	1U	1U	1UJ	1U	1U	1U	1.2UJ	1U	1UJ	1U	1UJ	0.9U	1UJ	1U	1U	1U	1U	1U	1U	1UJ
Indeno(1,2,3-cd)Pyrene	0.05	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Isophorone	40	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
N-Nitrosodi-n-propylamine	0.005	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	-	0.7U	0.7U	0.8UJ	0.7U	0.7U	0.7U	0.85UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	-	0.7U	0.7U	0.8UJ	0.7U	0.7U	0.7U	0.85UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
Naphthalene	300	0.1U	-	0.1U	0.1U	0.2J	0.1U	0.1U	0.1UJ	-	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.12UJ	0.1U	0.2J	0.1U	0.1UJ	0.1J	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Nitrobenzene	4	0.5U	-	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	-	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	0.5U	0.5UJ
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.6UJ	0.5U	2U	1.6U	2UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1U	1.2UJ	1U	1UJ	1U	1UJ	0.9U	1UJ	1U	1U	1U	1U	1U	--	1UJ
Phenanthrene	NA	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.09U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.61UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5U	0.6U	0.6U	0.6U	--	0.5UJ
Pyrene	200	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	0.12UJ	0.1U	0.1UJ	0.1U	0.1UJ	0.1J	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ
Total TIC SVOCS	NA	39JB	-	24J	58JB	20J	15J	38JB	12J	34J	52JB	190J	0UJ	0U	16J	-	-	10JB	41J	48J	83J	9J	57J	90J	26J	56J	79J	29J	58J	74J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-327								MW-327															MW-328						
Sample Date		11/16/2015	1/11/2016	4/12/2016	10/21/2016	1/20/2017	4/18/2017	4/18/2017	8/31/2017	10/12/2017	1/22/2018	4/10/2018	7/16/2018	7/16/2018	10/29/2018	1/3/2019	4/3/2019	7/2/2019	10/2/2019	1/3/2020	4/7/2020	7/10/2020	7/10/2020	10/12/2020	3/21/2012	5/23/2012	5/24/2012	7/25/2012	7/26/2012	4/25/2013	6/17/2013
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								Cell 2 Operation															Pre-CAMU Operation						
2,4,5-Trichlorophenol	700	0.5UJ	0.5U	0.5UJ	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2,4,6-Trichlorophenol	1	0.5UJ	0.5U	0.5UJ	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2,4-Dichlorophenol	20	0.5UJ	0.5U	0.5UJ	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2,4-Dimethylphenol	100	0.5UJ	0.5U	0.5UJ	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3UJ	3U	4U	3UJ	3UJ	3.3UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2,4-Dinitrophenol	10	10UJ	10U	10UJ	10UJ	10U	10U	10U	10U	10U	11UJ	10U	14U	15U	15U	14U	14U	15U	14UJ	15U	17U	14UJ	14UJ	15UJ	10U	11UJ	9UJ	11U	10U	11UJ	11U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1.0UJ	1UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1UJ	1UJ	1.1U	1U	1UJ	0.9UJ	1U	1U	1UJ	1U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.41UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4UJ	0.4UJ	0.4U	0.4UJ	0.4U	0.5U	0.4UJ	0.4UJ	0.44U	0.4U	0.4UJ	0.4UJ	0.4U	0.4U	0.4UJ	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5UJ	0.5U	0.5UJ	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1UJ	0.11U	0.1U	0.1J	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
2-Methylphenol (o-Cresol)	NA	0.5UJ	0.5U	0.5UJ	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2UJ	2UJ	2.2U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.5UJ	0.5U	0.5UJ	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3UJ	3U	4UJ	3UJ	3UJ	3.3UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2.1UJ	2U	2U	2U	2U	2U	2U	2U	3U	3U	3U	3U	3U	3U	3UJ	3U	4U	3UJ	3UJ	3.3U	2U	2UJ	2UJ	2U	2U	2UJ	2U
3-Nitroaniline	NA	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3UJ	3U	4U	3UJ	3UJ	3.3U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5UJ	5U	5UJ	5.2UJ	5U	5U	5U	5U	5U	5U	5U	8U	8U	8U	8U	8U	9U	8UJ	8U	10U	8UJ	8UJ	8.7UJ	5U	6UJ	5UJ	5U	5U	5UJ	5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
4-Chloroaniline	30	2U	2U	2U	2.1UJ	2U	2U	2U	2U	2U	2U	2U	4U	4U	4U	4U	4U	4U	4UJ	4U	5U	4UJ	4UJ	4.4U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.52UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
4-Methylphenol (p-Cresol)	NA	0.5UJ	0.5U	0.5UJ	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.9U	0.9U	0.9U	0.9U	0.9U	1U	0.9UJ	0.9U	1U	0.9UJ	0.9UJ	0.98U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
4-Nitrophenol	NA	10UJ	10U	10UJ	10UJ	10U	10U	10U	10U	10U	11U	10U	10U	11U	10U	10U	10U	11U	10UJ	10U	12U	10UJ	10UJ	11UJ	10U	11UJ	9UJ	11U	10U	11UJ	11U
Acenaphthene	400	0.1U	0.1U	0.1U	0.10UJ	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	1J	0.09UJ	1	0.9	0.1UJ	0.4J
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Acetophenone	700	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	4U	4U	4U	4U	4U	4U	4UJ	4U	5U	4UJ	4UJ	4.4U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Anthracene	2000	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Atrazine	3	2U	2U	2U	2.1UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2UJ	2UJ	2.2U	2U	2UJ	2UJ	2U	2U	2UJ	2U
Benzaldehyde	NA	1U	1U	1U	1.0UJ	1U	1U	1U	1U	1U	1U	1U	3U	3U	3U	3U	3U	3U	3UJ	3U	4U	3UJ	3UJ	3.3U	1U	1UJ	0.9UJ	1U	1U	1UJ	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Benzo(a)pyrene	0.1	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.10UJ	0.1U	0.1UJ	0.1UJ	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	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	**[2J]**	2.1UJ	2UJ	2U	2U	2U	2U	2U	2U	5U	5U	5U	5U	5U	5U	5UJ	5U	6U	5UJ	5UJ	5.5U	2U	2UJ	2UJ	2U	2U	2UJ	2U
Butylbenzylphthalate	100	2U	2U	2U	2.1UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2UJ	2UJ	2.2U	2U	2UJ	2UJ	2U	2U	2UJ	2U
Caprolactam	NA	5U	5U	5U	5.2UJ	5U	5U	5U	5UJ	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5UJ	5U	6U	5UJ	5UJ	5.5U	5U	6UJ	5UJ	5U	5U	5UJ	5U
Carbazole	NA	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2.1UJ	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2UJ	2UJ	2.2U	2U	2UJ	2UJ	2U	2U	2UJ	2U
Di-n-octylphthalate	100	2U	2U	2U	2.1UJ	2UJ	2U	2U	2U	2U	2U	2U	5U	5U	5U	5U	5U	5U	5UJ	5U	6U	5UJ	5UJ	5.5U	2U	2UJ	2UJ	2U	2U	2UJ	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.52UJ	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Diethylphthalate	6000	2U	2U	2U	2.1UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2UJ	2UJ	2.2U	2U	2UJ	2UJ	2U	2U	2UJ	2U
Dimethyl phthalate	NA	2U	2U	2U	2.1UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2UJ	2UJ	2.2U	2U	2UJ	2UJ	2U	2U	2UJ	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3UJ	3U	3UJ	3U	3UJ	3U	4U	3UJ	3UJ	3.3U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Fluorene	300	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.2J	0.09UJ	0.1J	0.2J	0.1UJ	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Hexachlorocyclopentadiene	40	5U	5U	5U	5.2UJ	5U	5U	5U	5UJ	5UJ	5U	5U	5U	5U	-	5U	5U	5U	5UJ	5U	6U	5.3UJ	5.3UJ	5.5U	5U	6UJ	5UJ	5U	5U	5UJ	5U
Hexachloroethane	2	1U	1U	1U	1.0UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1UJ	1UJ	1.1U	1U	1UJ	0.9UJ	1U	1U	1UJ	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Isophorone	40	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	0.7U	0.7U	0.7U	0.8U	0.7UJ	0.7U	0.9U	0.7UJ	0.7UJ	0.76U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	0.7U	0.7U	0.7U	0.8U	0.7UJ	0.7U	0.9U	0.7UJ	0.7UJ	0.76U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Naphthalene	300	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1UJ	0.11U	0.5	0.9J	0.09UJ	0.4J	0.2J	1U	0.1U
Nitrobenzene	4	0.5U	0.5U	0.5U	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55U	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
p-Chloro-m-cresol	NA	0.5UJ	0.5U	0.5UJ	0.52UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.5U	2U	1.6UJ	1.6UJ	1.7UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Pentachlorophenol	0.3	1UJ	**[5J]**	1UJ	1.0UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1UJ	1UJ	1.1UJ	1U	1UJ	0.9UJ	1U	1U	1UJ	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1J	0.1U	0.1UJ	0.1U
Phenol	2000	0.5UJ	0.5U	0.5UJ	0.52UJ	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	0.5UJ	0.5U	0.6U	0.5UJ	0.5UJ	0.55UJ	0.5U	0.6UJ	0.5UJ	0.5U	0.5U	0.5UJ	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.10UJ	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	0.1UJ	0.1U	0.1U	0.1UJ	0.1UJ	0.11U	0.1U	0.1UJ	0.09UJ	0.1U	0.1U	0.1UJ	0.1U
Total TIC SVOCS	NA	83J	25J	94JB	0UJ	480JB	77JB	57J	120J	280JB	62JB	45J	18JB	14J	22J	24J	38JB	7JB	0UJ	0U	0U	-	-	-	15J	230J	130J	110J	15J	200J	14J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328										
Sample Date		6/25/2013	9/10/2013	11/12/2013	3/14/2014	8/1/2014	8/8/2014	10/29/2014	1/16/2015	3/2/2015	6/1/2015	9/16/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation										
2,4,5-Trichlorophenol	700	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
2,4,6-Trichlorophenol	1	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
2,4-Dichlorophenol	20	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
2,4-Dimethylphenol	100	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
2,4-Dinitrophenol	10	12U	11UJ	11U	12U	13U	11UJ	10U	10U	11UJ	--	12U
2,4-Dinitrotoluene	0.05	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U
2,6-Dinitrotoluene	0.05	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
2-Chloronaphthalene	600	0.5U	0.4UJ	0.5U	0.5U	0.5U	0.5UJ	0.4U	0.4U	0.4UJ	0.4U	0.5U
2-Chlorophenol (o-Chlorophenol)	40	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
2-Methyl-Naphthlalene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
2-Nitroaniline (o-Nitroaniline)	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
2-Nitrophenol (o-Nitrophenol)	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
3,3'-Dichlorobenzidine	0.08	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2U	2U
3-Nitroaniline	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	6U	5UJ	6U	6U	6U	6UJ	5U	5U	5UJ	--	6U
4-Bromophenylphenylether	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
4-Chloroaniline	30	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	2U	2U
4-Chlorophenyl phenyl ether	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
4-Methylphenol (p-Cresol)	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
4-Nitroaniline	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
4-Nitrophenol	NA	12U	11UJ	11U	12U	13U	11UJ	10U	10U	11UJ	--	12U
Acenaphthene	400	0.2J	0.4J	0.5J	0.1U	0.1U	0.5J	0.1U	0.4J	0.1UJ	0.3J	0.6
Acenaphthylene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Acetophenone	700	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
Anthracene	2000	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Atrazine	3	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2U	2U
Benzaldehyde	NA	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Benzo(a)pyrene	0.1	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
bis(2-Chloroethyl) ether	0.03	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
bis(2-chloroisopropyl) ether	300	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
bis(2-Ethylhexyl)phthalate	2	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2U	2U
Butylbenzylphthalate	100	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2UJ	2U
Caprolactam	NA	6U	5UJ	6U	6U	6U	6UJ	5U	5U	5UJ	5U	6U
Carbazole	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
Chrysene	5	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Di-n-butylphthalate	700	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2U	2U
Di-n-octylphthalate	100	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Dibenzofuran	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
Diethylphthalate	6000	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2UJ	2U
Dimethyl phthalate	NA	2U	2UJ	2U	2U	3U	2UJ	2U	2U	2UJ	2UJ	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
Fluoranthene	300	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Fluorene	300	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Hexachlorobutadiene	0.4	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
Hexachlorocyclopentadiene	40	6U	5UJ	6U	6U	6U	6UJ	5U	5U	5UJ	5U	6U
Hexachloroethane	2	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1UJ	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Isophorone	40	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
N-Nitrosodi-n-propylamine	0.005	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
Naphthalene	300	1U	0.1UJ	0.2J	0.1U	0.1U	0.1UJ	0.1U	0.6	0.1UJ	0.1U	0.1U
Nitrobenzene	4	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	0.5U	0.6U
p-Chloro-m-cresol	NA	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
Pentachlorophenol	0.3	1U	1UJ	1U	1U	1U	1UJ	1U	1U	1UJ	--	1U
Phenanthrene	NA	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1J	0.1UJ	0.1U	0.1U
Phenol	2000	0.6U	0.5UJ	0.6U	0.6U	0.6U	0.6UJ	0.5U	0.5U	0.5UJ	--	0.6U
Pyrene	200	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1UJ	0.1U	0.1U
Total TIC SVOCS	NA	7J	120J	59J	40J	35J	160J	64J	--	76J	77J	74J

Location ID	NJ GW Quality Criterion-Class IIA	MW-328								
Sample Date		11/19/2015	12/15/2015	1/13/2016	4/14/2016	7/25/2016	12/6/2016	1/23/2017	4/27/2017	7/24/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation								
2,4,5-Trichlorophenol	700	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2,4-Dichlorophenol	20	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2,4-Dimethylphenol	100	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2,4-Dinitrophenol	10	11U	10UJ	10UJ	10UJ	10U	10UJ	11UJ	10U	10U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1UJ	1UJ	1U	1U
2,6-Dinitrotoluene	0.05	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2-Chloronaphthalene	600	0.5U	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4UJ	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
3-Nitroaniline	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	6U	5UJ	5U	5UJ	5U	5UJ	5UJ	5U	5U
4-Bromophenylphenylether	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
4-Chloroaniline	30	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
4-Chlorophenyl phenyl ether	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
4-Nitroaniline	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
4-Nitrophenol	NA	11U	10UJ	10U	10UJ	10U	10UJ	11UJ	10U	10U
Acenaphthene	400	0.7	1U	1	0.3J	0.6	0.6J	0.9J	0.2J	0.4J
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Acetophenone	700	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Atrazine	3	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
Benzaldehyde	NA	1U	1U	1U	1U	1U	1UJ	1UJ	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Benzo(a)pyrene	0.1	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
Caprolactam	NA	6U	5U	5U	5U	5U	5UJ	5UJ	5U	5U
Carbazole	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
Di-n-octylphthalate	100	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Dibenzofuran	NA	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Diethylphthalate	6000	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2UJ	2UJ	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Hexachlorobutadiene	0.4	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Hexachlorocyclopentadiene	40	6U	5U	5U	5U	5U	5UJ	5UJ	-	5U
Hexachloroethane	2	1U	1U	1U	1U	1U	1UJ	1UJ	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Isophorone	40	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.1J	0.1UJ	0.1UJ	0.1U	0.1U
Nitrobenzene	4	0.6U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
p-Chloro-m-cresol	NA	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Pentachlorophenol	0.3	1U	1UJ	1U	1UJ	1U	1UJ	1UJ	1U	1U
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Phenol	2000	0.6U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.5UJ	0.5U	0.5U
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1U	0.1U
Total TIC SVOCS	NA	77J	--	82JB	99J	42JB	52JB	33J	0U	57JB

Location ID	NJ GW Quality Criterion-Class IIA	MW-328										
Sample Date		10/12/2018	1/25/2018	4/12/2018	7/18/2018	10/29/2018	1/9/2019	4/5/2019	7/5/2019	10/3/2019	10/3/2019	1/9/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation										
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
2,4-Dimethylphenol	100	0.5UJ	0.5U	0.5U	3U	3U	3UJ	3U	3U	3UJ	3UJ	3UJ
2,4-Dinitrophenol	10	10U	10UJ	10U	14U	15U	15UJ	16U	14U	15UJ	15UJ	15UJ
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1UJ	1UJ
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.5U	0.4U	0.4UJ	0.4UJ	0.4UJ
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
2-Methyl-Naphthlalene	NA	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2UJ	2UJ	2UJ
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	0.5U	3U	3U	3UJ	3U	3U	3UJ	3UJ	3UJ
3,3'-Dichlorobenzidine	0.08	2U	2U	2U	3U	3U	3U	3U	3U	3UJ	3UJ	3UJ
3-Nitroaniline	NA	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3UJ	3UJ	3UJ
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	5U	8U	9U	8UJ	9U	8U	8UJ	8UJ	8UJ
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
4-Chloroaniline	30	2U	2U	2U	4U	4U	4U	5U	4U	4UJ	4UJ	4UJ
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
4-Nitroaniline	NA	0.5U	0.5U	0.5U	0.9U	1U	0.9U	1U	0.9U	0.9UJ	0.9UJ	0.9UJ
4-Nitrophenol	NA	10U	10U	10U	10U	11U	11UJ	12U	10U	11UJ	10UJ	10UJ
Acenaphthene	400	0.1U	0.3J	0.1U	0.3J	0.2J	0.4J	0.3J	0.8	0.3J-	0.2J-	0.3J-
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Acetophenone	700	0.5U	0.5U	0.5U	4U	4U	4U	5U	4U	4UJ	4UJ	4UJ
Anthracene	2000	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2UJ	2UJ
Benzaldehyde	NA	1U	1U	1U	-	3U	3U	3U	3U	3UJ	3UJ	3UJ
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Benzo(a)pyrene	0.1	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6UJ	0.5U	0.5UJ	0.5UJ	0.5UJ
bis(2-Ethylhexyl)phthalate	2	2U	2U	2U	5U	5U	5U	6U	5U	5UJ	5UJ	5UJ
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2UJ	2UJ
Caprolactam	NA	5U	5UJ	5U	5U	5U	5U	6U	5U	5UJ	5UJ	5UJ
Carbazole	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2UJ	2UJ
Di-n-octylphthalate	100	2U	2U	2U	5U	5U	5U	6U	5U	5UJ	5UJ	5UJ
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Dibenzofuran	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2UJ	2UJ
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2UJ	2UJ
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	0.5U	3U	3UJ	3U	3U	3U	3UJ	3UJ	3UJ
Fluoranthene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1J	0.1UJ	0.1UJ	0.1UJ
Fluorene	300	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1UJ	0.1UJ	0.1UJ
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
Hexachlorocyclopentadiene	40	5UJ	5U	5U	-	-	5U	6U	5U	5UJ	5UJ	5UJ
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1UJ	1UJ
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.5U	0.7U	0.8U	0.7U	0.8U	0.7U	0.7UJ	0.7UJ	0.7UJ
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.5U	0.7U	0.8U	0.7U	0.8U	0.7U	0.7UJ	0.7UJ	0.7UJ
Naphthalene	300	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1UJ	1U	1U	1UJ	1UJ	1UJ
Phenanthrene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.6U	0.5U	0.5UJ	0.5UJ	0.5UJ
Pyrene	200	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1UJ	0.1UJ
Total TIC SVOCS	NA	87JB	100J	19J	73JB	10J	160J	99JB	180JB	44J	20J	64J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328			MW-328	MW-333										MW-334										MW-334	MW-334R				
Sample Date		4/6/2020	7/9/2020	10/12/2020	12/2/2020	5/16/2012	5/17/2012	7/24/2012	7/25/2012	3/10/2014	5/22/2014	8/6/2014	10/30/2014	3/9/2015	6/3/2015	5/17/2012	5/18/2012	7/31/2012	8/1/2012	3/10/2014	5/22/2014	8/6/2014	10/30/2014	5/29/2015	3/9/2015	1/15/2016	7/20/2016	10/17/2016	1/19/2017	10/10/2017	1/25/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation			Post CAMU Closure	Pre-CAMU Operation										Pre-CAMU Operation										Cell 1 Operation					
2,4,5-Trichlorophenol	700	0.5U	0.59U	0.65UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	1	0.5U	0.59U	0.65UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	20	0.5U	0.59U	0.65UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	100	3U	3.5U	3.9UJ	3U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	39	51	4	4	1J	4	0.5U	0.6U	2	3	2	1J	0.55J	0.5U	0.5U	0.5U
2,4-Dinitrophenol	10	15U	16U	18UJ	14U	11U	10U	11U	10U	12U	11U	10U	12U	11UJ	10U	10U	10U	10U	10U	11U	11U	11U	11U	11U	12UJ	10U	10UJ	10U	10UJ	10U	10UJ
2,4-Dinitrotoluene	0.05	1U	1.2U	1.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	1UJ	1.0U	1U	1U	1U
2,6-Dinitrotoluene	0.05	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
2-Chloronaphthalene	600	0.4U	0.47U	0.52U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	0.4U	0.4U	0.5U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.5U	--	0.4UJ	0.40U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.59U	0.65UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	NA	0.1U	0.12U	0.13U	0.1U	1	0.6	0.1U	0.1U	0.1U	0.2J	0.5	0.1U	0.1U	0.1U	3	3	0.5	2	0.5J	0.9	0.1U	0.1U	0.5J	0.5J	--	1J	1.1	0.2J	0.1U	0.1U
2-Methylphenol (o-Cresol)	NA	0.5U	0.59U	0.65UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	NA	2U	2.3U	2.6U	2U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
2-Nitrophenol (o-Nitrophenol)	NA	3U	3.5U	3.9UJ	3U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
3,3'-Dichlorobenzidine	0.08	3U	3.5U	3.9U	3U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	2UJ	2.0U	2U	2U	2U
3-Nitroaniline	NA	3U	3.5U	3.9U	3U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	8U	9.4U	10UJ	8.1U	5U	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5U	5U	5U	6U	5U	5U	6U	5U	6U	5U	5UJ	5.0U	5U	5U	5U
4-Bromophenylphenylether	NA	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
4-Chloroaniline	30	4U	4.7U	5.2U	4U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	2U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	2U	0.6U	--	2UJ	2.0U	2U	2U	2U
4-Chlorophenyl phenyl ether	NA	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	NA	0.5U	0.59U	0.65UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	2	0.6J	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	3.0U	0.5U	0.5U	0.5U
4-Nitroaniline	NA	0.9U	1.1U	1.2U	0.91U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
4-Nitrophenol	NA	11U	12U	13UJ	10U	11U	10U	11U	10U	12U	11U	10U	12U	11U	10U	10U	10U	10U	10U	11U	11U	11U	11U	11U	12U	10U	10UJ	10U	10UJ	10U	10U
Acenaphthene	400	0.1U	0.12U	0.46J	0.16J	2	3	0.1U	3	2	2	4	0.3J	0.7	0.4J	0.6	1	0.1J	0.4J	0.1U	0.1U	0.1U	0.1U	0.7	0.3J	--	4J	3.6	0.7	0.4J	0.7
Acenaphthylene	NA	0.1U	0.12U	0.13U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Acetophenone	700	4U	4.7U	5.2U	4U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
Anthracene	2000	0.1U	0.12U	0.13U	0.1U	0.8	0.7	0.9	1	0.4J	0.3J	0.6	0.1U	0.2J	0.1J	0.1U	0.2J	0.2J	0.1J	0.1U	0.1U	0.1U	0.1U	0.1J	0.1U	--	0.2J	0.36J	0.2J	0.2J	0.2J
Atrazine	3	2U	2.3U	2.6U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	2UJ	2.0U	2U	2U	2U
Benzaldehyde	NA	3U	3.5U	3.9U	3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	1UJ	1.0U	1U	1U	1U
Benzo(a)anthracene	0.05	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.1	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.05	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	NA	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.5	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	NA	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.03	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	300	0.5UJ	0.59U	0.65U	0.5U	0.5U	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	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2	5U	5.9U	6.5U	5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	[2J]	2.0U	2U	2U	2U
Butylbenzylphthalate	100	2U	2.3U	2.6U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	2UJ	2.0U	2U	2U	2U
Caprolactam	NA	5U	5.9U	6.5U	5U	5U	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5U	5U	5U	6U	5U	5U	6U	5U	6U	--	5UJ	5.0U	5U	5U	5UJ
Carbazole	NA	0.5U	0.59U	0.65U	0.5U	0.6J	0.5U	0.6U	0.6J	0.6U	0.9J	2	0.6U	0.5U	0.5U	0.5U	0.6J	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	4J	1.8	0.5U	0.5U	0.5U
Chrysene	5	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Di-n-butylphthalate	700	2U	2.3U	2.6U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	2UJ	2.0U	2U	2U	2U
Di-n-octylphthalate	100	5U	5.9U	6.5U	5U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	2UJ	2.0U	2U	2U	2U
Dibenz(a,h)anthracene	0.005	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Dibenzofuran	NA	0.5U	0.59U	0.65U	0.5U	0.7J	0.5U	0.6U	0.6J	0.6U	0.8J	1	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	2J	1.7	0.5U	0.5U	0.5U
Diethylphthalate	6000	2U	2.3U	2.6U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	2UJ	2.0U	2U	2U	2U
Dimethyl phthalate	NA	2U	2.3U	2.6U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	--	2UJ	2.0U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	400	3U	3.5U	3.9U	3U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
Fluoranthene	300	0.1U	0.12U	0.13U	0.1U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1J	0.2J	0.3J	0.1J	0.2J	0.1U	0.1U	0.1J	0.1J	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.2J	0.3J	0.25J	0.2J	0.2J	0.1J
Fluorene	300	0.1U	0.12U	0.13U	0.1U	1	1	0.1U	1	0.8	2	2	0.1U	0.3J	0.2J	0.6	0.9	0.1J	0.4J	0.1U	0.1U	0.1U	0.1U	0.3J	0.2J	--	3J	2.3	0.5J	0.3J	0.5J
Hexachlorobenzene	0.02	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.4	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6UJ	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	40	5U	5.9U	6.5U	5U	5U	5U	6U	5U	6U	5U	5U	6U	5U	5U	5U	5U	5U	5U	6U	5U	5U	6U	5U	6U	--	5UJ	5.0U	5U	5U	5U
Hexachloroethane	2	1U	1.2U	1.3U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	--	1UJ	1.0U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.12U	0.13U	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	--	0.1UJ	0.10U	0.1U	0.1U	0.1U
Isophorone	40	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.005	0.7U	0.82U	0.92U	0.71U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.7U	0.82U	0.92U	0.71U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
Naphthalene	300	0.1U	0.12U	0.13U	0.26J	0.6	0.8	0.1U	0.1U	0.1U	0.2J	0.5	0.1U	0.1U	0.1U	2	2	0.5	1	0.3J	0.1U	0.1U	0.1U	0.5J	0.3J	--	2J	1.7	0.1J	0.1U	0.1J
Nitrobenzene	4	0.5U	0.59U	0.65U	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	--	0.5UJ	0.50U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	NA	2U	1.9U	2.1UJ	1.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
Pentachlorophenol	0.3	1U	1.2U	1.3UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1UJ	1.0U	1U	1U	1U
Phenanthrene	NA	0.1U	0.12U	0.13U	0.1U	0.9	0.1U	0.1U	0.1U	0.1U	0.5J	1	0.1U	0.1U	0.1U	0.1U	0.7	0.4J	0.5	0.1U	0.1U	0.1U	0.2J	0.3J	0.3J	--	2J	2.2	0.7	0.5	0.5J
Phenol	2000	0.5U	0.59U	0.65UJ	0.5U	0.5U	0.5U	0.6U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6U	0.5U	0.5U	0.6U	0.5U	1J	0.5U	0.5UJ	0.50U	0.5U	0.5U	0.5U
Pyrene	200	0.1U	0.12U	0.13U	0.1U	0.1U	0.1U	0.1U	0.3J	0.1U	0.1U	0.2J	0.2J	0.1U	0.2J	0.1U	0.1U	0.1J	0.2J	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.2J	0.3J	0.19J	0.2J	0.2J	0.2J
Total TIC SVOCS	NA	4J	-	-	-	40J	160J	1500J	540J	220J	370J	190J	280J	170J	660J	110J	310J	410J	310J	370J	320J	150J	120J	63J	340J	200J	170JB	88J	480J	200J	240J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-6
Semi-Volatile Organic Compound Results for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-334R				MW-334R								MW-474					MW-474												
Sample Date		1/25/2018	4/12/2018	7/18/2018	10/26/2018	1/9/2019	4/5/2019	7/5/2019	10/3/2019	1/9/2020	4/6/2020	7/9/2020	10/14/2020	1/8/2016	7/20/2016	10/17/2016	1/19/2017	4/18/2017	10/1017	1/25/2018	4/12/2018	7/18/2018	10/26/2018	1/9/2019	4/5/2019	7/5/2019	10/3/2019	1/8/2020	4/6/2020	7/9/2020	10/12/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation				Cell 2 Operation								Cell 1 Operation					Cell 2 Operation												
2,4,5-Trichlorophenol	700	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
2,4,6-Trichlorophenol	1	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
2,4-Dichlorophenol	20	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
2,4-Dimethylphenol	100	0.5U	0.5U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3.2U	3.1UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.5U	3.6U
2,4-Dinitrophenol	10	10UJ	10U	14U	15U	15U	14U	14U	15UJ	15U	15UJ	15U	15UJ	10U	10U	10U	11UJ	11U	10U	10UJ	10U	`	15U	15U	14U	14U	15U	15U	14U	17U	17U
2,4-Dinitrotoluene	0.05	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1UJ	1.1U	1UJ	1U	1U	1.0U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.2U	1.2U
2,6-Dinitrotoluene	0.05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
2-Chloronaphthalene	600	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4UJ	0.4U	0.4UJ	0.43U	0.42UJ	0.4U	0.4U	0.40U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.47U	0.48U
2-Chlorophenol (o-Chlorophenol)	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
2-Methyl-Naphthlalene	NA	0.1U	2	1	0.7	0.7	0.5J	0.8	0.2J-	0.1U	0.8J	0.62	0.37J	42	2	0.23J	0.1U	0.1U	2	0.5J	0.1U	1	0.9	0.4J	0.2J	1	1	0.1U	0.1U	0.68	18NJ
2-Methylphenol (o-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
2-Nitroaniline (o-Nitroaniline)	NA	0.5U	0.5U	2U	2U	2U	2U	2U	2UJ	2U	2UJ	2.1U	2.1UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U	2U	2U	2U	2U	2.4U	2.4U
2-Nitrophenol (o-Nitrophenol)	NA	0.5U	0.5U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3.2U	3.1UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.5U	3.6U
3,3'-Dichlorobenzidine	0.08	2U	2U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3.2U	3.1UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	3U	3U	3U	3U	3U	3U	3U	3U	3.5U	3.6U
3-Nitroaniline	NA	0.5U	0.5U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3.2U	3.1UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.5U	3.6U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	NA	5U	5U	8U	8U	9U	8U	8U	8UJ	8U	8UJ	8.5U	8.3UJ	5U	5U	5.0U	5U	5U	5U	5U	5U	8U	8U	9U	8U	8U	9U	9U	8U	9.4U	9.5U
4-Bromophenylphenylether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
4-Chloroaniline	30	2U	2U	4U	4U	4U	4U	4U	4UJ	4U	4UJ	4.3U	4.2UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	4U	4U	4U	4U	4U	4U	4U	4U	4.7U	4.8U
4-Chlorophenyl phenyl ether	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
4-Methylphenol (p-Cresol)	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	3.0U	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	0.59U	0.6U
4-Nitroaniline	NA	0.5U	0.5U	0.9U	0.9U	1U	0.9U	0.9U	0.9UJ	0.9U	0.9UJ	0.96U	0.94UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	0.9U	0.9U	1U	0.9U	0.9U	1U	1U	0.9U	1.1U	1.1U
4-Nitrophenol	NA	10U	10U	10U	10U	11U	10U	10U	10UJ	11U	10U	11U	10UJ	10U	10U	10U	11UJ	11U	10U	10U	10U	10U	11U	11U	10U	10U	11U	11U	10U	12U	12U
Acenaphthene	400	0.6	5	4	5	5	7	5	6J-	7	8J	5.9	5.2J	56	42	51	64	56	46	52	35	40	38	37	20	31	33	36	47	34	31
Acenaphthylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	0.7	0.6	0.49J	0.7	0.7	0.1U	0.6	0.3J	0.3J	0.2J	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.22J	0.12U
Acetophenone	700	0.5U	1J	4U	4U	4U	4U	4U	4UJ	4U	4UJ	4.3U	4.2UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.8J	4U	4U	4U	4U	4U	4U	4U	4U	4.7U	4.8U
Anthracene	2000	0.2J	0.2J	0.3J	0.4J	0.3J	0.4J	0.4J	0.4J-	0.5J	0.6J	0.47J	0.65J	4	5	2.7	2	2	2	3	1	2	2	1	1	2	1	0.9	2	1.2	1.5
Atrazine	3	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2UJ	2.1U	2.1UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.4U	2.4U
Benzaldehyde	NA	1U	1U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3.2U	3.1UJ	1U	1U	1.0U	1U	1U	1U	1U	1U	-	3U	3U	3U	3U	3U	3U	3U	3.5U	3.6U
Benzo(a)anthracene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	**[0.5J]**	**[2]**	0.10U	**[0.1J]**	0.1U	0.1U	**[0.8]**	0.1U	0.1U	0.1U	0.1U	**[0.3J]**	**[0.4J]**	0.1U	0.1U	0.1U	**[0.13J]**	**[0.23J]**
Benzo(a)pyrene	0.1	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	**[0.1J]**	**[0.5J]**	0.10U	0.1U	0.1U	0.1U	**[0.3J]**	0.1U	0.1U	0.1U	0.1U	**[0.1J]**	**[0.2J]**	0.1U	0.1U	0.1U	0.12U	0.12U
Benzo(b)fluoranthene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	**[0.2J]**	**[0.7]**	0.10U	0.1U	0.1U	0.1U	**[0.4J]**	0.1U	0.1U	0.1U	0.1U	**[0.1J]**	**[0.2J]**	0.1U	0.1U	0.1U	0.12U	0.12U
Benzo(g,h,i)perylene	NA	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	0.1U	0.2J	0.10U	0.1U	0.1U	0.1U	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.12U	0.12U
Benzo(k)fluoranthene	0.5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	0.1U	0.3J	0.10U	0.1U	0.1U	0.1U	0.2J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.12U	0.12U
bis(2-Chloroethoxy)methane	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
bis(2-Chloroethyl) ether	0.03	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
bis(2-chloroisopropyl) ether	300	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5UJ	0.59U	0.6U
bis(2-Ethylhexyl)phthalate	2	2U	2U	5U	5U	5U	5U	5U	5UJ	5U	5UJ	5.3U	5.2UJ	2U	**[3J]**	2.0U	2U	2U	2U	2U	2U	5U	5U	5U	5U	5U	5U	5U	5U	5.9U	6U
Butylbenzylphthalate	100	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2.1U	2.1UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	2U	2U	2U	3J	2U	2U	2U	2U	2.4U	2.4U
Caprolactam	NA	5UJ	5U	5U	5U	5U	5U	5U	5UJ	5U	5U	5.3U	5.2UJ	5U	5U	5.0U	5U	5U	5U	5UJ	5U	5U	5U	5U	5U	5U	5U	5U	5U	5.9U	6U
Carbazole	NA	0.5U	2	3	3	2	3	2J	2J-	3	2J	0.73J	0.52UJ	14	11	11	3	5	**[11]**	6	**[5]**	9	9	5	4	8	10	4	7	7.6	8.3
Chrysene	5	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	0.4J	2	0.10U	0.2J	0.1U	0.1U	0.8	0.1J	0.1U	0.1U	0.1U	0.3J	0.4J	0.1U	0.1U	0.1U	0.12U	0.18J
Di-n-butylphthalate	700	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2UJ	2.1U	2.1UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.4U	2.4U
Di-n-octylphthalate	100	2U	2U	5U	5U	5U	5U	5U	5UJ	5U	5UJ	5.3U	5.2UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	5U	5U	5U	5U	5U	5U	5U	5U	5.9U	6U
Dibenz(a,h)anthracene	0.005	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	0.1U	0.1U	0.10U	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	0.12U	0.12U
Dibenzofuran	NA	0.5U	2	2	2	3	4	3	3J-	4	4J	3.3	2.9J	23	17	18	26	24	14	21	14	12	11	13	7	9	10	12	16	9.9	9.1
Diethylphthalate	6000	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2.1U	2.1UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.4U	2.4U
Dimethyl phthalate	NA	2U	2U	2U	2U	2U	2U	2U	2UJ	2U	2U	2.1U	2.1UJ	2U	2U	2.0U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2U	2.4U	2.4U
Diphenyl (Biphenyl, Phenyl benzene)	400	0.5U	0.5U	3U	3U	3U	3U	3U	3UJ	3U	3UJ	3.2U	3.1UJ	5	2	1.5	0.5U	0.6J	0.5U	0.5U	0.5U	3U	3U	3U	3U	3U	3U	3U	3U	3.5U	3.6U
Fluoranthene	300	0.1J	0.1U	0.2J	0.4J	0.4J	0.3J	0.4J	0.4J-	0.1U	0.4J	0.3J	0.38J	5	12	2.8	2	2	2	6	2	2	2	1	2	4	2	1	2	2.1	2.6
Fluorene	300	0.1U	2	2	2	3	4	3	4J-	4	5J	4.1	3.4J	28	22	23	25	24	17	19	13	14	14	14	8	12	12	13	17	12	12
Hexachlorobenzene	0.02	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	0.1U	0.1U	0.10U	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	0.12U	0.12U
Hexachlorobutadiene	0.4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
Hexachlorocyclopentadiene	40	5U	5U	5U	5U	5U	5U	5U	5UJ	5U	5U	5.3U	5.2UJ	5U	5U	5.0U	5U	5U	5U	5U	5U	-	5U	5U	5U	5U	5U	5U	5U	5.9U	6U
Hexachloroethane	2	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1U	1.1U	1UJ	1U	1U	1.0U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.2U	1.2U
Indeno(1,2,3-cd)Pyrene	0.05	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	0.1U	**[0.1J]**	0.10U	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	0.12U	0.12U
Isophorone	40	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
N-Nitrosodi-n-propylamine	0.005	0.5U	0.5U	0.7U	0.7U	0.8U	0.7U	0.7U	0.7UJ	0.7U	0.7UJ	0.74U	0.73UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	0.8U	0.7U	0.7U	0.8U	0.7U	0.7U	0.83U	0.83U
N-Nitrosodiphenylamine (Diphenylamine)	7	0.5U	0.5U	0.7U	0.7U	0.8U	0.7U	0.7U	0.7UJ	0.7U	0.7UJ	0.74U	0.73UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	0.8U	0.7U	0.7U	0.8U	0.7U	0.7U	0.83U	0.83U
Naphthalene	300	0.1U	1	0.5	0.4J	0.4J	0.1U	0.1U	0.1UJ	0.1U	0.1UJ	0.11U	0.1UJ	35	9	1.3	0.2J	0.1U	1U	3	0.1U	1	3	0.8	0.3J	0.7	1	0.4J	0.4J	0.72	0.71
Nitrobenzene	4	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5UJ	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
p-Chloro-m-cresol	NA	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	2UJ	1.7U	1.7UJ	0.5U	0.5U	0.50U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U	1.9U	1.9U
Pentachlorophenol	0.3	1U	1U	1U	1U	1U	1U	1U	1UJ	1U	1UJ	1.1U	1UJ	1U	1U	1.0U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1.2U	1.2U
Phenanthrene	NA	0.6	1	2	2	2	3	3	3J-	3	4J	3.9	3.4J	28	26	13	2	3	6	2	0.5	3	2	3.3J	0.5	2	3	0.1U	0.1U	1.5	1.8
Phenol	2000	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5UJ	0.5U	0.5U	0.53U	0.52UJ	0.5U	0.5U	0.50U	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	0.59U	0.6U
Pyrene	200	0.1J	0.2J	0.2J	0.1U	0.3J	0.1U	0.3J	0.3J-	0.1U	0.2J	0.19J	0.3J	3	8	1.5	1	1	1	4	1	1	1	0.9	2	2	1	0.6	1	1.2	1.6
Total TIC SVOCS	NA	170J	110J	240J	170J	250JB	260JB	310JB	340J	260JB	400J	-	-	320J	420JB	240J	120J	230JB	520J	150J	43J	180J	330J	210JB	110JB	270JB	260J	130J	270J	-	-

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold,bracket and yellow shaded indcates exceedance to NJ GW Quality
NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211, MW-315, MW-333 and MW-334

-- Not measured
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
JB- Analyte concentration estimated (J) and the analyte was also found in the method blank (B)

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-115													
Sample Date		10/22/2002	2/26/2003	9/9/2003	7/30/2008	11/5/2008	11/5/2008	5/8/2009	11/5/2009	4/29/2010	7/19/2011	3/15/2012	5/14/2012	7/24/2012	11/19/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation													
Aluminum	200	47.7U	48U	72.9J	**208**	80.2U	80.2U	-	-	-	-	124J	80.1U	74.3U	74.3U
Antimony	6	9.9U	9.9U	8.5U	9.7U	9.7U	9.7U	-	-	-	-	5.8U	5.8U	3.5U	3.5U
Arsenic	0.02	4.9U	4.9U	4.9U	10.2U	10.0U	10.0U	-	-	-	-	5.1U	5.1U	6.8U	0.40U
Barium	6000	38.2J	39J	31.8	26.6	22.6	23.4	-	-	-	-	19.0	27.5	24.4	27.9
Beryllium	1	0.50U	0.50U	0.34U	0.90U	0.90U	0.90U	-	-	-	-	0.24U	0.24U	0.67U	0.67U
Cadmium	4	0.94U	0.94U	1.1J	2.2J	2.0U	2.0U	-	-	-	-	1.1J	1.3J	**4.5J**	2.2J
Calcium	NA	63800	62000	71900	53300	55700	57600	-	-	-	-	51700	68800	69900	70800
Chromium	70	2.0U	2.0U	2.2U	3.0U	3.0U	3.0U	-	-	-	-	1.8J	1.1U	1.1U	1.1U
Cobalt	NA	1.7J	1.7U	1.6U	2.1U	2.1U	2.1U	-	-	-	-	0.62U	0.62U	0.66U	0.66U
Copper	1300	2.6U	2.6U	2.6J	3.0J	2.7U	2.7U	-	-	-	-	1.2J	3.0J	2.1U	2.1U
Iron	300	**553**	40J	173J	**1090**	52.2U	52.2U	-	-	-	-	**314**	32.2J	182J	33.3U
Lead	5	8.9U	8.9U	9.3U	6.9U	**21.2**	**19.2**	6.9U	6.9U	6.9U	2.2U	2.2U	2.2U	5.1U	5.1U
Magnesium	NA	14000	14000	16600	12300	13500	13300	-	-	-	-	10700	15400	15300	15200
Manganese	50	**2270**	**2800**	**1050**	**777**	**52.6**	**109**	-	-	-	-	**81.7**	9.8	**411**	**1230**
Mercury	2	0.079U	0.080U	0.16U	0.056U	0.056U	0.056U	-	-	-	-	0.026U	0.026U	0.065J	0.070U
Nickel	100	5.2J	4.4J	7.4J	5.6U	5.6U	5.6U	-	-	-	-	3.9J	3.8J	5.7J	5.1J
Potassium	NA	2190	3000	2570	2710	2880	2820	-	-	-	-	2110	2400	2290	2450
Selenium	40	4.8U	4.8U	4.7U	10.7U	10.7U	10.7U	-	-	-	-	6.9U	6.9U	7.5U	7.5U
Silver	40	1.4U	1.4U	1.8U	2.2U	2.2U	2.2U	-	-	-	-	0.91U	0.91U	1.2U	1.2U
Sodium	50000	**70900**	**66500**	**76800**	**66000**	**68700**	**66700**	-	-	-	-	**57900**	**104000**	**94700**	**120000**
Thallium	0.5	9.5U	9.5U	8.9U	14.0U	14.0U	14.0U	-	-	-	-	4.2U	4.2U	5.7U	5.7U
Vanadium	NA	1.7U	1.7U	1.7U	2.5U	2.5U	2.5U	-	-	-	-	0.96U	0.96U	1.3U	1.3U
Zinc	2000	6.1J	19J	4.2J	33.5	10.8J	11.7J	-	-	-	-	9.8J	8.2J	30.4	9.9J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-115**											**MW-115**		
Sample Date		**2/19/2013**	**6/12/2013**	**9/3/2013**	**11/4/2013**	**3/5/2014**	**5/19/2014**	**8/4/2014**	**10/22/2014**	**3/2/2015**	**5/27/2015**	**9/14/2015**	**11/13/2015**	**1/5/2016**	**4/6/2016**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Pre-CAMU Operation**											**Cell 1 Operation**		
Aluminum	200	96.4J	74.3U	82.8U	82.8U	82.8U	83.8J	74.5J	**272**	83.0J	**1030**	103J	**257**	**340**	**1530**
Antimony	6	0.33U	0.33U	0.34U	0.34U	0.34U	0.34U	0.33U	0.33U	0.33U	0.56U	0.33U	0.63J	0.94J	1.1
Arsenic	0.02	0.40U	0.40U	0.42U	0.78U	0.78U	0.78U	0.82U	0.82U	0.82U	0.82U	0.54U	**1.2J**	**1.0J**	**1.6J**
Barium	6000	22.0	24.8	26.7	25.7	18.3	19.8	23.2	33.6	10.8	21.1	37.0	14.3	22.7	10.5
Beryllium	1	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.70U	0.70U	1.1U	1.1U
Cadmium	4	0.54J	0.36U	0.76U	0.76U	0.76U	0.76U	0.37J	1.5U	0.60J	0.91J	0.67J	0.30U	1.7J	0.66J
Calcium	NA	68400	74500	74400	77200	64600	66100	69600	80500	23600	33700	77600	39500	44500	28400
Chromium	70	1.1U	1.1U	1.6U	1.6U	1.6U	1.6U	1.3U	1.8J	1.3U	3.7J	1.5U	3.9J	2.7J	4.4J
Cobalt	NA	0.66U	0.66U	1.3U	1.3U	1.3U	1.3U	1.0U	1.0U	1.0U	1.0U	0.90U	0.90U	0.93J	0.90U
Copper	1300	2.1U	2.1U	2.7U	2.7U	2.7U	2.7U	2.8U	3.4J	2.8U	7.9J	4.6U	5.8J	11.0U	15.5J
Iron	300	110J	44.5J	43.0U	43.0U	43.0U	103J	101J	**625**	287	**2040**	180J	**466**	**796**	**2240**
Lead	5	0.24J	0.074J	0.13J	0.085U	0.085U	0.11J	0.22UJ	0.78J	0.79J	2.9	0.27J	2.0	**5.9**	**5.8**
Magnesium	NA	14700	16100	16200	16500	13400	13600	14500	17500	4900	5880	16200	5520	7040	3590
Manganese	50	**210**	23.7	34.8	14.8	19.0	37.7	**115**	**348**	**187**	**397**	**433**	**111**	**937**	**92.3**
Mercury	2	0.070U	0.070U	0.060U	0.060U	0.060U	0.060UJ	0.060U	0.060U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U
Nickel	100	4.3J	3.9J	4.4J	4.0J	3.6J	3.0J	3.4J	5.0J	1.6U	3.5J	2.6J	1.3U	3.4J	3.4J
Potassium	NA	2300	2410	2520	2570	2410	2400	2290	2740	996	1530	2360	1910	1940	1520
Selenium	40	7.5U	7.5U	8.4U	8.4U	8.4U	8.4U	4.8U	4.8U	4.8U	4.8U	8.2U	8.2U	8.2U	8.2U
Silver	40	1.2U	1.2U	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	1.8U	1.8U	1.4U	1.4U	1.8U	1.8U
Sodium	50000	**101000**	**106000**	**105000**	**101000**	**81500**	**86200**	**87300**	**131000**	31600	33900	**132000**	28900	30700	15500
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	1.3U	1.3U	2.0U	2.0U	2.0U	2.0U	1.9U	1.9U	1.9U	3.9J	1.4U	6.3	4.0J	6.3
Zinc	2000	13.3J	5.7J	6.6J	4.5J	6.3J	7.1J	9.9UJ	21.4J	13.6U	27.6	9.9J	14.8J	26.7	22.2

Notes:

Organge shaded cells shows data collected pre-CAMU operation
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Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

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J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-115**					**MW-115**							
Sample Date		**7/18/2016**	**10/11/2016**	**1/11/2017**	**4/18/2017**	**7/17/2017**	**10/9/2017**	**1/23/2018**	**4/9/2018**	**7/12/2018**	**10/18/2018**	**1/8/2019**	**4/8/2019**	**7/8/2019**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**					**Cell 2 Operation**							
Aluminum	200	**901**	**267**	**8070**	**4590**	**7330**	**440**	**9230**	**2000**	**549J**	**4780**	**479**	**485**	**509**
Antimony	6	0.95J	0.90U	3.9	3.4	2.4	0.81J	3.5	1.7	1.3J	2.2J	0.91J	1.2UJ	1.2J
Arsenic	0.02	**0.72J**	0.68U	**3.2**	**1.5J**	**1.5J**	0.72U	**7.0**	**1.0J**	**0.84J**	**2.4**	0.68U	**0.84J**	**0.92J**
Barium	6000	23.2	31.2J	135J	37.1	57.3	45.6	144	20.4	19.2	46.4	6.4	10.7	24.5
Beryllium	1	0.67U	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	2.0U	**1.4UJ**	1.0U	1U	1U	1U
Cadmium	4	0.49U	0.49U	0.96J	0.86UJ	2.1J	1.8U	3.4J	1.8U	1.0U	1.4J	1U	1U	1U
Calcium	NA	57100	65200	29700	44500	48900	83100	64000	36800	44300	40100	11600	22400	38000
Chromium	70	2.9J	1.8U	15.3	11.2J	17.3	3.3U	14.1J	5.9J	5.3U	10.8J	5.3U	5.3U	5.3U
Cobalt	NA	1.9U	1.9U	5.1	4.1J	6.5	2.1J	22.4	1.7U	1.5U	4.9J	1.5U	1.5U	1.5U
Copper	1300	6.7J	4.1U	44.6	34.9	51.1	4.5J	284	16.7J	10J	37.4	6.2U	6.4J	13.2UJ
Iron	300	**1190**	**425**	**10300**	**7080**	**11300**	**823**	**13200**	**2750**	**767**	**8180**	**760**	**765**	**719**
Lead	5	3.1	1.4	**33.8**	**23.8**	**23.5**	3.0	**315**	**10.5**	2.5J	**19.8**	3.1	4	2.9J
Magnesium	NA	8240	9460	7700	9700	11800	15400	13000	6600	7380	8520	2240	3550	6050
Manganese	50	**89.5**	**144**	**256**	**162**	**854**	**802**	**966**	**75.7**	**79.3**	**1010**	40.4	35.7	**121**
Mercury	2	0.050U	0.050U	0.050U	0.071J	0.081J	0.050U	0.050U	0.050U	0.050U	0.050UJ	0.05U	0.05U	0.05U
Nickel	100	3.0J	4.0J	15.9	10.1	17.6	5.2J	41.8	5.8J	3.1U	15.0	3.1U	3.1U	3.1U
Potassium	NA	2300	3220	3210	3050	3670	3180	3760	1830	1990	2780	739	1270	2020
Selenium	40	9.7U	9.7U	9.7U	9.7U	9.3U	9.3U	9.3U	9.3U	21.0U	21.0U	21U	21U	21U
Silver	40	1.9U	1.9U	1.9U	1.9U	2.4U	2.4U	2.4U	2.4U	5.0U	5.0U	5U	5U	5U
Sodium	50000	47100	**67700**	20000	**62500**	**56700**	**10300**	24200	19300	29500	28100	7530	13400	26500
Thallium	0.5	0.16U	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U	0.11U	0.11U
Vanadium	NA	3.2J	1.7J	24.3	17.9J	26.1	2.1J	47.1	7.0	3.0U	16.3	3U	3U	4UJ
Zinc	2000	16.3J	10.9J	109	75.2	118	20.9U	603	39.0	19.3J	87.5	10.1J	13.1J	26.5

Notes:

Organge shaded cells shows data collected pre-CAMU operation
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Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-115**				**MW-211**									
Sample Date		**10/4/2019**	**1/9/2020**	**4/8/2020**	**7/14/2020**	**1/31/2005**	**5/31/2005**	**10/26/2005**	**5/24/2006**	**11/6/2006**	**5/23/2007**	**12/17/2007**	**6/23/2008**	**10/29/2008**	**5/19/2009**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 2 Operation**				**Pre-CAMU Operation**									
Aluminum	200	**323J**	**224**	**1450**	-	-	-	-	-	-	-	-	-	-	-
Antimony	6	0.96J-	0.79J	1.4	1.9	-	-	-	-	-	-	-	-	-	-
Arsenic	0.02	**0.69J**	0.68U	**1J**	**1.4J**	-	-	-	-	-	-	-	-	-	-
Barium	6000	27.2	7.2	10.7	19	-	-	-	-	-	-	-	-	-	-
Beryllium	1	1U	1U	1U	1U	-	-	-	-	-	-	-	-	-	-
Cadmium	4	1U	1U	1U	1U	-	-	-	-	-	-	-	-	-	-
Calcium	NA	40500	20900	20300	18000	-	-	-	-	-	-	-	-	-	-
Chromium	70	1.6U	1.6U	2.2J	-	-	-	-	-	-	-	-	-	-	-
Cobalt	NA	1.5U	1.5U	1.5U	1.5U	-	-	-	-	-	-	-	-	-	-
Copper	1300	12U	12U	15.6J	16J	-	-	-	-	-	-	-	-	-	-
Iron	300	**781**	**327**	**1960**	-	**9470**	**18100**	**46900**	**1190**	**42000J**	**42000**	**27100**	**21200**	**7890**	**29100**
Lead	5	2.1	1.3	**7.5**	**12**	-	-	-	-	-	-	-	-	-	-
Magnesium	NA	6690	2780	3550	3600	-	-	-	-	-	-	-	-	-	-
Manganese	50	**489**	11	38.2	-	-	-	-	-	-	-	-	-	-	-
Mercury	2	0.05U	0.05U	0.05U	0.088J	-	-	-	-	-	-	-	-	-	-
Nickel	100	3.8J	2.1U	3.8J	5.3J	-	-	-	-	-	-	-	-	-	-
Potassium	NA	1870	1110	1040	1800	-	-	-	-	-	-	-	-	-	-
Selenium	40	16U	16U	16U	-	-	-	-	-	-	-	-	-	-	-
Silver	40	5U	5U	5U	5U	-	-	-	-	-	-	-	-	-	-
Sodium	50000	33700	7910J	7230	7900	-	-	-	-	-	-	-	-	-	-
Thallium	0.5	0.13U	0.13U	0.13U	0.13U	-	-	-	-	-	-	-	-	-	-
Vanadium	NA	4.3J	1.9U	6UJ	6.6J	-	-	-	-	-	-	-	-	-	-
Zinc	2000	20.2	7.6J	27	36	-	-	-	-	-	-	-	-	-	-

Notes:

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NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

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Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-211												
Sample Date		11/23/2009	6/7/2010	9/22/2010	6/26/2013	5/22/2014	7/1/2014	8/5/2014	9/26/2014	10/30/2014	3/12/2015	3/24/2015	6/8/2015	9/16/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation												
Aluminum	200	-	-	-	82.8U	82.8U	72.9J	69.7UJ	67.4U	67.4U	**1480**	**307**	454J	**521**
Antimony	6	-	-	-	0.44J	0.38J	0.37J	0.48J	0.47U	0.43U	0.53J	0.77J	0.33J	0.40J
Arsenic	0.02	-	-	-	**10.2**	**17.1**	**10.2**	**12.4**	**23.1**	**19.4**	**2.2**	**6.4J**	**9.1**	**14.8**
Barium	6000	-	-	-	480	698	583	636	808	844	193	491	615	703
Beryllium	1	-	-	-	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.70U
Cadmium	4	-	-	-	0.76U	0.76U	0.33U	0.33U	0.33U	0.33U	0.59UJ	0.33U	0.33U	0.91J
Calcium	NA	-	-	-	104000	150000	130000	140000	145000	138000	79700	144000	220000	249000
Chromium	70	-	-	-	1.6U	1.6U	1.8UJ	1.3U	1.3U	1.7J	2.1J	3.4U	2.6J	3.6J
Cobalt	NA	-	-	-	1.3U	1.3U	1.0U	1.0U	1.0U	1.1J	1.0U	1.0U	1.0U	1.2J
Copper	1300	-	-	-	2.7U	2.7U	2.8U	2.8U	2.8U	2.8U	2.8U	2.8U	2.8U	2.5U
Iron	300	**26100**	**18700**	**6650**	**29800**	**71500**	**42000**	**16600**	**39900**	**44500**	**7570**	**23800**	**55400**	**57100**
Lead	5	-	-	-	0.47J	0.29U	1.4	0.60J	0.23J	0.12J	2.9	1.1	1.5	1.0
Magnesium	NA	-	-	-	56000	82400	69700	71500	73600	71200	30000	65100	91800	103000
Manganese	50	-	-	-	**576**	**788**	**712**	**671**	**547**	**448**	**197**	**530**	**911**	**1120**
Mercury	2	-	-	-	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.050U	0.071U	0.050U	0.050UJ
Nickel	100	-	-	-	1.5U	1.5U	1.6U	2.3J	2.2J	2.7J	2.0J	2.1J	1.6U	2.0J
Potassium	NA	-	-	-	22400	28700	25100	27000	28900	28700	9170	19800	29500	28400
Selenium	40	-	-	-	8.4U	8.4U	4.8U	4.8U	4.8U	4.8U	4.8U	4.8U	8.5U	13.9J
Silver	40	-	-	-	2.1U	2.1U	1.8U	1.8U	1.8U	2.5J	1.8U	1.8U	1.8U	1.4U
Sodium	50000	-	-	-	**442000**	**502000**	**471000J+**	**505000**	**568000**	**540000**	**238000**	**450000**	**570000**	**630000**
Thallium	0.5	-	-	-	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	-	-	-	2.0U	2.0U	1.9U	1.9U	1.9U	1.9U	3.8J	1.9U	1.9U	1.9J
Zinc	2000	-	-	-	5.6J	3.4J	2.2UJ	5.8J	5.0U	3.8U	12.5J	7.9J	2.2J	4.4J-

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Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

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J- Analyte concentration estimated

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Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-211								MW-315	MW-323			
Sample Date		11/16/2015	12/10/2015	1/14/2016	4/8/2016	7/22/2016	12/8/2016	1/19/2017	4/18/2017	3/20/2012	3/14/2012	5/16/2012	7/30/2012	11/20/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Post-CAMU Operation								Pre-CAMU Operation	Pre-CAMU Operation			
Aluminum	200	91.9J	183J	92.9U	419	86.8U	**361**	**1190**	86.8U	80.1U	148J	98.4J	**296**	**250**
Antimony	6	0.33U	0.33U	0.33U	0.33U	0.48U	0.48U	0.48U	0.48U	5.8U	5.8U	5.8U	3.5U	3.5U
Arsenic	0.02	**15.8**	**14.2**	**15.4**	**11.3**	**10.2**	**4.4**	**3.9**	**3.5**	**5.8J**	**6.2J**	5.1U	6.8U	**2.2**
Barium	6000	579	603	677	618	556	440	350	488	153	135	138	116	150
Beryllium	1	0.70U	1.1U	1.1U	**1.6J**	0.67U	0.75J	0.67U	0.67U	0.24U	0.24U	0.24U	0.67U	0.67U
Cadmium	4	0.97UJ	0.64U	0.64U	0.64U	0.84UJ	0.49U	0.49U	0.49U	0.38J	0.65J	0.53J	0.36U	0.36U
Calcium	NA	229000	232000	258000	304000	257000	211000	233000	212000	33300	213000	216000	217000	137000
Chromium	70	2.1J	2U	4.0J	3.8J	1.8U	1.8U	2.3J	1.8U	2.4J	1.1J	1.6J	2.6J	1.1U
Cobalt	NA	0.91J	0.9U	0.90U	1.7J	1.9U	1.9U	1.9U	1.9U	0.64J	1.9J	1.4J	2.7J	10.7
Copper	1300	4.2J	3.2U	3.2U	3.2U	4.1U	5.1J	4.1U	4.1U	0.94U	0.97J	0.94U	6.5J	2.1U
Iron	300	**44100**	**43900**	**50000**	**60400**	**54400**	**18300**	**13800**	**29100**	**4060**	**29500**	**29400**	**28600**	**7800**
Lead	5	0.43J	0.65J	0.44J	1.5	0.38J	2.8	2.4	0.12J	2.2U	2.2U	2.2U	5.1U	25.5U
Magnesium	NA	91400	95100	106000	124000	111000	82900	91400	81500	39100	48300	49000	49400	31500
Manganese	50	**1240**	**1280**	**1470**	**2710**	**1760**	**1410**	**1420**	**1070**	**341**	**2160**	**2200**	**2160**	**1820**
Mercury	2	0.050U	0.05U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.036J	0.026U	0.026U	0.0081U	0.070U
Nickel	100	1.3U	2.5U	2.5U	2.5U	2.8U	2.8U	2.8U	2.8U	1.6J	5.3J	6.8J	5.8J	12.3
Potassium	NA	25000	27000	28100	25500	25200	25200	21200	19100	29100	4370	3960	5070	6010
Selenium	40	8.2U	8.2U	8.2U	9.7U	9.7U	9.7U	9.7U	9.7U	6.9U	6.9U	6.9U	7.5U	7.5U
Silver	40	1.4U	1.8U	1.8U	1.8U	1.9U	1.9U	1.9U	1.9U	0.91U	0.91U	1.0J	1.2U	1.2U
Sodium	50000	**589000**	**623000**	**670000**	**659000**	**552000**	**473000**	**512000**	**435000**	**626000**	**131000**	**119000**	**141000**	**106000**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.16U	0.16U	0.16U	0.16U	**5.5J**	4.2U	**6.4J**	5.7U	5.7U
Vanadium	NA	1.4U	2.3U	2.3U	2.3J	1.6U	2.9J	4.5UJ	1.6U	11.2	0.96U	0.96U	5.5	1.3U
Zinc	2000	4.4J	3.9U	103	10.4J	5.6J	5.4U	6.5J	5.4U	3.2U	7.3J	6.9J	8.1J	12.5J

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Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

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Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-323											MW-323		
Sample Date		2/20/2013	6/12/2013	9/5/2013	11/5/2013	3/12/2014	8/5/2014	10/29/2014	3/3/2015	6/8/2015	9/15/2015	9/15/2015	11/18/2015	1/7/2016	7/22/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation											Cell 1 Operation		
Aluminum	200	74.3U	**413**	**2850**	**1480**	**589**	**3690**	**9540**	**22100**	**15700**	**1670**	**1570**	**209**	**5570**	**4290**
Antimony	6	0.33U	0.33U	1.8	0.34U	0.34U	1.4	1.5	4.6	3.6	0.39J	0.51J	0.33U	1.8	0.61UJ
Arsenic	0.02	**1.4J**	**1.7J**	**2.8**	**1.8J**	**2.1**	**2.2**	**5.7**	**12.3**	**13.8**	**3.4**	**4.6**	**2.7**	**5.2**	**2.7**
Barium	6000	124	131	111	102	100	131	115	231	196	175	172	167	193	175
Beryllium	1	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	**1.2J**	0.85J	0.70U	0.70U	0.70U	1.1U	0.67U
Cadmium	4	0.36U	0.36U	0.76U	0.76U	0.76U	0.33U	0.33U	0.33U	0.33U	0.30U	0.30U	0.46J	0.64U	0.49U
Calcium	NA	180000	189000	130000	211000	203000	172000	202000	42900	71900	117000	115000	150000	141000	185000
Chromium	70	1.2J	1.6J	5.1J	3.0J	1.6U	6.0J	17.4	36.8	29.5	3.8J	3.7J	6.4J	12.8J	5.8J
Cobalt	NA	3.0J	2.8J	3.2J	4.8J	3.3J	8.1	8.1	11.0	14.3	3.5J	4.2J	3.1UJ	6.3	4.6J
Copper	1300	2.1U	2.1U	14.2	6.2J	2.7U	15.3	43.0	118	95.6	10.5U	9.6U	2.5U	30.2	20.7
Iron	300	**20200**	**23000**	**19700**	**27900**	**25300**	**24900**	**42000**	**38900**	**42400**	**14600**	**14200**	**14200**	**23800**	**23300**
Lead	5	0.082J	0.97J	**12.2**	4.0	2.2	**14.1**	**31.2**	**96.8**	**73.7**	**7.8**	**7.8**	1.9	**24.1**	**16.8**
Magnesium	NA	40400	42900	30000	48200	45500	39000	48000	9410	18300	25900	25500	32900	33200	42200
Manganese	50	**2020**	**2290**	**1560**	**2230**	**2350**	**2360**	**2230**	**446**	**1190**	**1340**	**1310**	**1610**	**1760**	**2160**
Mercury	2	0.070U	0.070U	0.060U	0.060U	0.060U	0.060U	0.078J	0.19J	0.14J	0.050UJ	0.050UJ	0.050U	0.061J	0.050U
Nickel	100	4.3J	4.9J	7.4J	7.4J	6.3J	10.9	20.2	29.9	32.2	7.8J	8.1J	6.4J	14.5	11.7
Potassium	NA	4210	4200	4460	4710	4160	4700	5350	5630	5620	4010	3380	3600	4540	4620
Selenium	40	8.1J	7.5U	8.4U	8.4U	8.4U	4.8U	4.8U	4.8U	5.6U	8.2U	8.2U	8.2U	8.2U	9.7U
Silver	40	1.2U	1.2J	2.1U	2.1U	2.1U	1.8U	1.8U	1.8U	1.8U	1.4U	1.4U	1.4U	1.8U	1.9U
Sodium	50000	**119000**	**117000**	**88900**	**141000**	**134000**	**119000**	**137000**	**205000**	**173000**	**123000**	**126000**	**130000**	**131000**	**134000**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.35J	0.19J	0.15U	0.15U	0.15U	0.15U	0.16U
Vanadium	NA	1.3U	1.3U	9.1	2.7J	2.0U	9.4	26.4	70.9	57.1	5.7	4.3J	1.4U	22.2	12.5
Zinc	2000	5.8J	7.2J	24.6	14.8J	11.4J	27.1	57.5	124	109	14.0J	13.2J	4.6J	42.6	32.1

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UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-323					MW-323								
Sample Date		10/13/2016	1/17/2017	3/17/2017	4/27/2017	7/18/2017	9/5/2017	10/13/2017	12/1/2017	1/19/2018	4/13/2018	4/13/2018	4/20/2018	7/13/2018	10/26/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation					Cell 2 Operation								
Aluminum	200	**15200**	**2130**	**695**	164J	**225**	89.4U	181J	89.4U	**1480U**	89.4U	89.4U	89.4U	**402J**	153U
Antimony	6	2.1	0.48U	0.48U	0.48U	0.45U	0.45U	0.45U	1.3	0.45U	0.45U	0.45U	0.45U	0.41U	0.41U
Arsenic	0.02	**11.9**	**2.9**	**1.4J**	**1.4J**	**1.3J**	**0.92J**	**1.2J**	0.98UJ	**1.7J**	0.72U	0.72U	0.72U	**1.2J**	**0.74J**
Barium	6000	234	123	127	148	143	132	137	60.8	129	135	133	141	138	111
Beryllium	1	**1.3J**	0.67U	0.67U	0.67U	2.0U	2U	2.0U	2U	2.0U	2.0U	2.0U	2.0U	1.0U	1.0U
Cadmium	4	1.2J	0.49U	0.84J	0.49U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U	1.0U	1.0U
Calcium	NA	199000	168000	181000	192000	170000	178000	187000	75300	207000	181000	178000	185000	187000	190000
Chromium	70	30.4	3.2J	1.8U	1.8U	3.3U	3.3U	3.3U	3.3U	3.3U	3.3U	3.3U	3.3U	5.3U	5.3U
Cobalt	NA	17.6	4.1J	3.3J	2.8J	2.9J	2J	2.0J	1.7U	2.8J	2.6J	2.7J	2.6J	2.9J	2.8J
Copper	1300	115	9.4UJ	4.1U	4.4UJ	4.0U	4U	4.0U	4U	4.0U	4.0U	4.0U	4.0U	6.2U	6.2U
Iron	300	**47000**	**20400**	**20900**	**21700**	**20800**	**20900**	**22900**	177J	**26600**	**23600**	**23300**	**22300**	**25100**	**22200**
Lead	5	**165**	4.6	2	1.2	0.71J	0.11U	1	0.3J	3.2	0.15J	0.14J	0.11U	1.1J	1.1U
Magnesium	NA	49600	40200	43200	43800	39700	40100	42800	16400	47900	40900	40300	41200	43100	41500
Manganese	50	**2190**	**1980**	**2090**	**2150**	**2140**	**2120**	**2190**	**122**	**2230**	**2230**	**2210**	**2370**	**2250**	**2010**
Mercury	2	0.49	0.050U	0.05U	0.050UJ	0.050U	0.05U	0.050U	0.05U	0.050U	0.050U	0.050U	0.050U	0.12UJ	0.056UJ
Nickel	100	41.9	7.1J	5.5J	4.9J	4.7J	4.7J	6.4J	4.6UJ	7.2J	4.0U	4.2J	7.3J	6.0J	7.0J
Potassium	NA	5700	7160	3940	4070	3580	3580	3820	21100	4440	3710	3880	4010	4630	6430
Selenium	40	9.7U	9.7U	9.7U	9.7U	9.3U	9.3U	9.3U	9.3U	9.3U	9.3U	9.3U	9.3U	21.0U	21.0U
Silver	40	1.9U	1.9U	1.9U	1.9U	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U	5.0U	5.0U
Sodium	50000	**145000**	**135000**	**136000**	**136000**	**118000**	**122000**	**135000**	**155000**	**153000**	**122000**	**120000**	**129000**	**132000**	**138000**
Thallium	0.5	0.18J	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.12U	0.12U	0.12U	0.12U	0.11U	0.11U
Vanadium	NA	78.3	5.4	2.1UJ	1.6U	1.6U	1.6U	1.6U	1.6U	2.0J	1.6U	1.6U	1.6U	3.0U	3.0U
Zinc	2000	206	14.2J	5.8J	6.2J	6.5U	6.5U	8.3J	24.8	10.6J	6.5U	6.5U	9.5J	12.0J	10.1J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-323									MW-325				
Sample Date		1/2/2019	4/9/2019	7/9/2019	10/7/2019	1/2/2020	4/1/2020	4/1/2020	7/6/2020	10/13/2020	3/12/2012	3/12/2012	5/17/2012	7/26/2012	11/21/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation									Pre-CAMU Operation				
Aluminum	200	153U	297UJ	**928**	182J	104	20.6J	26.4	150J	-	100J	145J	80.1U	74.3U	102J
Antimony	6	0.41U	0.41U	0.48J	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	5.8U	5.8U	5.8U	3.5U	3.5U
Arsenic	0.02	**0.82J**	**0.96J**	0.68U	**0.75J**	**0.84J**	**0.76J**	**0.8J**	**0.85J**	**1.1J**	**7.6J**	5.1U	5.1U	6.8U	**1.5J**
Barium	6000	111	124	117	109	100	92.2	89.4	97	100	737	733	733	714	817
Beryllium	1	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.24U	0.24U	0.24U	0.67U	0.67U
Cadmium	4	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.27U	0.27U	0.27U	0.36U	0.36U
Calcium	NA	189000	180000	162000	179000	199000	190000	181000	200000	160000	61500	62700	58100	58900	61300
Chromium	70	5.3U	5.3U	5.3U	1.6U	1.6U	1.7J	1.6U	1.6U	-	1.4J	1.5J	1.1U	1.1U	1.1U
Cobalt	NA	3.6UJ	2.3UJ	3.6UJ	3.2J	3J	2.5UJ	3.4UJ	2.7J	1.5U	0.62U	0.62U	0.62U	0.66U	0.66U
Copper	1300	6.2U	6.2U	7.6J	12U	12U	12U	12U	12U	12U	1.2J	1.3J	0.94U	2.1U	2.1U
Iron	300	**23200**	**25500**	**17800**	**24100**	**26700**	**21900**	**21300**	**23000**	-	**3100**	**3160**	**3260**	**3600**	**3990**
Lead	5	1.1U	1.1U	3	0.56	0.43J	0.16UJ	0.19UJ	0.69	0.094J	2.2U	2.2U	4.3J	5.1U	**7.9J**
Magnesium	NA	41300	40900	36400	40600	45200	40100	39400	43000	39000	65400	66000	63800	64500	65800
Manganese	50	**2160**	**2350**	**1710**	**2100**	**2280**	**2020**	**2000**	**1900**	-	**367**	**373**	**344**	**335**	**342**
Mercury	2	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.079U	0.079U	0.026U	0.026U	0.026U	0.0081U	0.070U
Nickel	100	4.8J	8UJ	7.6UJ	6.6J	6.5UJ	5.7J	6.6J	6.3J	4J	1.3J	0.95U	0.95U	1.1U	1.1U
Potassium	NA	3840	3920	15400	3900	4520	11500	12200	11000	13000	25100	25400	27000	24800	25300
Selenium	40	21U	21U	21U	16U	16U	16U	16U	16U	-	6.9U	6.9U	32.9	7.5U	7.5U
Silver	40	5U	5U	5U	5U	5U	5U	5U	5U	5U	0.91U	0.91U	0.91U	1.2U	1.2U
Sodium	50000	**125000**	**121000**	**135000**	**125000**	**136000**	**139000**	**135000**	**150000**	**130000**	**260000**	**269000**	**252000**	**270000**	**271000**
Thallium	0.5	0.11U	0.11U	0.11U	0.13U	0.13U	0.13U	0.13U	0.13U	0.13U	4.2U	4.2U	4.2U	5.7U	5.7U
Vanadium	NA	3U	3U	4UJ	1.9U	1.9U	1.9U	1.9U	1.9U	1.9U	0.96U	0.96U	0.96U	1.3U	1.3U
Zinc	2000	5.5J	11.5UJ	17.7J	8.3J	6.5J	3.7U	3.7U	8.4J	19J	3.2U	3.2U	3.2U	2.0U	2.0U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-325												MW-325	
Sample Date		2/21/2013	6/14/2013	9/9/2013	11/5/2013	11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015	5/28/2015	9/17/2015	11/17/2015	1/12/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation												Cell 1 Operation	
Aluminum	200	**203**	82.8U	**1410**	**704**	**586**	**1440**	**1120**	**1780**	**7180**	**70900**	177J	**11900**	**9360**	**42200**
Antimony	6	0.33U	0.34U	0.34U	0.34U	0.34U	0.38J	**11.3**	1.1	1.6	3.1	0.71U	0.98J	1.8	3.1
Arsenic	0.02	**1.8J**	**1.7J**	**1.9J**	**1.2J**	**1.4J**	**1.7J**	**1.7J**	**2.3**	**3.3**	**18.6**	**1.1J**	**3.9**	**3.6**	**33.6**
Barium	6000	741	746	778	766	757	852	64.4	790	852	1090	675	850	784	1930
Beryllium	1	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	3.4U	0.67U	0.70U	0.70U	**6.1**
Cadmium	4	0.36U	0.76U	0.76U	0.76U	0.76U	0.76U	0.76U	0.33U	0.33U	**4.4J**	0.35U	0.30U	0.70UJ	0.64U
Calcium	NA	59900	62700	62400	60800	60700	64400	44100	62500	66800	82800	58700	64200	61200	151000
Chromium	70	1.1U	1.6U	1.7J	1.6U	1.6U	1.8J	2.6J	3.8J	13.4J	**133**	1.3U	19.7	17.9	**92.2**
Cobalt	NA	0.66U	1.3U	1.3U	1.3U	1.3U	1.3U	1.3U	1.1J	3.6J	34.6	1.0U	4.6J	3.6J	48.4
Copper	1300	2.1U	2.7U	3.2J	2.7U	2.7U	3.3J	11.1	9.4J	19.8	159	2.8U	22.7	37.8	231
Iron	300	**4440**	**4400**	**5360**	**4630**	**4380**	**6160**	**1530**	**7750**	**15000**	**120000**	**4460**	**19500**	**18800**	**123000**
Lead	5	0.60J	0.31J	**6.0**	2.8	2.4	**6.3**	**7.0**	**15.2**	**22.9**	**173**	1.1	**21.6**	**43.4**	**821**
Magnesium	NA	64300	69300	68800	67000	66500	69100	6170	67000	67300	79500	59400	68700	62300	84900
Manganese	50	**347**	**352**	**353**	**341**	**337**	**390**	17.7J	**381**	**507**	**1430**	**384**	**537**	**526**	**2850**
Mercury	2	0.070U	0.070U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.084J	0.25U	0.050UJ	0.25U	**3.2**
Nickel	100	1.1U	1.5U	2.6J	1.5U	1.5U	1.5U	2.4J	3.0J	9.6J	92.4	1.6U	11.1J	10.8	100.0
Potassium	NA	25000	26000	26300	26800	26500	26300	8650	25700	26500	34300	24300	27600	24700	31800
Selenium	40	7.5U	8.4U	8.4U	8.4U	8.4U	8.4U	8.4U	4.8U	4.8U	24.0U	4.8U	8.2U	8.2U	8.2U
Silver	40	1.2U	2.1U	2.1U	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	9.0U	1.8U	1.4U	1.4U	1.8U
Sodium	50000	**256000**	**328000**	**271000**	**263000**	**267000**	**277000**	**96100**	**242000**	**256000**	**268000**	**244000**	**271000**	**240000**	**237000**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.37J	0.15U	0.15U	0.18J	0.20J
Vanadium	NA	1.3U	2.0U	3.0J	2.0U	2.0U	3.4J	5.0	6.0	17.5	229	1.9U	28.3	29.6	278
Zinc	2000	2.6J	2.3J	7.2J	4.6J	3.8J	7.7J	9.8J	18.5J	49.1	342	2.0U	42.8	53.1	997

Notes:

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Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-325				MW-325									
Sample Date		4/7/2016	7/21/2016	1/18/2017	4/26/2017	10/11/2017	1/24/2018	4/11/2018	7/17/2018	10/24/2018	1/4/2019	4/9/2019	7/9/2019	10/7/2019	1/6/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation				Cell 2 Operation									
Aluminum	200	**3150**	**6810**	**4480**	**2090**	**1100**	**1770**	**6880**	**2210**	**6240**	**10800**	**9260**	**7840**	**4050J**	**3980**
Antimony	6	0.56J	0.53J	1.0U	0.50J	0.45U	0.45U	1.6	0.77J	1.7J	1.8J	2.2	1.9J	0.56J	0.7J
Arsenic	0.02	**2.5**	**1.9J**	**2.8**	**1.5J**	**1.0J**	**1.2J**	**4.4**	**1.7J**	**3.3**	**3.1**	**3.6**	**3.2**	**2.4**	**2.2**
Barium	6000	828	804	681	741	760	756	431	689	521	348	469	551	675	674
Beryllium	1	**2.7J**	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	1.0U	1.0U	1U	1U	1U	1U	1U
Cadmium	4	0.71J	0.49U	0.49U	0.49U	1.8U	1.8U	1.8U	1.0U	1.0U	1U	1U	1U	1U	1U
Calcium	NA	57800	62300	68200	61000	57000	55700	55600	52600	44400	38600	51700	44300	53800	55800
Chromium	70	7.4J	11.1J	15.7U	2.9UJ	4.1J	3.6J	15.2	5.9J	23.1	25.7	26.2	16.5	11J	12.2J
Cobalt	NA	0.98J	1.9U	1.9U	1.9U	1.7U	1.7U	**5.3**	2.3J	6.0	7.7	8.1	5.4	3.5J	3.8J
Copper	1300	14.5	17.6	12.3	10.5UJ	4.0U	4.7J	38.3	7.8J	38.6	48.9	45.3	33.8	22.9	21.3
Iron	300	**10700**	**13300**	**10000**	**8290**	**6780**	**7570**	**10500**	**8710**	**15000**	**17600**	**16800**	**14800**	**12100**	**12000**
Lead	5	**12.8**	**15.8**	**17.4**	**8.4**	**3.6**	**5.2**	**33.0**	**10.7**	**28.9**	**40**	**50.7**	**31.9**	**18.2**	**20.7**
Magnesium	NA	61200	66700	55700	61800	60300	59000	54800	55400	42200	32900	52900	42400	55300	55500
Manganese	50	**420**	**473**	**439**	**437**	**496**	**404**	**501**	**442**	**504**	**332**	**561**	**410**	**498**	**523**
Mercury	2	0.050U	0.050U	0.050U	0.050UJ	0.050U	0.050U	0.050UJ	0.050U	0.050U	0.05U	0.056J	0.05U	0.05U	0.05U
Nickel	100	4.8J	6.0J	9.2J	2.8U	4.0U	4.0U	11.7	5.8J	15.1	16.9	22.8	13.5	9.1J	7.3J
Potassium	NA	25200	27100	26500	24900	24000	24100	22300	23600	18600	14800	22100	19600	24000	23200
Selenium	40	8.2U	9.7U	9.7U	15.1UJ	9.3U	9.3U	9.3U	21.0U	21.0U	21U	21U	21U	16U	16U
Silver	40	1.8U	1.9U	1.9U	1.9U	2.4U	2.4U	2.4U	5.0U	5.0U	5U	5U	5U	5U	5U
Sodium	50000	**262000**	**259000**	**504000**	**248000**	**242000**	**241000**	**205000**	**237000**	**172000**	**115000**	**204000**	**173000**	**217000**	**210000**
Thallium	0.5	0.15U	0.16U	0.16U	0.16U	0.12U	0.12U	0.13J	0.11U	0.11U	0.11J	0.22J	0.11U	0.13U	0.13U
Vanadium	NA	8.2	16.8	15.0	8.6J	4.8J	2.8J	22.6	7.2J	28.7	42.1	45.8	31	18.6	14.7
Zinc	2000	18.5J	26.6	27.5	15.6J	6.5U	7.7J	44.0	19.3J	47.5	63.1	66.8	51.2	29.7	30.4

Notes:

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Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

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Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

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Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-325			MW-326										
Sample Date		4/3/2020	7/8/2020	10/12/2020	3/12/2012	5/23/2012	7/26/2012	11/20/2012	2/20/2013	6/13/2013	9/5/2013	11/6/2013	3/10/2014	8/5/2014	3/23/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation			Pre-CAMU Operation										
Aluminum	200	**914**	-	-	**2170**	**835J**	167J	**1930**	**992**	**391**	82.8U	82.8U	82.8U	79.2U	**1650**
Antimony	6	0.41U	1.2	3.9	5.8U	5.8U	4.7J	**9.5J**	0.47J	0.50J	0.38J	0.60J	0.34U	0.33U	0.48J
Arsenic	0.02	**1.1J**	**2.4**	**7.7**	**36.1J**	**44.8J**	34.0U	**7.4**	**4.0**	**5.3**	**5.9**	**8.0**	**3.6**	**6.7**	**11.2**
Barium	6000	703	560	380	310	227	181	326	235	317	402	384	290	334	189
Beryllium	1	1U	1U	1U	0.24U	0.24U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U
Cadmium	4	1U	1U	1U	**6.5**	**19.8**	**5.9**	1.8U	1.8U	0.36U	0.76U	0.76U	0.76U	0.33U	1.7U
Calcium	NA	54600	55000	59000	216000	191000	166000	216000	149000	154000	134000	133000	113000	119000	191000
Chromium	70	1.6U	-	-	6.8J	4.9J	3.8J	4.8J	11.1J	6.1J	4.2J	3.0J	1.6U	2.4J	10.9J
Cobalt	NA	1.5U	3.2J	12	66.1	74.9	70.4	83.8	65.3	80.9	60.2	68.5	55.4	68.0	111
Copper	1300	12U	19J	71	3.6J	0.94U	2.1U	2.1U	2.1U	23.2	5.4U	3.8J	7.2J	5.9J	14.0U
Iron	300	**7670**	-	-	**288000**	**367000**	**343000**	**331000**	**347000**	**396000**	**371000**	**363000**	**242000**	**318000**	**413000**
Lead	5	3.8	**16**	**65**	**14.0J**	2.2U	**5.2J**	25.5U	1.6	1.1	0.16J	0.15J	0.34J	0.28J	2.2
Magnesium	NA	55100	52000	45000	156000	146000	127000	169000	117000	122000	101000	99900	84500	89300	134000
Manganese	50	**434**	-	-	**46000**	**50500**	**44900**	**50700**	**39000**	**40200**	**29000**	**32400**	**25500**	**28500**	**51000**
Mercury	2	0.05U	0.079U	0.19J	0.026U	0.026U	0.0081U	0.070U	0.070U	0.070U	0.060U	0.060U	1.3	0.060U	0.050U
Nickel	100	4.5J	6J	30	19.7	11.9	12.4	14.0	5.5U	3.1J	3.7J	7.4J	4.9J	7.5J	17.9
Potassium	NA	24900	22000	22000	14300	7860	6110	11300	6090	5990	6510	5600	6560	4510	5810
Selenium	40	16U	-	-	**50.5**	16.7J	24.0	30.7	**73.0**	7.5U	16.7J	8.4U	8.4U	4.8U	**70.7**
Silver	40	5U	5U	5U	5.8	5.9	10.1	5.9	1.2U	2.1J	5.8	4.5J	4.7J	1.9J	22.6
Sodium	50000	**225000**	**200000**	**160000**	**846000**	**545000**	**464000**	**767000**	**446000**	**397000**	**326000**	**293000**	**277000**	**247000**	**452000**
Thallium	0.5	0.13U	0.13U	0.19J	4.2U	21.0U	28.5U	5.7U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	4.2UJ	17	56	15.7	12.3	8.6	1.3U	1.3U	1.4J	2.0U	2.0U	3.9J	1.9U	7.4
Zinc	2000	5.1J	21	90	74.5	27.5	2.0U	23.2	2.0U	7.0J	4.3J	15.9J	7.3J	5.7U	3.8J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**			
Sample Date		**5/29/2015**	**5/29/2015**	**9/18/2015**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**
Sampling Event				
Aluminum	200	159J	187J	**854**
Antimony	6	0.38J	0.44J	0.55J
Arsenic	0.02	**10.0**	**9.2**	**8.3**
Barium	6000	301	302	266
Beryllium	1	0.67U	0.67U	0.70U
Cadmium	4	1.7U	1.7U	0.30U
Calcium	NA	176000	173000	117000
Chromium	70	11.9J	12.5J	5.7J
Cobalt	NA	105	102	79.1
Copper	1300	2.8U	2.8U	7.7U
Iron	300	**287000**	**377000**	**298000**
Lead	5	0.73J	0.81J	1.8
Magnesium	NA	130000	130000	92200
Manganese	50	**32500**	**41800**	**33700**
Mercury	2	0.050U	0.050U	0.051U
Nickel	100	15.5	15.4	15.3
Potassium	NA	5830	5450	3960
Selenium	40	**59.4J**	**62.2J**	**77.6**
Silver	40	11.0	11.4	34.1
Sodium	50000	**277000**	**345000**	**240000**
Thallium	0.5	0.15U	0.15U	0.15U
Vanadium	NA	3.5J	3.9J	2.0J
Zinc	2000	2.0U	2.0U	16.3J

Notes:

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Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

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J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-326							MW-326						
Sample Date		11/18/2015	1/11/2016	4/12/2016	7/19/2016	10/13/2016	1/17/2017	4/21/2017	10/10/2017	1/23/2018	4/10/2018	7/16/2018	10/29/2018	1/3/2019	4/3/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation							Cell 2 Operation						
Aluminum	200	84.1U	**2030**	**834**	**530**	86.8U	**410**	**1190**	89.4U	89.4U	89.4UJ	**257J**	153U	153U	**590**
Antimony	6	0.45UJ	0.60J	0.33U	0.48U	0.48J	0.48U	0.48U	0.45U	0.45U	0.45U	0.41U	0.41U	0.41U	0.72J
Arsenic	0.02	**8.7**	**7.6**	**4.2**	**7.1**	**7.4**	**2.0J**	**4.3**	**5.2**	**3.9**	**4.4**	**5.9**	**4.6**	**4.7**	**5.1**
Barium	6000	300	170	151	284	285	95.5	218	282	236	281	304	305	270	255
Beryllium	1	0.70U	1.1U	1.1U	0.67U	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	1.0U	1.0U	1U	1U
Cadmium	4	0.30U	0.64U	0.64U	2.5U	0.49U	0.49U	0.49U	**6.4**	2.5J	1.8U	5.0U	5.0UJ	5U	5U
Calcium	NA	135000	151000	164000	129000	128000	139000	141000	123000	138000	140000	124000	118000	127000	137000
Chromium	70	23.6	12.4J	2.0U	12.3J	1.8U	2.1J	7.8J	6.9J	3.3U	3.3U	5.3U	5.3U	5.3U	7.9UJ
Cobalt	NA	75.1	277	355	85.5	68.5	27.6	80.2	78.0	113	**94.9**	62.6	58.0	59.7	76
Copper	1300	3.3UJ	35.2	11.7U	19.7	4.1U	17.0J	7.2J	4.0U	4.0U	4.0U	6.2U	6.2U	31U	31U
Iron	300	**317000**	**138000**	**110000**	**294000**	**286000**	**56500**	**149000**	**277000**	**211000**	**251000**	**315000**	**278000**	**206000**	**268000**
Lead	5	0.46J	3.5	0.94J	0.49J	0.44J	0.51J	1.5	0.17J	0.37J	0.15J	1.1U	1.1U	1.1U	1.8J
Magnesium	NA	104000	60700	60000	97800	96100	43400	75500	97800	90100	94300	100000	90200	79700	93700J
Manganese	50	**33200**	**16600**	**14900**	**32600**	**33300**	**5020**	**21000**	**35200**	**25000**	**28000**	**34100**	**30600**	**24200**	**29200**
Mercury	2	0.050U	0.050UJ	0.050UJ	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050U	0.05U	0.05U
Nickel	100	6.5J	**616**	**748**	29.4	22.0	29.4	80.1	6.8J	**125**	71.7	3.5J	28.9J	30.4	57.1
Potassium	NA	4390	8060	7120	3940	4090	60900	27800	4370	10100	8080	4370	5090	8200	5140
Selenium	40	**85.3**	19.3U	20.0J	**50.0J**	9.7U	9.7U	**45.4**	20.9	9.3U	20.0	105U	105UJ	21U	105U
Silver	40	14.1	1.8U	3.6J	2.9J	1.9U	1.9U	1.9U	7.5	2.4U	15.5J	7.8J	5.0U	5U	25U
Sodium	50000	**287000**	**198000**	**208000**	**244000**	**244000**	**164000**	**245000**	**265000**	**213000**	**268000**	**267000**	**231000**	**193000**	**244000**
Thallium	0.5	0.15U	0.15U	0.15U	0.16U	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U	0.11U
Vanadium	NA	3.5J	5.5	2.3U	3.8J	2.6J	1.6U	1.6U	2.7J	1.6U	1.6U	7.9J	8.8J	15U	15U
Zinc	2000	3.9U	99.9	153	5.4U	7.1J	15.6J	25.3	12.0J	35.1	6.5U	15.0U	18.7J	21.6J	18J

Notes:

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NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

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Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW--326						MW-327							
Sample Date		7/2/2019	10/2/2019	1/3/2020	4/7/2020	7/13/2020	10/14/2020	3/13/2012	5/18/2012	7/31/2012	9/6/2013	11/11/2013	3/11/2014	8/7/2014	10/23/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation						Pre-CAMU Operation							
Aluminum	200	765U	58.7	168	68.9	-	-	**451**	80.1U	74.3U	82.8U	82.8U	82.8U	67.4U	**1530**
Antimony	6	1J	0.47J	0.41U	0.41U	0.41U	0.45J	5.8U	29.0U	3.5U	0.34U	0.34U	0.34U	0.33U	0.33U
Arsenic	0.02	**6.6**	**4.6**	**2.5**	0.68U	**2**	**3.9**	5.1U	5.1U	6.8U	**0.52J**	0.78U	0.78U	0.82U	**1.3J**
Barium	6000	291	333	177	104	230	340	112	155	124	162	190	217	182	212
Beryllium	1	1U	1U	1U	1U	**3.7J**	1U	0.24U	0.24U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U
Cadmium	4	5U	5U	1U	1U	1.3J	3.6J	0.27U	0.27U	0.36U	0.76U	0.76U	0.76U	0.33U	0.33U
Calcium	NA	137000	142000	142000	162000	150000	120000	129000	150000	150000	163000	183000	185000	180000	199000
Chromium	70	5.3U	2.1J	9.6J	1.6U	-	-	1.2J	1.1U	1.1U	1.6U	1.6U	1.6U	1.3U	2.9J
Cobalt	NA	67.5	70.5	31.5	60.9	47	42	1.3J	1.8J	1.9J	1.9J	2.4J	3.0J	3.3J	3.4J
Copper	1300	31U	60U	12U	12U	29	12U	2.0J	3.4J	2.1U	2.7U	2.7U	2.7U	2.8U	2.8U
Iron	300	**322000**	**336000**	**101000**	**11100**	-	-	**765**	**1280**	**952**	**1180**	**1280**	**1430**	**1260**	**2750**
Lead	5	**13.5**	0.12J	0.71	0.27J	3.4	0.3J	2.2U	3.5J	5.1U	0.085U	0.20J	0.089J	0.082U	1.5
Magnesium	NA	106000	113000	68000	69800	85000	94000	28900	33100	32200	36200	39600	40500	40100	44000
Manganese	50	**36800**	**37300**	**11000**	**8900**	-	-	**1880**	**2230**	**2120**	**2350**	**2740**	**2930**	**2670**	**3070**
Mercury	2	0.05U	0.05U	0.05U	0.05U	0.079U	0.079U	0.026U	0.026U	0.0081U	0.060U	0.060U	0.060U	0.060U	0.060U
Nickel	100	15.5U	16.4J	34.9	**106**	44	4J	3.0J	1.8J	2.9J	3.3J	3.5J	3.3J	4.2J	5.6J
Potassium	NA	4630	3930	8890	9620	6400	3700	2450	2490	3050	2700	3090	3040	2820	3200
Selenium	40	105U	80U	16U	20.8UJ	-	-	6.9U	38.6	7.5U	8.4U	8.4U	8.4U	4.8U	4.8U
Silver	40	25U	25U	5U	5U	5U	5U	0.91U	0.91U	1.2U	2.1U	2.1U	2.1U	1.8U	1.8U
Sodium	50000	**281000**	**261000**	**136000**	**120000**	**210000**	**240000**	32800	38900	38900	**56100**	**64200**	**71000**	**73100**	**85900**
Thallium	0.5	0.11U	0.13U	0.13U	0.13U	0.13U	0.13U	4.2U	4.2U	5.7U	0.15U	0.15U	0.17J	0.15U	0.21J
Vanadium	NA	15U	9.5U	1.9U	1.9U	1.9U	6.6J	2.0J	0.96U	1.3U	2.0U	2.0U	2.0U	1.9U	3.8U
Zinc	2000	28.3J	21.7J	12.8J	26.8	3.7U	19U	7.5J	12.8J	5.8J	6.2J	8.5J	6.4J	8.6J	12.3J

Notes:

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Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

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Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-327			MW-327								MW-327		
Sample Date		3/23/2015	6/1/2015	9/15/2015	11/16/2015	1/11/2016	4/12/2016	10/21/2016	1/20/2017	4/18/2017	4/18/2017	7/21/2017	10/12/2017	1/22/2018	4/10/2018
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation			Cell 1 Operation								Cell 2 Operation		
Aluminum	200	**940**	116J	84.1U	**560**	92.9U	92.9U	**355**	**259**	86.8U	86.8U	**2990**	89.4U	89.4U	89.4UJ
Antimony	6	0.33U	0.33U	0.33U	0.33U	0.33U	0.33U	0.48U	0.48U	0.48U	0.48U	0.45U	0.45U	0.45U	0.45U
Arsenic	0.02	0.82U	0.82U	**0.87J**	**0.65J**	**0.68J**	0.54U	**1.2J**	**0.97J**	0.68U	0.68U	**0.87J**	0.72U	0.72U	**1.2J**
Barium	6000	223	206	200	210	192	211	249	296J	248	252	203	232	234	273
Beryllium	1	0.67U	0.67U	0.70U	0.70U	1.1U	1.1U	0.67U	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	2.0U
Cadmium	4	0.33U	0.33U	0.30U	0.48UJ	0.64U	0.64U	0.49U	0.49U	0.74UJ	0.77UJ	1.8U	1.8U	1.8U	1.8U
Calcium	NA	185000	200000	188000	198000	188000	189000	215000	190000	204000	206000	201000	201000	202000	204000
Chromium	70	3.4J	1.5J	1.5U	2.6J	3.2J	2.5J	2.4J	2.4J	2.4J	2.2J	4.3J	3.3U	3.3U	3.3U
Cobalt	NA	4.4J	4.1J	4.2J	4.8J	3.9J	5.4	4.9J	7.3	7.6	7.4	7.9J	7.7J	6.8	**7.9**
Copper	1300	3.9J	2.8U	2.5U	4.0J	3.2UJ	3.2U	4.1U	4.1U	4.9J	4.4J	4.0U	4.0U	4.0U	9.1J
Iron	300	**2780**	**1250**	**1320**	**1630**	**1070**	**2220**	**3030**	**2450**	**2750**	**2990**	**3030**	**1710**	**1720**	**19200**
Lead	5	4.5	0.54J	0.48U	1.1	0.40J	0.13U	0.57J	0.33J	0.14UJ	0.14UJ	0.59J	0.11U	0.11U	0.13J
Magnesium	NA	40800	43900	40900	43800	40200	41900	45600	48600	45600	46000	45900	44800	44200	45400
Manganese	50	**3110**	**3200**	**3230**	**3350**	**3060**	**3450**	**4240**	**4090**	**4380**	**4430**	**3860**	**4210**	**4200**	**4670**
Mercury	2	0.050U	0.050U	0.050UJ	0.050U	0.050UJ	0.050UJ	0.050U	0.050UJ	0.050U	0.050U	0.050U	0.050UJ	0.050U	0.050U
Nickel	100	6.2J	4.2J	5.7J	5.1J	4.6J	6.0J	7.4J	7.6J	6.6J	6.3J	7.1J	6.2J	8.3J	7.2J
Potassium	NA	3010	2990	2950	3320	3310	3270	3650	3740	3610	3630	7830	3640	3360	3640
Selenium	40	4.8U	4.8U	8.2U	8.2U	8.2U	9.7U	9.7U	9.7U	9.7U	9.7U	9.3U	9.3UJ	9.3U	9.3U
Silver	40	1.8U	1.8U	1.4U	1.4U	1.8U	1.8U	1.9U	1.9U	1.9U	1.9U	2.4U	2.4UJ	2.4U	2.4U
Sodium	50000	**87000**	38200	**89500**	**96700**	**91500**	**98400**	**120000**	**128000**	**128000**	**129000**	**134000**	**124000**	**122000**	**134000**
Thallium	0.5	0.17J	0.17J	0.21J	0.20J	0.15U	0.25J	0.18J	0.25J	0.32J	0.19J	0.18J	0.19J	0.22J	0.27UJ
Vanadium	NA	1.9U	1.9U	1.4U	1.5J	2.3U	2.3U	2.5U	1.6U	1.8UJ	1.7UJ	6.1	1.8J	1.6U	1.6U
Zinc	2000	10.6J	7.7J	8.6J	9.4J	12.1J	8.0J	11.5J	13.3J	14.5J	10.1J	10.8J	10.3J	9.4J	11.2J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-327												MW-328	
Sample Date		7/16/2018	7/16/2018	10/29/2018	1/3/2019	4/3/2019	7/2/2019	10/2/2019	1/3/2020	4/7/2020	7/10/2020	7/10/2020	10/12/2020	3/20/2012	5/23/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation												Pre-CAMU Operation	
Aluminum	200	197J	174J	153U	153U	153U	**333**	197U	43.9	53.7	-	-	-	**415**	80.1U
Antimony	6	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	5.8U	5.8U
Arsenic	0.02	0.68U	0.68U	0.68U	0.68U	0.68U	0.68U	0.68U	0.68U	0.68U	0.68U	0.68U	0.68U	**8.1J**	5.1U
Barium	6000	243	239	212	234	222	189	213	214	252	210	210	210	136	113
Beryllium	1	1.0U	1.0U	1.0U	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.24U	0.24U
Cadmium	4	1.0U	1.0U	1.0UJ	1U	1U	1U	1U	1U	1U	1U	1U	1U	0.27U	0.80J
Calcium	NA	204000	207000	190000	209000	202000	190000	205000	204000	213000	200000	200000	190000	124000	146000
Chromium	70	5.3U	5.3U	5.3U	5.3U	5.3U	5.3U	1.7J	2.6J	1.6U	-	-	-	2.2J	1.9J
Cobalt	NA	9.7J	8.9J	8.1	9.8	8	8.4	8.6	8.2	13.4	13	13	11	1.9J	2.1J
Copper	1300	6.2U	6.2U	13.2UJ	6.2U	6.2U	6.2U	12U	12U	12U	12U	12U	12U	7.2J	0.94U
Iron	300	**3880**	**3870**	**1900**	**1410**	**2720**	**2530**	**2360**	**2090**	**9700**	-	-	-	**13300**	**10700**
Lead	5	1.1U	1.1U	1.1U	1.1U	1.1U	3.2	0.077J	0.23J	0.15J	0.29J	0.29J	0.071U	2.5J	2.2U
Magnesium	NA	46500	45100	41900	43100	44200J	42000	44500	45200	46200	44000	44000	43000	32600	37600
Manganese	50	**4880**	**4640**	**4280**	**4330**	**4340**	**4140**	**4400**	**3940**	**5060**	-	-	-	**2670**	**2950**
Mercury	2	0.050U	0.050U	0.050U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.079U	0.079U	0.083J	0.038J	0.026U
Nickel	100	9.1J	8.7J	9.6J	7.8J	7.9UJ	8.5UJ	8.2J	9.2J	12	9.6J	9.6J	9.4J	2.4J	0.95U
Potassium	NA	3680	3580	3870	3800	3500	3460	3430	3390	3830	3500	3500	3300	6020	5370
Selenium	40	21.0U	21.0U	21.0UJ	21U	21U	21U	16U	16U	16U	-	-	-	6.9U	6.9U
Silver	40	5.0U	5.0U	5.0U	5U	5U	5U	5U	5U	5U	5U	5U	5U	0.91U	0.91U
Sodium	50000	**141000**	**134000**	**122000**	**125000**	**123000**	**118000**	**128000**	**119000**	**127000**	**130000**	**130000**	**120000**	**74100**	**69100**
Thallium	0.5	0.20J	0.25J	0.19J	0.21J	0.18J	0.16J	0.17J	0.17J	0.22J	0.17J	0.17J	0.17J	**4.3J**	4.2U
Vanadium	NA	3.0U	3.0U	3.0U	3U	3U	3U	1.9U	1.9U	1.9U	1.9U	1.9U	1.9U	1.7J	1.2J
Zinc	2000	14.1J	11.9J	10.2J	11.2J	9J	13.5UJ	17.6J	13.3J	14.5J	14J	14J	18J	4.5J	3.2U

Notes:

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Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328										
Sample Date		7/25/2012	4/25/2013	6/17/2013	6/25/2013	9/10/2013	11/12/2013	3/14/2014	8/1/2014	8/8/2014	10/29/2014	1/16/2015
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation										
Aluminum	200	74.3U	74.3U	82.8U	83.7J	82.8U	82.8U	82.8U	67.4U	67.4U	67.4U	109J
Antimony	6	3.5U	0.33U	0.34U	0.34U	0.34U	0.34U	0.44J	0.33U	0.33U	0.33U	0.33U
Arsenic	0.02	6.8U	**2.4**	**3.0**	**2.5**	**2.5**	**2.9**	0.78U	**1.9J**	**2.6**	**2.5**	**3.2**
Barium	6000	108	85.2	78.8	74.3	77.0	86.1	70.8	67.2	69.0	63.4	69.5
Beryllium	1	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U
Cadmium	4	0.36U	0.36U	0.76U	0.76U	0.76U	0.76U	0.76U	0.52J	0.33U	0.33U	0.33U
Calcium	NA	156000	152000	162000	157000	163000	157000	163000	159000	159000	160000	163000
Chromium	70	1.3J	1.3J	1.6U	1.6U	1.6U	1.6U	1.6U	1.5J	1.3U	1.3U	2.3UJ
Cobalt	NA	1.7J	1.0J	1.3U	1.3U	1.3U	1.3U	1.3U	1.0U	1.0U	1.0U	1.0U
Copper	1300	2.1U	2.1U	2.7U	2.7U	2.7U	3.2J	2.7U	2.8U	2.8U	2.8U	2.8U
Iron	300	**12900**	**11700**	**18300**	**16700**	**17800**	**17700**	**4150**	**18200**	**18000**	**19100**	**19600**
Lead	5	5.1U	0.19J	0.11J	0.12J	0.085U	0.096J	0.50J	0.16J	0.19J	0.19J	0.46J
Magnesium	NA	39500	38900	41000	39200	40900	40000	41400	39800	39600	39100	40000
Manganese	50	**2950**	**2360**	**2200**	**2050**	**2140**	**2280**	**2030**	**2060**	**1780**	**1870**	**1890**
Mercury	2	0.0081U	0.070U	0.070U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U	0.060U
Nickel	100	1.1U	1.1U	1.5U	1.5U	1.5U	1.5U	1.5U	1.6U	1.6U	1.6U	1.6U
Potassium	NA	4550	3880	3710	3440	3580	3700	3680	3390	3120	3250	3290
Selenium	40	7.5U	7.5U	8.4U	8.4U	8.4U	8.4U	8.4U	5.3UJ	4.8UJ	4.8U	4.8U
Silver	40	1.2U	1.2U	2.1U	2.1U	2.1U	2.1U	2.1U	1.8U	1.8U	1.8U	1.8U
Sodium	50000	**76200**	**67900**	**70800**	**69500**	**72100**	**70700**	**75900**	**63800**	**74100**	**65500**	**67600**
Thallium	0.5	5.7U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	1.3U	1.3U	2.0U	2.0U	2.0U	2.0U	2.0U	1.9U	1.9U	1.9U	1.9U
Zinc	2000	2.0U	3.5J	2.5J	2.0U	2.0U	14.7J	7.5J	2.1J	3.0U	2.0UJ	5.6J

Notes:

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Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328			MW-328								
Sample Date		3/2/2015	6/1/2015	9/16/2015	11/19/2015	12/10/2015	1/13/2016	4/14/2016	7/25/2016	12/6/2016	1/23/2017	4/27/2017	7/24/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation			Cell 1 Operation								
Aluminum	200	67.4U	67.4U	**280**	84.1U	92.9U	92.9U	92.9U	86.8U	86.8U	86.8U	86.8U	89.4U
Antimony	6	0.33U	0.33U	0.33U	0.33U	0.33U	0.33U	0.33U	0.48U	0.48U	0.48UJ	0.48U	0.45U
Arsenic	0.02	**0.90J**	**1.7J**	**1.9J**	**2.5**	**1.6J**	**1.8J**	**1.6J**	**1.5J**	**1.8J**	**1.4J**	**1.0J**	**0.91J**
Barium	6000	57.9	65.2	94.3	57.1	55.8	66.4	62.8	56.1	56.1	53.3	56.1	54.9
Beryllium	1	0.67U	0.67U	0.70U	0.70U	1.1U	1.1U	1.1U	0.67U	0.67U	0.67U	0.67U	2.0U
Cadmium	4	0.33U	0.33U	0.33J	0.30U	0.64U	0.64U	0.64U	0.49U	0.49U	0.49U	0.49U	1.8U
Calcium	NA	151000	164000	235000	151000	151000	165000	160000	149000	149000	157000	162000	138000
Chromium	70	1.9J	1.3J	2.7J	2.8J	2U	2.2J	2.0U	1.9J	1.8U	1.8U	2.1J	3.3U
Cobalt	NA	1.0U	1.0U	0.97J	0.90U	0.9U	0.90U	0.90UJ	1.9U	1.9U	1.9U	1.9U	1.7U
Copper	1300	2.8U	7.1J	2.9U	2.5U	3.2U	4.5J	3.2U	4.1U	4.1U	4.1U	4.1UJ	4.0U
Iron	300	**3380**	**15700**	**26000**	**16800**	**17200**	**19100**	**12300**	**14600**	**15700**	**15700**	**12500**	**15200**
Lead	5	0.34J	0.17J	0.26J	0.27UJ	0.13U	0.13U	0.13U	0.090U	0.090U	0.090UJ	0.090U	0.11U
Magnesium	NA	37900	39900	57100	37200J	35900	41000	39900	35900	35400	37600	40300	36300
Manganese	50	**1920**	**1900**	**2660**	**1650**	**1630**	**1870**	**1800**	**1650**	**1580**	**1490**	**1280**	**1440**
Mercury	2	0.050U	0.050U	0.050UJ	0.050U	0.05U	0.050U	0.050U	0.050U	0.050U	0.050U	0.050UJ	0.050UJ
Nickel	100	1.6U	1.6U	1.8J	1.3U	2.5U	2.5U	2.5U	2.8U	2.8U	2.8U	2.8U	4.0U
Potassium	NA	3050	3060	4640	2940	3060	3680	3190	2960	3000	3000	3230	2750
Selenium	40	4.8U	4.8U	8.2U	8.2U	8.2U	8.2U	9.7U	9.7U	9.7U	9.7U	9.7U	9.3U
Silver	40	1.8U	1.8U	1.4U	1.4U	1.8U	1.8U	1.8U	1.9U	1.9U	1.9U	1.9U	2.4U
Sodium	50000	**67500**	**68900**	**56500**	**70300**	**71600**	**79600**	**72600**	**71300**	**72200**	**73100**	**75500**	**68400**
Thallium	0.5	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.15U	0.16U	0.16U	0.16UJ	0.16U	0.12U
Vanadium	NA	1.9U	1.9U	1.4U	1.4U	2.3U	2.3U	2.3U	1.6U	1.6U	1.6U	1.6U	1.6U
Zinc	2000	4.2U	4.3J	3.9UJ	3.9U	3.9U	59.7	12.0J	5.4U	5.4U	5.4U	5.5J	6.5U

Notes:

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NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328												
Sample Date		10/12/2017	1/25/2018	4/12/2018	7/18/2018	10/29/2018	1/9/2019	4/5/2019	7/5/2019	10/3/2019	10/3/2019	1/9/2020	4/6/2020	7/9/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation												
Aluminum	200	89.4U	89.4U	89.4U	153U	153U	153U	153U	153U	19.7U	19.7U	19.7U	19.7U	-
Antimony	6	0.45U	0.45U	0.45U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U	0.41U
Arsenic	0.02	**1.2J**	**1.2J**	**1.5J**	**1.6J**	**1.3J**	1.9UJ	**0.73J**	**0.95J**	1.4U	1.4U	**1J**	**0.92J**	0.68U
Barium	6000	51.9	51.1	53.4	49.8	48.6	53.3	49.6	57.4	49.9	48	50.3	41	43
Beryllium	1	2.0U	2.0U	2.0U	1.0U	1.0U	1U	1U	1U	1U	1U	1U	1U	1U
Cadmium	4	1.8U	1.8U	1.8U	1.0U	1.0UJ	1U	1U	1U	1U	1.1UJ	1U	1U	1U
Calcium	NA	149000	144000	150000	144000	143000	149000	144000	156000	146000	140000	141000	151000	140000
Chromium	70	3.3U	3.3U	3.3U	5.3U	5.3U	5.3U	5.3U	5.3U	1.6U	1.6U	1.6U	1.6U	-
Cobalt	NA	2.1UJ	1.7U	1.7U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U	1.5U
Copper	1300	4.0U	4.0U	4.0U	6.2U	9.4UJ	6.2U	6.2U	6.2U	12U	12U	12U	12U	12U
Iron	300	**14200**	**14400**	**12800**	**15000**	**16400**	**17500**	**10900**	**14100**	**14500**	**14300**	**15900**	**6290**	-
Lead	5	0.11U	0.11U	0.18J	1.1U	1.1U	1.1U	1.1U	1.1U	0.14U	0.14U	0.078J	0.071U	0.076J
Magnesium	NA	37400	36800	38000	36000	35300	37100	36700	38800	33800	33400	34700	37700	36000
Manganese	50	**1670**	**1530**	**1310**	**1430**	**1400**	**1550**	**1140**	**1390**	**1380**	**1350**	**1430**	**715**	-
Mercury	2	0.050UJ	0.050U	0.050UJ	0.050U	0.050U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.079U
Nickel	100	4.0U	4.0U	4.0U	3.1U	4.4J	3.1U	3.1U	3.1U	2.1U	2.1U	2.1U	2.1U	2.1U
Potassium	NA	2890	3160	3250	2840J	3160	3180	2990	3140	2660	2500	2810	2980	2800
Selenium	40	9.3UJ	9.3U	9.3U	21.0U	21.0UJ	21U	21U	21U	16U	16U	16U	16U	-
Silver	40	2.4UJ	2.4U	2.4U	5.0U	5.0U	5U	5U	5U	5U	5U	5U	5U	5U
Sodium	50000	**67700**	**68600**	**72600**	**67500**	**67700**	**73100**	**70300**	**76100**	**65600**	**64800**	**67600J**	**67600**	**70000B**
Thallium	0.5	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U	0.11U	0.11U	0.26U	0.26U	0.13U	0.13U	0.13U
Vanadium	NA	1.6U	1.6U	1.6U	3.0U	3.0U	3U	3U	3U	1.9U	1.9U	1.9U	1.9U	1.9U
Zinc	2000	6.5U	6.5U	6.5U	3.0U	3.0U	3U	4.7UJ	10.6UJ	3.8J	4.3J	3.7U	3.7U	3.7U

Notes:

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Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

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J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328		MW-328	MW-333					
Sample Date		9/25/2020	10/12/2020	12/2/2020	5/16/2012	7/24/2012	3/10/2014	5/22/2014	8/6/2014	10/30/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation		Post CAMU Closure	Pre-CAMU Operation					
Aluminum	200	-	-	-	178J	98.3J	82.8U	82.8U	**1600**	**17800**
Antimony	6	-	0.41U	-	5.8U	3.5U	0.56J	0.69J	0.71J	1.0U
Arsenic	0.02	-	**1.1J**	-	**18.2J**	**33.9**	**8.0**	**8.8**	**20.0**	**26.6**
Barium	6000	-	47	-	193	396	648	743	986	917
Beryllium	1	-	1U	-	0.24U	0.67U	0.67U	0.67U	0.67U	0.67U
Cadmium	4	-	1U	-	0.36J	0.36U	0.76U	0.76U	0.33U	0.33U
Calcium	NA	-	140000	-	146000	123000	146000	132000	133000	127000
Chromium	70	-	-	-	2.0J	2.0J	2.0J	1.6J	3.9J	30.0
Cobalt	NA	-	1.5U	-	1.3J	2.0J	1.3U	1.3U	1.1J	4.7J
Copper	1300	-	12U	-	1.7J	2.1U	2.7U	2.7U	2.8U	24.2
Iron	300	**11000**	-	**17000**	**41600**	**27600**	**31900**	**26100**	**38100**	**53400**
Lead	5	-	0.14J	-	2.2U	5.1U	0.12J	0.48U	2.7	**22.0**
Magnesium	NA	-	34000	-	90700	76500	95300	82700	77500	75400
Manganese	50	-	-	-	**517**	**352**	**427**	**176**	**229**	**320**
Mercury	2	-	0.079U	-	0.026U	0.070J	0.060U	0.060U	0.060U	0.060U
Nickel	100	-	2.1U	-	6.3J	1.3J	1.5U	1.5U	1.6U	22.2
Potassium	NA	-	2800	-	27200	30000	26400	25900	30100	29800
Selenium	40	-	-	-	6.9U	7.5U	8.4U	8.4U	4.8U	6.2J
Silver	40	-	5U	-	1.0J	1.2U	2.1U	2.1U	1.8U	3.8J
Sodium	50000	-	**68000**	-	**481000**	**477000**	**723000**	**406000**	**371000**	**426000**
Thallium	0.5	-	0.13U	-	**6.1J**	5.7U	0.15U	0.15U	0.15U	0.15U
Vanadium	NA	-	1.9U	-	1.8J	1.5J	2.0U	2.0U	5.0	35.7
Zinc	2000	-	16J	-	7.4J	3.0J	3.1J	5.9J	9.0J	53.1J

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-333		MW-334								MW-334	MW-334R	
Sample Date		3/9/2015	6/3/2015	5/17/2012	7/31/2012	3/10/2014	5/22/2014	8/6/2014	10/30/2014	3/9/2015	5/29/2015	1/15/2016	7/20/2016	10/17/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation		Pre-CAMU Operation								Cell 1 Operation		
Aluminum	200	**2870**	**8890**	128J	74.3U	**248**	82.8U	91.4J	**8260**	**486**	**888**	179J	**271**	86.8U
Antimony	6	0.66J	0.98J	5.8U	3.5U	0.34U	0.34U	0.33U	1.0U	0.33U	0.42J	0.33U	0.48U	0.48U
Arsenic	0.02	**16.5**	**16.8**	5.1U	**12.6J**	**4.6**	**7.2**	**4.2**	**10.4**	**9.2**	**17.8**	**14.8**	**15.6**	**6.6**
Barium	6000	422	357	207	233	348	295	310	302	286	236	358	376	384
Beryllium	1	0.67U	0.67U	0.24U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	0.67U	1.1U	0.67U	0.67U
Cadmium	4	0.33U	0.33U	0.41J	0.36U	0.76U	0.76U	0.33U	0.33U	0.33U	0.33U	0.64U	0.49U	3.4J
Calcium	NA	341000	493000	106000	167000	185000	191000	176000	169000	157000	86400	124000	107000	118000
Chromium	70	9.0J	19.9	2.3J	4.0J	2.6J	1.9J	3.9J	17.8	4.8J	5.0J	7.8J	6.6J	1.8U
Cobalt	NA	5.3	12.0	0.95J	1.8J	1.3U	1.3U	2.3J	6.1	1.0U	1.0U	1.6UJ	1.9U	1.9U
Copper	1300	6.8J	16.7	1.5J	2.1U	2.7U	2.7U	2.8U	24.4	2.8U	3.2U	13.1	10.3	4.1U
Iron	300	**59100**	**59300**	**103000**	**71900**	**76000**	**82200**	**71600**	**63200**	**73800**	**48600**	**176000**	**161000**	**114000**
Lead	5	**7.0**	**20.1**	2.2U	5.1U	0.86J	0.085U	0.32J	**20.1**	2.2J	**5.7**	1.6	3.0	0.58J
Magnesium	NA	120000	141000	182000	313000	307000	307000	350000	297000	273000	212000	181000	179000	188000
Manganese	50	**5800**	**10100**	**586**	**1860**	**2160**	**1330**	**1800**	**1880**	**1090**	**364**	**937**	**859**	**1040**
Mercury	2	0.050U	0.50U	0.026U	0.0081U	0.087J	0.060U	0.060U	0.13J	0.050U	0.050U	0.050U	0.050U	0.050U
Nickel	100	5.7J	25.7	0.95U	1.1U	1.5U	1.5U	1.6U	10.5	1.6U	1.9J	2.5U	2.8U	2.8U
Potassium	NA	23100	21200	40900	104000	86200	85300	103000	97600	70600	55100	26800	24700	30200
Selenium	40	12.4J	10.3U	6.9U	7.5U	8.4U	8.4U	4.8U	4.8U	15.1J	13.7U	12.4J	12.9J	9.7U
Silver	40	1.8U	1.8U	0.91U	1.2U	2.1U	2.1U	1.8U	3.1J	1.8U	1.8U	1.8U	1.9U	1.9U
Sodium	50000	**558000**	**763000**	**2080000**	**2600000**	**2550000**	**2250000**	**2410000**	**2510000**	**2200000**	**2150000**	**2020000**	**1910000**	**1960000**
Thallium	0.5	0.15U	0.15U	4.2U	5.7U	0.15U	0.15U	0.15U	0.15U	0.15UJ	0.15U	0.15U	0.16U	0.16U
Vanadium	NA	7.2	20.7	2.4J	2.4J	5.0J	2.0U	3.4J	22.2	5.1	6.7	3.5J	2.9J	1.6U
Zinc	2000	16.1J	35.9	7.1J	7.5J	4.2J	2.9J	3.2U	34.2J	5.3U	10.2J	338	17.5J	5.4U

Notes:

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Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-334R		MW-334R											
Sample Date		1/19/2017	4/21/2017	10/10/2017	1/25/2018	1/25/2018	4/12/2018	7/18/2018	10/26/2018	1/9/2019	4/5/2019	7/5/2019	10/3/2019	1/9/2020	4/6/2020
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 1 Operation		Cell 2 Operation											
Aluminum	200	86.8U	86.8U	89.4U	89.4U	89.4U	89.4U	153U	153U	153U	**791**	**720**	47.8	35.6	19.7U
Antimony	6	0.48U	0.48U	0.45U	0.45U	0.45U	0.45U	0.41U	0.52J	0.46J	0.97J	0.69J	0.8J	0.41U	0.41U
Arsenic	0.02	**2.8**	**3.3**	**2.1**	**1.6J**	**1.7J**	**6.4**	**8.8**	**7.6**	**11.4**	**15.1**	**8.2**	**7.5**	**12.4**	**12.6**
Barium	6000	559	495	477	430	425	358	291	269	279	357	330	376	227	253
Beryllium	1	0.67U	0.67U	2.0U	2.0U	2.0U	2.0U	1.0U	1.0J	1U	1U	1U	1U	1U	1U
Cadmium	4	0.56UJ	0.49U	2.2J	1.8U	1.8J	1.8U	1.0U	1.0U	2.1UJ	1U	1U	**6.8**	5U	1U
Calcium	NA	178000	194000	198000	207000	204000	157000	109000	101000	96100	86900	122000	111000	74900	90200
Chromium	70	1.9J	2.9J	4.3J	3.3U	3.3U	3.3U	5.3U	5.3U	5.3U	5.3U	5.3U	1.6U	1.6U	1.6U
Cobalt	NA	1.9U	1.9U	1.7U	1.7U	1.7U	1.7U	1.5U	1.5U	1.5U	3.4J	1.5U	1.5U	2.9J	1.6UJ
Copper	1300	4.1U	4.1U	4.0U	4.0U	4.0U	4.0U	6.2U	6.2U	6.2U	6.2U	6.2U	12U	12U	12U
Iron	300	**99600**	**89300**	**78200**	**82800**	**82000**	**81000**	**92900**	**81300**	**105000**	**96100**	**122000**	**119000**	**97200**	**132000**
Lead	5	0.12J	0.14J	0.16J	0.11U	0.11J	0.49J	1.1U	1.1U	1.3J	**5.5**	4.8	0.43J	0.17J	0.071U
Magnesium	NA	301000	333000	352000	322000	316000	277000	202000	177000	198000	186000	219000	189000	174000	179000
Manganese	50	**1780**	**2180**	**2330**	**2350**	**2320**	**1330**	**859**	**755**	**551**	**463**	**829**	**823**	**304**	**435**
Mercury	2	0.050U	0.050U	0.075J	0.050U	0.050U	0.050UJ	0.050U	0.050U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U
Nickel	100	2.8U	2.8U	4.0U	4.0U	4.0U	4.0U	3.1U	3.1U	3.1U	3.1U	3.1U	2.1U	2.1U	9.3J
Potassium	NA	81500	88900	107000	95400	93700	65200	52100	46800	36100	33900	42300	37800	25600	27000
Selenium	40	9.7U	24.8	9.3U	9.3U	9.3U	9.3U	21.0U	21.0U	21U	21U	21U	16U	16U	16U
Silver	40	4.5J	1.9U	2.4U	2.4U	2.4U	2.4U	5.0U	5.0U	5U	5U	5U	5U	5U	5U
Sodium	50000	**2430000**	**2340000**	**2630000**	**2430000**	**2420000**	**2190000**	**1850000**	**1830000**	**1700000J**	**1600000**	**1760000**	**1800000**	**1510000**	**1590000**
Thallium	0.5	0.16U	0.16U	0.12U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U	0.11U	0.11U	0.13U	0.13U	0.13U
Vanadium	NA	7.1J	4.9J	3.9J	3.6J	3.1J	3.3J	3.8J	4.3J	3U	7.6J	6.8J	4.9J	1.9U	1.9U
Zinc	2000	5.4U	5.4U	6.5U	6.5U	6.5U	6.5U	3.0U	3.5J	7.9UJ	13.3J	15.5UJ	10J	3.7U	3.7U

Notes:

Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-334R		MW-474					MW-474					
Sample Date		7/9/2020	10/14/2020	1/8/2016	7/20/2016	10/17/2016	1/19/2017	4/18/2017	10/10/2017	1/25/2018	4/12/2018	7/18/2018	10/26/2018	1/9/2019
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Cell 2 Operation		Cell 1 Operation					Cell 2 Operation					
Aluminum	200	-	-	**2560**	**10500**	135J	**765**	**208**	89.4U	**7790**	**591J**	179J	**546**	**603**
Antimony	6	0.41U	0.41U	1.4	3.6	0.48U	0.54UJ	0.48U	0.45U	2.8	0.45U	0.41U	0.41UJ	0.41U
Arsenic	0.02	**10**	**7.3**	**7.3**	**8.8**	**2.5**	**2.2**	**2.0**	**1.5J**	**3.3**	**1.6J**	**1.0J**	**1.2J**	0.79UJ
Barium	6000	250	330	377	545	454	231	340	470	412	333	421	448	381
Beryllium	1	1U	1U	1.1U	0.67U	0.67U	0.67U	0.67U	2.0U	2.0U	2.0U	1.0U	1.0U	1U
Cadmium	4	1U	2.2J	0.64U	0.77J	1.5J	0.49U	0.49U	1.8U	1.8U	1.8U	1.0U	1.0UJ	1U
Calcium	NA	85000	100000	118000	109000	135000	151000	176000	117000	182000	156000	120000	130000	135000
Chromium	70	-	-	9.8J	30.6	1.8U	2.3J	2.9J	3.3U	19.9	3.3U	5.3U	5.3U	5.3U
Cobalt	NA	1.5U	1.5U	2.1J	4.4J	1.9U	1.9U	1.9U	1.7U	4.7J	1.7U	1.5U	1.5U	1.5U
Copper	1300	12U	12U	14.4J	57.4	4.1U	4.1U	4.1U	4.0U	28.3	4.0U	6.2U	6.2U	6.2U
Iron	300	-	-	**43700**	**57100**	**36700**	**23700**	**37800**	**39100**	**42600**	**38600**	**43200**	**41800**	**40400**
Lead	5	0.66	0.22J	**16.1**	**92.8**	1.1	3.8	1.2	0.26J	**36.0**	3.1	1.2J	2.7J	2.9J
Magnesium	NA	170000	190000	96600	103000	93200	66100	94000	97100	97900	96100	102000	102000	104000
Manganese	50	-	-	**1820**	**1520**	**1890**	**2470**	**2970**	**1480**	**3080**	**2330**	**1410**	**1410**	**1830**
Mercury	2	0.079U	0.079U	0.15J	0.93	0.050U	0.050U	0.050U	0.050U	0.22	0.050UJ	0.050U	0.078UJ	0.05U
Nickel	100	2.1U	2.1U	6.8J	27.8	2.8U	2.8U	2.8U	4.0U	16.6	4.0U	3.1U	3.8J	3.1U
Potassium	NA	26000	32000	11900	9690	20800	22200	22900	14100	25200	15700	13700	17200	16800
Selenium	40	-	-	8.2U	9.7U	9.7U	9.7U	9.7U	9.3U	9.3U	9.3U	21.0U	21.0U	21U
Silver	40	5U	5U	1.8U	1.9U	1.9U	2.2J	1.9U	2.4U	2.4U	2.4U	5.0U	5.0U	5U
Sodium	50000	**1500000**	**1800000**	**614000**	**601000**	**602000**	**507000**	**587000**	**610000**	**666000**	**565000**	**632000**	**629000**	**551000J**
Thallium	0.5	0.13U	0.13U	0.15U	0.16U	0.16U	0.16U	0.16U	0.12U	0.12U	0.12U	0.11U	0.11U	0.11U
Vanadium	NA	2J	4.5J	26.4	119	4.0J	9.7J	5.5	5.2	64.3	11.0	10.7J	17.0	15
Zinc	2000	3.7U	3.7U	40.1	237	5.4U	9.9J	5.4U	6.5U	86.0	7.1J	3.8J	7.6J	8.9UJ

Notes:

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Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-7
TAL Metals for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-474**						
Sample Date		**4/5/2019**	**7/5/2019**	**10/3/2019**	**1/8/2020**	**4/6/2020**	**7/9/2020**	**10/12/2020**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 2 Operation**						
Aluminum	200	**1230**	**3040**	164	158	**429**	-	-
Antimony	6	0.76J	1.6J	0.41U	0.41U	0.41U	1.7	0.68J
Arsenic	0.02	**1.2J**	**2.8**	1.4U	**0.91J**	**0.85J**	**2.1**	**1.2J**
Barium	6000	387	464	455	359	366	440	410
Beryllium	1	1U	1U	1U	1U	1U	1U	1U
Cadmium	4	1U	1U	2.5UJ	1U	1U	1J	1U
Calcium	NA	130000	124000	108000	131000	132000	110000	100000
Chromium	70	5.3U	10.8J	1.6U	3.3UJ	2.3J	-	-
Cobalt	NA	1.5U	2UJ	1.5U	1.5U	1.5U	2.2J	1.5U
Copper	1300	10.2UJ	20.3	12U	12U	12U	17J	12U
Iron	300	**42800**	**56300**	**38300**	**41600**	**45800**	-	-
Lead	5	5	**20.2**	0.82J	0.88	2.1	**22**	**8**
Magnesium	NA	105000	113000	96400	91500	103000	98000	90000
Manganese	50	**1640**	**1320**	**1100**	**1810**	**1560**	-	-
Mercury	2	0.05U	0.21	0.05U	0.05U	0.05U	0.17J	0.16J
Nickel	100	3.7UJ	14.7	2.1U	2.1U	4.4J	13	4.9J
Potassium	NA	13400	12400	11000	15300	13900	10000	10000
Selenium	40	21U	21U	16U	16U	16U	-	-
Silver	40	5U	5U	5U	5U	5U	5U	5U
Sodium	50000	**594000**	**577000**	**591000**	**554000**	**595000**	**540000B**	**560000**
Thallium	0.5	0.11U	0.11U	0.26U	0.13U	0.13U	0.13U	0.13U
Vanadium	NA	19.3	49.8	12.7	13.6	16.7	54	23
Zinc	2000	15.7UJ	70.9	7.3J	3.7U	3.7U	51	17J

Notes:

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Organge shaded cells shows data collected post CAMU Closure
Bold, yellow shaded indcates exceedance to NJ GW Quality Criterion-Class IIA

NA- No action level limit available for this parameter

Monitoring wells abandoned - MW-211,MW-315, MW-333 and MW-334

U- Analyte not detected at that concentration

UJ- Analyte not detected above the approximate reported sample quantification limit

J- Analyte concentration estimated

J- - Analyte concentration biased low

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-115**														
Sample Date		**2/26/2003**	**9/9/2003**	**3/16/2012**	**5/14/2012**	**5/15/2012**	**7/24/2012**	**7/25/2012**	**11/19/2012**	**2/19/2013**	**6/12/2013**	**9/3/2013**	**11/4/2013**	**3/5/2014**	**5/19/2014**	**8/4/2014**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Pre-CAMU Operation**														
Ammonia Nitrogen As N	3000	120J	110U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U
Total Phosphorus as PO4 water	NA	-	-	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-115				MW-115							MW-115	MW-211	
Sample Date		10/22/2014	3/2/2015	5/27/2015	9/14/2015	11/13/2015	1/5/2016	4/6/2016	7/18/2016	10/11/2016	1/11/2017	4/18/2017	1/8/2019	5/22/2014	9/26/2014
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation				Cell 1 Operation							Cell 2 Operation	Pre-CAMU Operation	
Ammonia Nitrogen As N	3000	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	1500	**8800**	**12600**
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	250U	260J	250U	250U	250U	480	250U	250U	350	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-211				MW-211							MW-323			
Sample Date		10/30/2014	3/24/2015	6/8/2015	9/16/2015	11/16/2015	1/14/2016	4/8/2016	7/22/2016	12/8/2016	1/19/2017	4/18/2017	3/15/2012	5/16/2012	5/17/2012	7/30/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation				Cell 1 Operation							Pre-CAMU Operation			
Ammonia Nitrogen As N	3000	**10600**	**7300**	**7100**	**8500**	**8200**	**13300**	**6800**	**5800**	**10100**	**8500**	**4900**	200U	200U	200U	200U
Total Phosphorus as PO4 water	NA	260J	250U	250U	250U	470	320	330	390	250U	250U	250U	250U	250U	250U	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-323**													**MW-323**	
Sample Date		**7/31/2012**	**11/20/2012**	**2/20/2013**	**6/12/2013**	**9/5/2013**	**11/5/2013**	**3/12/2014**	**8/5/2014**	**10/29/2014**	**3/3/2015**	**6/8/2015**	**9/15/2015**	**9/15/2015**	**11/18/2015**	**1/7/2016**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Pre-CAMU Operation**													**Cell 1 Operation**	
Ammonia Nitrogen As N	3000	200U	200U	200U	200U	200U	200U	200U	200U	200U	200U	410J	200U	200U	280J	200U
Total Phosphorus as PO4 water	NA	250U	250U	250U	1100	250U	250U	250U	250U	530	530	1100	250U	250U	250U	390

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-323**				**MW-325**										
Sample Date		**7/22/2016**	**10/13/2016**	**1/17/2017**	**4/27/2017**	**3/13/2012**	**3/13/2012**	**5/17/2012**	**5/18/2012**	**7/26/2012**	**7/27/2012**	**11/21/2012**	**2/21/2013**	**6/14/2013**	**9/9/2013**	**11/5/2013**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**				**Pre-CAMU Operation**										
Ammonia Nitrogen As N	3000	2200	200U	200U	200U	**8700**	**8700**	1000	**4300**	2100	1100	2000	**12000**	1700	200U	1600
Total Phosphorus as PO4 water	NA	250U	770	250U	250U	250U	250U	440	410	250J	420	430	510	580	600	410

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-325								MW-325						MW-326
Sample Date		11/5/2013	3/11/2014	5/21/2014	8/7/2014	10/28/2014	3/10/2015	5/28/2015	9/17/2015	11/17/2015	1/12/2016	4/7/2016	7/21/2016	1/18/2017	4/26/2017	3/13/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation								Cell 1 Operation						Pre-CAMU Operation
Ammonia Nitrogen As N	3000	1100	2000	200U	**6600**	2000	2500	**7800**	1600	810	2700	1800	2300	2000	2200	**11700**
Total Phosphorus as PO4 water	NA	400	580	250U	580	840	2000	460	680	1700	14700	950	1200	530	510	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-326**														
Sample Date		**5/23/2012**	**5/24/2012**	**7/26/2012**	**7/27/2012**	**11/20/2012**	**2/20/2013**	**6/13/2013**	**9/5/2013**	**11/6/2013**	**3/10/2014**	**8/5/2014**	**3/23/2015**	**5/29/2015**	**5/29/2015**	**9/18/2015**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Pre-CAMU Operation**														
Ammonia Nitrogen As N	3000	**7600**	**6400**	**4300**	**21500**	**11500**	**10700**	**7700**	**13900**	**8300**	**8900**	**9800**	**6500**	**11300**	**6100**	**7600**
Total Phosphorus as PO4 water	NA	250U	340	250U	500	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-326**							**MW-327**							
Sample Date		**11/18/2015**	**1/11/2016**	**4/12/2016**	**7/19/2016**	**10/13/2016**	**1/17/2017**	**4/21/2017**	**3/14/2012**	**5/18/2012**	**5/18/2012**	**7/31/2012**	**8/1/2012**	**9/6/2013**	**11/11/2013**	**3/11/2014**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**							**Pre-CAMU Operation**							
Ammonia Nitrogen As N	3000	**8700**	**7000**	**6200**	**7700**	**7700**	2000	**8700**	200U	200U	200U	200U	200U	200U	200U	200U
Total Phosphorus as PO4 water	NA	250J	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-327					MW-327							MW-328		
Sample Date		8/7/2014	10/23/2014	3/23/2015	6/1/2015	9/15/2015	11/16/2015	1/11/2016	4/12/2016	10/21/2016	1/20/2017	4/18/2017	4/18/2017	3/21/2012	5/23/2012	5/24/2012
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation					Cell 1 Operation							Pre-CAMU Operation		
Ammonia Nitrogen As N	3000	**6300**	200U	200U	230J	200U	200U	200U	200U	230J	200U	200U	200U	2900	2600	2500
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-328											MW-328			
Sample Date		7/25/2012	7/26/2012	6/17/2013	9/10/2013	11/12/2013	3/14/2014	8/8/2014	10/29/2014	3/2/2015	6/1/2015	9/16/2015	11/19/2015	1/13/2016	4/14/2016	7/25/2016
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation											Cell 1 Operation			
Ammonia Nitrogen As N	3000	2100	1800	900	540J	200U	420J	920	1100	200U	260J	200U	400J	200U	1100	510J
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-328**			**MW-328**			**MW-333**								
Sample Date		**12/6/2016**	**1/23/2017**	**4/27/2017**	**1/9/2019**	**9/25/2020**	**12/2/2020**	**5/16/2012**	**5/17/2012**	**7/24/2012**	**7/25/2012**	**3/10/2014**	**5/22/2014**	**8/6/2014**	**10/30/2014**	**3/9/2015**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**			**Cell 2 Operation**			**Pre-CAMU Operation**								
Ammonia Nitrogen As N	3000	200U	200U	200U	40U	--	--	**20000**	**12400**	**13000**	**17800**	**16000**	**13500**	**14600**	**12700**	**7300**
Total Phosphorus as PO4 water	NA	250U	250U	250U	250U	80UJ	250U	250U	260J	250U	250U	500	390	1300	1600	520

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	NJ GW Quality Criterion-Class IIA	MW-333											MW-334	MW-334R		
Sample Date		6/3/2015	5/17/2012	5/18/2012	7/31/2012	8/1/2012	3/10/2014	5/22/2014	8/6/2014	10/30/2014	3/9/2015	5/29/2015	1/15/2016	7/20/2016	10/17/2016	1/19/2017
Parameter Name/Report Units		ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L	ug/L
Sampling Event		Pre-CAMU Operation											Cell 1 Operation	Cell 1 Operation		
Ammonia Nitrogen As N	3000	**17700**	**14600**	**12200**	**24300**	**19600**	**18300**	**16600**	**18700**	**20000**	**14000**	**13800**	**9200**	**9900**	**20500**	**17200**
Total Phosphorus as PO4 water	NA	670	6100	250U	5300	3700	7800	2800	6600	2100	4500	2100	270J	250U	250U	6400

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix A-8
Additional Parameters for Additional Groundwater Monitoring Program
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Location ID	**NJ GW Quality Criterion-Class IIA**	**MW-334R**	**MW-474**				
Sample Date		**4/21/2017**	**1/8/2016**	**7/20/2016**	**10/17/2016**	**1/19/2017**	**4/18/2017**
Parameter Name/Report Units		**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Sampling Event		**Cell 1 Operation**	**Cell 1 Operation**				
Ammonia Nitrogen As N	3000	**19000**	200U	1100	1700	1700	1800
Total Phosphorus as PO4 water	NA	4900	250U	360	250U	250U	250U

Notes:
Organge shaded cells shows data collected pre-CAMU operation
Green shaded cells shows data collected during Cell 1 operation
Blue shaded cells shows data collected during Cell 2 operation
Monitoring wells abandoned - MW-211, MW-333 and MW-334
NA- No action level limit available for this parameter
U- Analyte not detected at that concentration
J- Analyte concentration estimated

Appendix B-1
Field Parameters for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Parameter/Sampling Event	Unit	6/5/2017	9/21/2017	12/12/2017	3/26/2018	6/6/2018	9/20/2018	12/12/2018	3/12/2019	6/18/2019	9/18/2019
Cell 1											
pH	SU	7.29	7.55	7.54	7.56	7.54	7.58	5.42	8.48	7.24	7.16
Dissolved Oxygen	mg/l	1.15	5.77	6.50	6.46	5.74	7.61	9.26	5.94	6.85	8.34
Cell 2											
pH	SU	NA	NA	NA	7.16	7.48	7.61	7.82	8.26	8.14	8.08
Dissolved Oxygen	mg/l	NA	NA	NA	6.73	5.33	7.72	8.06	7.39	7.94	7.68

Parameter/Sampling Event	Unit	12/20/2019	3/17/2020	6/8/2020	10/30/2020	12/21/2020
Cell 1						
pH	SU	7.86	7.87	7.65	6.80	7.54
Dissolved Oxygen	mg/l	4.30	8.73	8.48	9.64	8.49
Cell 2						
pH	SU	7.82	7.94	7.22	7.59	7.52
Dissolved Oxygen	mg/l	6.45	8.16	6.26	11.80	8.46

Appendix B-2
Volatile Organic Compound Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2017Q2-LGMP	CS-WW-2017Q3-LGMP	CS-WW-2017Q4-LGMP	CS-WW-2018Q1-LGMP-Cell1	CS-WW-2018Q1-LGMP-Cell2	CS-WW-2018Q2-LGMP-CELL 1	CS-WW-2018Q2-LGMP-CELL 2	CS-WW-2018Q3-LGMP-CELL 1
Sample Date	**06/05/2017**	**09/21/2017**	**12/12/2017**	**03/26/2018**	**03/26/2018**	**06/06/2018**	**06/06/2018**	**09/20/2018**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,1 Dichloroethene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
1,1,1-Trichloroethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U
1,1,2,2-Tetrachloroethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
1,1,2-Trichloroethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	2U	2U	2U	2U	2U	2U	2U	0.2U
1,1-Dichloroethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
1,2,4-Trichlorobenzene	1U	1U	1U	1U	1U	1U	1U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	2U	2U	2U	2U	2U	2U	2U	0.3U
1,2-Dibromoethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	1U	1U	1U	1U	1U	1U	1U	0.2U
1,2-Dichloroethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U
1,2-Dichloropropane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
1,3-Dichlorobenzene	1U	1U	1U	1U	1U	1U	1U	0.2U
1,4-Dichlorobenzene	1U	1U	1U	1U	1U	1U	1U	0.2U
2-Butanone (Methyl ethyl ketone)	3U	3U	3U	3U	3U	3U	3U	0.3U
2-Hexanone	3U	3U	3U	3U	3U	3U	3U	0.3U
4-Methyl-2-pentanone	3U	3U	3U	3U	3U	3U	3U	0.5U
Acetone	6U	6U	6U	6U	6U	6U	6J	3J
Benzene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Bromodichloromethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Bromoform	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Bromomethane (Methyl bromide)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U
Carbon disulfide	1U	1U	1U	1U	1U	1U	1U	0.2U
Carbon Tetrachloride	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Chlorobenzene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Chloroethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Chloroform	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Chloromethane (Methyl chloride)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
cis-1,2-Dichloroethene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
cis-1,3-Dichloropropene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Cyclohexane	2U	2U	2U	2U	2U	2U	2U	0.2U
Dibromochloromethane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Dichlorodifluoromethane (Freon 12)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Ethylbenzene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.4U
Isopropylbenzene	1U	1U	1U	1U	1U	1U	1U	0.2U
Methyl acetate	1U	1U	1U	1U	1U	1U	1U	0.2U
Methyl-t-butyl ether	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Methylcyclohexane	1U	1U	1U	1U	1U	1U	1U	0.2U
Methylene chloride (Dichloromethane)	2U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.3U
Styrene	1U	1U	1U	1U	1U	1U	1U	0.2U
Tetrachloroethene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Toluene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
trans-1,2-Dichloroethene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
trans-1,3-Dichloropropene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Trichloroethene (Trichloroethylene)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Trichlorofluoromethane (Freon 11)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Vinyl chloride (Chloroethene)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.2U
Xylene (total)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	1U
VOCs+TICS	0U	0U	--	--	--	0U	0U	0U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- - Analyte concentration biased low
-- Not measured

Appendix B-2
Volatile Organic Compound Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2018Q3-LGMP-CELL 2	CS-WW-2019Q1-LGMP-CELL 1	CS-WW-2019Q1-LGMP-CELL 2	CS-WW-2019Q2-LGMP-Cell1	CS-WW-2019Q2-LGMP-Cell2	CS-WW-2019Q3-LGMP-Cell1	CS-WW-2019Q3-LGMP-Cell2
Sample Date	**09/20/2018**	**03/12/2019**	**03/12/2019**	**06/18/2019**	**06/18/2019**	**09/18/2019**	**09/18/2019**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,1 Dichloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,1-Trichloroethane	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1-Dichloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2,4-Trichlorobenzene	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromoethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichloroethane	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dichloropropane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-Dichlorobenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,4-Dichlorobenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-Butanone (Methyl ethyl ketone)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
2-Hexanone	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
4-Methyl-2-pentanone	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.6J
Acetone	2J	3J	8J	1UJ	0.8UJ	0.7U	2J
Benzene	0.3J	0.2U	0.2U	0.2U	0.4J	0.2U	0.2U
Bromodichloromethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Bromoform	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U
Bromomethane (Methyl bromide)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Carbon Tetrachloride	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chlorobenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroform	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloromethane (Methyl chloride)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,2-Dichloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,3-Dichloropropene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Cyclohexane	0.2U	0.2U	0.2U	0.2U	0.2U	1U	1U
Dibromochloromethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Dichlorodifluoromethane (Freon 12)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Ethylbenzene	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methyl acetate	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methyl-t-butyl ether	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methylcyclohexane	0.2U	0.2U	0.2U	0.2U	0.2U	0.5U	0.5U
Methylene chloride (Dichloromethane)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Styrene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Tetrachloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Toluene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,2-Dichloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,3-Dichloropropene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichloroethene (Trichloroethylene)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	0.2U	0.2U	0.2U	0.2UJ	0.2UJ	0.2U	0.2U
Vinyl chloride (Chloroethene)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Xylene (total)	1U	1U	1U	1U	1U	1U	1U
VOCs+TICS	0U	0U	0U	-	-	0U	0U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approxima
J- - Analyte concentration biased low
-- Not measured

Appendix B-2
Volatile Organic Compound Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2019Q4-LGMP-Cell1	CS-WW-2019Q4-LGMP-Cell2	CS-WW-2020Q1-LGMP-Cell1	CS-WW-2020Q1-LGMP-Cell2	CS-WW-2020Q2-LGMP-Cell1	CS-WW-2020Q2-LGMP-Cell2	CS-WW-2020Q3-LGMP-Cell 1	CS-WW-2020Q3-LGMP-Cell 2
Sample Date	**12/20/2019**	**12/20/2019**	**03/17/2020**	**03/17/2020**	**06/08/2020**	**06/08/2020**	**10/30/2020**	**10/30/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
1,1 Dichloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,1-Trichloroethane	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,1,2,2-Tetrachloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	0.2U	0.2U	0.2U	0.2U	-	-	-	-
1,1-Dichloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2,4-Trichlorobenzene	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dibromoethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,2-Dichloroethane	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
1,2-Dichloropropane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,3-Dichlorobenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
1,4-Dichlorobenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
2-Butanone (Methyl ethyl ketone)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
2-Hexanone	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
4-Methyl-2-pentanone	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Acetone	2J	0.8J	2J	0.7U	1.1J	1.5J	0.82J	1.7J
Benzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Bromodichloromethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Bromoform	1U	1U	1U	1U	1U	1U	1U	1U
Bromomethane (Methyl bromide)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Carbon disulfide	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Carbon Tetrachloride	0.2UJ	0.2UJ	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chlorobenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloroform	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Chloromethane (Methyl chloride)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,2-Dichloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
cis-1,3-Dichloropropene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Cyclohexane	1U	1U	1U	1U	1U	1U	1U	1U
Dibromochloromethane	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Dichlorodifluoromethane (Freon 12)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Ethylbenzene	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
Isopropylbenzene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methyl acetate	0.2U	0.2U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Methyl-t-butyl ether	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Methylcyclohexane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Methylene chloride (Dichloromethane)	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U	0.3U
Styrene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Tetrachloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Toluene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,2-Dichloroethene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
trans-1,3-Dichloropropene	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichloroethene (Trichloroethylene)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Vinyl chloride (Chloroethene)	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U	0.2U
Xylene (total)	1U	1U	1U	1U	1.4U	1.4U	1.4U	1.4U
VOCs+TICS	0U	0U	0U	0U	-	-	0U	0U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approxima
J- - Analyte concentration biased low
-- Not measured

Appendix B-2
Volatile Organic Compound Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	**CS-WW-2020Q4-LGMP-CELL 1**	**CS-WW-2020Q4-LGMP-CELL 2**
Sample Date	**12/21/2020**	**12/21/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**
1,1 Dichloroethene	0.2U	0.2U
1,1,1-Trichloroethane	0.3U	0.3U
1,1,2,2-Tetrachloroethane	0.2U	0.2U
1,1,2-Trichloroethane	0.2U	0.2U
1,1,2-Trichlorotrifluoroethane (Freon 113)	-	-
1,1-Dichloroethane	0.2U	0.2U
1,2,4-Trichlorobenzene	0.3U	0.3U
1,2-Dibromo-3-chloropropane (DBCP)	0.3U	0.3U
1,2-Dibromoethane	0.2U	0.2U
1,2-Dichlorobenzene (o-Dichlorobenzene)	0.2U	0.2U
1,2-Dichloroethane	0.3U	0.3U
1,2-Dichloropropane	0.2U	0.2U
1,3-Dichlorobenzene	0.2U	0.2U
1,4-Dichlorobenzene	0.2U	0.2U
2-Butanone (Methyl ethyl ketone)	0.3U	0.3U
2-Hexanone	0.3U	0.3U
4-Methyl-2-pentanone	0.5U	0.5U
Acetone	0.7U	0.7U
Benzene	0.2U	0.2U
Bromodichloromethane	0.2U	0.2U
Bromoform	1U	1U
Bromomethane (Methyl bromide)	0.3U	0.3U
Carbon disulfide	0.2U	0.2U
Carbon Tetrachloride	0.2U	0.2U
Chlorobenzene	0.2U	0.2U
Chloroethane	0.2U	0.2U
Chloroform	0.2U	0.2U
Chloromethane (Methyl chloride)	0.2U	0.2U
cis-1,2-Dichloroethene	0.2U	0.2U
cis-1,3-Dichloropropene	0.2U	0.2U
Cyclohexane	1U	1U
Dibromochloromethane	0.2U	0.2U
Dichlorodifluoromethane (Freon 12)	0.2U	0.2U
Ethylbenzene	0.4U	0.4U
Isopropylbenzene	0.2U	0.2U
Methyl acetate	0.3U	0.3U
Methyl-t-butyl ether	0.2U	0.2U
Methylcyclohexane	0.5U	0.5U
Methylene chloride (Dichloromethane)	0.3U	0.3U
Styrene	0.2U	0.2U
Tetrachloroethene	0.2U	0.2U
Toluene	0.2U	0.2U
trans-1,2-Dichloroethene	0.2U	0.2U
trans-1,3-Dichloropropene	0.2U	0.2U
Trichloroethene (Trichloroethylene)	0.2U	0.2U
Trichlorofluoromethane (Freon 11)	0.2U	0.2U
Vinyl chloride (Chloroethene)	0.2U	0.2U
Xylene (total)	1.4U	1.4U
VOCs+TICS	0U	0U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approxima
J- - Analyte concentration biased low
-- Not measured

Appendix B-3
Semi Volatile Organic Compound Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2017Q2-LGMP	CS-WW-2017Q3-LGMP	CS-WW-2017Q4-LGMP	CS-WW-2018Q1-LGMP-Cell2	CS-WW-2018Q1-LGMP-Cell1	CS-WW-2018Q2-LGMP-CELL 1	CS-WW-2018Q2-LGMP-CELL 2	CS-WW-2018Q3-LGMP-CELL 1	CS-WW-2018Q3-LGMP-CELL 2
Sample Date	**06/05/2017**	**09/21/2017**	**12/12/2017**	**03/26/2018**	**03/26/2018**	**06/06/2018**	**06/06/2018**	**09/20/2018**	**09/20/2018**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
2,4,5-Trichlorophenol	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	0.5U	0.5U	0.5U	1	0.5U	3U	3U	3U	3U
2,4-Dinitrophenol	10U	10U	10U	10U	10U	14U	14U	14U	14U
2,4-Dinitrotoluene	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Chloronaphthalene	0.4U	0.4UJ	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.4J
2-Methylphenol (o-Cresol)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	0.5U	0.5U	0.5U	0.5U	0.5U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U
3,3'-Dichlorobenzidine	2U	2U	2U	2U	2U	3U	3U	3U	3U
3-Nitroaniline	0.5U	0.5U	0.5U	0.5U	0.5U	3U	3U	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	5U	5U	5U	5U	5U	8U	8U	8U	8U
4-Bromophenylphenylether	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chloroaniline	2U	2U	2U	2U	2U	4U	4U	4U	4U
4-Chlorophenyl phenyl ether	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	0.5U	0.5U	0.5U	0.5U	0.5U	0.9U	0.9U	0.9U	0.9U
4-Nitrophenol	10U	10U	10U	10U	10U	10U	10U	10U	10U
Acenaphthene	0.1U	0.1UJ	0.1J	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	0.5U	0.5U	0.5U	0.5U	0.5U	4U	4U	4U	4U
Anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	1U	1U	1U	1U	1U	3U	3U	3U	3U
Benzo(a)anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	2U	2U	2U	2U	2U	5U	5U	5U	5U
Butylbenzylphthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	5U	5U	5U	5U	5U	5U	5U	5U	5U
Carbazole	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chrysene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	2U	2U	2U	2U	2U	5U	5U	5U	5U
Dibenz(a,h)anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Diethylphthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	0.5U	0.5UJ	0.5U	0.5U	0.5U	3U	3U	3U	3U
Fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	0.1U	0.1UJ	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	5U	5U	5U	5U	5U	5U	5U	5U	5U
Hexachloroethane	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.5U	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	0.7U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	0.5U	0.5U	0.5U	0.5U	0.5U	0.7U	0.7U	0.7U	0.7U
Naphthalene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	0.5U	0.5UJ	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pentachlorophenol	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
SVOCs TICs	--	--	--	--	--	10JB	35J	130J	16J

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the analyte was also found in the
-- Not measured

Appendix B-3
Semi Volatile Organic Compound Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2019Q1-LGMP-CELL 1	CS-WW-2019Q1-LGMP-CELL 2	CS-WW-2019Q2-LGMP-Cell1	CS-WW-2019Q2-LGMP-Cell2	CS-WW-2019Q3-LGMP-Cell1	CS-WW-2019Q3-LGMP-Cell2	CS-WW-2019Q4-LGMP-Cell1	CS-WW-2019Q4-LGMP-Cell2	CS-WW-2020Q1-LGMP-Cell1
Sample Date	**03/12/2019**	**03/12/2019**	**06/18/2019**	**06/18/2019**	**09/18/2019**	**09/18/2019**	**12/20/2019**	**12/20/2019**	**03/17/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
2,4,5-Trichlorophenol	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4,6-Trichlorophenol	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dichlorophenol	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2,4-Dimethylphenol	3U	3U	3U	3U	3U	3U	3U	3U	3U
2,4-Dinitrophenol	14U	14U	14U	14U	14U	14U	14U	14U	14U
2,4-Dinitrotoluene	1U	1U	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Chloronaphthalene	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U	0.4U
2-Chlorophenol (o-Chlorophenol)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Methyl-Naphthlalene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
2-Nitroaniline (o-Nitroaniline)	2U	2U	2U	2U	2U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	3U	3U	3U	3U	3U	3U	3U	3U	3U
3,3'-Dichlorobenzidine	3U	3U	3U	3U	3U	3U	3U	3U	3U
3-Nitroaniline	3U	3U	3U	3U	3U	3U	3U	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	8U	8U	8U	8U	8U	8U	8U	8U	8U
4-Bromophenylphenylether	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Chloroaniline	4U	4U	4U	4U	4U	4U	4U	4U	4U
4-Chlorophenyl phenyl ether	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Methylphenol (p-Cresol)	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
4-Nitroaniline	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U	0.9U
4-Nitrophenol	10U	10U	10U	10U	10U	10U	10U	10U	10U
Acenaphthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	4U	4U	4U	4U	4U	4U	4U	4U	4U
Anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	2U	2U	2U	2U	2U	2U	2U	2U	2U
Benzaldehyde	3U	3U	3U	3U	3U	3U	3U	3U	3U
Benzo(a)anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Chloroethyl) ether	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-chloroisopropyl) ether	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
bis(2-Ethylhexyl)phthalate	5U	5U	6J	8J	5U	6J	5U	5U	5U
Butylbenzylphthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Caprolactam	5U	5U	5U	5U	5U	5U	5U	5U	5U
Carbazole	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Chrysene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Di-n-octylphthalate	5U	5U	5U	5U	5U	5U	5U	5U	5U
Dibenz(a,h)anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Diethylphthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Dimethyl phthalate	2U	2U	2U	2U	2U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	3U	3U	3U	3U	3U	3U	3U	3U	3U
Fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Hexachlorocyclopentadiene	5U	5U	5U	5U	5U	5U	5U	5U	5U
Hexachloroethane	1U	1U	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
N-Nitrosodi-n-propylamine	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U	0.7U
Naphthalene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
p-Chloro-m-cresol	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	2U
Pentachlorophenol	1U	1U	1U	1U	1U	1U	1U	1U	1U
Phenanthrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U
Pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
SVOCs TICs	180JB	120JB	-	-	8J	400J	77J	6J	0U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate r
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the a
-- Not measured

Appendix B-3
Semi Volatile Organic Compound Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2020Q1-LGMP-Cell2	CS-WW-2020Q2-LGMP-Cell1	CS-WW-2020Q2-LGMP-Cell2	CS-WW-2020Q3-LGMP-Cell 1	CS-WW-2020Q3-LGMP-Cell 2	CS-WW-2020Q4-LGMP-CELL 1	CS-WW-2020Q4-LGMP-CELL 2
Sample Date	**03/17/2020**	**06/08/2020**	**06/08/2020**	**10/30/2020**	**10/30/2020**	**12/21/2020**	**12/21/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
2,4,5-Trichlorophenol	0.5U	0.52U	0.52U	0.51UJ	0.51UJ	0.51U	0.5U
2,4,6-Trichlorophenol	0.5U	0.52U	0.52U	0.51UJ	0.51UJ	0.51UJ	0.5UJ
2,4-Dichlorophenol	0.5U	0.52U	0.52U	0.51UJ	0.51UJ	0.51U	0.5U
2,4-Dimethylphenol	3U	3.1U	3.1U	3.1UJ	3.1UJ	3U	3U
2,4-Dinitrophenol	14U	15U	15U	14UJ	14UJ	14U	14U
2,4-Dinitrotoluene	1U	1U	1U	1U	1U	1U	1U
2,6-Dinitrotoluene	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
2-Chloronaphthalene	0.4U	0.41U	0.41U	0.41U	0.41U	0.41U	0.4U
2-Chlorophenol (o-Chlorophenol)	0.5U	0.52U	0.52U	0.51UJ	0.51UJ	0.51U	0.5U
2-Methyl-Naphthlalene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
2-Methylphenol (o-Cresol)	0.5U	0.52U	0.52U	0.51UJ	0.51UJ	0.51U	0.5U
2-Nitroaniline (o-Nitroaniline)	2U	2.1U	2.1U	2U	2U	2U	2U
2-Nitrophenol (o-Nitrophenol)	3U	3.1U	3.1U	3.1UJ	3.1UJ	3UJ	3UJ
3,3'-Dichlorobenzidine	3U	3.1U	3.1U	3.1U	3.1U	3U	3U
3-Nitroaniline	3U	3.1U	3.1U	3.1U	3.1U	3U	3U
4,6-Dinitro-2-methylphenol (4,6-Dinitro-o-cresol)	8U	8.3U	8.3U	8.1UJ	8.2UJ	8.1UJ	8UJ
4-Bromophenylphenylether	0.5U	0.52UJ	0.52UJ	0.51U	0.51U	0.51U	0.5U
4-Chloroaniline	4U	4.1U	4.1U	4.1U	4.1U	4.1U	4U
4-Chlorophenyl phenyl ether	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
4-Methylphenol (p-Cresol)	0.5U	0.52U	0.52U	0.51UJ	0.51UJ	0.51U	0.5U
4-Nitroaniline	0.9U	0.93U	0.93U	0.92U	0.92U	0.91U	0.9U
4-Nitrophenol	10U	10U	10U	10UJ	10UJ	10U	10U
Acenaphthene	0.1U	0.29J	0.29J	0.1U	0.1U	0.1U	0.1U
Acenaphthylene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Acetophenone	4U	4.1U	4.1U	4.1U	4.1U	4.1U	4U
Anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Atrazine	2U	2.1U	2.1U	2UJ	2UJ	2U	2U
Benzaldehyde	3U	3.1U	3.1U	3.1UJ	3.1UJ	3U	3U
Benzo(a)anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(a)pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(b)fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(g,h,i)perylene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Benzo(k)fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
bis(2-Chloroethoxy)methane	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
bis(2-Chloroethyl) ether	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
bis(2-chloroisopropyl) ether	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
bis(2-Ethylhexyl)phthalate	5U	5.2U	5.2U	5.1U	5.1U	5.1U	5U
Butylbenzylphthalate	2U	2.1U	2.1U	2U	2U	2U	2U
Caprolactam	5U	5.2U	5.2U	5.1UJ	5.1UJ	5.1U	5U
Carbazole	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
Chrysene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Di-n-butylphthalate	2U	2.1U	2.1U	2U	2U	2U	2U
Di-n-octylphthalate	5U	5.2U	5.2U	5.1U	5.1U	5.1U	5U
Dibenz(a,h)anthracene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Dibenzofuran	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
Diethylphthalate	2U	2.1U	2.1U	2U	2U	2U	2U
Dimethyl phthalate	2U	2.1U	2.1U	2U	2U	2U	2U
Diphenyl (Biphenyl, Phenyl benzene)	3U	3.1U	3.1U	3.1U	3.1U	3U	3U
Fluoranthene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Fluorene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobenzene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Hexachlorobutadiene	0.5U	0.52UJ	0.52UJ	0.51U	0.51U	0.51U	0.5U
Hexachlorocyclopentadiene	5U	5.2U	5.2U	5.1U	5.1U	5.1U	5U
Hexachloroethane	1U	1U	1U	1U	1U	1U	1U
Indeno(1,2,3-cd)Pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Isophorone	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
N-Nitrosodi-n-propylamine	0.7U	0.73U	0.73U	0.71U	0.72U	0.71U	0.7U
N-Nitrosodiphenylamine (Diphenylamine)	0.7U	0.73U	0.73U	0.71U	0.72U	0.71U	0.7U
Naphthalene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Nitrobenzene	0.5U	0.52U	0.52U	0.51U	0.51U	0.51U	0.5U
p-Chloro-m-cresol	2U	1.7U	1.7U	1.6UJ	1.6UJ	1.6U	1.6U
Pentachlorophenol	1U	1U	1U	1UJ	1UJ	1U	1U
Phenanthrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
Phenol	0.5U	0.52U	0.52U	0.51UJ	0.51UJ	0.51U	0.5U
Pyrene	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U
SVOCs TICs	32J	-	-	-	0U	0U	0U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate r
J- - Analyte concentration biased low
JB- Analyte concentration estimated (J) and the a
-- Not measured

Appendix B-4
TAL Metals Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2017Q2-LGMP	CS-WW-2017Q3-LGMP	CS-WW-2017Q4-LGMP	CS-WW-2018Q1-LGMP-Cell1	CS-WW-2018Q1-LGMP-Cell2	CS-WW-2018Q2-LGMP-CELL 1	CS-WW-2018Q2-LGMP-CELL 2
Sample Date	**06/05/2017**	**09/21/2017**	**12/12/2017**	**03/26/2018**	**03/26/2018**	**06/06/2018**	**06/06/2018**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Aluminum	86.8U	89.4U	89.4U	89.4U	89.4U	89.4U	89.4U
Antimony	15.6	9.5	15.1	29.5	12.3	33.2	19.1
Arsenic	5.1	2.6	4.2	11.8	7.1	8.3	7.1
Barium	28.3	45.9	38.6	34.2	53.6	36.5	73.3
Beryllium	0.67U	2U	2U	2U	2U	2U	2U
Cadmium	0.49U	1.8U	1.8U	1.8U	1.8U	1.8U	1.8U
Calcium	94700	161000	138000	86300	152000	80500	160000
Chromium	2.9UJ	3.3U	3.3U	3.6J	3.3U	3.3U	3.3U
Cobalt	1.9U	1.7U	1.7U	1.7U	6.6	1.7U	8.3
Copper	13.2	35.8	33.1	69.2	10.8	78.3	9.7J
Iron	74.7U	82.1UJ	80.5U	121UJ	378	91J	837
Lead	4.4	3	3.1	7.7	2.9	10.1	1.8
Magnesium	155000	216000	288000	328000	107000	294000	184000
Manganese	28.4	58.7	35.7	31.2	1610.0	35.1	2290J
Mercury	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U
Nickel	6.2J	5.6J	6.9J	8.5J	14.1	10.2	17.4
Potassium	10300	17300	13600	12500	18200	16600	28300
Selenium	9.7U	9.3U	9.6J	9.3U	9.3U	9.3U	9.3U
Silver	1.9U	2.4U	2.4U	2.4U	2.4U	2.4U	2.4U
Sodium	159000	247000	196000	231000J	263000J	281000J	406000J
Thallium	0.16U	0.12U	0.12U	0.12U	0.12U	0.12U	0.12U
Vanadium	35.4	20.9	12.3	145.0	4.6J	79.6	3.8J
Zinc	10.6J	81.2	18.2J	35.2	12.3J	28.0	14.3J

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix B-4
TAL Metals Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	CS-WW-2018Q3-LGMP-CELL 1	CS-WW-2018Q3-LGMP-CELL 2	CS-WW-2019Q1-LGMP-CELL 1	CS-WW-2019Q1-LGMP-CELL 2	CS-WW-2019Q2-LGMP-Cell1	CS-WW-2019Q2-LGMP-Cell2
Sample Date	**09/20/2018**	**09/20/2018**	**03/12/2019**	**03/12/2019**	**06/18/2019**	**06/18/2019**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Aluminum	153U	153U	153U	153U	153U	153U
Antimony	21.9	16.9	329	69.7	64.3	43
Arsenic	4.7	2.2J	14.8	11.1	6.1	5.6
Barium	40.3	48.4	22.9	57.5	31.8	73.9
Beryllium	1U	1U	1U	1U	1U	1U
Cadmium	1U	1U	1U	1U	1U	1U
Calcium	110000	199000	35300	73000	66300	85800
Chromium	5.3U	5.3U	5.3U	5.3U	5.3U	5.3U
Cobalt	1.5U	2.6UJ	1.5UJ	5.9	1.5U	5.2
Copper	34.8J	16J	21.4	3880	21.6	50.4
Iron	89.8J	1060	161J	2090	40U	936
Lead	3J	1.8J	10.3	109	1.5J	2.9J
Magnesium	302000	220000	151000	163000	146000	180000
Manganese	31.2J	798	131	2180	4.6J	2020
Mercury	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U
Nickel	11.2UJ	10.2UJ	5.8J	9.5J	6UJ	12.6
Potassium	16900	22300	9920	13300	10300	17900
Selenium	21U	21U	21U	21U	21U	21U
Silver	5U	5U	5U	5U	5U	5U
Sodium	242000	253000	232000	332000	153000	298000
Thallium	0.11U	0.11U	0.11U	0.11U	0.11U	0.11U
Vanadium	78.2	4.3UJ	46.4	3U	41.4	3U
Zinc	24.2J	22.7J	8.5J	1380	19.7J	43.3

Notes:
U- Analyte not detected at that con
UJ- Analyte not detected above the
sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased lc

Appendix B-4
TAL Metals Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	**CS-WW-2019Q3-LGMP-Cell1**	**CS-WW-2019Q3-LGMP-Cell2**	**CS-WW-2019Q4-LGMP-Cell1**	**CS-WW-2019Q4-LGMP-Cell2**	**CS-WW-2020Q1-LGMP-Cell1**	**CS-WW-2020Q1-LGMP-Cell2**
Sample Date	**09/18/2019**	**09/18/2019**	**12/20/2019**	**12/20/2019**	**03/17/2020**	**03/17/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Aluminum	107U	107U	226	51	52.3	21.7J
Antimony	30.3	39.3	30	76	24	61
Arsenic	4.2	6.9	11	5	4	2.5
Barium	50.8	77.1	30	27	40	36.8
Beryllium	1U	1U	1U	1U	1U	1U
Cadmium	1U	1U	1U	1U	1U	1U
Calcium	97000	105000	52500	61200	117000	110000
Chromium	1.6U	3.2J	3.7UJ	2.8UJ	3.3J	3.6J
Cobalt	3UJ	4.4UJ	1.5U	1.5U	1.5U	1.5U
Copper	34.8	594	32	51	60.3	169
Iron	93.8UJ	2940	208	336	111J	175J
Lead	3	29.2	18	3	4.4	3.5
Magnesium	162000	206000	213000	157000	235000	227000
Manganese	457	1370	75	48	26.8	120.0
Mercury	0.05U	0.05U	0.05U	0.05U	0.05U	0.05U
Nickel	11.2	9.4J	5.8J	4.2J	12.4	5.1J
Potassium	14900	18500	11100	11100	19500	18100
Selenium	16U	16U	16U	16U	16U	16U
Silver	5U	5U	5U	5U	5U	5U
Sodium	211000	258000	176000	178000	364000	266000
Thallium	0.13U	0.13U	0.13U	0.13U	0.13U	0.13U
Vanadium	32.1	13.4	50	13	53.9	1.9U
Zinc	13.6J	182	24	18J	20.2	59.2

Notes:
U- Analyte not detected at that con
UJ- Analyte not detected above the
sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased lc

Appendix B-4
TAL Metals Results for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	**CS-WW-2020Q2-LGMP-Cell1**	**CS-WW-2020Q2-LGMP-Cell2**	**CS-WW-2020Q3-LGMP-Cell 1**	**CS-WW-2020Q3-LGMP-Cell 2**	**CS-WW-2020Q4-LGMP-CELL 1**	**CS-WW-2020Q4-LGMP-CELL 2**
Sample Date	**06/08/2020**	**06/08/2020**	**10/30/2020**	**10/30/2020**	**12/21/2020**	**12/21/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**	**ug/L**
Aluminum	-	-	-	-	150U	2800
Antimony	31	71	8.2	8.3	11.0	20.0
Arsenic	6	1.6J	8.0	2.9	2.2	1.5J
Barium	41B	60B	66	24	66	68
Beryllium	1U	1U	1U	1U	1U	1U
Cadmium	1U	1U	1U	1U	1U	1U
Calcium	92000	170000	130000	43000	220000	260000
Chromium	-	-	-	-	1.6U	8.4J
Cobalt	1.5U	1.5U	19	1.7J	1.5U	4.3J
Copper	41	56	73	180	41	55
Iron	-	-	-	-	44J	4200
Lead	4	0.39J	13	13	4.5	4.6
Magnesium	210000	250000	310000	11000	130000	120000
Manganese	-	-	-	-	33.0	380
Mercury	0.079U	0.079U	0.1J	0.079U	0.08J	0.079J
Nickel	7.5J	8.4J	23	6.1J	7.4J	8.6J
Potassium	14000	20000	23000	9600	33000	36000
Selenium	-	-	-	-	16U	16U
Silver	5U	5U	5U	5U	5U	5U
Sodium	270000	310000	260000	14000	170000	130000
Thallium	0.13U	0.13U	0.13U	0.13U	0.13U	0.13U
Vanadium	38B	1.9U	35	7.5J	35	9.3J
Zinc	11J	22	30	140	33	40

Notes:
U- Analyte not detected at that con
UJ- Analyte not detected above the
sample quantification limit
J- Analyte concentration estimated
J- - Analyte concentration biased lo

Appendix B-5
Ammonia Nitrogen for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	**CS-WW-2017Q2-LGMP**	**CS-WW-2017Q3-LGMP**	**CS-WW-2017Q4-LGMP**
Sample Date	**06/05/2017**	**09/21/2017**	**12/12/2017**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	550J	250U	250U

Field Sample ID	**CS-WW-2018Q1-LGMP-Cell 1**	**CS-WW-2018Q1-LGMP-Cell 2**	**CS-WW-2018Q2-LGMP-CELL 1**
Sample Date	**03/26/2018**	**03/26/2018**	**06/06/2018**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	2000U	2000U	2000U

Field Sample ID	**CS-WW-2018Q2-LGMP-CELL 2**	**CS-WW-2018Q3-LGMP-CELL 1**	**CS-WW-2018Q3-LGMP-CELL 2**
Sample Date	**06/06/2018**	**09/20/2018**	**09/20/2018**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	2000U	250U	250U

Field Sample ID	**CS-WW-2019Q1-LGMP-CELL 1**	**CS-WW-2019Q1-LGMP-CELL 2**	**CS-WW-2019Q2-LGMP-Cell1**
Sample Date	**03/12/2019**	**03/12/2019**	**06/18/2019**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	250U	250U	250U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
J- - Analyte concentration biased low

Appendix B-5
Ammonia Nitrogen for Leachate Samples
Updated LDMP and LGMP for Cells 1-3 through 4th quarter 2020
Former Chevron Perth Amboy Facility in New Jersey

Field Sample ID	**CS-WW-2019Q2-LGMP-Cell2**	**CS-WW-2019Q3-LGMP-Cell1**	**CS-WW-2019Q3-LGMP-Cell2**
Sample Date	**06/18/2019**	**09/18/2019**	**09/18/2019**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	540J	250U	250UJ

Field Sample ID	**CS-WW-2019Q4-LGMP-Cell1**	**CS-WW-2019Q4-LGMP-Cell2**	**CS-WW-2020Q1-LGMP-Cell1**
Sample Date	**12/20/2019**	**12/20/2019**	**03/17/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	250U	250U	250U

Field Sample ID	**CS-WW-2020Q1-LGMP-Cell2**	**CS-WW-2020Q2-LGMP-Cell1**	**CS-WW-2020Q2-LGMP-Cell2**
Sample Date	**03/17/2020**	**06/08/2020**	**06/08/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	250U	250U	250U

Field Sample ID	**CS-WW-2020Q3-LGMP-Cell 1**	**CS-WW-2020Q3-LGMP-Cell 2**	**CS-WW-2020Q4-LGMP-CELL 1**
Sample Date	**10/30/2020**	**10/30/2020**	**12/21/2020**
Parameter Name/Report Units	**ug/L**	**ug/L**	**ug/L**
Ammonia Nitrogen As N	630U	630U	250U

Field Sample ID	**CS-WW-2020Q4-LGMP-CELL 2**
Sample Date	**12/21/2020**
Parameter Name/Report Units	**ug/L**
Ammonia Nitrogen As N	250U

Notes:
U- Analyte not detected at that concentration
UJ- Analyte not detected above the approximate reported sample
J- Analyte concentration estimated
J- - Analyte concentration biased low

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-08-2020**
Weather:	**partly cloudy , 33 degrees F , Wind W , 10 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-0057**	Well Depth:	**19**	ft below TOC	Depth to Water:	**6**	ft below TOC	Sampling Method:
Sample ID:	**MW-0057E8**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.4 - 18.4**	ft	Pump Intake:	**12.2**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:35	**7.22**	**115.8**	**192.1**	**5.71**	**0.355**	**6.89**	**0.17**	**100**	**6.15**
08:40	**7.4**	**165.7**	**187.8**	**4.34**	**0.348**	**7.3**	**0.17**	**100**	**6.4**
08:45	**7.34**	**223.6**	**32**	**3.29**	**0.348**	**7.35**	**0.17**	**100**	**6.59**
08:50	**7.38**	**162.3**	**-4.6**	**3.15**	**0.348**	**7.21**	**0.17**	**100**	**6.8**
08:55	**7.41**	**91.9**	**-2.8**	**3.44**	**0.348**	**7.03**	**0.17**	**100**	**6.91**
09:00	**7.41**	**61.2**	**2.3**	**3.32**	**0.346**	**8.82**	**0.17**	**200**	**7.1**
09:05	**7.43**	**53.8**	**3.4**	**3.32**	**0.346**	**9.36**	**0.17**	**200**	**7.3**
09:10	**7.44**	**56.7**	**-0.1**	**3.24**	**0.347**	**9.5**	**0.17**	**200**	**7.49**
09:15	**7.46**	**52.2**	**-0.8**	**3.05**	**0.347**	**9.64**	**0.17**	**200**	**7.7**
09:20	**7.46**	**53.1**	**-1.4**	**2.99**	**0.347**	**9.62**	**0.17**	**200**	**9.89**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-0057E8**	Clarity: **Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**01-08-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**09:25**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-08-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**		Date:	**01-08-2020**
Monitor Well #:	**MW-0057**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**19 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**N/A**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-08-2020**
Weather:	**cloudy , 50 degrees F , Wind N , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-0057**	Well Depth:	**19**	ft below TOC	Depth to Water:	**5.78**	ft below TOC	Sampling Method:
Sample ID:	**MW-0057E9**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.4 - 18.4**	ft	Pump Intake:	**12.09**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:20	**7.2**	**45.8**	**429.4**	**5.5**	**0.918**	**13.47**	**0.47**	**100**	**6.2**
08:25	**7.2**	**45.9**	**451.9**	**4.18**	**0.909**	**12.83**	**0.45**	**100**	**6.32**
08:30	**7.22**	**43.8**	**471.8**	**3.47**	**0.914**	**12.74**	**0.45**	**100**	**6.53**
08:35	**7.25**	**41.8**	**473.2**	**3.24**	**0.917**	**12.57**	**0.45**	**100**	**6.71**
08:40	**7.26**	**35.2**	**477.3**	**3.06**	**0.916**	**12.41**	**0.45**	**100**	**6.85**
08:45	**7.29**	**33.6**	**476.1**	**3.06**	**0.915**	**12.42**	**0.45**	**100**	**6.94**
08:50	**7.31**	**31.2**	**474.2**	**3.06**	**0.915**	**12.49**	**0.45**	**100**	**7.06**
08:55	**7.33**	**30.6**	**472**	**3.15**	**0.915**	**12.52**	**0.45**	**100**	**7.13**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-0057E9**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**04-08-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**900**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-08-2020**
Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**		Date:	**04-08-2020**
Monitor Well #:	**MW-0057**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**19 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-13-2020**
Weather:	**sunny , 88 degrees F , Wind NW , 8 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-0057**	Well Depth:	**16**	ft below TOC	Depth to Water:	**7.32**	ft below TOC	Sampling Method:
Sample ID:	**M057F1**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.4 - 18.4**	ft	Pump Intake:	**12.86**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04e8960ad**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:35	**6.8**	**27.2**	**-102.9**	**1.43**	**1.602**	**23.44**	**0.81**	**200**	**7.39**
12:40	**6.96**	**16.8**	**-106.3**	**0.47**	**1.693**	**20.01**	**0.86**	**200**	**7.48**
12:45	**6.99**	**14.9**	**-104.4**	**0.25**	**1.695**	**19.34**	**0.86**	**200**	**7.61**
12:50	**7**	**14.2**	**-103.6**	**0.17**	**1.689**	**19.08**	**0.86**	**200**	**7.71**
12:55	**7.01**	**13.6**	**-96.9**	**0.12**	**1.656**	**19.09**	**0.84**	**200**	**7.98**
13:00	**7.03**	**16.9**	**-89.4**	**0.1**	**1.635**	**19.26**	**0.83**	**200**	**8.21**
13:05	**7.04**	**18**	**-77.9**	**0.09**	**1.59**	**19.21**	**0.81**	**200**	**8.44**
13:10	**7.06**	**17.7**	**-71.6**	**0.08**	**1.555**	**19.35**	**0.79**	**200**	**8.6**
13:15	**7.08**	**18.9**	**-73.3**	**0.07**	**1.544**	**19.45**	**0.78**	**200**	**8.7**
13:20	**7.08**	**18.2**	**-74.5**	**0.07**	**1.53**	**19.26**	**0.77**	**200**	**8.73**

Electronic Data Logger Used:	**No**				Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**M057F1**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**07-13-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1325**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **07-13-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-13-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/SWMU 43/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **07-13-2020**

Monitor Well #: **MW-0057** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**16 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-04-2019**
Weather:	**sunny , 65 degrees F , Wind N , 18 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-0057**	Well Depth:	**16**	ft below TOC	Depth to Water:	**6.92**	ft below TOC	Sampling Method:
Sample ID:	**MW-0057E7**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.4 - 18.4**	ft	Pump Intake:	**12.5**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:		Instrument Serial #:	**01j0214ac**
VOCs:	**0**	H_2S:	**0**	LEL:	**0**	Instrument Make/Model: **YSI 6920**	Temp. Correction Value: **0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
13:00	**7.48**	**21.6**	**-33.7**	**1.24**	**0.586**	**24.59**	**0.31**	**240**	**7.08**
13:05	**7.42**	**17.6**	**-39.7**	**0.93**	**0.509**	**24.43**	**0.25**	**120**	**7.36**
13:10	**7.4**	**10.2**	**-45.3**	**0.87**	**0.493**	**24.5**	**0.24**	**120**	**7.48**
13:15	**7.4**	**6.3**	**-50.3**	**1.02**	**0.49**	**25.38**	**0.23**	**120**	**7.56**
13:20	**7.4**	**49.5**	**-54.8**	**1.57**	**0.467**	**25.2**	**0.23**	**120**	**7.65**
13:25	**7.4**	**34.6**	**-54.2**	**1.89**	**0.491**	**24.92**	**0.24**	**120**	**7.64**
13:30	**7.4**	**4**	**-44.2**	**2.25**	**0.489**	**25.39**	**0.23**	**120**	**7.62**
13:35	**7.41**	**1.4**	**-35**	**1.9**	**0.489**	**25.77**	**0.23**	**120**	**7.63**
13:40	**7.42**	**0.8**	**-24.3**	**2.37**	**0.49**	**26.72**	**0.23**	**120**	**7.62**
13:45	**7.41**	**0.4**	**-17**	**1.27**	**0.485**	**27.45**	**0.23**	**120**	**7.62**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-0057E7**	Clarity:	**Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **10-04-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **1355**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-04-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-04-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date: **10-04-2019**
Monitor Well #:	**MW-0057**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**16 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-12-2020**
Weather:	**overcast , 58 degrees F , Wind NE , 18 mph , rain**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-0057**	Well Depth:	**19.14**	ft below TOC	Depth to Water:	**8.3**	ft below TOC	Sampling Method:
Sample ID:	**M057F2**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**3.4 - 18.4**	ft	Pump Intake:	**13.35**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:50	**6.86**	**35.8**	**-95.1**	**0.28**	**2.652**	**17.27**	**1.38**	**100**	**8.6**
12:55	**6.85**	**34.7**	**-102.9**	**0.25**	**2.706**	**17.12**	**1.41**	**100**	**8.68**
13:00	**6.83**	**25**	**-107.6**	**0.17**	**2.717**	**17.06**	**1.42**	**100**	**8.85**
13:05	**6.83**	**17.5**	**-112.3**	**0.13**	**2.712**	**17.07**	**1.41**	**100**	**8.9**
13:10	**6.87**	**12.5**	**-121**	**0.07**	**2.655**	**17.94**	**1.38**	**200**	**9.11**
13:15	**6.91**	**9.8**	**-126.8**	**0.07**	**2.582**	**18.17**	**1.34**	**200**	**9.28**
13:20	**6.93**	**8.3**	**-128.1**	**0.09**	**2.553**	**18.27**	**1.31**	**200**	**9.45**
13:25	**6.95**	**8.3**	**-129**	**0.09**	**2.479**	**18.27**	**1.28**	**200**	**9.62**
13:30	**6.98**	**7.3**	**-126.2**	**0.08**	**2.394**	**18.26**	**1.24**	**200**	**9.84**
13:35	**7**	**7.6**	**-123.3**	**0.07**	**2.325**	**18.35**	**1.2**	**200**	**10.07**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M057F2**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-12-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1340**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-12-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-12-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 43/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**10-12-2020**
Monitor Well #:	**MW-0057**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**19.14 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-08-2020**
Weather:	**partly cloudy , 36 degrees F , Wind W , 15 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-114**	Well Depth:	**12**	ft below TOC	Depth to Water:	**4.24**	ft below TOC	Sampling Method:
Sample ID:	**MW-114F2**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**1.73 - 11.73**	ft	Pump Intake:	**7.99**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bailer**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
10:30	**6.59**	**1**	**151**	**3.26**	**0.303**	**11.52**	**0.15**	**100**	**4.33**
10:35	**6.62**	**0.6**	**127.6**	**2.26**	**0.289**	**11.97**	**0.14**	**100**	**4.4**
10:40	**6.61**	**0.7**	**102.2**	**1.72**	**0.286**	**12.73**	**0.14**	**200**	**4.6**
10:45	**6.6**	**1.6**	**95.8**	**1.69**	**0.283**	**12.85**	**0.14**	**200**	**4.79**
10:50	**6.6**	**1.9**	**94.9**	**1.56**	**0.283**	**12.8**	**0.14**	**200**	**4.87**
10:55	**6.6**	**1.8**	**93.2**	**1.66**	**0.283**	**12.86**	**0.14**	**200**	**4.98**
11:00	**6.6**	**2**	**94.3**	**1.57**	**0.283**	**12.84**	**0.14**	**200**	**5.07**
11:05	**6.59**	**7.6**	**93.3**	**1.56**	**0.282**	**12.86**	**0.14**	**200**	**5.16**
11:10	**6.59**	**2.2**	**92.4**	**1.57**	**0.283**	**13.01**	**0.15**	**200**	**5.27**
11:15	**6.59**	**3**	**92.5**	**1.57**	**0.282**	**12.85**	**0.14**	**200**	**5.35**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-114F2**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**01-08-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**11:20**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-08-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**
Monitor Well #:	**MW-114**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**12 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**N/A**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-08-2020**
Weather:	**cloudy , 52 degrees F , Wind N , 9 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-114**	Well Depth:	**12**	ft below TOC	Depth to Water:	**3.97**	ft below TOC	Sampling Method:
Sample ID:	**MW-114F3**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**1.73 - 11.73**	ft	Pump Intake:	**7.85**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
10:00	**6.69**	**9**	**427**	**4.45**	**0.76**	**14.25**	**0.38**	**200**	**4.06**
10:05	**6.45**	**8.9**	**456**	**2.45**	**0.758**	**13.69**	**0.37**	**200**	**4.1**
10:10	**6.25**	**7.6**	**466.6**	**0.94**	**0.749**	**13.19**	**0.37**	**200**	**4.36**
10:15	**6.24**	**7.6**	**472.8**	**0.74**	**0.746**	**13.19**	**0.37**	**200**	**4.47**
10:20	**6.25**	**7.9**	**484**	**0.65**	**0.743**	**13.07**	**0.37**	**200**	**4.58**
10:25	**6.27**	**7.1**	**485.4**	**0.61**	**0.74**	**13.09**	**0.36**	**200**	**4.7**
10:30	**6.31**	**7.7**	**484.2**	**0.6**	**0.74**	**13.55**	**0.36**	**200**	**4.79**
10:35	**6.31**	**7.3**	**486.8**	**0.61**	**0.74**	**13.72**	**0.36**	**200**	**4.87**
10:40	**6.28**	**7.2**	**489.9**	**0.6**	**0.738**	**13.79**	**0.36**	**200**	**4.98**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-114F3**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**04-08-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**1045**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-08-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**04-08-2020**
Monitor Well #:	**MW-114**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**12 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-14-2020**
Weather:	**sunny , 81 degrees F , Wind NW , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-114**	Well Depth:	**12**	ft below TOC	Depth to Water:	**4.24**	ft below TOC	Sampling Method:
Sample ID:	**MW-114F4**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**1.73 - 11.73**	ft	Pump Intake:	**7.99**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**04e8960ad**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
11:20	**6.53**	**42.9**	**91**	**5.35**	**0.682**	**22.5**	**0.33**	**200**	**4.31**
11:25	**6.5**	**41.6**	**95.4**	**4.86**	**0.68**	**20.94**	**0.33**	**200**	**4.46**
11:30	**6.51**	**40.9**	**97.4**	**3.9**	**0.678**	**20.54**	**0.33**	**200**	**4.58**
11:35	**6.5**	**31.1**	**99.2**	**1.94**	**0.676**	**20.55**	**0.33**	**200**	**4.73**
11:40	**6.5**	**27.4**	**100.2**	**1.23**	**0.677**	**20.52**	**0.33**	**200**	**4.84**
11:45	**6.51**	**24.9**	**100.2**	**1.06**	**0.677**	**20.72**	**0.33**	**200**	**4.99**
11:50	**6.51**	**26.2**	**99.9**	**0.96**	**0.676**	**20.76**	**0.33**	**200**	**5.09**
11:55	**6.51**	**21.3**	**98.7**	**0.82**	**0.677**	**20.8**	**0.33**	**200**	**5.16**
12:00	**6.52**	**22.5**	**98.1**	**0.82**	**0.677**	**20.96**	**0.33**	**200**	**5.25**
12:05	**6.51**	**23.6**	**98.2**	**0.76**	**0.678**	**20.81**	**0.33**	**200**	**5.34**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-114F4**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **07-14-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **1210**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **07-14-2020**

Reviewer Name & Signature:	**Dipal Dhagat**	Dipal	Date: **07-14-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**
Monitor Well #:	**MW-114**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**12 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Dipal Dhagat**	Dipal	Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-04-2019**
Weather:	**sunny , 65 degrees F , Wind N , 15 mph , none**			Sampling Personnel:	

Monitor Well #:	**MW-114**	Well Depth:	**12**	ft below TOC	Depth to Water:	**4.51**	ft below TOC	Sampling Method:
Sample ID:	**MW-114F1**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**1.73 - 11.73**	ft	Pump Intake:	**8**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01j214ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
11:00	**6.59**	**30.7**	**107.1**	**3.02**	**0.442**	**21.66**	**0.21**	**120**	**4.52**
11:05	**6.56**	**12.5**	**92.6**	**2.22**	**0.414**	**21.3**	**0.2**	**240**	**4.74**
11:10	**6.55**	**4.7**	**84.7**	**1.37**	**0.411**	**20.32**	**0.2**	**240**	**4.89**
11:15	**6.55**	**4.4**	**83.7**	**1.02**	**0.41**	**20.9**	**0.2**	**240**	**5.03**
11:20	**6.56**	**3.9**	**84.4**	**0.72**	**0.41**	**20.81**	**0.2**	**240**	**5.16**
11:25	**6.55**	**4.1**	**84.5**	**0.65**	**0.41**	**21.03**	**0.2**	**240**	**5.2**
11:30	**6.55**	**3.8**	**85.1**	**0.59**	**0.41**	**21**	**0.2**	**240**	**4.28**
11:35	**6.56**	**3.2**	**85.9**	**0.42**	**0.41**	**21.01**	**0.2**	**240**	**5.37**
11:40	**6.55**	**3**	**87.2**	**0.35**	**0.41**	**21.03**	**0.2**	**240**	**5.46**
11:45	**6.55**	**2.8**	**87.9**	**0.32**	**0.41**	**21.06**	**0.2**	**240**	**5.57**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-114F1**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **10-04-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **1155**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-04-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-04-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Sampling Personnel:	Well Type:	**Flush Mount**	Date: **10-04-2019**
Monitor Well #:	**MW-114**	Pump Utilized for Three Volume Purge:	Same as Low Flow:	Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**12 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-13-2020**
Weather:	**overcast , 54 degrees F , Wind NW , 8 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-114**	Well Depth:	**12**	ft below TOC	Depth to Water:	**4.33**	ft below TOC	Sampling Method:
Sample ID:	**M114F5**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**1.73 - 11.73**	ft	Pump Intake:	**8.03**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04A0514AA**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
13:25	**6.53**	**33**	**136.2**	**1.34**	**0.42**	**19.86**	**0.2**	**150**	**4.49**
13:30	**6.51**	**29.7**	**136.3**	**1.2**	**0.421**	**19.87**	**0.2**	**150**	**4.5**
13:35	**6.49**	**21.8**	**134.7**	**0.79**	**0.424**	**19.96**	**0.2**	**150**	**4.52**
13:40	**6.49**	**19.5**	**134.6**	**0.76**	**0.424**	**19.95**	**0.2**	**150**	**4.63**
13:45	**6.49**	**20.2**	**134.6**	**0.74**	**0.424**	**19.93**	**0.2**	**150**	**4.65**
13:50	**6.49**	**20.4**	**134.1**	**0.75**	**0.424**	**20**	**0.2**	**150**	**4.67**
13:55	**6.49**	**20**	**134.1**	**0.75**	**0.424**	**20**	**0.2**	**150**	**4.69**
14:00	**6.49**	**20**	**134.1**	**0.75**	**0.424**	**20**	**0.2**	**150**	**4.7**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M114F5**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**10-13-2020**	Odor:	**Odorless**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**14:00**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**		Date: **10-13-2020**
Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-13-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/SWMU 28, SWMU 30/Main Yard**				Sampling Personnel:	**Alex Ciofani**	Well Type:	**Flush Mount**		Date:	**10-13-2020**
Monitor Well #:	**MW-114**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**12 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-09-2020**
Weather:	**sunny , 28 degrees F , Wind W , 5 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-115**	Well Depth:	**22**	ft below TOC	Depth to Water:	**4.24**	ft below TOC	Sampling Method:
Sample ID:	**MW-115E6**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**16.66 - 21.66**	ft	Pump Intake:	**19.16**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
10:45	**7.39**	**21.2**	**-24.8**	**9.76**	**0.082**	**7.89**	**0.04**	**200**	**4.25**
10:50	**7.36**	**17**	**-19.4**	**9.63**	**0.064**	**8.68**	**0.03**	**200**	**4.31**
10:55	**7.16**	**9.8**	**-19.7**	**8.95**	**0.045**	**11.86**	**0.02**	**200**	**4.34**
11:00	**7.09**	**7.8**	**30.5**	**8.87**	**0.043**	**12.13**	**0.02**	**200**	**4.34**
11:05	**7.05**	**7.1**	**45**	**8.9**	**0.042**	**12.02**	**0.02**	**200**	**4.35**
11:10	**7.04**	**6.6**	**51.7**	**8.77**	**0.043**	**12.15**	**0.02**	**200**	**4.3**
11:15	**7.03**	**6.4**	**58**	**8.55**	**0.042**	**12.39**	**0.02**	**200**	**4.3**
11:20	**7.03**	**6.6**	**61.4**	**8.51**	**0.042**	**12.4**	**0.02**	**200**	**4.32**
11:25	**7.01**	**6.1**	**65**	**8.38**	**0.042**	**12.27**	**0.02**	**200**	**4.32**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-115E6**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **01-09-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **11:30**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-09-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-09-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**01-09-2020**
Monitor Well #:	**MW-115**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**22 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-08-2020**
Weather:	**partly cloudy , 63 degrees F , Wind N , 8 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-115**	Well Depth:	**22**	ft below TOC	Depth to Water:	**3.65**	ft below TOC	Sampling Method:
Sample ID:	**MW-115E7**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**16.66 - 21.66**	ft	Pump Intake:	**19.16**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
11:35	**6.46**	**53**	**375.2**	**9.03**	**0.222**	**16.38**	**0.11**	**200**	**3.74**
11:40	**6.1**	**48.4**	**398.8**	**8.33**	**0.139**	**15.12**	**0.07**	**200**	**3.74**
11:45	**6.02**	**42.8**	**440.1**	**8.23**	**0.136**	**15.14**	**0.06**	**200**	**3.74**
11:50	**5.85**	**39.9**	**450.8**	**8.25**	**0.134**	**14.65**	**0.134**	**200**	**3.74**
11:55	**5.75**	**35**	**456.8**	**8.26**	**0.134**	**14.35**	**0.06**	**200**	**3.74**
12:00	**5.76**	**37.2**	**465.9**	**8.27**	**0.134**	**14.32**	**0.06**	**200**	**3.74**
12:05	**5.78**	**35.6**	**471.3**	**8.26**	**0.133**	**14.19**	**0.06**	**200**	**3.74**
12:10	**5.83**	**34.8**	**482.9**	**8.24**	**0.133**	**14.15**	**0.06**	**200**	**3.74**
12:15	**5.91**	**33.7**	**486**	**8.24**	**0.132**	**14.06**	**0.06**	**200**	**3.74**
12:20	**5.99**	**34.2**	**489.1**	**8.22**	**0.132**	**14.26**	**0.06**	**200**	**3.74**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min **00** sec	Sample ID:	**MW-115E7**	Clarity:	**Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**04-08-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1225**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-08-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**04-08-2020**
Monitor Well #:	**MW-115**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**22 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-14-2020**
Weather:	**sunny , 78 degrees F , Wind NW , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-115**	Well Depth:	**22**	ft below TOC	Depth to Water:	**3.92**	ft below TOC	Sampling Method:
Sample ID:	**MW-115E8**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**16.66 - 21.66**	ft	Pump Intake:	**19.2**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04e8960ad**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
10:10	**6.46**	**74.4**	**100.5**	**4.83**	**0.125**	**24.09**	**0.06**	**200**	**3.96**
10:15	**6.19**	**81.3**	**123.7**	**1.88**	**0.118**	**20.93**	**0.06**	**200**	**4.11**
10:20	**6.15**	**72.8**	**130.1**	**1.36**	**0.118**	**20.45**	**0.06**	**200**	**4.16**
10:25	**6.07**	**63.9**	**135.6**	**0.88**	**0.118**	**20.09**	**0.06**	**200**	**4.13**
10:30	**5.9**	**60.1**	**148.5**	**0.7**	**0.118**	**19.89**	**0.06**	**200**	**4.12**
10:35	**5.99**	**55.3**	**143.2**	**0.6**	**0.119**	**19.87**	**0.06**	**200**	**4.14**
10:40	**6.08**	**54.4**	**138.4**	**0.52**	**0.119**	**20**	**0.06**	**200**	**4.12**
10:45	**6.07**	**53.3**	**139**	**0.45**	**0.119**	**19.67**	**0.06**	**200**	**4.12**
10:50	**6.09**	**53.5**	**137.8**	**0.42**	**0.119**	**19.75**	**0.06**	**200**	**4.12**
10:55	**6.1**	**51.9**	**136.9**	**0.42**	**0.118**	**19.8**	**0.06**	**200**	**4.12**

Electronic Data Logger Used:	**No**				Sampling Information:		Observations/Comments:
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-115E8**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**07-14-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1100**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **07-14-2020**

Reviewer Name & Signature:	**Dipal Dhagat**		Date: **07-14-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/SWMU 28, SWMU 30/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Flush Mount** Date: **07-14-2020**

Monitor Well #: **MW-115** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**22 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Dipal Dhagat**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-04-2019**
Weather:	**sunny , 60 degrees F , Wind N , 10 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-115**	Well Depth:	**22**	ft below TOC	Depth to Water:	**4.08**	ft below TOC	Sampling Method:
Sample ID:	**MW-115E5**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**16.66 - 21.66**	ft	Pump Intake:	**19**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01j0214ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:05	**6.52**	**103.2**	**146.2**	**3.85**	**0.88**	**19.6**	**0.04**	**120**	**4.15**
09:10	**6.19**	**50.1**	**148.5**	**1.91**	**0.065**	**19.35**	**0.03**	**240**	**4.19**
09:15	**6.14**	**30.4**	**135.5**	**1.48**	**0.064**	**19.18**	**0.03**	**240**	**4.18**
09:20	**6.22**	**20.4**	**120.4**	**1.08**	**0.068**	**19.09**	**0.03**	**240**	**4.19**
09:25	**6.31**	**15**	**110.6**	**0.68**	**0.074**	**19.03**	**0.03**	**240**	**4.2**
09:30	**6.38**	**10.3**	**88.2**	**0.52**	**0.085**	**18.89**	**0.04**	**240**	**4.2**
09:35	**6.41**	**7.7**	**66.8**	**0.39**	**0.098**	**18.83**	**0.05**	**240**	**4.21**
09:40	**6.42**	**5.8**	**64.3**	**0.36**	**0.109**	**18.79**	**0.05**	**240**	**4.19**
09:45	**6.42**	**4.2**	**61.4**	**0.31**	**0.125**	**18.76**	**0.06**	**240**	**4.18**
09:50	**6.42**	**3.4**	**49.3**	**0.28**	**0.144**	**18.79**	**0.07**	**240**	**4.18**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-115E5**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**Yes**	mg/L			Sample Date:	**10-04-2019**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1000**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-04-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-04-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 28, SWMU 30/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**
Monitor Well #:	**MW-115**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**22 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**Only low flow done and the samples were collected for TAL Metals (filtered and unfiltered), VOC, VOC+10, SVOC+20, Sulfate, Sulfide, Total Nitrogen, Nitrate.**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/SWMU 28, SWMU 30/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-13-2020**
Weather:	**overcast , 54 degrees F , Wind variable , 8 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-115**	Well Depth:	**22**	ft below TOC	Depth to Water:	**4.15**	ft below TOC	Sampling Method:
Sample ID:	**M115E9**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**16.66 - 21.66**	ft	Pump Intake:	**19.16**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**04A0514AA**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
12:25	**7.9**	**206.8**	**72.5**	**11.13**	**0.057**	**20.14**	**0.03**	**150**	**4.19**
12:30	**7.82**	**193.1**	**79.1**	**11.12**	**0.047**	**20.33**	**0.02**	**150**	**4.24**
12:35	**7.64**	**134.2**	**95.2**	**11.08**	**0.043**	**20.08**	**0.02**	**150**	**4.3**
12:40	**7.52**	**144.4**	**104.3**	**10.98**	**0.043**	**20.12**	**0.02**	**150**	**4.36**
12:45	**7.51**	**140**	**105.5**	**11.03**	**0.042**	**20.01**	**0.02**	**150**	**4.39**
12:50	**7.47**	**144**	**108.9**	**11.03**	**0.042**	**20.09**	**0.02**	**150**	**4.44**
12:55	**7.44**	**141**	**110.5**	**11**	**0.042**	**20.14**	**0.02**	**150**	**4.49**
13:00	**7.42**	**116.5**	**111.3**	**10.97**	**0.042**	**20.34**	**0.02**	**150**	**4.5**
13:05	**7.4**	**104.5**	**113**	**11**	**0.042**	**20.49**	**0.02**	**150**	**4.54**
13:10	**7.4**	**112.5**	**113**	**11.02**	**0.042**	**20.5**	**0.02**	**150**	**4.6**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M115E9**	Clarity:	**Brown hue**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**10-13-2020**	Odor:	**None**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**13:10**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**		Date: **10-13-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-13-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/SWMU 28, SWMU 30/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Flush Mount** Date: **10-13-2020**

Monitor Well #: **MW-115** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**22 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 22/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-07-2020**
Weather:	**cloudy , 56 degrees F , Wind NW , 4 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-120**	Well Depth:	**13**	ft below TOC	Depth to Water:	**1.69**	ft below TOC	Sampling Method:
Sample ID:	**MW-120F4**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.3 - 13.3**	ft	Pump Intake:	**8.3**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
10:20	**5.69**	**550.4**	**331.5**	**1.87**	**1.394**	**13.41**	**0.71**	**200**	**1.81**
10:25	**5.63**	**379.8**	**364.5**	**1.51**	**1.345**	**12.78**	**0.68**	**200**	**1.93**
10:30	**5.58**	**279.8**	**407.9**	**1.01**	**1.332**	**12.83**	**0.67**	**200**	**1.95**
10:35	**5.56**	**204**	**415.7**	**0.71**	**1.324**	**12.71**	**0.67**	**200**	**2**
10:40	**5.54**	**137.4**	**429.8**	**0.51**	**1.319**	**12.76**	**0.66**	**200**	**2.04**
10:45	**5.52**	**97**	**434.5**	**0.38**	**1.315**	**12.79**	**0.66**	**200**	**2.04**
10:50	**5.51**	**83.6**	**444.7**	**0.29**	**1.314**	**12.86**	**0.66**	**200**	**2.03**
10:55	**5.48**	**67.8**	**450.4**	**0.23**	**1.313**	**12.96**	**0.66**	**200**	**2.03**
11:00	**5.47**	**59.4**	**453**	**0.19**	**1.31**	**12.91**	**0.66**	**200**	**2.03**
11:05	**5.46**	**53.5**	**456.6**	**0.17**	**1.307**	**13**	**0.66**	**200**	**2.03**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min **00** sec	Sample ID:	**MW-120F4**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**04-07-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1110**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-07-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-07-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/SWMU 22/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **04-07-2020**

Monitor Well #: **MW-120** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**13 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 22/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-14-2020**
Weather:	**sunny , 73 degrees F , Wind W , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-120**	Well Depth:	**13**	ft below TOC	Depth to Water:	**1.24**	ft below TOC	Sampling Method:
Sample ID:	**MW-120F5**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.3 - 13.3**	ft	Pump Intake:	**8.3**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04e8960ad**
VOCs:	**0.2**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:35	**6.02**	**211.7**	**32.5**	**1.53**	**1.256**	**20.87**	**0.63**	**200**	**1.4**
08:40	**6.02**	**147.4**	**37.7**	**1.67**	**1.243**	**22.4**	**0.62**	**200**	**1.58**
08:45	**5.9**	**88.4**	**55.3**	**0.96**	**1.239**	**21.64**	**0.62**	**200**	**1.5**
08:50	**5.99**	**75**	**62.4**	**0.82**	**1.238**	**21.7**	**0.62**	**200**	**1.65**
08:55	**6**	**68.8**	**67.4**	**0.82**	**1.237**	**21.78**	**0.62**	**200**	**1.74**
09:00	**6**	**61.9**	**70.5**	**0.81**	**1.238**	**21.74**	**0.62**	**200**	**1.71**
09:05	**6**	**57.5**	**71.9**	**0.79**	**1.239**	**21.48**	**0.62**	**200**	**1.74**
09:10	**5.99**	**47.6**	**69.2**	**0.74**	**1.24**	**20.8**	**0.62**	**200**	**1.78**
09:15	**5.99**	**40.4**	**65.5**	**0.71**	**1.241**	**20.31**	**0.62**	**200**	**1.75**
09:20	**5.99**	**30.4**	**62.4**	**0.68**	**1.241**	**19.68**	**0.62**	**200**	**1.72**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-120F5**	Clarity: **Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**07-14-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**0920**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **07-14-2020**

Reviewer Name & Signature:	**Dipal Dhagat**		Date: **07-14-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 22/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**
Monitor Well #:	**MW-120**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**13 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Dipal Dhagat**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/SWMU 22/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-12-2020**
Weather:	**overcast , 53 degrees F , Wind variable , 15 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-120**	Well Depth:	**14**	ft below TOC	Depth to Water:	**1.88**	ft below TOC	Sampling Method:
Sample ID:	**MW-120F6**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.3 - 13.3**	ft	Pump Intake:	**8.3**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04A0514AA**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:15	**6.12**	**106.5**	**60.1**	**1.02**	**1**	**16.47**	**0.5**	**150**	**1.93**
12:20	**6.09**	**100.8**	**61.1**	**1.02**	**1.002**	**16.47**	**0.5**	**150**	**1.95**
12:25	**6.02**	**87.5**	**66.7**	**1.02**	**1.004**	**16.48**	**0.5**	**150**	**1.97**
12:30	**5.99**	**77.7**	**70**	**1.03**	**1.005**	**16.42**	**0.5**	**150**	**2.04**
12:35	**5.97**	**72.3**	**74.6**	**1.02**	**1.004**	**16.43**	**0.5**	**150**	**2.05**
12:40	**5.97**	**76.2**	**78.9**	**1.03**	**1.007**	**16.44**	**0.5**	**150**	**2.06**
12:45	**5.96**	**69.4**	**81.6**	**1.02**	**1.007**	**16.45**	**0.5**	**160**	**2.1**
12:50	**5.96**	**69.9**	**82**	**1.04**	**1.011**	**16.43**	**0.5**	**150**	**2.14**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-120F6**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**10-12-2020**	Odor:	**Odorless**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**12:50**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**10-12-2020**
Reviewer Name & Signature:	**Ragini Sharma**	Date:	**10-12-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/SWMU 22/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **10-12-2020**

Monitor Well #: **MW-120** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**14 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/SWMU 22/Main Yard**	Consulting Firm:	**Parsons**	Date:	**12-16-2019**
Weather:	**cloudy , 35 degrees F , Wind SW , 2 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-120**	Well Depth:	**11**	ft below TOC	Depth to Water:	**1.77**	ft below TOC	Sampling Method:
Sample ID:	**MW-120F2**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.3 - 13.3**	ft	Pump Intake:	**8.3**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01a0144ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.05**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
10:03	**6.13**	**279.6**	**189.2**	**4.61**	**0.91**	**7.79**	**0.49**	**300**	**1.88**
10:08	**6.06**	**202.6**	**96.3**	**2.54**	**0.901**	**9.3**	**0.46**	**150**	**1.91**
10:13	**6.06**	**191**	**93.7**	**2.07**	**0.9**	**9.44**	**0.45**	**225**	**1.92**
10:18	**6.04**	**161.8**	**102**	**1.33**	**0.896**	**11.29**	**0.44**	**225**	**2.02**
10:23	**6.03**	**127.4**	**107.7**	**1.03**	**0.897**	**11.58**	**0.44**	**225**	**2.09**
10:28	**6.03**	**112.7**	**103.9**	**0.93**	**0.893**	**11.85**	**0.42**	**225**	**2.15**
10:33	**6.03**	**108.8**	**101.6**	**0.93**	**0.819**	**11.96**	**0.44**	**225**	**2.23**
10:38	**6.03**	**99.2**	**100.4**	**0.93**	**0.879**	**11.9**	**0.39**	**225**	**2.23**
10:43	**6.03**	**94.2**	**98.9**	**0.89**	**0.874**	**11.89**	**0.39**	**225**	**2.24**
10:48	**6.02**	**82.9**	**96.4**	**0.81**	**0.782**	**12.05**	**0.38**	**225**	**2.24**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-120F2**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**12-16-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**10:50**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **12-16-2019**
Reviewer Name &			

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **12-16-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/SWMU 22/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**12-16-2019**
Monitor Well #:	**MW-120**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**11 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/NF 2/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-07-2020**
Weather:	**cloudy , 41 degrees F , Wind W , 4 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-233**	Well Depth:	**9**	ft below TOC	Depth to Water:	**2.05**	ft below TOC	Sampling Method:
Sample ID:	**MW-233F6**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.93 - 8.93**	ft	Pump Intake:	**6.43**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bailer**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01b0202ac**
VOCs:	**9**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:12	**7.64**	**7.3**	**-307.5**	**1.97**	**5.876**	**10.08**	**3.2**	**100**	**2.05**
09:17	**7.66**	**7.1**	**-339.1**	**0.53**	**6.896**	**10.45**	**3.8**	**200**	**2.05**
09:22	**7.69**	**16**	**-364**	**0.3**	**5.721**	**10.6**	**3.14**	**200**	**2.05**
09:27	**7.74**	**12.1**	**-370.9**	**0.29**	**4.377**	**10.39**	**2.37**	**200**	**2.05**
09:32	**7.75**	**7.6**	**-371.4**	**0.17**	**3.996**	**10.29**	**2.12**	**200**	**2.07**
09:37	**7.75**	**4.5**	**-372.3**	**0.12**	**3.688**	**10.29**	**1.96**	**200**	**2.05**
09:42	**7.75**	**3.3**	**-372.3**	**0.12**	**3.5**	**10.21**	**1.85**	**200**	**2.08**
09:47	**7.75**	**2.8**	**-374**	**0.08**	**3.411**	**10.24**	**1.8**	**200**	**2.05**
09:52	**7.79**	**3**	**-375.1**	**0.08**	**2.983**	**10.08**	**3.023**	**200**	**2.06**
09:57	**7.83**	**4.4**	**-376.2**	**0.08**	**2.19**	**9.82**	**1.15**	**200**	**2.05**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-233F6**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**01-07-2020**	Odor:	**Strong product like odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**10:05**	Other:	**Sheen present**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-07-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-07-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/NF 2/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **01-07-2020**

Monitor Well #: **MW-233** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**9 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/NF 2/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-02-2020**
Weather:	**partly cloudy , 47 degrees F , Wind NW , 16 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-233**	Well Depth:	**9.7**	ft below TOC	Depth to Water:	**1.91**	ft below TOC	Sampling Method:
Sample ID:	**MW-233F7**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.93 - 8.93**	ft	Pump Intake:	**6.43**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01h1295ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
10:45	**7.84**	**3.5**	**-119.2**	**3.28**	**2.112**	**11.52**	**1.09**	**200**	**1.94**
10:50	**7.99**	**2.7**	**-161.9**	**0.66**	**2.078**	**10.65**	**1.07**	**200**	**1.96**
10:55	**8.01**	**2.3**	**-181.5**	**0.56**	**2.078**	**10.85**	**1.07**	**200**	**1.97**
11:00	**8.02**	**2**	**-203**	**0.43**	**2.085**	**10.52**	**1.07**	**200**	**1.95**
11:05	**8.02**	**1.6**	**-225.2**	**0.45**	**2.12**	**10.69**	**1.09**	**200**	**1.96**
11:10	**8.01**	**1.3**	**-251**	**0.41**	**2.315**	**11.12**	**1.19**	**200**	**1.96**
11:15	**8.01**	**0.9**	**-280.7**	**0.46**	**2.62**	**11.15**	**1.36**	**200**	**1.97**
11:20	**8.01**	**0.6**	**-307.9**	**0.49**	**2.95**	**11.07**	**1.54**	**200**	**1.95**
11:25	**7.99**	**0.4**	**-317**	**0.46**	**3.125**	**11.28**	**1.65**	**200**	**1.96**
11:30	**7.96**	**0.3**	**-324.6**	**0.51**	**3.289**	**11.45**	**1.73**	**200**	**1.96**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-233F7**	Clarity:	**Clear and slight dark**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**04-02-2020**	Odor:	**Moderate product like odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**1135**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-02-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-02-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/NF 2/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**		Date:	**04-02-2020**
Monitor Well #:	**MW-233**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**9.7 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/NF 2/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-07-2020**
Weather:	**overcast , 77 degrees F , Wind variable , 3 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-233**	Well Depth:	**9.5**	ft below TOC	Depth to Water:	**1.33**	ft below TOC	Sampling Method:
Sample ID:	**MW-233F8**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.93 - 8.93**	ft	Pump Intake:	**6.43**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
09:40	**8.53**	**4.7**	**231.9**	**2.71**	**4.567**	**23.47**	**2.44**	**150**	**1.38**
09:45	**8.06**	**1.9**	**-298.3**	**0.87**	**4.861**	**22.91**	**2.61**	**150**	**1.46**
09:50	**7.98**	**1.3**	**-329.3**	**1.21**	**5.403**	**22.5**	**2.92**	**150**	**1.49**
09:55	**7.97**	**1.2**	**-340.2**	**0.76**	**5.945**	**22.43**	**3.24**	**140**	**1.53**
10:00	**7.95**	**1.6**	**-345.4**	**1.93**	**6.35**	**22.61**	**3.47**	**150**	**1.53**
10:05	**7.94**	**1.7**	**-348.6**	**1**	**6.633**	**22.68**	**3.64**	**150**	**1.53**
10:10	**7.92**	**1.3**	**-350.4**	**1.22**	**6.844**	**22.84**	**3.76**	**150**	**1.53**
10:15	**7.9**	**1.5**	**-351.4**	**1.19**	**7.016**	**22.77**	**3.86**	**150**	**1.53**
10:20	**7.87**	**1.1**	**-352.2**	**1.24**	**7.252**	**22.94**	**4.01**	**150**	**1.53**
10:25	**7.85**	**1.1**	**-352.3**	**1.17**	**7.391**	**22.92**	**4.08**	**150**	**1.53**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-233F8**	Clarity:	**Hazy**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-07-2020**	Odor:	**Slight HC odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**10:25**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**07-07-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-07-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/NF 2/Main Yard**				Sampling Personnel:	**Alex Ciofani**	Well Type:	**Stick Up**	Date:	**07-07-2020**	
Monitor Well #:	**MW-233**			Pump Utilized for Three Volume Purge:			Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**9.5 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**ISCO/NF 2/Main Yard**	Consulting Firm:	**Parsons**	Date:	**09-28-2020**
Weather:	**cloudy , 71 degrees F , Wind S , 6 mph , none**			Sampling Personnel:	**Ragini Sharma**

Monitor Well #:	**MW-233**	Well Depth:	**9**	ft below TOC	Depth to Water:	**2.49**	ft below TOC	Sampling Method:
Sample ID:	**M233F9**	Well Diameter:	**4**	inches	Depth to Product:	**2.46**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.93 - 8.93**	ft	Pump Intake:	**6.43**	ft below TOC	**Low Flow and Volume Average**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**06G2068AB**
VOCs:	**199.4**	H_2S:	**0**	LEL: **25**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.18**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:25	**7.57**	**3.6**	**-247.9**	**2.17**	**4.597**	**21.52**	**2.46**	**110**	**2.53**
09:30	**7.79**	**0.9**	**-308.4**	**0.18**	**5.938**	**21.44**	**3.26**	**110**	**2.58**
09:35	**7.74**	**0.2**	**-339.8**	**0.11**	**6.537**	**21.45**	**3.58**	**110**	**2.61**
09:40	**7.72**	**0.7**	**-349.4**	**0.05**	**6.671**	**21.45**	**3.66**	**110**	**2.6**
09:45	**7.71**	**0.2**	**-352.9**	**0.05**	**6.877**	**21.48**	**3.78**	**110**	**2.59**
09:50	**7.7**	**0.5**	**-352.9**	**0.05**	**6.864**	**21.53**	**3.87**	**110**	**2.58**
09:55	**7.69**	**0.3**	**-353.3**	**0.02**	**6.989**	**21.57**	**3.93**	**110**	**2.58**
10:00	**7.69**	**0.3**	**-354.5**	**0.03**	**7.022**	**21.61**	**3.96**	**110**	**2.58**
10:05	**7.68**	**0.8**	**-356.4**	**0.03**	**7.185**	**21.68**	**3.96**	**110**	**2.59**
10:10	**7.67**	**0.3**	**-356.6**	**0.02**	**7.281**	**21.71**	**4.11**	**110**	**2.59**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M233F9**	Clarity:	**Turbid yellowish**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**09-28-2020**	Odor:	**Strong odor**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**10:10**	Other:	

Sampler Name & Signature:	**Ragini Sharma**	Date:	**09-28-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Ryan Zsamba**		Date: **09-28-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location: **ISCO/NF 2/Main Yard** Sampling Personnel: **Ragini Sharma** Well Type: **Stick Up** Date: **09-28-2020**

Monitor Well #: **MW-233** Pump Utilized for Three Volume Purge: Same as Low Flow: **X** Make/Model: **Geo Pump**

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)
Prior to Purging	**10:10**	**7.67**	**0.3**	**-356.6**	**0.02**	**7.281**	**21.71**	**4.11**	**2.59**	**--**
After Purging	**11:15**	**7.74**	**4.7**	**-322.7**	**0.62**	**13.27**	**22.55**	**7.66**	**3.56**	**--**
After Sampling	**11:40**	**7.75**	**10.6**	**-299.9**	**1.28**	**4.534**	**23.17**	**2.42**	**2.68**	**9**

Initial Depth to Water (ft):	**2.49**
Depth to Bottom (ft):	**9 ft below TOC**
Static Water Col. Ht. (ft):	**6.44**
Static Water Volume (gal) (SWV):	**4.19**
Min. Purge Volume (gal) (SWV*3):	**12.57**
Max. Purge Volume (gal) (SWV*5):	**20.95**
Pump Intake (ft):	**2 feet BDTW**
Purge Start Time:	**1015**
Purge End Time:	**1130**
Purge Rate (L/min, gal/min):	**0.16 gal/min**
Volume Purged (gal):	**12**
Well Purged Dry:	**No**
Total Purged Volume (gal) (low flow + 3 Volume):	**13.3**

Sampling Information:

Sample ID: **M233F9X**

Sample Date: **09-28-2020** Sample Time: **1120**

Sample Method: **Bottom Fill Bailer**

Bailer Construction: **Polyethylene**

Observations/Comments:

Clarity: **Turbid yellowish**

Odor: **Strong odor**

Other: **Sheen**

Additional Comments:

Water Quality Start Time (after sampling): **1130**

Water Quality End Time (after sampling): **1140**

Sampler Name & Signature: **Ragini Sharma** Date: **09-28-2020**

Reviewer Name & Signature: **Ryan Zsamba** Date: **09-28-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/NF 2/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-08-2019**
Weather:	**cloudy , 60 degrees F , Wind NW , 10 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-233**	Well Depth:	**9.7**	ft below TOC	Depth to Water:	**2.57**	ft below TOC	Sampling Method:
Sample ID:	**MW-233F5**	Well Diameter:	**4**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**3.93 - 8.93**	ft	Pump Intake:	**6.5**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**02e0838af**
VOCs:	**312.4**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.09**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:05	**8**	**18.4**	**-314.2**	**3.11**	**5.432**	**19.55**	**2.93**	**120**	**2.53**
09:10	**7.82**	**9.4**	**-361.6**	**0.75**	**6.3**	**19.66**	**3.4**	**120**	**2.55**
09:15	**7.79**	**8.8**	**-370.9**	**2.33**	**6.653**	**19.7**	**3.64**	**120**	**2.59**
09:20	**7.77**	**5.4**	**-378.8**	**2.24**	**6.976**	**19.69**	**3.84**	**120**	**2.62**
09:25	**7.7**	**3.6**	**-381**	**1.67**	**7.209**	**19.68**	**3.98**	**120**	**2.59**
09:30	**7.74**	**3.7**	**-375.8**	**1.75**	**7.324**	**19.69**	**4.05**	**120**	**2.59**
09:35	**7.73**	**3.2**	**-375.7**	**1.94**	**7.47**	**19.73**	**4.13**	**120**	**2.58**
09:40	**7.71**	**1.8**	**-379**	**1.62**	**8.046**	**19.8**	**4.47**	**240**	**2.62**
09:45	**7.7**	**1.5**	**-377.7**	**1.46**	**8.336**	**19.78**	**4.65**	**240**	**2.63**
09:50	**7.69**	**0.9**	**-370.4**	**1.31**	**8.565**	**19.76**	**4.79**	**240**	**2.63**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-233F5**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Yes**	mg/L			Sample Date: **10-08-2019**	Odor:	**Strong product like odor**
Filtered (0.45 Micron Filter):	**Yes**				Sample Time: **1005**	Other:	**Sheen present**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-08-2019**
Reviewer Name &			

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-08-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/NF 2/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**		Date:	**10-08-2019**
Monitor Well #:	**MW-233**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**9.7 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**Efferesence upon HCl, h2so4, h3po4**
Well Purged Dry:		**Only low flow done. Previous well depth -6 ft , current well depth 9.70ft**
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/AOC 44/North Field**	Consulting Firm:	**Parsons**	Date:	**01-07-2020**
Weather:	**cloudy , 43 degrees F , Wind W , 6 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-234RR**	Well Depth:	**11.03**	ft below TOC	Depth to Water:	**3.82**	ft below TOC	Sampling Method:
Sample ID:	**MW-234RRD2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**4.23 - 10.73**	ft	Pump Intake:	**7.48**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
11:30	**6.87**	**228.9**	**-103**	**6.67**	**0.633**	**8.54**	**0.31**	**100**	**4.11**
11:35	**7.02**	**210.4**	**-113.4**	**0.82**	**0.628**	**8.65**	**0.31**	**100**	**4.63**
11:40	**7.07**	**156.8**	**-118.2**	**0.87**	**0.627**	**8.69**	**0.31**	**100**	**4.7**
11:45	**7.09**	**110.8**	**-123.2**	**0.87**	**0.628**	**8.65**	**0.31**	**100**	**4.88**
11:50	**7.1**	**93.5**	**-127.4**	**0.78**	**0.627**	**8.57**	**0.31**	**100**	**5.05**
11:55	**7.11**	**86**	**-129.7**	**0.87**	**0.627**	**8.51**	**0.31**	**100**	**5.15**
12:00	**7.11**	**66.8**	**-131.7**	**0.79**	**0.626**	**8.54**	**0.31**	**100**	**5.18**
12:05	**7.12**	**61**	**-133.4**	**0.72**	**0.627**	**8.75**	**0.31**	**200**	**5.4**
12:10	**7.13**	**39.1**	**-136.9**	**0.75**	**0.629**	**8.5**	**0.31**	**100**	**5.63**
12:15	**7.13**	**31.2**	**-140.9**	**0.71**	**0.631**	**8.51**	**0.31**	**200**	**5.84**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-234RRD2**	Clarity:	**Slight turbidity**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**01-07-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**12:20**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-07-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-07-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/AOC 44/North Field**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**		Date:	**01-07-2020**
Monitor Well #:	**MW-234RR**			Pump Utilized for Three Volume Purge:			Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**11.03 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**N/A**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/AOC 44/North Field**	Consulting Firm:	**Parsons**	Date:	**04-02-2020**
Weather:	**sunny , 43 degrees F , Wind NW , 12 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-234RR**	Well Depth:	**11.04**	ft below TOC	Depth to Water:	**3.51**	ft below TOC	Sampling Method:
Sample ID:	**MW-234RRD3**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**4.23 - 10.73**	ft	Pump Intake:	**7.48**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01h1295ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:45	**6.95**	**154.3**	**-58.7**	**3.6**	**0.829**	**10.64**	**0.41**	**200**	**3.9**
08:50	**7.03**	**140.4**	**-75.5**	**2.61**	**0.831**	**10.52**	**0.41**	**100**	**4.21**
08:55	**7.08**	**115**	**-67.2**	**2.01**	**0.829**	**10.13**	**0.41**	**100**	**4.51**
09:00	**7.1**	**90.2**	**-68**	**1.43**	**0.827**	**10.07**	**0.41**	**100**	**4.9**
09:05	**7.11**	**72.4**	**-73**	**1.14**	**0.827**	**10.01**	**0.41**	**100**	**4.98**
09:10	**7.14**	**61.5**	**-79**	**0.88**	**0.826**	**10.13**	**0.41**	**100**	**4.97**
09:15	**7.14**	**46.3**	**-83.7**	**0.74**	**0.827**	**10.12**	**0.41**	**200**	**5.16**
09:20	**7.15**	**39.5**	**-87.8**	**0.65**	**0.828**	**10.15**	**0.41**	**200**	**5.42**
09:25	**7.16**	**20.9**	**-92.8**	**0.62**	**0.834**	**10.04**	**0.41**	**200**	**5.65**
09:30	**7.16**	**12.1**	**-97.3**	**0.55**	**0.841**	**10.05**	**0.42**	**200**	**5.82**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-234RRD3**	Clarity:	**Slightly Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**04-02-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**0935**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-02-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-02-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/AOC 44/North Field** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **04-02-2020**

Monitor Well #: **MW-234RR** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**11.04 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**ISCO/AOC 44/North Field**	Consulting Firm:	**Parsons**	Date:	**09-25-2020**
Weather:	**overcast , 62 degrees F , Wind NW , 4 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-234RR**	Well Depth:	**10.5**	ft below TOC	Depth to Water:	**4.26**	ft below TOC	Sampling Method:
Sample ID:	**MW-234RRD5**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**4.23 - 10.73**	ft	Pump Intake:	**7.5**	ft below TOC	**Low Flow and Volume Average**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**14H102206**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:25	**7.05**	**0**	**-126.1**	**2.07**	**1.92**	**20.37**	**0.98**	**130**	**4.26**
08:30	**6.86**	**0**	**-134.5**	**1.12**	**1.862**	**20.78**	**0.95**	**130**	**4.26**
08:35	**6.87**	**0**	**-143.2**	**0.72**	**1.857**	**21.01**	**0.94**	**130**	**4.26**
08:40	**6.88**	**0**	**-153.9**	**0.75**	**1.856**	**21.16**	**0.94**	**130**	**4.26**
08:45	**6.88**	**0**	**-150.3**	**0.66**	**1.855**	**21.33**	**0.94**	**130**	**4.26**
08:50	**6.88**	**0**	**-149.6**	**0.79**	**1.857**	**21.39**	**0.94**	**130**	**4.26**
08:55	**6.88**	**0**	**-147.6**	**0.87**	**1.862**	**21.39**	**0.95**	**130**	**4.26**
09:00	**6.87**	**0**	**-162**	**1.05**	**1.869**	**21.4**	**0.95**	**130**	**4.26**
09:05	**6.87**	**0**	**-165.3**	**1.01**	**1.874**	**21.37**	**0.95**	**130**	**4.26**
09:10	**6.87**	**0**	**-165.8**	**1.2**	**1.881**	**21.44**	**0.96**	**130**	**4.26**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-234RRD5**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**09-25-2020**	Odor:	**Odorless**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**9:10**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**09-25-2020**

Reviewer Name & Signature:	**Ryan Zsamba**	Ryan	Date: **09-25-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location: **ISCO/AOC 44/North Field** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **09-25-2020**

Monitor Well #: **MW-234RR** Pump Utilized for Three Volume Purge: Same as Low Flow: **X** Make/Model: **Geo Pump**

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)
Prior to Purging	**09:10**	**6.87**	**0**	**-165.8**	**1.2**	**1.881**	**21.44**	**0.96**	**4.26**	**--**
After Purging	**09:30**	**7.01**	**4.1**	**-125.3**	**4.39**	**1.945**	**21.74**	**0.99**	**9.54**	**--**
After Sampling	**09:40**	**6.93**	**0.4**	**-132.9**	**1.88**	**1.943**	**21.48**	**0.99**	**9.89**	**10.5**

Initial Depth to Water (ft):	**4.26**
Depth to Bottom (ft):	**10.5 ft below TOC**
Static Water Col. Ht. (ft):	**6.24**
Static Water Volume (gal) (SWV):	**1**
Min. Purge Volume (gal) (SWV*3):	**3**
Max. Purge Volume (gal) (SWV*5):	**5**
Pump Intake (ft):	**2 feet BDTW**
Purge Start Time:	**9:10**
Purge End Time:	**9:30**
Purge Rate (L/min, gal/min):	**0.1 gal/min**
Volume Purged (gal):	**2**
Well Purged Dry:	**No**
Total Purged Volume (gal) (low flow + 3 Volume):	**3.5**

Sampling Information:

Sample ID: **MW-234RRD5X**

Sample Date: **09-25-2020** Sample Time: **9:30**

Sample Method: **Bottom Fill Bailer**

Bailer Construction: **Teflon**

Observations/Comments:

Clarity: **Clear**

Odor: **Musty odor**

Other: **Na**

Additional Comments:

Water Quality Start Time (after sampling): **9:35**

Water Quality End Time (after sampling): **9:40**

Sampler Name & Signature: **Alex Ciofani** Date: **09-25-2020**

Reviewer Name & Signature: **Ryan Zsamba** Ryan Date: **09-25-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/AOC 44/North Field**	Consulting Firm:	**Parsons**	Date:	**10-13-2020**
Weather:	**cloudy , 64 degrees F , Wind N , 12 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-234RR**	Well Depth:	**11.05**	ft below TOC	Depth to Water:	**3.9**	ft below TOC	Sampling Method:
Sample ID:	**M234RRD6**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**4.23 - 10.73**	ft	Pump Intake:	**7.48**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:

VOCs: **0** H_2S: **0** LEL: **0**

Water Quality Meter Information: Instrument Serial #: **01b0202aa**

Instrument Make/Model: **YSI 6920** Temp. Correction Value: **0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
14:05	**7.02**	**76.2**	**-156.2**	**2.4**	**1.188**	**18.77**	**0.59**	**200**	**4.36**
14:10	**7.07**	**48.9**	**-142.2**	**1.17**	**1.175**	**18.7**	**0.59**	**200**	**4.74**
14:15	**7.08**	**36.6**	**-137.7**	**1.5**	**1.172**	**18.66**	**0.59**	**200**	**4.83**
14:20	**7.09**	**29.7**	**-133.5**	**1.39**	**1.171**	**18.72**	**0.58**	**200**	**4.95**
14:25	**7.09**	**21.9**	**-129.5**	**1.51**	**1.171**	**18.78**	**0.58**	**200**	**5.02**
14:30	**7.1**	**17.9**	**-124.8**	**1.18**	**1.172**	**18.81**	**0.59**	**200**	**5.15**
14:35	**7.1**	**16.7**	**-126.8**	**1.26**	**1.172**	**18.89**	**0.59**	**200**	**5.19**
14:40	**7.09**	**11.3**	**-128.9**	**1.55**	**1.174**	**18.97**	**0.59**	**200**	**5.28**
14:45	**7.09**	**10**	**-128.5**	**1.37**	**1.175**	**18.99**	**0.59**	**200**	**5.39**
14:50	**7.09**	**9.4**	**-128.9**	**1.22**	**1.175**	**19.06**	**0.59**	**200**	**5.48**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M234RRD6**	Clarity:	**Minimal turbidity**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-13-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1455**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**	Date:	**10-13-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-13-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/AOC 44/North Field** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **10-13-2020**

Monitor Well #: **MW-234RR** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**11.05 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-02-2020**
Weather:	**sunny , 41 degrees F , Wind SW , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-322**	Well Depth:	**22.98**	ft below TOC	Depth to Water:	**11.95**	ft below TOC	Sampling Method:
Sample ID:	**MW-322E3**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**11.72 - 21.72**	ft	Pump Intake:	**16.84**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**02f0895ab**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6820**	Temp. Correction Value:	**0.13**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
10:45	**6.44**	**21.1**	**-81.3**	**4.37**	**2.161**	**12.54**	**1.12**	**100**	**12.34**
10:50	**6.49**	**23**	**-84**	**3.28**	**2.08**	**12.9**	**1.07**	**100**	**12.9**
10:55	**6.51**	**22.8**	**-83.7**	**2.67**	**2.071**	**13.19**	**1.07**	**100**	**13.38**
11:00	**6.53**	**19.2**	**-82.3**	**2.07**	**2.082**	**13.23**	**1.07**	**100**	**13.75**
11:05	**6.54**	**13.5**	**-83.2**	**1.83**	**2.092**	**13.26**	**1.08**	**100**	**14.08**
11:10	**6.55**	**11.7**	**-88.3**	**1.58**	**2.151**	**13.3**	**1.11**	**100**	**14.32**
11:15	**6.67**	**15.7**	**-105.7**	**2.43**	**2.127**	**13.72**	**1.06**	**100**	**14.62**
11:20	**6.65**	**14.2**	**-107.9**	**2.98**	**2.132**	**13.73**	**1.1**	**100**	**15.06**
11:25	**6.58**	**21.8**	**-105.2**	**1.37**	**2.11**	**13.96**	**1.09**	**100**	**15.39**
11:30	**6.56**	**11.6**	**-104.1**	**0.86**	**2.102**	**14.22**	**1.08**	**100**	**15.68**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-322E3**	Clarity:	**Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**01-02-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**11:35**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-02-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-02-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**01-02-2020**
Monitor Well #:	**MW-322**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**22.98 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**N/A**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-01-2020**
Weather:	**cloudy , 43 degrees F , Wind E , 11 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-322**	Well Depth:	**22.98**	ft below TOC	Depth to Water:	**13.22**	ft below TOC	Sampling Method:
Sample ID:	**MW-322E4**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**11.72 - 21.72**	ft	Pump Intake:	**17.47**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01h1295ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:50	**6.72**	**112.7**	**-64.8**	**6.22**	**1.875**	**10.7**	**0.97**	**200**	**13.95**
08:55	**6.72**	**118**	**-68.2**	**5.54**	**1.835**	**11.04**	**0.94**	**200**	**14.3**
09:00	**6.71**	**118.6**	**-62.4**	**4.94**	**1.874**	**11.22**	**0.94**	**100**	**14.58**
09:05	**6.71**	**102.4**	**-59.2**	**4.43**	**1.841**	**11.38**	**0.94**	**100**	**14.98**
09:10	**6.69**	**106.2**	**-56.5**	**4.45**	**1.893**	**11.43**	**0.97**	**100**	**15.34**
09:15	**6.69**	**94**	**-55.3**	**4.29**	**1.94**	**11.2**	**0.99**	**100**	**15.64**
09:20	**6.69**	**93**	**-55.5**	**3.59**	**1.96**	**11.15**	**1**	**100**	**15.81**
09:25	**6.69**	**88.4**	**-55.7**	**4.03**	**1.954**	**11.24**	**1**	**100**	**16.14**
09:30	**6.69**	**79.4**	**-58.2**	**3.68**	**1.938**	**11.53**	**0.99**	**100**	**16.34**
09:35	**6.69**	**69.2**	**-60.4**	**3.9**	**1.926**	**11.81**	**0.99**	**100**	**16.52**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-322E4**	Clarity: **Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**04-01-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**Yes**				Sample Time:	**0940**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-01-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-01-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**04-01-2020**	
Monitor Well #:	**MW-322**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**22.98 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-06-2020**
Weather:	**sunny , 83 degrees F , Wind variable , 2 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-322**	Well Depth:	**21.5**	ft below TOC	Depth to Water:	**11.2**	ft below TOC	Sampling Method:
Sample ID:	**M322E5**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**11.72 - 21.72**	ft	Pump Intake:	**16.72**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:55	**6.8**	**0**	**-118.6**	**0.61**	**3.585**	**18.06**	**1.9**	**170**	**12**
10:00	**6.74**	**2.1**	**-125.4**	**0.43**	**3.563**	**18.02**	**1.88**	**170**	**14.8**
10:05	**6.75**	**0**	**-130.2**	**0.38**	**3.606**	**20.33**	**1.9**	**170**	**14.7**
10:10	**6.76**	**0**	**-128.8**	**0.34**	**3.629**	**22.32**	**1.91**	**170**	**14.7**
10:15	**6.73**	**1.3**	**-126.5**	**0.23**	**3.621**	**24.84**	**1.9**	**170**	**14.8**
10:20	**6.73**	**0**	**-125.7**	**0.19**	**3.699**	**25.06**	**1.95**	**170**	**14.8**
10:25	**6.71**	**0**	**-120.5**	**0.14**	**3.902**	**24.64**	**2.06**	**170**	**14.8**
10:30	**6.7**	**0**	**-117**	**0.16**	**3.975**	**24.83**	**2.1**	**170**	**14.8**
10:35	**6.7**	**0**	**-112.7**	**0.16**	**3.978**	**25.43**	**2.1**	**170**	**14.8**
10:40	**6.69**	**0**	**-112.1**	**0.08**	**3.901**	**25.85**	**2.06**	**170**	**14.8**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M322E5**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-06-2020**	Odor:	**Slight HC odor**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**10:40**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**07-06-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **07-06-2020**

Monitor Well #: **MW-322** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**21.5 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-02-2019**
Weather:	**partly cloudy , 71 degrees F , Wind W , 10 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-322**	Well Depth:	**22.98**	ft below TOC	Depth to Water:	**8.84**	ft below TOC	Sampling Method:
Sample ID:	**MW-322E2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**11.72 - 21.72**	ft	Pump Intake:	**17**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:	Instrument Serial #:	**01j0214ac**
VOCs:	**0.5**	H_2S:	**0**	LEL:	**9**	Instrument Make/Model: **YSI 6920**	Temp. Correction Value: **0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:10	**6.93**	**207.6**	**-100.4**	**3.92**	**2.42**	**24.14**	**1.24**	**249**	**9.54**
09:15	**6.92**	**272.9**	**-101.4**	**2.99**	**2.413**	**23.69**	**1.24**	**140**	**10.49**
09:20	**6.93**	**317.5**	**-101.4**	**2.53**	**2.405**	**23.49**	**1.24**	**100**	**11.01**
09:25	**6.93**	**305.2**	**-101.6**	**2.21**	**2.399**	**23.46**	**1.23**	**110**	**11.49**
09:30	**6.93**	**322.1**	**-92.8**	**2.05**	**2.402**	**24.14**	**1.23**	**100**	**11.69**
09:35	**6.92**	**298**	**-104.4**	**1.77**	**2.403**	**24.26**	**1.24**	**110**	**12.13**
09:40	**6.89**	**257.9**	**-107.6**	**1.6**	**2.399**	**23.88**	**1.23**	**110**	**12.55**
09:45	**6.85**	**155**	**-107.1**	**1.3**	**2.406**	**23.74**	**1.24**	**110**	**13.02**
09:50	**6.82**	**139.8**	**-105**	**1.1**	**2.411**	**23.83**	**1.24**	**110**	**13.54**
09:55	**6.8**	**119.3**	**-106.4**	**0.95**	**2.429**	**23.83**	**1.25**	**110**	**13.75**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-322E2**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **10-02-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **1000**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-02-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-02-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**10-02-2019**
Monitor Well #:	**MW-322**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**22.98 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**Previous well depth – 18.5 ft, current 22.98 ft (stick up). Only low flow was done and the samples were collected for VOC+10, SVOC+20 and TAL Metals (filtered and unfiltered), NH3 and PO4 – Bailer info is in 3 vol purge section (which wasn't performed) !!**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-13-2020**
Weather:	**overcast , 55 degrees F , Wind variable , 16 mph , rain**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-322**	Well Depth:	**22**	ft below TOC	Depth to Water:	**9.8**	ft below TOC	Sampling Method:
Sample ID:	**M322E6**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**11.72 - 21.72**	ft	Pump Intake:	**16.72**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04A0514AA**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:35	**6.72**	**27.3**	**-115.8**	**1.73**	**1.537**	**18.4**	**0.78**	**140**	**10.03**
09:40	**6.74**	**29.2**	**-119.8**	**1.56**	**1.538**	**18.49**	**0.78**	**140**	**10.2**
09:45	**6.8**	**39.8**	**-130.2**	**1.38**	**1.538**	**18.5**	**0.78**	**150**	**10.39**
09:50	**6.77**	**24.4**	**-125.6**	**1.18**	**1.572**	**18.02**	**0.8**	**150**	**10.51**
09:55	**6.72**	**23**	**-98.4**	**1.58**	**1.621**	**16.88**	**0.82**	**150**	**10.67**
10:00	**6.71**	**28.7**	**-76.6**	**2.22**	**1.627**	**16.48**	**0.83**	**150**	**10.78**
10:05	**6.72**	**38.3**	**-66.2**	**3.07**	**1.63**	**16.25**	**0.83**	**150**	**10.85**
10:10	**6.72**	**51.6**	**-61.1**	**3.36**	**1.634**	**16.04**	**0.83**	**150**	**11.03**
10:15	**6.72**	**62.6**	**-60.1**	**3.62**	**1.639**	**15.9**	**0.83**	**150**	**11.2**
10:20	**6.72**	**64.9**	**-60.2**	**3.61**	**1.637**	**15.92**	**0.83**	**150**	**11.29**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M322E6**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**10-13-2020**	Odor:	**Odorless**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**10:20**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**10-13-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-13-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **10-13-2020**

Monitor Well #: **MW-322** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**22 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-02-2020**
Weather:	**partly cloudy , 43 degrees F , Wind SW , 8 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-323**	Well Depth:	**46.05**	ft below TOC	Depth to Water:	**8.96**	ft below TOC	Sampling Method:
Sample ID:	**MW-323E3**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**40.3 - 45.3**	ft	Pump Intake:	**42.8**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**02f0895ab**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6820**	Temp. Correction Value:	**0.13**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:45	**6.7**	**41.1**	**73.3**	**7.54**	**1.013**	**12.14**	**0.51**	**100**	**9.85**
12:50	**6.73**	**45**	**62.4**	**6.47**	**0.955**	**12.36**	**0.47**	**100**	**9.85**
12:55	**6.75**	**35.2**	**54.8**	**5.79**	**0.941**	**12.3**	**0.47**	**100**	**9.93**
13:00	**6.76**	**29.5**	**45.3**	**5.28**	**0.93**	**12.97**	**0.46**	**200**	**9.85**
13:05	**6.41**	**19.9**	**-69.3**	**2.43**	**1.044**	**13.42**	**0.52**	**200**	**9.86**
13:10	**6.3**	**13.2**	**-75.9**	**1.02**	**1.119**	**13.47**	**0.56**	**200**	**9.88**
13:15	**6.28**	**11.5**	**-76**	**0.62**	**1.126**	**13.5**	**0.55**	**200**	**9.91**
13:20	**6.27**	**9.4**	**-76.1**	**0.46**	**1.12**	**13.67**	**0.55**	**200**	**9.97**
13:25	**6.27**	**8.3**	**-76.3**	**0.38**	**1.112**	**13.73**	**0.55**	**200**	**9.91**
13:30	**6.27**	**7.3**	**-76.1**	**0.34**	**1.106**	**13.63**	**0.55**	**200**	**9.87**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-323E3**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**01-02-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**13:35**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-02-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-02-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **01-02-2020**

Monitor Well #: **MW-323** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**46.05 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**N/A**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-01-2020**
Weather:	**partly cloudy , 46 degrees F , Wind E , 12 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-323**	Well Depth:	**46.05**	ft below TOC	Depth to Water:	**9.66**	ft below TOC	Sampling Method:
Sample ID:	**MW-323E4**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**40.3 - 45.3**	ft	Pump Intake:	**42.8**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01h1295ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
10:40	**7.45**	**20.7**	**72.8**	**9.1**	**0.868**	**13.14**	**0.43**	**200**	**9.7**
10:45	**7.36**	**12.6**	**81.9**	**5.88**	**0.856**	**13.12**	**0.42**	**200**	**9.72**
10:50	**7.32**	**8.2**	**94.9**	**6.81**	**0.849**	**13.05**	**0.42**	**200**	**9.78**
10:55	**7.3**	**6**	**102.2**	**5.82**	**0.848**	**13.38**	**0.42**	**200**	**9.77**
11:00	**7.29**	**5.3**	**108.1**	**5.8**	**0.849**	**13.35**	**0.42**	**200**	**9.8**
11:05	**7.08**	**4.9**	**116.3**	**5.12**	**0.866**	**13.43**	**0.43**	**200**	**9.77**
11:10	**6.95**	**5.6**	**124.1**	**5.87**	**0.878**	**13.74**	**0.43**	**200**	**9.79**
11:15	**6.91**	**4**	**127.3**	**4.96**	**0.88**	**13.84**	**0.44**	**200**	**9.77**
11:20	**6.86**	**5.9**	**109.5**	**4.43**	**0.885**	**13.97**	**0.44**	**200**	**9.79**
11:25	**6.7**	**5.4**	**42.7**	**4.02**	**0.918**	**14.14**	**0.45**	**200**	**9.77**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-323E4**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**04-01-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**Yes**				Sample Time:	**1130**	Other: **Mild sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-01-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-01-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **04-01-2020**

Monitor Well #: **MW-323** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**46.05 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-06-2020**
Weather:	**sunny , 88 degrees F , Wind variable , 2 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-323**	Well Depth:	**45**	ft below TOC	Depth to Water:	**10.13**	ft below TOC	Sampling Method:
Sample ID:	**MW-323E6**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**40.3 - 45.3**	ft	Pump Intake:	**42.8**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S:	**0**	LEL:	**0**	Instrument Make/Model: **YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
12:20	**7.01**	**0**	**149.2**	**6.07**	**0.24**	**27.75**	**0.5**	**160**	**10.16**
12:25	**6.97**	**2.3**	**87.9**	**0.96**	**1.814**	**24.96**	**0.92**	**160**	**10.16**
12:30	**6.7**	**3.1**	**95**	**0.71**	**1.785**	**24.23**	**0.9**	**160**	**10.16**
12:35	**6.61**	**5.1**	**96.4**	**0.6**	**1.78**	**23.79**	**0.9**	**160**	**10.16**
12:40	**6.54**	**15.6**	**68.9**	**0.48**	**1.808**	**23.58**	**0.92**	**160**	**10.16**
12:45	**6.45**	**15.7**	**11.6**	**0.34**	**1.9**	**23.59**	**0.97**	**160**	**10.16**
12:50	**6.38**	**14**	**-11.6**	**0.22**	**2.02**	**23.55**	**1.03**	**160**	**10.16**
12:55	**6.36**	**17**	**-19**	**0.17**	**2.086**	**23.45**	**1.06**	**160**	**10.16**
13:00	**6.35**	**24.5**	**-24.5**	**0.13**	**2.093**	**23.4**	**1.07**	**160**	**10.16**
13:05	**6.35**	**24.1**	**-26**	**0.12**	**2.096**	**23.52**	**1.07**	**160**	**10.16**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-323E6**	Clarity:	**Hazy**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-06-2020**	Odor:	**Slight HC odor**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**13:05**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**07-06-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/CAMU/Main Yard**	Sampling Personnel:	**Alex Ciofani**	Well Type:	**Stick Up**	Date:	**07-06-2020**
Monitor Well #:	**MW-323**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**45 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-07-2019**
Weather:	**cloudy , 70 degrees F , Wind SW , 12 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-323**	Well Depth:	**42**	ft below TOC	Depth to Water:	**10.13**	ft below TOC	Sampling Method:
Sample ID:	**MW-323E2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**40.3 - 45.3**	ft	Pump Intake:	**43**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:		Instrument Serial #:	**02e0838af**
VOCs:	**0**	H_2S:	**0**	LEL:	**0**	Instrument Make/Model: **YSI 6920**	Temp. Correction Value: **0.09**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:50	**6.73**	**27.6**	**-37.6**	**4.31**	**1.144**	**21.3**	**0.57**	**120**	**10.15**
09:55	**6.56**	**28.4**	**-48.3**	**3.01**	**1.216**	**20.68**	**0.61**	**120**	**10.17**
10:00	**6.46**	**22.1**	**-55.5**	**2.09**	**1.346**	**18.78**	**0.67**	**220**	**10.22**
10:05	**6.44**	**17.6**	**-58.6**	**1.46**	**1.428**	**18.43**	**0.72**	**220**	**10.19**
10:10	**6.43**	**14.6**	**-59.5**	**1.14**	**1.449**	**18.34**	**0.73**	**220**	**10.23**
10:15	**6.43**	**14**	**-59.8**	**0.87**	**1.464**	**18.13**	**0.74**	**220**	**10.2**
10:20	**6.43**	**12**	**-60.1**	**0.78**	**1.467**	**18.27**	**0.74**	**220**	**10.2**
10:25	**6.43**	**11.2**	**-60.2**	**0.66**	**1.469**	**18.55**	**0.74**	**220**	**10.18**
10:30	**6.43**	**10.7**	**-60.9**	**0.59**	**1.465**	**18.61**	**0.74**	**220**	**10.19**
10:35	**6.43**	**10.4**	**-60.3**	**0.52**	**1.458**	**18.79**	**0.74**	**220**	**10.19**

Electronic Data Logger Used:	**No**				Sampling Information:		Observations/Comments:
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-323E2**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**10-07-2019**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1045**	Other: **Sheen present**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-07-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-07-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **10-07-2019**

Monitor Well #: **MW-323** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**42 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-13-2020**
Weather:	**overcast , 55 degrees F , Wind variable , 12 mph , rain**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-323**	Well Depth:	**46**	ft below TOC	Depth to Water:	**10.9**	ft below TOC	Sampling Method:
Sample ID:	**M323E7**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**40.3 - 45.3**	ft	Pump Intake:	**42.8**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04A0514AA**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:35	**7.06**	**21.1**	**79.5**	**7.28**	**0.717**	**17.18**	**0.35**	**150**	**11.2**
08:40	**6.56**	**22.6**	**85.5**	**6.34**	**0.707**	**17.62**	**0.35**	**150**	**11.39**
08:45	**6.44**	**13.9**	**89.5**	**7.07**	**0.704**	**17.03**	**0.35**	**150**	**11.55**
08:50	**6.4**	**10.9**	**93.7**	**7.72**	**0.703**	**16.45**	**0.34**	**150**	**11.78**
08:55	**6.38**	**11.9**	**99.5**	**5**	**0.702**	**16.02**	**0.34**	**150**	**11.98**
09:00	**6.38**	**12**	**99.8**	**5.25**	**0.701**	**16**	**0.34**	**150**	**12.1**
09:05	**6.38**	**12.8**	**103.6**	**3.35**	**0.702**	**15.82**	**0.34**	**150**	**12.34**
09:10	**6.38**	**48.3**	**79.3**	**4.13**	**0.702**	**15.68**	**0.34**	**150**	**12.6**
09:15	**6.38**	**50.6**	**76.6**	**4.65**	**0.702**	**15.67**	**0.34**	**150**	**12.84**
09:20	**6.38**	**31.3**	**70.6**	**5.19**	**0.703**	**15.67**	**0.34**	**150**	**12.98**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M323E7**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**10-13-2020**	Odor:	**Odorless**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**9:20**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**10-13-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-13-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **10-13-2020**

Monitor Well #: **MW-323** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**46 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-06-2020**
Weather:	**cloudy , 46 degrees F , Wind SW , 15 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-324**	Well Depth:	**19.1**	ft below TOC	Depth to Water:	**6.98**	ft below TOC	Sampling Method:
Sample ID:	**MW-324D7**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**9.02 - 19.02**	ft	Pump Intake:	**14.02**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:58	**5.53**	**589.9**	**35.4**	**3.81**	**0.963**	**11.78**	**0.48**	**100**	**7.34**
13:03	**5.46**	**605.9**	**36.9**	**1.78**	**1.096**	**12.09**	**0.55**	**100**	**7.96**
13:08	**5.44**	**505.8**	**38.1**	**1.36**	**1.119**	**12.22**	**0.56**	**100**	**8.5**
13:13	**5.43**	**404.6**	**40.6**	**1.28**	**1.103**	**12.14**	**0.55**	**100**	**8.87**
13:18	**5.42**	**280.1**	**44.1**	**1.11**	**1.06**	**12.29**	**0.53**	**100**	**9.13**
13:23	**5.41**	**221.1**	**48.9**	**1.46**	**0.972**	**12.28**	**0.48**	**100**	**9.22**
13:28	**5.41**	**183**	**52**	**1.78**	**0.912**	**12.16**	**0.45**	**100**	**9.36**
13:33	**5.4**	**166.1**	**56.4**	**1.83**	**0.85**	**12.2**	**0.42**	**100**	**9.42**
13:38	**5.38**	**131.3**	**58.3**	**1.75**	**0.853**	**12.29**	**0.42**	**100**	**9.61**
13:43	**5.37**	**121.9**	**58.4**	**1.55**	**0.878**	**12.42**	**0.43**	**100**	**9.75**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-324D7**	Clarity: **Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**01-06-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**13:50**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-06-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**01-06-2020**
Monitor Well #:	**MW-324**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**19.1 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-03-2020**
Weather:	**cloudy , 54 degrees F , Wind N , 15 mph , rain**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-324**	Well Depth:	**19**	ft below TOC	Depth to Water:	**6.8**	ft below TOC	Sampling Method:
Sample ID:	**MW-324D8**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**9.02 - 19.02**	ft	Pump Intake:	**14.02**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01h1295ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
12:20	**5.62**	**351.7**	**21.6**	**2.57**	**1.318**	**12.52**	**0.66**	**200**	**7.56**
12:25	**5.58**	**386.5**	**28.7**	**1.42**	**1.243**	**12.31**	**0.63**	**200**	**8.39**
12:30	**5.54**	**417.1**	**37.6**	**1.49**	**1.093**	**12.28**	**0.55**	**200**	**8.77**
12:35	**5.52**	**390.2**	**42.9**	**1.54**	**1.031**	**12.36**	**0.51**	**200**	**8.88**
12:40	**5.5**	**366.8**	**46.4**	**1.57**	**1.004**	**12.35**	**0.5**	**200**	**8.87**
12:45	**5.48**	**349.5**	**48.1**	**1.56**	**0.998**	**12.96**	**0.5**	**200**	**8.86**
12:50	**5.47**	**373.3**	**49.2**	**1.59**	**1.016**	**12.16**	**0.5**	**200**	**8.86**
12:55	**5.5**	**366.7**	**45.2**	**1.41**	**1.135**	**12.24**	**0.56**	**200**	**8.9**
13:00	**5.53**	**432.8**	**40.1**	**1.39**	**1.184**	**12.7**	**0.59**	**200**	**8.89**
13:05	**5.55**	**547.8**	**36.9**	**1.41**	**1.211**	**12.94**	**0.61**	**200**	**8.9**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-324D8**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**04-03-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**1310**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-03-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-03-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**
Monitor Well #:	**MW-324**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Date: **04-03-2020**

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**19 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-08-2020**
Weather:	**overcast , 76 degrees F , Wind variable , 2 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-324**	Well Depth:	**19**	ft below TOC	Depth to Water:	**6.7**	ft below TOC	Sampling Method:
Sample ID:	**M324D9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**9.02 - 19.02**	ft	Pump Intake:	**14.02**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
09:40	**5.8**	**658.3**	**-1**	**4.53**	**2.124**	**22.81**	**1.09**	**150**	**6.79**
09:45	**5.6**	**680.2**	**4.2**	**4.14**	**2.236**	**22.79**	**1.15**	**160**	**6.88**
09:50	**5.51**	**589**	**6.4**	**5.05**	**2.366**	**22.9**	**1.22**	**150**	**6.95**
09:55	**5.44**	**411.5**	**6.1**	**7.09**	**2.468**	**23.4**	**1.27**	**160**	**7.03**
10:00	**5.42**	**346.6**	**4.6**	**8.35**	**2.498**	**23.78**	**1.29**	**160**	**7.09**
10:05	**5.41**	**256.1**	**3.6**	**9.19**	**2.5**	**23.88**	**1.29**	**160**	**7.16**
10:10	**5.41**	**249.6**	**2.2**	**10.67**	**2.494**	**24.06**	**1.28**	**160**	**7.19**
10:15	**5.4**	**219.9**	**1.1**	**11.27**	**2.478**	**24.2**	**1.27**	**160**	**7.26**
10:20	**5.4**	**236.5**	**0.1**	**11.64**	**2.467**	**24.31**	**1.27**	**160**	**7.27**
10:25	**5.4**	**208.2**	**0**	**11.71**	**2.466**	**24.33**	**1.27**	**160**	**7.32**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M324D9**	Clarity:	**Dark and hazy**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-08-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**10:25**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**		Date: **07-08-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/CAMU/Main Yard**	Sampling Personnel:	**Alex Ciofani**	Well Type:	**Flush Mount**	Date:	**07-08-2020**
Monitor Well #:	**MW-324**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**19 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-07-2019**
Weather:	**cloudy , 70 degrees F , Wind SW , 13 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-324**	Well Depth:	**19**	ft below TOC	Depth to Water:	**6.13**	ft below TOC	Sampling Method:
Sample ID:	**MW-324D6**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**9.02 - 19.02**	ft	Pump Intake:	**14**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**02je0838af**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.09**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
13:30	**5.45**	**1279**	**77.1**	**1.81**	**1.771**	**22.56**	**0.89**	**240**	**7.12**
13:35	**5.44**	**1101.1**	**27.4**	**1.21**	**1.828**	**22.72**	**0.93**	**120**	**7.89**
13:40	**5.33**	**1022.2**	**53.5**	**1.54**	**1.791**	**22.84**	**0.9**	**120**	**8.72**
13:45	**5.3**	**803.2**	**55.9**	**1.37**	**1.65**	**23.38**	**0.84**	**100**	**9.02**
13:50	**5.32**	**592.6**	**55.2**	**2**	**1.477**	**23.57**	**0.75**	**100**	**9.23**
13:55	**5.38**	**406.4**	**51**	**2.02**	**1.332**	**23.31**	**0.66**	**100**	**9.45**
14:00	**5.44**	**329.5**	**48.4**	**2.13**	**1.213**	**23.13**	**0.51**	**100**	**9.58**
14:05	**5.46**	**283.4**	**44.5**	**2.22**	**1.158**	**23.08**	**0.58**	**100**	**9.57**
14:10	**5.45**	**159**	**46.4**	**2.22**	**1.158**	**22.93**	**0.57**	**100**	**9.89**
14:15	**5.43**	**54.1**	**48.6**	**2.78**	**1.188**	**23.09**	**0.59**	**100**	**9.98**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-324D6**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**10-07-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**1425**	Other:	**Sheen present**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-07-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-07-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**10-07-2019**
Monitor Well #:	**MW-324**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**19 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**Only low flow - CAMU well**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-12-2020**
Weather:	**overcast , 53 degrees F , Wind NE , 15 mph , rain**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-324**	Well Depth:	**19**	ft below TOC	Depth to Water:	**7.02**	ft below TOC	Sampling Method:
Sample ID:	**MW-324E1**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**9.02 - 19.02**	ft	Pump Intake:	**14**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202aa**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
09:50	**5.39**	**1304.6**	**-14.5**	**1.5**	**2.881**	**16.57**	**1.47**	**200**	**7.94**
09:55	**5.8**	**1245.3**	**15.3**	**1.32**	**2.653**	**16.49**	**1.26**	**200**	**8.32**
10:00	**5.47**	**1247.8**	**31.3**	**2.3**	**3.154**	**16.72**	**1.65**	**200**	**8.95**
10:05	**5.43**	**1294.9**	**33.2**	**1.51**	**3.236**	**17.07**	**1.7**	**200**	**9.5**
10:10	**5.45**	**1265.9**	**31.9**	**1.25**	**3.107**	**17.4**	**1.64**	**200**	**10.09**
10:15	**5.45**	**1216.8**	**30.6**	**0.88**	**2.993**	**17.5**	**1.57**	**100**	**10.4**
10:20	**5.46**	**1078.6**	**31.3**	**1.41**	**3**	**17.42**	**1.57**	**200**	**10.48**
10:25	**5.43**	**770.9**	**34.7**	**0.86**	**3.059**	**17.34**	**1.6**	**200**	**10.71**
10:30	**36.8**	**610.8**	**36.7**	**0.67**	**3.11**	**17.26**	**1.63**	**200**	**10.92**
10:35	**5.42**	**530.8**	**37.4**	**0.62**	**3.126**	**17.16**	**1.64**	**200**	**11.26**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-324E1**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-12-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**1040**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-12-2020**

Reviewer Name & Signature:	**Dipal Dhagat**	Dipal	Date: **10-12-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Flush Mount** Date: **10-12-2020**

Monitor Well #: **MW-324** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**19 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Dipal Dhagat**	Dipal	Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU area/MY**	Consulting Firm:	**Parsons**	Date:	**01-06-2020**
Weather:	**sunny , 42 degrees F , Wind SW , 10 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-325**	Well Depth:	**41**	ft below TOC	Depth to Water:	**10.14**	ft below TOC	Sampling Method:
Sample ID:	**MW-325D6**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**35.56 - 40.56**	ft	Pump Intake:	**38.06**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
11:30	**7.34**	**105.3**	**-28.7**	**6.84**	**0.137**	**13.6**	**0.07**	**100**	**10.3**
11:35	**7.46**	**82.8**	**-24.2**	**4.51**	**0.123**	**13.9**	**0.06**	**100**	**10.46**
11:40	**7.55**	**13.6**	**-18.7**	**3.83**	**0.121**	**14.36**	**0.06**	**100**	**10.54**
11:45	**7.64**	**96**	**-13.7**	**2.8**	**0.12**	**14.54**	**0.12**	**200**	**10.96**
11:50	**7.71**	**10.1**	**-4.9**	**2.95**	**0.119**	**14.67**	**0.06**	**200**	**11.07**
11:55	**7.75**	**152.9**	**4**	**2.75**	**0.12**	**14.43**	**0.06**	**200**	**11.04**
12:00	**7.76**	**13.3**	**9.3**	**2.87**	**0.121**	**14.7**	**0.06**	**200**	**11.05**
12:05	**7.41**	**131**	**-55.5**	**2.51**	**0.248**	**14.34**	**0.12**	**200**	**11.1**
12:10	**7.3**	**89.7**	**-127.9**	**1.38**	**0.608**	**14.26**	**0.3**	**200**	**11.1**
12:15	**7.37**	**84**	**-145.3**	**0.9**	**0.673**	**13.84**	**0.33**	**200**	**11.09**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-325D6**	Clarity: **Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**01-06-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**12:20**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-06-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU area/MY**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**	Date:	**01-06-2020**
Monitor Well #:	**MW-325**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**41 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU area/MY**	Consulting Firm:	**Parsons**	Date:	**04-03-2020**
Weather:	**cloudy , 52 degrees F , Wind N , 13 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-325**	Well Depth:	**41**	ft below TOC	Depth to Water:	**10.13**	ft below TOC	Sampling Method:
Sample ID:	**MW-325D7**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**35.56 - 40.56**	ft	Pump Intake:	**38.06**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01h1295ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
11:00	**7.36**	**115.6**	**-14.1**	**9.01**	**0.138**	**14.33**	**0.07**	**200**	**10.45**
11:05	**7.52**	**89**	**-11.3**	**8.27**	**0.116**	**14.19**	**0.05**	**200**	**10.64**
11:10	**7.59**	**67.6**	**-1.6**	**7.85**	**0.115**	**14.12**	**0.05**	**200**	**11.84**
11:15	**7.61**	**36.4**	**-19.2**	**4.72**	**0.129**	**14.33**	**0.06**	**200**	**10.97**
11:20	**7.41**	**27.3**	**-80.7**	**3.08**	**0.453**	**14.3**	**0.19**	**200**	**10.89**
11:25	**7.46**	**21.2**	**-120.1**	**1.56**	**0.702**	**14.31**	**0.34**	**200**	**10.95**
11:30	**7.51**	**29.3**	**-138.8**	**0.84**	**0.785**	**14.39**	**0.39**	**200**	**11.07**
11:35	**7.53**	**35.8**	**-148.9**	**0.56**	**0.809**	**14.59**	**0.4**	**200**	**11**
11:40	**7.54**	**33.6**	**-153.4**	**0.48**	**0.813**	**14.55**	**0.4**	**200**	**11.1**
11:45	**7.56**	**27**	**-156**	**0.44**	**0.816**	**14.43**	**0.4**	**200**	**11.06**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-325D7**	Clarity:	**Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**04-03-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**1150**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-03-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-03-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU area/MY**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**	Date:	**04-03-2020**
Monitor Well #:	**MW-325**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**41 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU area/MY**	Consulting Firm:	**Parsons**	Date:	**07-08-2020**
Weather:	**overcast , 76 degrees F , Wind variable , 2 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-325**	Well Depth:	**41**	ft below TOC	Depth to Water:	**10.35**	ft below TOC	Sampling Method:
Sample ID:	**M325D8**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**35.56 - 40.56**	ft	Pump Intake:	**38.06**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:30	**7.26**	**445.4**	**104.8**	**3.78**	**0.403**	**15.53**	**0.19**	**16**	**10.5**
08:35	**7.28**	**309.3**	**99.6**	**3.42**	**0.398**	**15.29**	**0.19**	**160**	**10.6**
08:40	**7.28**	**283.4**	**97.2**	**3.35**	**0.396**	**15.21**	**0.19**	**160**	**10.7**
08:45	**7.32**	**275.6**	**94.9**	**3.28**	**0.397**	**15.25**	**0.19**	**160**	**10.8**
08:50	**7.32**	**257.9**	**93**	**3.24**	**0.398**	**15.2**	**0.19**	**160**	**10.9**
08:55	**7.36**	**235.7**	**90.3**	**3.25**	**0.398**	**15.22**	**0.19**	**160**	**11**
09:00	**7.36**	**230.9**	**90.1**	**3.16**	**0.412**	**15.19**	**0.2**	**160**	**11.1**
09:05	**7.21**	**131**	**13.7**	**2.19**	**1.321**	**15.94**	**0.66**	**160**	**11.2**
09:10	**7.27**	**125.4**	**-109.3**	**1.96**	**1.595**	**16.02**	**0.81**	**160**	**11.3**
09:15	**7.28**	**123.9**	**-115**	**2.01**	**1.607**	**16.04**	**0.82**	**160**	**11.4**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M325D8**	Clarity:	**Turbid hazy water**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-08-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**9:15**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**07-08-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/CAMU area/MY**				Sampling Personnel:	**Alex Ciofani**	Well Type:	**Flush Mount**		Date:	**07-08-2020**
Monitor Well #:	**MW-325**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**41 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU area/MY**	Consulting Firm:	**Parsons**	Date:	**10-07-2019**
Weather:	**cloudy , 70 degrees F , Wind SW , 13 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-325**	Well Depth:	**41**	ft below TOC	Depth to Water:	**10.03**	ft below TOC	Sampling Method:
Sample ID:	**MW-325D5**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**35.56 - 40.56**	ft	Pump Intake:	**38**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**02e0838af**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.09**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
11:55	**7.23**	**179.5**	**-97.2**	**17.78**	**0.569**	**23.79**	**0.25**	**120**	**10.34**
12:00	**7.28**	**183.7**	**-118.7**	**17.75**	**0.783**	**22.98**	**0.38**	**120**	**10.28**
12:05	**7.34**	**183.9**	**-144.4**	**15.07**	**1.128**	**22.02**	**0.56**	**120**	**10.36**
12:10	**7.39**	**153.2**	**-154.8**	**14.08**	**1.238**	**21**	**0.62**	**120**	**10.56**
12:15	**7.42**	**117.8**	**-162.8**	**12.94**	**1.289**	**20.85**	**0.64**	**120**	**10.51**
12:25	**7.42**	**83**	**-156.4**	**3.64**	**1.735**	**20.44**	**1**	**120**	**10.84**
12:30	**7.6**	**73.1**	**-50**	**2.8**	**1.387**	**20.5**	**0.7**	**120**	**10.72**
12:40	**7.41**	**49.6**	**-164.1**	**1.64**	**1.556**	**20.79**	**0.78**	**120**	**10.73**
12:45	**7.38**	**34.1**	**-143.5**	**1.24**	**1.489**	**21.35**	**0.75**	**120**	**10.79**
12:50	**7.39**	**48.4**	**-160.5**	**0.81**	**1.344**	**21.83**	**0.67**	**120**	**10.89**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min **00** sec	Sample ID:	**MW-325D5**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-07-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1300**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-07-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-07-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU area/MY** Sampling Personnel: **Ryan Zsamba** Well Type: **Flush Mount** Date: **10-07-2019**

Monitor Well #: **MW-325** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**41 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU area/MY**	Consulting Firm:	**Parsons**	Date:	**10-12-2020**
Weather:	**overcast , 55 degrees F , Wind NE , 16 mph , rain**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-325**	Well Depth:	**41.02**	ft below TOC	Depth to Water:	**10.16**	ft below TOC	Sampling Method:
Sample ID:	**MW-325D9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**35.56 - 40.56**	ft	Pump Intake:	**38.1**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01b0202aa**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
11:15	**6.83**	**283.7**	**-74.2**	**1.01**	**0.944**	**14.68**	**0.48**	**200**	**10.5**
11:20	**7.08**	**156**	**-90.7**	**0.56**	**0.861**	**15.38**	**0.43**	**20**	**10.76**
11:25	**7.23**	**56.8**	**-73.3**	**0.23**	**0.903**	**15.2**	**0.45**	**200**	**10.91**
11:30	**7.24**	**42.9**	**-62.7**	**0.11**	**1.227**	**15.1**	**0.56**	**200**	**10.91**
11:35	**7.28**	**53.4**	**-96.3**	**0.67**	**1.404**	**15**	**0.71**	**200**	**10.96**
11:40	**7.29**	**49.6**	**-116.3**	**0.23**	**1.472**	**14.87**	**0.74**	**200**	**11**
11:45	**7.31**	**86**	**-126.8**	**0.1**	**1.5**	**14.87**	**0.76**	**200**	**11.08**
11:50	**7.31**	**137.5**	**-128.8**	**0.1**	**1.491**	**14.92**	**0.75**	**200**	**11.07**
11:55	**7.31**	**208.1**	**-122.2**	**0.16**	**1.455**	**14.9**	**0.74**	**200**	**11.07**
12:00	**7.31**	**239**	**-126.1**	**0.18**	**1.459**	**14.91**	**0.74**	**200**	**11.13**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-325D9**	Clarity:	**Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-12-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1205**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**	Date:	**10-12-2020**

Reviewer Name & Signature:	**Dipal Dhagat**	Dipal	Date: **10-12-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU area/MY** Sampling Personnel: **Ryan Zsamba** Well Type: **Flush Mount** Date: **10-12-2020**

Monitor Well #: **MW-325** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**41.02 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Dipal Dhagat**	Dipal	Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-03-2020**
Weather:	**cloudy , 46 degrees F , Wind W , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-326**	Well Depth:	**25.1**	ft below TOC	Depth to Water:	**6.84**	ft below TOC	Sampling Method:
Sample ID:	**MW-326D8**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**19.64 - 24.64**	ft	Pump Intake:	**22.14**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01B0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
12:50	**6.2**	**114.8**	**-36.8**	**3.54**	**1.667**	**12.93**	**0.85**	**100**	**6.8**
12:55	**6.13**	**54.7**	**-73.3**	**1.88**	**2.087**	**13.36**	**1.07**	**100**	**7.3**
13:00	**6.14**	**57.2**	**-79.8**	**1.63**	**2.24**	**13.73**	**1.15**	**100**	**7.95**
13:05	**6.16**	**83.4**	**-81.3**	**1.24**	**2.253**	**13.86**	**1.16**	**100**	**8.5**
13:10	**6.18**	**101.9**	**-79.9**	**1.14**	**2.222**	**13.85**	**1.15**	**100**	**9.07**
13:15	**6.19**	**135.1**	**-73.7**	**1.02**	**2.045**	**13.85**	**1.05**	**100**	**9.95**
13:20	**6.21**	**159.1**	**-67.4**	**1.05**	**1.764**	**13.83**	**0.9**	**100**	**10.41**
13:25	**6.21**	**177.1**	**-58.9**	**1.02**	**1.491**	**13.91**	**0.76**	**100**	**11.05**
13:30	**6.2**	**177**	**-53.8**	**1**	**1.42**	**13.85**	**0.72**	**100**	**11.67**
13:35	**6.19**	**174.7**	**-46.9**	**1**	**1.344**	**13.83**	**0.68**	**100**	**12.23**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-326D8**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**01-03-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**13:40**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-03-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-03-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**	Date:	**01-03-2020**
Monitor Well #:	**MW-326**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**25.1 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**N/A**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-07-2020**
Weather:	**partly cloudy , 53 degrees F , Wind NW , 3 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-326**	Well Depth:	**25**	ft below TOC	Depth to Water:	**7.67**	ft below TOC	Sampling Method:
Sample ID:	**MW-326D9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**19.64 - 24.64**	ft	Pump Intake:	**22.14**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
08:35	**5.62**	**198.1**	**206.9**	**1.8**	**1.635**	**13.61**	**0.83**	**200**	**7.8**
08:40	**5.53**	**201.9**	**274.5**	**1.66**	**1.606**	**13.46**	**0.82**	**200**	**8.07**
08:45	**5.42**	**238.2**	**355.2**	**1.51**	**1.525**	**13.08**	**0.77**	**200**	**9.12**
08:50	**5.41**	**206.8**	**381.3**	**1.39**	**1.516**	**13.13**	**0.77**	**100**	**9.7**
08:55	**5.41**	**173.3**	**420.1**	**1.13**	**1.503**	**13.09**	**0.76**	**100**	**10.2**
09:00	**5.41**	**147**	**439.6**	**0.95**	**1.493**	**12.97**	**0.76**	**100**	**10.7**
09:05	**5.42**	**112.1**	**454.3**	**0.85**	**1.482**	**13.08**	**0.75**	**100**	**11.4**
09:10	**5.43**	**103.6**	**461.2**	**0.72**	**1.476**	**13.15**	**0.75**	**200**	**11.94**
09:15	**5.43**	**84.1**	**463.5**	**0.71**	**1.472**	**13.21**	**0.74**	**100**	**12.24**
09:20	**5.44**	**71.1**	**464**	**0.65**	**1.469**	**13.27**	**0.74**	**100**	**12.73**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-326D9**	Clarity:	**Moderately turbid, reddish orange**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**04-07-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**0925**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-07-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-07-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**04-07-2020**
Monitor Well #:	**MW-326**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**25 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-13-2020**
Weather:	**sunny , 73 degrees F , Wind W , 5 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-326**	Well Depth:	**25**	ft below TOC	Depth to Water:	**7.18**	ft below TOC	Sampling Method:
Sample ID:	**M326E1**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**19.64 - 24.64**	ft	Pump Intake:	**22.14**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04e8960ad**
VOCs:	**0.2**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
11:10	**6.14**	**18.3**	**-35.7**	**1.81**	**3.379**	**18.84**	**1.78**	**200**	**7.5**
11:15	**6.17**	**8**	**-37.6**	**1.43**	**3.461**	**18.15**	**1.82**	**200**	**7.89**
11:20	**6.2**	**9.3**	**-31.9**	**0.81**	**3.349**	**16.74**	**1.77**	**200**	**9.41**
11:25	**6.18**	**10.1**	**-28.4**	**0.8**	**3.263**	**17.63**	**1.7**	**100**	**10.08**
11:30	**6.15**	**11.7**	**-23.1**	**0.72**	**3.052**	**17.89**	**1.6**	**100**	**10.64**
11:35	**6.12**	**14.6**	**-17.6**	**0.62**	**2.913**	**17.91**	**1.53**	**100**	**11.38**
11:40	**6.11**	**13.9**	**-15.2**	**0.51**	**2.859**	**17.9**	**1.49**	**100**	**11.89**
11:45	**6.1**	**14.3**	**-14.1**	**0.54**	**2.827**	**18.11**	**1.48**	**100**	**12.44**
11:50	**6.09**	**14.5**	**-12.4**	**0.52**	**2.8**	**18.04**	**1.46**	**200**	**12.75**
11:55	**6.07**	**17.9**	**-11**	**0.54**	**2.776**	**18.32**	**1.45**	**100**	**13.2**

Electronic Data Logger Used:	**No**				Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**M326E1**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**07-13-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1200**	Other:	**Minimal sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **07-13-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-13-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**07-13-2020**
Monitor Well #:	**MW-326**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**25 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-02-2019**
Weather:	**partly cloudy , 80 degrees F , Wind W , 13 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-326**	Well Depth:	**25.11**	ft below TOC	Depth to Water:	**6.56**	ft below TOC	Sampling Method:
Sample ID:	**MW-326D7**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**19.64 - 24.64**	ft	Pump Intake:	**22.5**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01j0214ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
11:50	**6.05**	**8.9**	**-92.5**	**2.41**	**2.649**	**25.91**	**1.37**	**120**	**6.61**
11:55	**6.1**	**3.2**	**-77.5**	**1.37**	**2.674**	**23.94**	**1.37**	**110**	**7.11**
12:00	**6.13**	**2.4**	**-70.7**	**1.07**	**2.638**	**23.46**	**1.36**	**110**	**7.89**
12:05	**6.13**	**3.2**	**-64.2**	**0.74**	**2.64**	**23.1**	**1.36**	**110**	**8.55**
12:10	**6.12**	**2**	**-63.2**	**0.8**	**2.629**	**22.88**	**1.36**	**110**	**9.13**
12:15	**6.12**	**1.8**	**-62**	**0.58**	**2.628**	**23.16**	**1.36**	**110**	**9.74**
12:20	**6.12**	**2.5**	**-61.8**	**0.61**	**2.625**	**23.14**	**1.36**	**120**	**10.38**
12:25	**6.12**	**1.7**	**-60.4**	**0.61**	**2.621**	**23.24**	**1.35**	**110**	**11.08**
12:30	**6.12**	**1.7**	**-59.2**	**0.6**	**2.622**	**22.68**	**1.36**	**110**	**11.75**
12:35	**6.12**	**1.5**	**-59.6**	**0.65**	**2.622**	**23.17**	**1.35**	**110**	**12.34**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-326D7**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**10-02-2019**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1245**	Other: **Minor sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-02-2019**
Reviewer Name &			

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-02-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**10-02-2019**
Monitor Well #:	**MW-326**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**25.11 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**Only low flow was done and the samples were collected for VOC+10, SVOC+20 and TAL Metals (unfiltered) – Bailer info is in 3 vol purge section????**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-14-2020**
Weather:	**sunny , 65 degrees F , Wind SW , 9 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-326**	Well Depth:	**25.1**	ft below TOC	Depth to Water:	**6.81**	ft below TOC	Sampling Method:
Sample ID:	**M326E2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**19.64 - 24.64**	ft	Pump Intake:	**22.14**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01b0202aa**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:20	**6.09**	**26**	**-38.3**	**2.24**	**2.597**	**19.3**	**1.35**	**200**	**7.75**
12:25	**6.12**	**30.7**	**-49.3**	**1.09**	**2.629**	**19.01**	**1.36**	**100**	**8.2**
12:30	**6.13**	**29.6**	**-53.5**	**0.87**	**2.645**	**18.83**	**1.37**	**100**	**8.7**
12:35	**6.13**	**34**	**-54.7**	**0.83**	**2.641**	**18.75**	**1.37**	**100**	**9.4**
12:40	**6.13**	**41.5**	**-54.4**	**0.78**	**2.623**	**18.74**	**1.36**	**100**	**9.93**
12:45	**6.12**	**42.2**	**-51.8**	**0.79**	**2.597**	**18.76**	**1.35**	**100**	**10.6**
12:50	**6.09**	**52**	**-45.5**	**0.88**	**2.557**	**18.78**	**1.33**	**100**	**11.16**
12:55	**6.07**	**48.2**	**-39.1**	**1.01**	**2.51**	**18.79**	**1.3**	**100**	**11.61**
13:00	**6.05**	**44.6**	**-36.6**	**1.04**	**2.491**	**18.81**	**1.29**	**100**	**11.81**
13:05	**6.06**	**36.7**	**-37.8**	**1.03**	**2.494**	**18.71**	**1.29**	**200**	**12.2**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M326E2**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-14-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1310**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**	Date:	**10-14-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-14-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Flush Mount** Date: **10-14-2020**

Monitor Well #: **MW-326** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**25.1 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-03-2020**
Weather:	**cloudy , 42 degrees F , Wind SW , 6 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-327**	Well Depth:	**26.1**	ft below TOC	Depth to Water:	**1.23**	ft below TOC	Sampling Method:
Sample ID:	**MW-327D9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**21.14 - 26.14**	ft	Pump Intake:	**23.64**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
10:55	**6.67**	**21.1**	**139**	**7.29**	**1.209**	**10.07**	**0.6**	**100**	**1.26**
11:00	**6.62**	**17.4**	**127.1**	**6.18**	**1.21**	**10.66**	**0.61**	**100**	**1.38**
11:05	**6.56**	**16.1**	**95.8**	**5.24**	**1.219**	**10.9**	**0.61**	**100**	**1.38**
11:10	**6.49**	**14.7**	**75**	**4.26**	**1.227**	**11.01**	**0.62**	**100**	**1.38**
11:15	**6.44**	**11.5**	**64.6**	**3.08**	**12.3**	**12.27**	**0.52**	**200**	**1.48**
11:20	**6.42**	**9.8**	**59.1**	**2.6**	**1.231**	**12.57**	**0.62**	**200**	**1.48**
11:25	**6.42**	**9.6**	**57.1**	**2.53**	**1.228**	**12.6**	**0.62**	**200**	**1.46**
11:30	**6.41**	**9.2**	**55.3**	**2.3**	**1.225**	**12.64**	**0.61**	**200**	**1.4**
11:35	**6.41**	**9**	**54.3**	**2.12**	**1.221**	**12.75**	**0.61**	**200**	**1.41**
11:40	**6.41**	**7.4**	**54.2**	**2.18**	**1.22**	**12.83**	**0.61**	**200**	**1.44**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-327D9**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**01-03-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**11:45**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-03-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-03-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**01-03-2020**	
Monitor Well #:	**MW-327**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**26.1 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-07-2020**
Weather:	**partly cloudy , 61 degrees F , Wind S , 3 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-327**	Well Depth:	**25**	ft below TOC	Depth to Water:	**1.22**	ft below TOC	Sampling Method:
Sample ID:	**MW-327D9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**21.14 - 26.14**	ft	Pump Intake:	**23.64**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:15	**5.39**	**161.2**	**397.8**	**1.39**	**1.72**	**20.89**	**0.87**	**200**	**1.29**
12:20	**4.93**	**139.7**	**409**	**0.81**	**1.666**	**16.56**	**0.85**	**200**	**1.35**
12:25	**4.77**	**129.6**	**465**	**0.52**	**1.651**	**15.91**	**0.84**	**200**	**1.41**
12:30	**4.72**	**128.9**	**469.7**	**0.35**	**1.648**	**15.55**	**0.84**	**200**	**1.44**
12:35	**4.7**	**134.9**	**472**	**0.26**	**1.646**	**15.48**	**0.84**	**200**	**1.33**
12:40	**4.68**	**129.8**	**475.3**	**0.21**	**1.646**	**15.37**	**0.84**	**200**	**1.37**
12:45	**4.69**	**129.3**	**476.8**	**0.16**	**1.639**	**15.45**	**0.83**	**200**	**1.37**
12:50	**4.73**	**114.4**	**479.8**	**0.15**	**1.635**	**15.67**	**0.83**	**200**	**1.35**
12:55	**4.81**	**115.2**	**480.6**	**0.13**	**1.632**	**16.2**	**0.83**	**200**	**1.36**
13:00	**4.83**	**10.9**	**481**	**0.12**	**1.631**	**16.3**	**0.83**	**200**	**1.37**

Electronic Data Logger Used:	**No**				Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-327D9**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**04-07-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1305**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-07-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-07-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **04-07-2020**

Monitor Well #: **MW-327** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**25 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-10-2020**
Weather:	**overcast , 77 degrees F , Wind variable , 4 mph , rain**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-327**	Well Depth:	**26**	ft below TOC	Depth to Water:	**1.88**	ft below TOC	Sampling Method:
Sample ID:	**MW-327E1**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**21.14 - 26.14**	ft	Pump Intake:	**23.64**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:10	**6.48**	**101.9**	**79.5**	**6.71**	**2.365**	**18.82**	**1.21**	**160**	**2.02**
08:15	**6.26**	**16.7**	**39**	**5.13**	**2.261**	**17.28**	**1.17**	**150**	**2.15**
08:20	**6.25**	**15.6**	**33.4**	**4.64**	**2.255**	**17.02**	**1.16**	**150**	**2.21**
08:25	**6.26**	**15.7**	**30**	**4.31**	**2.212**	**16.89**	**1.14**	**150**	**2.3**
08:30	**6.27**	**14.2**	**25.5**	**3.73**	**2.167**	**16.68**	**1.12**	**150**	**2.38**
08:35	**6.27**	**15.4**	**23.8**	**3.33**	**2.15**	**16.53**	**1.11**	**160**	**2.43**
08:40	**6.28**	**14.9**	**23.9**	**3.26**	**2.149**	**16.44**	**1.11**	**150**	**2.5**
08:45	**6.28**	**14.4**	**23.9**	**3.21**	**2.149**	**16.41**	**1.11**	**150**	**2.58**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-327E1**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-10-2020**	Odor:	**Slight musty odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**8:45**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**		Date: **07-10-2020**
Reviewer Name & Signature:	**Ryan Zsamba**		Date: **07-10-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/CAMU/Main Yard**				Sampling Personnel:	**Alex Ciofani**	Well Type:	**Stick Up**	Date:	**07-10-2020**	
Monitor Well #:	**MW-327**			Pump Utilized for Three Volume Purge:			Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**26 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**	A Ci	Date:
Reviewer Name & Signature:	**Ryan Zsamba**	Ryan Z	Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-02-2019**
Weather:	**sunny , 86 degrees F , Wind W , 13 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-327**	Well Depth:	**26.01**	ft below TOC	Depth to Water:	**1.31**	ft below TOC	Sampling Method:
Sample ID:	**MW-327D7**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**21.14 - 26.14**	ft	Pump Intake:	**23.5**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01j0214ac**
VOCs:	**0.1**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
13:55	**6.36**	**2.2**	**-20.9**	**3.44**	**1.443**	**25.41**	**0.74**	**120**	**1.46**
14:00	**6.33**	**28.8**	**4.3**	**1.19**	**1.415**	**22.51**	**0.71**	**240**	**1.46**
14:05	**6.32**	**20.5**	**18.4**	**0.56**	**1.415**	**20.82**	**0.71**	**240**	**1.46**
14:10	**6.36**	**3**	**21.7**	**0.47**	**1.413**	**20.11**	**0.71**	**240**	**1.47**
14:15	**6.34**	**4.1**	**23**	**0.44**	**1.397**	**19.93**	**0.7**	**240**	**1.45**
14:20	**6.34**	**4.3**	**23.5**	**0.42**	**1.389**	**19.93**	**0.7**	**240**	**1.45**
14:25	**6.34**	**4**	**23.6**	**0.4**	**1.381**	**19.78**	**0.69**	**240**	**1.5**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-327D7**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**10-02-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**1435**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-02-2019**
Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-02-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date: **10-02-2019**
Monitor Well #:	**MW-327**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**26.01 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):		**Previous well depth – 23 ft, current 26.01 ft (stick up). Only low flow was done and the samples were collected for VOC+10, SVOC+20 and TAL Metals (unfiltered) – Bailer info is in 3 vol purge section!!**	
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-12-2020**
Weather:	**overcast , 53 degrees F , Wind variable , 15 mph , rain**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-327**	Well Depth:	**28**	ft below TOC	Depth to Water:	**2.06**	ft below TOC	Sampling Method:
Sample ID:	**M327F2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**21.14 - 26.14**	ft	Pump Intake:	**23.64**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04A0514AA**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
13:10	**6.82**	**21.3**	**87.8**	**0.54**	**1.246**	**17.03**	**0.62**	**140**	**2.45**
13:15	**6.64**	**22.9**	**90**	**0.53**	**1.246**	**17.04**	**0.62**	**150**	**2.68**
13:20	**6.28**	**15.5**	**51.5**	**0.51**	**1.243**	**16.63**	**0.62**	**150**	**2.98**
13:25	**6.26**	**14**	**41.8**	**0.53**	**1.243**	**16.27**	**0.62**	**150**	**3.21**
13:30	**6.24**	**80.3**	**39.3**	**0.56**	**1.246**	**15.89**	**0.62**	**150**	**3.37**
13:35	**6.22**	**14.4**	**40.7**	**0.58**	**1.235**	**15.65**	**0.62**	**150**	**3.52**
13:40	**6.22**	**16.3**	**39.5**	**0.53**	**1.217**	**15.55**	**0.61**	**150**	**3.84**
13:45	**6.23**	**12.5**	**39.6**	**0.53**	**1.209**	**15.51**	**0.61**	**150**	**3.99**
13:50	**6.23**	**13**	**39.1**	**0.51**	**1.204**	**15.5**	**0.6**	**150**	**4.24**
13:55	**6.22**	**13**	**39.1**	**0.51**	**1.204**	**15.49**	**0.6**	**150**	**4.35**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M327F2**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**10-12-2020**	Odor:	**Odorless**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**13:55**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**10-12-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-12-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **10-12-2020**

Monitor Well #: **MW-327** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**28 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-09-2020**
Weather:	**sunny , 30 degrees F , Wind W , 2 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-328**	Well Depth:	**28**	ft below TOC	Depth to Water:	**3.53**	ft below TOC	Sampling Method:
Sample ID:	**MW-328E1**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**25.28 - 30.28**	ft	Pump Intake:	**27.78**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:20	**6.76**	**22.4**	**-56.8**	**4.49**	**0.273**	**10.34**	**0.13**	**100**	**3.59**
12:25	**6.74**	**10.2**	**-79.2**	**1.94**	**0.277**	**11.47**	**0.13**	**200**	**3.61**
12:30	**6.76**	**3.6**	**-94.5**	**0.91**	**0.28**	**13.01**	**0.13**	**200**	**3.6**
12:35	**6.77**	**1.3**	**-100.8**	**0.65**	**0.282**	**13.11**	**0.14**	**200**	**3.6**
12:40	**6.76**	**0.7**	**-103.1**	**0.62**	**0.283**	**13.49**	**0.14**	**200**	**3.6**
12:45	**6.75**	**0.9**	**-103.4**	**0.55**	**0.284**	**13.09**	**0.14**	**200**	**3.6**
12:50	**6.74**	**0.8**	**-103.3**	**0.53**	**0.286**	**12.78**	**0.14**	**200**	**3.6**
12:55	**6.74**	**0.5**	**-103.6**	**0.5**	**0.286**	**13.03**	**0.14**	**200**	**3.6**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-328E1**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**01-09-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**13:00**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-09-2020**
Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-09-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **01-09-2020**

Monitor Well #: **MW-328** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**28 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-06-2020**
Weather:	**sunny , 51 degrees F , Wind N , 5 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-328**	Well Depth:	**28**	ft below TOC	Depth to Water:	**3.15**	ft below TOC	Sampling Method:
Sample ID:	**MW-328E2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**25.28 - 30.28**	ft	Pump Intake:	**27.78**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:15	**6.92**	**25.2**	**227.2**	**4.61**	**1.047**	**14.14**	**0.53**	**200**	**3.2**
09:20	**6.92**	**18.6**	**13.82**	**4.29**	**1**	**13.85**	**0.5**	**200**	**3.2**
09:25	**6.9**	**11.7**	**315**	**4.04**	**0.99**	**13.96**	**0.49**	**200**	**3.2**
09:30	**6.88**	**11.1**	**342.8**	**3.81**	**0.988**	**14.19**	**0.49**	**200**	**3.2**
09:35	**6.85**	**13**	**359.6**	**3.63**	**0.986**	**14.35**	**0.49**	**200**	**3.2**
09:40	**6.83**	**11.7**	**267**	**3.29**	**0.984**	**14.67**	**0.49**	**200**	**3.2**
09:45	**6.82**	**12.4**	**134.7**	**3.03**	**0.982**	**14.79**	**0.49**	**200**	**3.2**
09:50	**6.77**	**17.1**	**40.8**	**2.7**	**0.981**	**14.88**	**0.49**	**200**	**3.22**
09:55	**6.72**	**19.3**	**9.1**	**2.19**	**0.983**	**15.05**	**0.49**	**200**	**3.23**
10:00	**6.67**	**18.4**	**-6.9**	**1.81**	**0.986**	**14.98**	**0.49**	**200**	**3.22**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-328E2**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **04-06-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **1005**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-06-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **04-06-2020**

Monitor Well #: **MW-328** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**28 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-09-2020**
Weather:	**overcast , 74 degrees F , Wind variable , 2 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-328**	Well Depth:	**28**	ft below TOC	Depth to Water:	**3.7**	ft below TOC	Sampling Method:
Sample ID:	**M328E4**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**25.28 - 30.28**	ft	Pump Intake:	**27.78**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:30	**6.9**	**32.1**	**75.3**	**6.54**	**1.251**	**22.21**	**0.62**	**160**	**3.9**
08:35	**6.78**	**13.4**	**81.6**	**5.51**	**1.26**	**22.43**	**0.65**	**160**	**4.1**
08:40	**6.76**	**8**	**81.3**	**5.09**	**1.246**	**22.47**	**0.62**	**160**	**4.19**
08:45	**6.75**	**4.6**	**79.8**	**4.82**	**1.238**	**22.43**	**0.62**	**160**	**4.3**
08:50	**6.73**	**4.9**	**57.2**	**4.36**	**1.233**	**22.38**	**0.61**	**160**	**4.39**
08:55	**6.73**	**3.5**	**25**	**4.17**	**1.23**	**22.46**	**0.61**	**160**	**4.4**
09:00	**6.73**	**3.4**	**-9.1**	**3.92**	**1.229**	**22.6**	**0.61**	**160**	**4.51**
09:05	**6.73**	**2.3**	**-37.7**	**3.56**	**1.229**	**22.77**	**0.61**	**160**	**4.63**
09:10	**6.73**	**4**	**-50.6**	**3.33**	**1.228**	**22.76**	**0.61**	**160**	**4.7**
09:15	**6.73**	**2.5**	**-54.3**	**3.22**	**1.227**	**22.81**	**0.61**	**160**	**4.8**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M328E4**	Clarity:	**Hazy**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-09-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**9:15**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**07-09-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-09-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/CAMU/Main Yard**	Sampling Personnel:	**Alex Ciofani**	Well Type:	**Stick Up**	Date:	**07-09-2020**
Monitor Well #:	**MW-328**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**28 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**ISCO/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**09-25-2020**
Weather:	**sunny , 62 degrees F , Wind variable , 5 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-328**	Well Depth:	**28**	ft below TOC	Depth to Water:	**4.69**	ft below TOC	Sampling Method:
Sample ID:	**MW-328E5**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**25.28 - 30.28**	ft	Pump Intake:	**27.78**	ft below TOC	**Low Flow and Volume Average**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**14H102206**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
10:00	**7.09**	**0**	**-40.4**	**6.53**	**1.242**	**20.62**	**0.62**	**150**	**4.7**
10:05	**6.72**	**0**	**-63.7**	**5.22**	**1.233**	**19.11**	**0.62**	**150**	**4.86**
10:10	**6.69**	**0**	**-68.9**	**5.12**	**1.232**	**18.74**	**0.62**	**150**	**5.03**
10:15	**6.65**	**0**	**-72.9**	**5.26**	**1.229**	**18.48**	**0.62**	**150**	**5.18**
10:20	**6.67**	**0**	**-80.7**	**5.53**	**1.227**	**18.42**	**0.61**	**150**	**5.27**
10:25	**6.69**	**0**	**-94.7**	**5.54**	**1.221**	**18.19**	**0.61**	**150**	**5.32**
10:30	**6.74**	**0**	**-105.6**	**5.58**	**1.217**	**18.07**	**0.61**	**150**	**5.45**
10:35	**6.74**	**0**	**-106.4**	**5.57**	**1.211**	**18.05**	**0.61**	**150**	**5.56**
10:40	**6.76**	**0**	**-113.5**	**6.44**	**1.204**	**17.89**	**0.6**	**150**	**5.73**
10:45	**6.77**	**0**	**-114.4**	**6.42**	**1.202**	**18.02**	**0.6**	**150**	**5.91**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-328E5**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**09-25-2020**	Odor:	**Musty odor**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**10:45**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**09-25-2020**

Reviewer Name & Signature:	**Ryan Zsamba**		Date: **09-25-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location: **ISCO/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **09-25-2020**

Monitor Well #: **MW-328** Pump Utilized for Three Volume Purge: Same as Low Flow: **X** Make/Model: **Geo Pump**

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)
Prior to Purging	**10:45**	**6.77**	**0**	**-114.4**	**6.42**	**1.202**	**18.02**	**0.6**	**5.91**	**--**
After Purging	**11:30**	**6.77**	**0**	**-102.5**	**5.81**	**1.275**	**21.95**	**0.64**	**6.56**	**--**
After Sampling	**11:40**	**6.7**	**0**	**91.5**	**5.49**	**1.276**	**20.14**	**0.64**	**6.69**	**28**

Initial Depth to Water (ft):	**4.69**
Depth to Bottom (ft):	**28 ft below TOC**
Static Water Col. Ht. (ft):	**23.31**
Static Water Volume (gal) (SWV):	**3.73**
Min. Purge Volume (gal) (SWV*3):	**11.19**
Max. Purge Volume (gal) (SWV*5):	**18.65**
Pump Intake (ft):	**2 feet BDTW**
Purge Start Time:	**10:45**
Purge End Time:	**11:30**
Purge Rate (L/min, gal/min):	**0.222 gal/min**
Volume Purged (gal):	**10**
Well Purged Dry:	**No**
Total Purged Volume (gal) (low flow + 3 Volume):	**11.8**

Sampling Information:

Sample ID:	**MW-328E5X**
Sample Date:	**09-25-2020**
Sample Time:	**11:30**
Sample Method:	**Bottom Fill Bailer**
Bailer Construction:	**Teflon**

Observations/Comments:

Clarity:	**Clear**
Odor:	**Musty odor**
Other:	**Na**
Additional Comments:	
Water Quality Start Time (after sampling):	**11:35**
Water Quality End Time (after sampling):	**11:40**

Sampler Name & Signature: **Alex Ciofani** Date: **09-25-2020**

Reviewer Name & Signature: **Ryan Zsamba** Date: **09-25-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-03-2019**
Weather:	**cloudy , 65 degrees F , Wind E , 13 mph , rain**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-328**	Well Depth:	**28.61**	ft below TOC	Depth to Water:	**3.52**	ft below TOC	Sampling Method:
Sample ID:	**MW-328D9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**25.28 - 30.28**	ft	Pump Intake:	**28**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01j0214ac**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:15	**6.67**	**14.9**	**-19.4**	**4.73**	**0.713**	**17.3**	**0.35**	**120**	**3.58**
09:20	**6.76**	**12.1**	**-70.9**	**2.56**	**0.692**	**17.15**	**0.34**	**120**	**3.56**
09:25	**6.81**	**9.2**	**-88.7**	**1.07**	**0.692**	**16.85**	**0.34**	**240**	**3.59**
09:30	**6.84**	**4.7**	**-97.3**	**0.75**	**0.691**	**16.58**	**0.34**	**240**	**3.55**
09:35	**6.85**	**4.5**	**-100.8**	**0.6**	**0.684**	**16.46**	**0.34**	**240**	**3.61**
09:40	**6.87**	**4**	**-103.3**	**0.55**	**0.683**	**16.32**	**0.34**	**240**	**3.64**
09:45	**6.87**	**3.7**	**-104.1**	**0.52**	**0.682**	**16.12**	**0.33**	**240**	**3.65**
09:50	**6.86**	**2.9**	**-103.9**	**0.48**	**0.683**	**16.03**	**0.33**	**240**	**3.63**
09:55	**6.85**	**2.9**	**-103.4**	**0.42**	**0.684**	**16.06**	**0.33**	**240**	**3.63**
10:00	**6.85**	**2.5**	**-102.8**	**0.38**	**0.682**	**16.1**	**0.34**	**240**	**3.62**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-328D9**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Yes**	mg/L		Sample Date:	**10-03-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**Yes**			Sample Time:	**1020**	Other:	**Mild sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-03-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-03-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **10-03-2019**

Monitor Well #: **MW-328** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**28.61 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**CAMU Well) Previous well depth -28 ft, current well depth -28.61 ft (stick up) --Only low flow done**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-14-2020**
Weather:	**sunny , 53 degrees F , Wind N , 4 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-334R**	Well Depth:	**18.17**	ft below TOC	Depth to Water:	**3.6**	ft below TOC	Sampling Method:
Sample ID:	**M334RD2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**7.96 - 17.96**	ft	Pump Intake:	**12.96**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202aa**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
08:45	**6.53**	**53.4**	**-132.2**	**1.63**	**7.141**	**17.72**	**3.9**	**200**	**3.65**
08:50	**6.55**	**54.1**	**-121.9**	**1.13**	**7.191**	**18.21**	**3.98**	**200**	**3.79**
08:55	**6.56**	**50.8**	**-118.2**	**0.8**	**7.245**	**18.48**	**4.01**	**200**	**3.86**
09:00	**6.54**	**39**	**-112.2**	**1.03**	**7.395**	**18.83**	**4.09**	**200**	**3.94**
09:05	**6.54**	**35.4**	**-117.4**	**1.03**	**7.508**	**18.85**	**4.16**	**200**	**4.04**
09:10	**6.54**	**27.4**	**-121**	**1.2**	**7.605**	**18.84**	**4.22**	**200**	**4.11**
09:15	**6.56**	**23.7**	**-121.3**	**1.11**	**7.633**	**18.87**	**4.24**	**200**	**4.13**
09:20	**6.56**	**21**	**-121.5**	**1.11**	**7.664**	**18.87**	**4.24**	**200**	**4.16**
09:25	**6.57**	**22.3**	**-122**	**1.18**	**7.696**	**18.93**	**4.27**	**200**	**4.19**
09:30	**6.57**	**17.8**	**-121.2**	**1.3**	**7.692**	**19.08**	**4.27**	**200**	**4.2**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M334RD2**	Clarity:	**Minimal turbidity**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-14-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**0935**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**	Date:	**10-14-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-14-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**
Monitor Well #:	**MW-334R**	Pump Utilized for Three Volume Purge:		Same as Low Flow:	Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**18.17 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-09-2020**
Weather:	**sunny , 25 degrees F , Wind SW , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-334R**	Well Depth:	**18**	ft below TOC	Depth to Water:	**3.97**	ft below TOC	Sampling Method:
Sample ID:	**MW-334RC8**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**7.96 - 17.96**	ft	Pump Intake:	**12.96**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
08:45	**6.3**	**16.4**	**-86.7**	**3.88**	**2.123**	**6.71**	**1.09**	**200**	**4.1**
08:50	**6.48**	**15.9**	**-114.9**	**1.6**	**2.124**	**7.92**	**1.09**	**200**	**4.26**
08:55	**6.52**	**29.1**	**-123.2**	**0.86**	**2.129**	**8.28**	**1.09**	**200**	**4.45**
09:00	**6.53**	**28.7**	**-127.2**	**0.67**	**2.133**	**8.47**	**1.1**	**200**	**4.44**
09:05	**6.53**	**31.4**	**-127.8**	**0.6**	**2.137**	**8.55**	**1.1**	**200**	**4.51**
09:10	**6.54**	**27.8**	**-127.3**	**0.56**	**2.14**	**8.64**	**1.1**	**200**	**4.56**
09:15	**6.54**	**22.3**	**-128.2**	**0.55**	**2.148**	**8.69**	**1.1**	**200**	**4.65**
09:20	**6.54**	**18.9**	**-129.9**	**0.48**	**2.157**	**8.69**	**1.11**	**200**	**4.66**
09:25	**6.53**	**13.7**	**-128.4**	**0.49**	**2.173**	**8.97**	**1.12**	**200**	**4.74**
09:30	**6.5**	**12**	**-130.5**	**0.48**	**2.203**	**9.33**	**1.15**	**200**	**4.68**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-334RC8**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**01-09-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**09:35**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-09-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-09-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**01-09-2020**	
Monitor Well #:	**MW-334R**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**18 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-06-2020**
Weather:	**sunny , 60 degrees F , Wind N , 7 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-334R**	Well Depth:	**18**	ft below TOC	Depth to Water:	**3.17**	ft below TOC	Sampling Method:
Sample ID:	**MW-334RC9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**7.96 - 17.96**	ft	Pump Intake:	**12.96**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**04k17092ac**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
12:15	**6.24**	**17.3**	**-84.1**	**0.42**	**6.464**	**15.39**	**3.53**	**200**	**3.37**
12:20	**5.99**	**18**	**-80.8**	**0.21**	**6.464**	**13.61**	**3.55**	**200**	**3.51**
12:25	**5.89**	**22.1**	**-77.1**	**0.15**	**6.52**	**13.35**	**3.58**	**200**	**3.51**
12:30	**5.79**	**19.9**	**-72.1**	**0.1**	**6.633**	**13.28**	**3.65**	**200**	**3.51**
12:35	**5.72**	**25.4**	**-68.2**	**0.08**	**6.77**	**13.34**	**3.72**	**200**	**3.66**
12:40	**5.64**	**14.3**	**-62.7**	**0.08**	**6.911**	**13.28**	**3.81**	**200**	**3.72**
12:45	**5.59**	**13.9**	**-59.8**	**0.07**	**7.113**	**13.35**	**3.93**	**200**	**3.73**
12:50	**5.53**	**9**	**-58.6**	**0.05**	**7.307**	**13.38**	**4.04**	**200**	**3.82**
12:55	**5.5**	**11.6**	**-57.9**	**0.04**	**7.413**	**13.41**	**4.11**	**200**	**3.91**
13:00	**5.49**	**8.3**	**-58.7**	**0.05**	**7.461**	**13.43**	**4.14**	**200**	**3.89**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-334RC9**	Clarity: **Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**04-06-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**1305**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-06-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**04-06-2020**	
Monitor Well #:	**MW-334R**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**18 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-09-2020**
Weather:	**overcast , 88 degrees F , Wind variable , 2 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-334R**	Well Depth:	**18**	ft below TOC	Depth to Water:	**2.75**	ft below TOC	Sampling Method:
Sample ID:	**M334RD1**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**7.96 - 17.96**	ft	Pump Intake:	**12.96**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
12:20	**6.54**	**0**	**-107.1**	**5.09**	**8.713**	**25.26**	**4.83**	**150**	**2.88**
12:25	**6.53**	**0**	**-109.4**	**5**	**8.745**	**25.15**	**4.88**	**150**	**2.97**
12:30	**6.5**	**0**	**-123.9**	**4.4**	**9.206**	**24.41**	**5.16**	**150**	**3.05**
12:35	**6.49**	**0**	**-128.6**	**4.01**	**9.497**	**24.07**	**5.34**	**150**	**3.12**
12:40	**6.49**	**0**	**-128.9**	**3.63**	**9.7**	**23.9**	**5.45**	**150**	**3.19**
12:45	**6.48**	**0**	**-122.6**	**3.24**	**9.743**	**23.83**	**5.51**	**140**	**3.24**
12:50	**6.49**	**0**	**-120.7**	**2.81**	**9.843**	**23.64**	**5.54**	**160**	**3.29**
12:55	**6.49**	**0**	**-117.7**	**2.69**	**9.852**	**23.52**	**5.54**	**160**	**3.38**
13:00	**6.49**	**0**	**-114.4**	**2.58**	**9.86**	**23.45**	**5.55**	**150**	**3.48**
13:05	**6.5**	**0**	**-115.3**	**2.56**	**9.848**	**23.41**	**5.55**	**150**	**3.58**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M334RD1**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-09-2020**	Odor:	**Odorless**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**13:05**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**07-09-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-09-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Stick Up** Date: **07-09-2020**

Monitor Well #: **MW-334R** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**18 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-06-2020**
Weather:	**partly cloudy , 36 degrees F , Wind SW , 8 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-402**	Well Depth:	**20**	ft below TOC	Depth to Water:	**5.33**	ft below TOC	Sampling Method:
Sample ID:	**MW-402C8**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**5.02 - 20.02**	ft	Pump Intake:	**12.68**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202ac**
VOCs:	**0**	H_2S: **0**	LEL: **82**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:35	**6.27**	**955.6**	**-101.8**	**1.81**	**1.277**	**9.4**	**0.64**	**100**	**5.67**
09:40	**6.32**	**640.3**	**-109.3**	**1.17**	**1.255**	**9.74**	**0.63**	**100**	**5.86**
09:45	**6.35**	**377.6**	**-112**	**1.01**	**1.248**	**9.75**	**0.63**	**100**	**5.99**
09:50	**6.37**	**192**	**-111.5**	**0.92**	**1.239**	**9.86**	**0.62**	**100**	**6.24**
09:55	**6.39**	**108.6**	**-110**	**0.86**	**1.235**	**9.74**	**0.62**	**100**	**6.47**
10:00	**6.39**	**74.8**	**-108.4**	**1.07**	**1.23**	**9.79**	**0.62**	**100**	**6.77**
10:05	**6.41**	**59.7**	**-107.3**	**0.78**	**1.231**	**9.72**	**0.62**	**100**	**6.98**
10:10	**6.42**	**55.6**	**-106.2**	**0.85**	**1.228**	**9.87**	**0.62**	**100**	**7.18**
10:15	**6.42**	**43.6**	**-105.1**	**0.84**	**1.226**	**9.95**	**0.61**	**200**	**7.31**
10:20	**6.41**	**31.5**	**-104.8**	**0.81**	**1.224**	**9.94**	**0.61**	**200**	**8.61**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID:	**MW-402C8**	Clarity: **Turbid**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date:	**01-06-2020**	Odor: **No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time:	**10:25**	Other: **No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-06-2020**
Reviewer Name &			

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**01-06-2020**
Monitor Well #:	**MW-402**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**20 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-03-2020**
Weather:	**cloudy , 47 degrees F , Wind N , 12 mph , rain**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-402**	Well Depth:	**20**	ft below TOC	Depth to Water:	**4.7**	ft below TOC	Sampling Method:
Sample ID:	**MW-402C9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**5.02 - 20.02**	ft	Pump Intake:	**12.52**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01h1295ac**
VOCs:	**0.2**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
09:10	**6.36**	**34.5**	**-77.2**	**3.49**	**1.33**	**11.03**	**0.67**	**200**	**5.1**
09:15	**6.42**	**29.7**	**-77.4**	**2.79**	**1.33**	**11.07**	**0.67**	**200**	**5.59**
09:20	**6.43**	**22.1**	**-84.1**	**1.9**	**1.32**	**11**	**0.66**	**200**	**6.02**
09:25	**6.44**	**16.9**	**-88.1**	**1.99**	**1.287**	**10.98**	**0.65**	**200**	**6.55**
09:30	**6.45**	**7.9**	**-80.1**	**1.85**	**1.256**	**10.89**	**0.63**	**200**	**7.02**
09:35	**6.45**	**6**	**-75.8**	**1.74**	**1.261**	**10.88**	**0.63**	**200**	**7.41**
09:40	**6.46**	**4.7**	**-73.3**	**1.59**	**1.269**	**10.96**	**0.64**	**200**	**7.81**
09:45	**6.46**	**4.9**	**-72.1**	**1.77**	**1.273**	**11.01**	**0.64**	**200**	**8.14**
09:50	**6.46**	**6.5**	**-69.1**	**2.03**	**1.279**	**11**	**0.64**	**200**	**8.58**
09:55	**6.46**	**6.9**	**-67.5**	**1.69**	**1.283**	**11.12**	**0.64**	**200**	**8.95**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-402C9**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **04-03-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **1000**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-03-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-03-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Flush Mount**		Date:	**04-03-2020**
Monitor Well #:	**MW-402**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**20 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-08-2020**		
Weather:	**overcast , 76 degrees F , Wind variable , 3 mph , none**			Sampling Personnel:	**Alex Ciofani**		
Monitor Well #:	**MW-402**	Well Depth:	**1** ft below TOC	Depth to Water:	**3.7**	ft below TOC	Sampling Method:
Sample ID:	**M402D1**	Well Diameter:	**2** inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**5.02 - 20.02** ft	Pump Intake:	**12.52**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**						

Head Space Readings:				Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
12:40	**6.33**	**774.8**	**-90.6**	**4.35**	**3.12**	**20.34**	**1.63**	**160**	**3.83**
12:45	**6.32**	**817.1**	**-89.4**	**4.68**	**3.116**	**20.09**	**1.64**	**160**	**3.9**
12:50	**6.34**	**850.1**	**-90.2**	**4.47**	**3.112**	**19.97**	**1.63**	**160**	**3.99**
12:55	**6.43**	**660.7**	**-91.7**	**7.48**	**3.056**	**19.75**	**1.6**	**160**	**4.08**
13:00	**6.46**	**345.3**	**-94.9**	**9.01**	**3.038**	**19.87**	**1.59**	**160**	**4.1**
13:05	**6.45**	**35.9**	**-100.3**	**7.86**	**3.074**	**20.08**	**1.61**	**160**	**4.21**
13:10	**6.42**	**18.5**	**-102.9**	**8.79**	**3.106**	**19.69**	**1.63**	**160**	**4.28**
13:15	**6.4**	**77.6**	**-104.9**	**6.55**	**3.121**	**19.22**	**1.64**	**160**	**4.31**
13:20	**6.38**	**68.7**	**-104.7**	**7.93**	**3.125**	**18.88**	**1.64**	**160**	**4.33**
13:25	**6.38**	**58.1**	**-104.9**	**7.78**	**3.128**	**18.87**	**1.64**	**160**	**4.34**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M402D1**	Clarity:	**Brown color**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-08-2020**	Odor:	**None**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**13:25**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	Date:	**07-08-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **CAMU/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Flush Mount** Date: **07-08-2020**

Monitor Well #: **MW-402** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**1 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**ISCO/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**09-24-2020**
Weather:	**sunny , 62 degrees F , Wind variable , 5 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-402**	Well Depth:	**20**	ft below TOC	Depth to Water:	**3.55**	ft below TOC	Sampling Method:
Sample ID:	**MW-402D2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**5.02 - 20.02**	ft	Pump Intake:	**12.52**	ft below TOC	**Low Flow and Volume Average**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**14H102206**
VOCs:	**0**	H_2S: **0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value: **0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
08:50	**6.51**	**68.1**	**-120.2**	**2.18**	**3.578**	**19.7**	**1.87**	**130**	**3.68**
08:55	**6.31**	**68.5**	**-112.8**	**0.73**	**3.114**	**19.74**	**1.64**	**130**	**3.78**
09:00	**6.32**	**96**	**-115.3**	**0.6**	**3.022**	**19.92**	**1.58**	**130**	**3.9**
09:05	**6.32**	**95.9**	**-115.5**	**0.58**	**3.016**	**20.01**	**1.57**	**130**	**4.02**
09:10	**6.31**	**82.9**	**-115.3**	**0.57**	**3.007**	**20.18**	**1.57**	**130**	**4.13**
09:15	**6.33**	**66.9**	**-113.9**	**0.57**	**3.015**	**20.28**	**1.58**	**130**	**4.22**
09:20	**6.29**	**47.3**	**-112**	**0.59**	**3.029**	**20.32**	**1.58**	**130**	**4.3**
09:25	**6.31**	**26.7**	**-109.1**	**0.61**	**3.059**	**20.29**	**1.6**	**130**	**4.53**
09:30	**6.21**	**16.2**	**-105.8**	**0.61**	**3.093**	**20.19**	**1.62**	**130**	**4.72**
09:35	**6.22**	**17.4**	**-105.5**	**0.65**	**3.099**	**20.1**	**1.62**	**130**	**4.84**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-402D2**	Clarity:	**Hazy**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**09-24-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**Yes**	Sample Time:	**9:35**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**	AC	Date: **09-24-2020**

Reviewer Name & Signature:	**Ryan Zsamba**	Date:	**09-24-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location: **ISCO/CAMU/Main Yard** Sampling Personnel: **Alex Ciofani** Well Type: **Flush Mount** Date: **09-24-2020**

Monitor Well #: **MW-402** Pump Utilized for Three Volume Purge: Same as Low Flow: **X** Make/Model: **Geo Pump**

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)
Prior to Purging	**09:35**	**6.22**	**17.4**	**-105.5**	**0.65**	**3.099**	**20.1**	**1.62**	**4.84**	**--**
After Purging	**10:25**	**6.21**	**52.5**	**-91.3**	**3.16**	**3.522**	**20.65**	**1.86**	**9.77**	**--**
After Sampling	**10:35**	**6.31**	**65.7**	**-95.1**	**1.51**	**3.709**	**20.2**	**1.95**	**10.32**	**20**

Initial Depth to Water (ft):	**3.55**
Depth to Bottom (ft):	**20 ft below TOC**
Static Water Col. Ht. (ft):	**16.45**
Static Water Volume (gal) (SWV):	**2.63**
Min. Purge Volume (gal) (SWV*3):	**7.89**
Max. Purge Volume (gal) (SWV*5):	**13.15**
Pump Intake (ft):	**2 feet BDTW**
Purge Start Time:	**9:35**
Purge End Time:	**10:25**
Purge Rate (L/min, gal/min):	**0.13 gal/min**
Volume Purged (gal):	**6.5**
Well Purged Dry:	**No**
Total Purged Volume (gal) (low flow + 3 Volume):	**8**

Sampling Information:

Sample ID:	**MW-402D2X**		
Sample Date:	**09-24-2020**	Sample Time:	**10:25**
Sample Method:	**Bottom Fill Bailer**		
Bailer Construction:	**Teflon**		

Observations/Comments:

Clarity:	**Hazy**
Odor:	**No odor**
Other:	**Na**
Additional Comments:	
Water Quality Start Time (after sampling):	**10:30**
Water Quality End Time (after sampling):	**10:35**

Sampler Name & Signature: **Alex Ciofani** AC Date: **09-24-2020**

Reviewer Name & Signature: **Ryan Zsamba** Date: **09-24-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**09-25-2019**
Weather:	**sunny , 65 degrees F , Wind S , 4 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-402**	Well Depth:	**20**	ft below TOC	Depth to Water:	**3.23**	ft below TOC	Sampling Method:
Sample ID:	**MW-402C7**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**5.02 - 20.02**	ft	Pump Intake:	**12.52**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**11g101140**
VOCs:	**0.2**	H_2S:	**1.3**	LEL: **99**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.1**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:25	**6.15**	**41.5**	**-223.7**	**4.15**	**2.226**	**16.96**	**1.14**	**400**	**3.39**
09:30	**6.26**	**39.5**	**-240**	**3.37**	**2.135**	**16.67**	**1.1**	**200**	**5.56**
10:10	**6.32**	**43.6**	**-182.4**	**2.88**	**2.128**	**20.29**	**1.09**	**105**	**5.69**
10:15	**6.31**	**47.5**	**-192.2**	**2.86**	**2.098**	**19.56**	**1.07**	**110**	**6.06**
10:20	**6.25**	**19.1**	**-151**	**6.05**	**1.151**	**21.28**	**0.57**	**110**	**6.46**
10:25	**6.28**	**27.3**	**-167**	**3.76**	**2.129**	**21.25**	**1.08**	**110**	**6.49**
10:30	**6.29**	**22.3**	**-182.4**	**2.52**	**2.108**	**20.36**	**1.08**	**110**	**6.68**
10:35	**6.29**	**23.5**	**-189.3**	**2.89**	**2.1**	**20.43**	**1.07**	**110**	**6.94**
10:40	**6.29**	**20.8**	**-192.2**	**2.89**	**2.093**	**20.35**	**1.07**	**110**	**7.15**
10:45	**6.29**	**21.1**	**-193.6**	**2.91**	**2.099**	**20.44**	**1.08**	**110**	**7.36**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-402C7**	Clarity:	**Turbid slightly**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**09-25-2019**	Odor:	**Mild product like odor**
Filtered (0.45 Micron Filter):	**Yes**			Sample Time:	**1055**	Other:	**Sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **09-25-2019**

Reviewer Name & Signature:	Date: **09-25-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Flush Mount** Date: **09-25-2019**

Monitor Well #: **MW-402** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**20 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**Between 9:35am and 10:10am, the pump was inactive for 35 mins. Raised question and asked for clarification to sampler regrading high initial flow rate and dropping of DTW more than 0.3ft.**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**	Date:
Reviewer Name & Signature:		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-14-2020**
Weather:	**sunny , 56 degrees F , Wind SW , 6 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-402**	Well Depth:	**19.72**	ft below TOC	Depth to Water:	**3.9**	ft below TOC	Sampling Method:
Sample ID:	**MW-402D3**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Flush Mount**	Screened Interval:	**5.02 - 20.02**	ft	Pump Intake:	**12.52**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:				Water Quality Meter Information:	Instrument Serial #:	**01b0202aa**
VOCs:	**6.3**	H_2S: **0**	LEL: **99**	Instrument Make/Model: **YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
10:50	**6.46**	**108**	**6.47**	**1.69**	**2.165**	**19.33**	**1.11**	**200**	**4.5**
10:55	**6.46**	**101.2**	**-93.2**	**1.19**	**2.124**	**19.61**	**1.09**	**200**	**5.01**
11:00	**6.46**	**113.7**	**-96.4**	**0.95**	**2.107**	**19.87**	**1.08**	**200**	**5.39**
11:05	**6.46**	**122.6**	**-97.4**	**0.89**	**2.102**	**20.03**	**1.08**	**200**	**5.51**
11:10	**6.46**	**134.6**	**-98.6**	**0.81**	**2.093**	**20.23**	**1.07**	**200**	**5.79**
11:15	**6.46**	**134.7**	**-98.5**	**0.79**	**2.09**	**20.34**	**1.07**	**200**	**6**
11:20	**6.52**	**128.6**	**-72.2**	**0.76**	**2.1**	**20.66**	**1.07**	**200**	**6.26**
11:25	**6.42**	**118.9**	**-82.9**	**0.77**	**2.099**	**20.2**	**1.08**	**200**	**6.46**
11:30	**6.37**	**65.1**	**-81.7**	**0.74**	**2.103**	**19.83**	**1.08**	**200**	**6.65**
11:35	**6.43**	**52**	**-122.9**	**0.69**	**2.094**	**19.98**	**1.02**	**200**	**6.9**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**MW-402D3**	Clarity:	**Turbid**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-14-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1140**	Other:	**Minimal sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-14-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-14-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Flush Mount** Date: **10-14-2020**

Monitor Well #: **MW-402** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**19.72 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**01-08-2020**
Weather:	**partly cloudy , 42 degrees F , Wind W , 19 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-474**	Well Depth:	**13**	ft below TOC	Depth to Water:	**4.51**	ft below TOC	Sampling Method:
Sample ID:	**MW-474B9**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**5.27 - 13.27**	ft	Pump Intake:	**9.27**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01b0202ac**
VOCs:	**0.7**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**-0.11**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:55	**6.8**	**85.4**	**-100.4**	**3.24**	**0.677**	**6.47**	**0.33**	**100**	**4.56**
13:00	**6.73**	**36.2**	**-113.7**	**1.82**	**0.851**	**7.45**	**0.42**	**200**	**4.56**
13:05	**6.73**	**21**	**-123.4**	**1.23**	**0.997**	**8.18**	**0.49**	**200**	**4.55**
13:10	**6.73**	**14.1**	**-129.8**	**0.85**	**1.025**	**8.37**	**0.51**	**200**	**4.55**
13:15	**6.74**	**8.1**	**-135.2**	**0.68**	**1.033**	**8.36**	**0.51**	**200**	**4.55**
13:20	**6.74**	**11.4**	**-138.2**	**0.62**	**1.047**	**8.21**	**0.52**	**200**	**4.55**
13:25	**6.72**	**4.9**	**-139.3**	**0.59**	**1.056**	**8.19**	**0.53**	**200**	**4.55**
13:30	**6.72**	**4.6**	**-139.7**	**0.55**	**1.067**	**8.13**	**0.53**	**200**	**4.57**
13:35	**6.71**	**4.8**	**-140**	**0.55**	**1.077**	**8.08**	**0.54**	**200**	**4.57**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-474B9**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**01-08-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**13:45**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **01-08-2020**

Reviewer Name & Signature:	**Peter Argyrakis**		Date: **01-08-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**01-08-2020**	
Monitor Well #:	**MW-474**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**13 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**N/A**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Peter Argyrakis**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**04-06-2020**
Weather:	**sunny , 56 degrees F , Wind N , 6 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-474**	Well Depth:	**13**	ft below TOC	Depth to Water:	**5.02**	ft below TOC	Sampling Method:
Sample ID:	**MW-474C1**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**5.27 - 13.27**	ft	Pump Intake:	**9.27**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:				Water Quality Meter Information:		Instrument Serial #:	**04k17092ac**
VOCs:	**0.5**	H_2S:	**0**	LEL:	**0**	Instrument Make/Model: **YSI 6920**	Temp. Correction Value: **0.06**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
10:45	**6.32**	**54.3**	**-51.6**	**1.02**	**2.409**	**13.35**	**1.22**	**200**	**5.04**
10:50	**6.17**	**25.3**	**-54.6**	**0.32**	**2.83**	**12.12**	**1.47**	**200**	**5.04**
10:55	**6.07**	**13.3**	**-53.3**	**0.18**	**2.977**	**11.71**	**1.56**	**200**	**5.04**
11:00	**6.03**	**12.9**	**-51.8**	**0.13**	**3.019**	**11.69**	**1.58**	**200**	**5.04**
11:05	**6**	**8.7**	**-50.7**	**0.15**	**3.055**	**11.57**	**1.6**	**200**	**5.04**
11:10	**5.99**	**9.5**	**-50.2**	**0.13**	**3.07**	**11.47**	**1.61**	**200**	**5.04**
11:15	**5.98**	**7.6**	**-49.8**	**0.07**	**3.084**	**11.52**	**1.67**	**200**	**5.08**
11:20	**5.97**	**8.8**	**-49.2**	**0.08**	**3.107**	**11.67**	**1.63**	**200**	**5.05**
11:25	**5.96**	**5.9**	**-49**	**0.06**	**3.126**	**11.58**	**1.64**	**200**	**5.05**
11:30	**5.95**	**6.1**	**-48.5**	**0.05**	**3.133**	**11.47**	**1.65**	**200**	**5.05**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00**	sec	Sample ID: **MW-474C1**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L			Sample Date: **04-06-2020**	Odor:	**Minimal product like odor**
Filtered (0.45 Micron Filter):	**No**				Sample Time: **1135**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **04-06-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **04-06-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location: **Sitewide/CAMU/Main Yard** Sampling Personnel: **Ryan Zsamba** Well Type: **Stick Up** Date: **04-06-2020**

Monitor Well #: **MW-474** Pump Utilized for Three Volume Purge: Same as Low Flow: Make/Model:

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**13 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**CAMU/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**07-09-2020**
Weather:	**overcast , 74 degrees F , Wind variable , 2 mph , none**			Sampling Personnel:	**Alex Ciofani**

Monitor Well #:	**MW-474**	Well Depth:	**13**	ft below TOC	Depth to Water:	**4.55**	ft below TOC	Sampling Method:
Sample ID:	**M474C2**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**5.27 - 13.27**	ft	Pump Intake:	**9.27**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**07F100016**
VOCs:	**0**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
09:40	**6.42**	**67.3**	**-82.3**	**5.78**	**3.939**	**24.43**	**2.09**	**150**	**4.7**
09:45	**6.38**	**35.9**	**-99.1**	**4.45**	**4.028**	**24.2**	**2.13**	**150**	**4.88**
09:50	**6.39**	**26.7**	**-100.3**	**3.96**	**4.053**	**23.74**	**2.15**	**169**	**4.95**
09:55	**6.4**	**22.1**	**-105.6**	**3.55**	**4.061**	**23.7**	**2.15**	**150**	**5.03**
10:00	**6.4**	**22.6**	**-105.6**	**3.15**	**4.081**	**23.62**	**2.16**	**150**	**5.11**
10:05	**6.41**	**21**	**-108.8**	**2.66**	**4.075**	**23.16**	**2.16**	**150**	**5.21**
10:10	**6.41**	**19.2**	**-108.9**	**2.64**	**4.074**	**23.15**	**2.16**	**150**	**5.3**
10:15	**6.42**	**15**	**-109.6**	**2.39**	**4.072**	**23.51**	**2.16**	**160**	**5.4**
10:20	**6.42**	**8.1**	**-108.5**	**2.19**	**4.091**	**23.5**	**2.17**	**160**	**5.51**
10:25	**6.42**	**10**	**-110.8**	**2.06**	**4.086**	**23.71**	**2.17**	**160**	**5.55**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M474C2**	Clarity:	**Slightly hazy**
Ferrous Iron Test with HACHDR820:	**Na** mg/L	Sample Date:	**07-09-2020**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**10:25**	Other:	**Na**

Sampler Name & Signature:	**Alex Ciofani**		Date: **07-09-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **07-09-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**CAMU/CAMU/Main Yard**	Sampling Personnel:	**Alex Ciofani**	Well Type:	**Stick Up**	Date:	**07-09-2020**
Monitor Well #:	**MW-474**	Pump Utilized for Three Volume Purge:		Same as Low Flow:		Make/Model:	

Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**13 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Alex Ciofani**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-03-2019**
Weather:	**cloudy , 56 degrees F , Wind E , 15 mph , none**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-474**	Well Depth:	**13.02**	ft below TOC	Depth to Water:	**5.04**	ft below TOC	Sampling Method:
Sample ID:	**MW-474B8**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**5.27 - 13.27**	ft	Pump Intake:	**9.5**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Bladder**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01j0214ac**
VOCs:	**2.1**	H_2S:	**0**	LEL: **0**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.05**

Time:	+/-0.1	+/-10%	+/-10mV	+/-10%	+/-3%	+/-3%			<0.3 ft
	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	Depth to Water (ft below TOC)
12:35	**6.48**	**34.9**	**-105.4**	**3.57**	**2.401**	**17.9**	**1.24**	**120**	**5.01**
12:40	**6.51**	**108.4**	**-97.4**	**2.14**	**2.419**	**18.72**	**1.25**	**120**	**5.02**
12:45	**6.51**	**39.6**	**-92.4**	**1.25**	**2.409**	**19.82**	**1.25**	**240**	**5.04**
12:50	**6.5**	**9.5**	**-88**	**0.93**	**2.38**	**19.87**	**1.23**	**240**	**5.06**
12:55	**6.49**	**28.6**	**-86.7**	**0.89**	**2.364**	**19.81**	**1.22**	**240**	**5.04**
13:00	**6.48**	**14**	**-86**	**0.62**	**2.356**	**19.86**	**1.21**	**240**	**5.06**
13:05	**6.48**	**15.6**	**-86.2**	**0.82**	**2.534**	**19.8**	**1.21**	**240**	**5.07**
13:10	**6.48**	**5.4**	**-85.7**	**0.7**	**2.35**	**19.81**	**1.21**	**240**	**5.07**
13:15	**6.48**	**5.2**	**-85.9**	**0.7**	**2.354**	**19.89**	**1.21**	**240**	**5.05**
13:20	**6.48**	**30.1**	**-85.4**	**0.78**	**2.351**	**19.87**	**1.21**	**240**	**5.06**

Electronic Data Logger Used:	**No**			Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05**	min	**00** sec	Sample ID:	**MW-474B8**	Clarity:	**Clear**
Ferrous Iron Test with HACHDR820:	**No**	mg/L		Sample Date:	**10-03-2019**	Odor:	**No odor**
Filtered (0.45 Micron Filter):	**No**			Sample Time:	**1330**	Other:	**Sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-03-2019**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-03-2019**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**10-03-2019**	
Monitor Well #:	**MW-474**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:
Depth to Bottom (ft):	**13.02 ft below TOC**	Sample ID:
Static Water Col. Ht. (ft):		Sample Date: Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:
Pump Intake (ft):		Clarity:
Purge Start Time:		Odor:
Purge End Time:		Other:
Purge Rate (L/min, gal/min):		Additional Comments:
Volume Purged (gal):		**Previous well depth -10 ft, current well depth -13.01 ft (stick up)**
Well Purged Dry:		
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):
		Water Quality End Time (after sampling):

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

Project Site/Location:	**Sitewide/CAMU/Main Yard**	Consulting Firm:	**Parsons**	Date:	**10-12-2020**
Weather:	**overcast , 59 degrees F , Wind NE , 18 mph , rain**			Sampling Personnel:	**Ryan Zsamba**

Monitor Well #:	**MW-474**	Well Depth:	**12.97**	ft below TOC	Depth to Water:	**5.26**	ft below TOC	Sampling Method:
Sample ID:	**M474C3**	Well Diameter:	**2**	inches	Depth to Product:	**Na**	ft below TOC	
Well Type:	**Stick Up**	Screened Interval:	**5.27 - 13.27**	ft	Pump Intake:	**9.27**	ft below TOC	**Low Flow**
Make/Model of Pump:	**Geo Pump**							

Head Space Readings:					Water Quality Meter Information:		Instrument Serial #:	**01b0202aa**
VOCs:	**6.8**	H_2S:	**0**	LEL: **20**	Instrument Make/Model:	**YSI 6920**	Temp. Correction Value:	**0.07**

Time:	+/-0.1 pH	+/-10% Turbidity (NTU)	+/-10mV ORP (mV)	+/-10% DO (mg/L)	+/-3% Spec. Cond. (mS/cm)	+/-3% Temperature (^{0}C)	Salinity (%)	Pumping Rate (mL/min)	<0.3 ft Depth to Water (ft below TOC)
14:15	**6.47**	**257.6**	**-65.1**	**1.76**	**4.075**	**17.43**	**2.17**	**100**	**5.26**
14:20	**6.46**	**243.5**	**-66.9**	**1.35**	**4.099**	**17.38**	**2.18**	**200**	**5.26**
14:25	**6.45**	**178.1**	**-69**	**1.2**	**4.112**	**17.38**	**2.19**	**200**	**5.26**
14:30	**6.44**	**134.2**	**-71.3**	**1.18**	**4.12**	**17.42**	**2.2**	**200**	**5.27**
14:35	**6.44**	**93**	**-72.8**	**1.13**	**4.124**	**17.46**	**2.2**	**200**	**5.28**
14:40	**6.43**	**77.1**	**-73.5**	**1.06**	**4.128**	**17.44**	**2.2**	**200**	**5.28**
14:45	**6.43**	**57.3**	**-74.4**	**1.07**	**4.125**	**17.48**	**2.2**	**200**	**5.28**
14:50	**6.43**	**38.3**	**-75**	**1.01**	**4.126**	**17.54**	**2.2**	**200**	**5.27**
14:55	**6.42**	**40.3**	**-75.5**	**1.05**	**4.133**	**17.56**	**2.21**	**200**	**5.26**
15:00	**6.42**	**34.2**	**-76.2**	**1**	**4.136**	**17.55**	**2.21**	**200**	**5.27**

Electronic Data Logger Used:	**No**	Sampling Information:		Observations/Comments:	
Low Flow Interval Rate:	**05** min	Sample ID:	**M474C3**	Clarity:	**Slightly turbid**
Ferrous Iron Test with HACHDR820:	**No** mg/L	Sample Date:	**10-12-2020**	Odor:	**Mild odor**
Filtered (0.45 Micron Filter):	**No**	Sample Time:	**1505**	Other:	**No sheen**

Sampler Name & Signature:	**Ryan Zsamba**		Date: **10-12-2020**

Reviewer Name & Signature:	**Ragini Sharma**		Date: **10-12-2020**

Groundwater Sampling Data Sheet - Chevron Perth Amboy, NJ

NO DATA ENTERED/SUBMITTED

Project Site/Location:	**Sitewide/CAMU/Main Yard**				Sampling Personnel:	**Ryan Zsamba**	Well Type:	**Stick Up**	Date:	**10-12-2020**	
Monitor Well #:	**MW-474**		Pump Utilized for Three Volume Purge:				Same as Low Flow:		Make/Model:		
Water Quality Data	Time	pH	Turbidity (NTU)	ORP (mV)	DO (mg/L)	Spec. Cond. (mS/cm)	Temperature (^{0}C)	Salinity (%)	Depth to Water (ft. below TOC)	Depth to Bottom (ft. below TOC)	

Initial Depth to Water (ft):		Sampling Information:	
Depth to Bottom (ft):	**12.97 ft below TOC**	Sample ID:	
Static Water Col. Ht. (ft):		Sample Date:	Sample Time:
Static Water Volume (gal) (SWV):		Sample Method:	
Min. Purge Volume (gal) (SWV*3):		Bailer Construction:	
Max. Purge Volume (gal) (SWV*5):		Observations/Comments:	
Pump Intake (ft):		Clarity:	
Purge Start Time:		Odor:	
Purge End Time:		Other:	
Purge Rate (L/min, gal/min):		Additional Comments:	
Volume Purged (gal):			
Well Purged Dry:			
Total Purged Volume (gal) (low flow + 3 Volume):		Water Quality Start Time (after sampling):	
		Water Quality End Time (after sampling):	

Sampler Name & Signature:	**Ryan Zsamba**		Date:
Reviewer Name & Signature:	**Ragini Sharma**		Date:

Appendix D
Summary of Monitoring Well Construction
Updated LDMP and LGMP for Cells 1-3 through 2nd quarter
2020 Former Chevron Perth Amboy Facility in New Jersey

Existing Monitoring Wells

Well ID	Casing Diameter (inch)	Casing Type	Well Type	Screen Length (ft)	Top of Screen (ft below TOC)	Well Depth (ft below TOC)	Ground Surface Elevation (ft NGVD29)	Top of Casing (TOC) Elevation (ft NGVD29)
MW-0057	4.0	SCH 40 PVC	Stick-up	15	3.5	18.5	15.24	17.64
MW-114	4.0	SCH 40 PVC	Flush mounted	10	2.0	12.0	14.16	13.89
MW-115	4.0	SCH 40 PVC	Flush mounted	5	17.0	22.0	14.28	14.01
MW-120	4.0	SCH 40 PVC	Stick-up	10	4.0	14.0	7.70	10.00
MW-233	4.0	SCH 40 PVC	Stick-up	5	3.9	8.9	8.70	11.63
MW-234RR	2.0	SCH 40 PVC	Stick-up	6.5	4.5	11.0	NA	NA
MW-322	2.0	SCH 40 PVC	Stick-up	10	11.7	21.7	16.70	19.92
MW-323	2.0	SCH 40 PVC	Stick-up	5	40.3	45.3	16.60	19.90
MW-324	2.0	SCH 40 PVC	Flush mounted	10	9.0	19.0	17.00	16.44
MW-325	2.0	SCH 40 PVC	Flush mounted	5	36.0	41.0	17.20	16.73
MW-326	2.0	SCH 40 PVC	Flush mounted	5	20.0	25.0	14.60	14.24
MW-327	2.0	SCH 40 PVC	Stick-up	5	21.1	26.1	7.20	10.34
MW-328	2.0	SCH 40 PVC	Stick-up	5	25.3	30.3	11.00	13.28
MW-334R	2.0	SCH 40 PVC	Stick-up	10	8.0	18.0	9.30	12.26
MW-402	2.0	SCH 40 PVC	Flush mounted	15	5.0	20.0	16.40	15.92
MW-474	2.0	SCH 40 PVC	Stick-up	8	5.3	13.3	10.50	13.77

Notes:

Monitoring wells with subscript "R" and "RR" were abandoned and re-installed

NGVD29 - National Geodetic Vertical Datum of 1929

NA - Not Available (Survey pending)

Abandoned Monitoring Wells

Well ID	Casing Diameter (inch)	Casing Type	Well Type	Screen Length (ft)	Top of Screen (ft below TOC)	Well Depth (ft below TOC)	Ground Surface Elevation (ft NGVD29)	Top of Casing (TOC) Elevation (ft NGVD29)
MW-211	4.0	SCH 40 PVC	Stick-up	7	3.9	10.9	9.80	12.73
MW-234	4.0	SCH 40 PVC	Stick-up	6	4.4	10.4	8.80	11.21
MW-234R	2.0	SCH 40 PVC	Stick-up	6.5	3.9	10.4	9.60	12.00
MW-315	2.0	SCH 40 PVC	Stick-up	5	8.5	13.5	12.70	16.24
MW-333	2.0	SCH 40 PVC	Stick-up	8	4.8	12.8	27.00	29.76
MW-334	2.0	SCH 40 PVC	Stick-up	10	9.3	19.3	9.00	11.29

Notes:

Monitoring well with subscript "R" was abandoned and re-installed

NGVD29 - National Geodetic Vertical Datum of 1929