



COLORADO

**Department of Public
Health & Environment**

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REM#7037

January 3, 2022

Scott Poole
Praxair Inc.
285 Wilmington-West Chester Pike
Chadds Ford, PA 19317

RE: Project Update - June 2021 Sampling Event
Linde (Praxair, Inc.) Facility
2541 Jackson County Road 10
Walden, Colorado
EPA ID No. COR000205807

Dear Mr. Poole:

The Colorado Department of Public Health and Environment's, Hazardous Materials and Waste Management Division (the "Division") has completed reviewing the Project Update, June 2021 Sampling Event (Project Update) for the Praxair, Inc. facility in Walden, Colorado ("the Facility"). The Project Update was submitted to the Division on behalf of the Facility by APTIM Environmental & Infrastructure, Inc. for review under Section 100.26 of the Colorado Hazardous Waste Regulations, 6 CCR 1007-3 ("the Regulations").

The Project Update provides a summary of the data collected at the Facility during the June 2021 annual sampling event. The concentration of contaminants remain generally stable, or are decreasing. Based on its review, the Division approves the Project Update as submitted. If have any questions regarding this letter, please contact me at david.walker@state.co.us.

Sincerely,

David Walker
Hazardous Waste Corrective Action Unit
Hazardous Materials and Waste Management Division
Colorado Department of Public Health and Environment

ecc: Kent Crowder, Jackson County Administrator
Alex Fischer, COGCC
Dan Rathgeber, Praxair
Reggie Kornas, Praxair
Michael Jennings, Aptim Environmental & Infrastructure, LLC





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December 16, 2021

Mr. Dave Walker
Environmental Protection Specialist
Hazardous Waste Corrective Action Unit
Hazardous Materials and Waste Management Division
4300 Cherry Creek Drive South
Denver, CO 80246-1530

**Subject: Project Update
Linde Facility
2541 Jackson County Road 10
Walden, Colorado
USEPA ID No. COR000205807**

Dear Mr. Walker:

APTIM Environmental & Infrastructure, LLC (APTIM) on behalf of Linde, is pleased to submit this project update report on groundwater monitoring activities conducted at Linde's former CO₂ plant located 3 miles northeast of Walden, Colorado (**Figure 1**). This report discusses the results of the June 2021 groundwater monitoring event. Based on an approval letter from CDPHE on July 18, 2019, monitoring wells MW-4, MW-5 and MW-8 were removed from the annual monitoring program. Therefore, only monitoring wells MW-11R, MW-12, MW-13 and MW-14 were sampled during this event.

Monitoring Activities

APTIM performed groundwater monitoring activities on June 2 2021. All monitoring wells (**Figure 2**) were accessible and contained enough water to measure depths to the static water level and/or collect groundwater samples. Before collecting the groundwater samples, APTIM measured the static groundwater levels using an electronic water level probe. Water level measurements, flow direction, and gradient are summarized in **Table 1**. APTIM hand-bailed each available well a minimum of three well volumes prior to the collection of groundwater samples. Groundwater samples were collected into laboratory-supplied containers, documented on a chain-of-custody form (COC), placed in a cooler with wet ice, and transported the following day to ALS Laboratory in Fort Collins, Colorado. All samples were analyzed for Benzene, Toluene, Ethylbenzene, Xylenes and Naphthalene (BTEXN) using EPA Method 8260C. The laboratory results for the groundwater monitoring event are summarized in **Table 2**. Laboratory data, including COC forms, can be found in **Appendix A**.

Monitoring Results

On average, groundwater elevations from the June 2021 monitoring event were approximately 2.22 feet lower than those during the June 2020 event. The groundwater flow direction was determined to be to the north northwest, similar to previous sampling events. Groundwater gradient from MW-10 to MW-8 was 0.00261 feet/feet, a decrease from the gradient of 0.00441 feet/feet observed in June 2020. Overall,

the gradient indicates groundwater is very flat and slow moving across the Linde site. The June 2021 groundwater contour map is included as **Figure 3**.

Because of possible multiple plumes impacting the Linde site, the discussion of monitoring results is broken into three areas: monitoring wells associated with the leach field (MW-12, and MW-13); the monitoring well associated with the release from the neighboring Bonanza Creek operation (MW-11R); and the monitoring well associated with an unknown source (MW-14).

Leach Field Release (MW-12, and MW-13)

For MW-12, the benzene concentration of 5.5 µg/L was just above the groundwater standard of 5.0 µg/L and the naphthalene concentration (140 µg/L) was at the standard. Overall, other than the slight increase in benzene in this monitoring period, BTEXN concentrations appear to be stable to slightly decreasing.

For MW-13, the sampling results continue to produce mixed results. Ethylbenzene and xylene concentrations were above their respective standards while toluene was slightly below the standard for the first time since this well was installed. Ethylbenzene concentrations are stable while toluene and xylene concentrations have shown a marked decrease over time. The naphthalene concentration, while much lower than its standard, was at its highest since the well was installed. The laboratory reporting limit for benzene was again 50 µg/L, which is well above the standard of 5 µg/L. Therefore, it was not possible to determine if the benzene concentration was above or below the standard.

The overall impacts of the leach field release continue to be present on the north side of the field, with overall petroleum compound concentrations likely stable, discounting the latest xylene concentration. Naphthalene continues to be the only compound on the west side of the leach field with concentrations above the standard. Perhaps naphthalene was the primary compound to travel this distance and direction towards MW-12, while the bulk of the plume remained to the east.

Bonanza Creek Release (MW-11R)

All BTEXN concentrations were well below their respective standards and only ethylbenzene and xylenes exceeded the laboratory detection limits. This is the second time in the last three monitoring events that only trace concentrations of benzene were detected in MW-11R. Petroleum impacts in MW-11R have been abated, likely due in part to the operations of the injection well system installed by the former Bonanza Creek facility immediately adjacent to the monitoring well. The remedial system continues to operate.

Mixed Sources (MW-14)

Only benzene was detected above laboratory reporting limits for MW-14; however, the concentration of 2.9 µg/L was below the standard. All other petroleum compounds were below both the laboratory reporting limits and the standard.


Recommendations

Based on the 2021 findings, APTIM, on behalf of Linde, recommends the following:

- Based on the long term plume stability and lack of sensitive receptors, continued annual sampling is recommended.
- Collect groundwater samples from MW-11R, MW-12, MW-13 and MW-14 during May/June 2021. All groundwater samples will be analyzed for BTEXN by USEPA Method 8260C.
- Submit an annual monitoring report to CDPHE by December 31, 2022.

If you have any questions, please contact me at 720-554-8177 (office), 970-988-9371 (cell), or via email at Michael.jennings@cbi.com.

Sincerely,

A handwritten signature in black ink that reads "Michael Jennings". The signature is written in a cursive, slightly slanted style.

Michael Jennings
Project Manager

Attachments

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra-chloro-ethene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	n-Butyl-benzene	Sec-butylbenzene	Tert-butylbenzene	P-Isopropyl-toluene	Isopropyl-benzene	n-Propyl-benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW-1	Nov-07	ND	ND	0.61	3.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	18.3	39.6	4.6	9.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	ND	ND	ND	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	ND	ND	3.1	34.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-10	ND	ND	ND	2.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	ND	ND	3.8	38.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	<0.27	<1.0	<0.33	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-2	Nov-07	1.7	ND	8	11.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	21.9	54.7	3.9	9.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	34.7	ND	170	56.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	2.7	0.34	10.2	3.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	2.7	0.53	19	6.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	ND	ND	6.2	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	1.6	ND	9.6	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	10.8	1.6	65.1	22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-10	Well could not be located due to snow cover														
	May-10	0.86	ND	14.8	34.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	10.4	1.1	67.3	44.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	4.5	<1.0	36.1	11.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	5.1	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	3	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	1.6	<1.0	1.2	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	1.5	<1.0	0.8	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-3	Nov-07	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	1.1	4.9	ND	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	Well could not be located due to snow cover														
	Feb-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra- chloro- ethene	1,2,4- Trimethyl- benzene	1,3,5- Trimethyl- benzene	n-Butyl- benzene	Sec- butylbenzene	Tert- butylbenzene	P-Isopropyl- toluene	Isopropyl- benzene	n-Propyl- benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
	May-11	<1.0	<1.0	<1.0	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	<0.27	<1.0	<0.33	11	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-4	Nov-07	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	16,600	12,700	71.9	400	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	11,800	9,970	59.9	331	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	8,570	10,600	78	570	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	6,870	6,340	57.5	1,140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	7,020	5,580	44	430	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	6,180	4,150	49	209	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	3,360	1,000	77.2	771	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-10	975	48.5	39.3	811.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-10	1,360	ND	33.2	521	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	1,450	ND	29.9	271	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	1.1	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	16.4	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	283	<1.0	1.8	7.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	751	<1.0	2.6	8.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	465	<5.0	<1.7	<10.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-13	6.9	<2.0	<2.0	<3.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-14	<0.25	<1.0	<0.31	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-14	2.1	<0.22	<0.25	<0.30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-15	6.0	<0.29	<0.24	0.23 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-15	18.9	0.22 J	0.73 J	1.6 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-15	<0.50	<0.71	<0.50	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-16	12	<1.0	0.69 J	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-16	6.2	<1.0	<1.0	0.77 J	<1.0	45	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Jun-17	2.9	<1.0	<1.0	0.34 J	<1.0	58	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Jul-18	2.2	<1.0	<1.0	0.57	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-19	<1.0	<1.0	<1.0	<3	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra-chloro-ethene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	n-Butyl-benzene	Sec-butylbenzene	Tert-butylbenzene	P-Isopropyl-toluene	Isopropyl-benzene	n-Propyl-benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW-5	Aug-07	3.7	367	1,220	10,700	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-07	3	4.6	1,570	12,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	8.4	13	1,370	9,960	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	2	1	405	3,130	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	11.3	12.8	1,130	8,280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	1.5	1.7	26.5	225	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	1.2	4.7	925	8,180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	ND	ND	1,160	9,480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	1.4	0.5	883	8,100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-10	ND	11.4	233	2,060	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-10	5.1	ND	949	8,480	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	0.99	ND	378	3,289	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	<1.0	<1.0	2	634	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	1.4	14.9	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	412	4,063	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	383	4,397	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	0.35	3.8	197	2,020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-13	0.31	1.3	173	2,250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-14	<0.25	<1.0	79.3	1,070	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-14	<0.25	1.9	194	2,050	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-15	<1.4	<1.5	101	960	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-15	0.23 J	0.26 J	154	1,460	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-15	<5.0	<7.1	213	2,020	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-16	<5.0	<5.0	41	533	6.3	100	<5	200	96	<5.0	1.6 J	<5.0	1.5 J	31	30
	Nov-16	Insufficient amount of water to collect sample														
	Jun-17	<1.0	0.33 J	33	13	5.2	35	0.31 J	NA	49	<1.0	0.75 J	0.33 J	0.96 J	15	13
	Jul-18	Insufficient amount of water to collect sample														
	May-19	<1.0	0.32 J	1.6	88	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-6	Aug-07	368	0.65	2.7	23.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-07	350	5.8	ND	1.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	13.5	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	108	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	153	1.8	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	165	5.2	2.6	22.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	164	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	51.3	0.55	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	Insufficient amount of water to collect sample														
	Feb-10	Insufficient amount of water to collect sample														
	May-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	<1.0	<1.0	<1.0	3.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
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Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra- chloro- ethene	1,2,4- Trimethyl- benzene	1,3,5- Trimethyl- benzene	n-Butyl- benzene	Sec- butylbenzene	Tert- butylbenzene	P-Isopropyl- toluene	Isopropyl- benzene	n-Propyl- benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
	May-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	<0.27	<1.0	<0.33	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-14	<0.25	<1.0	<0.31	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-14	<0.25	<0.22	<0.25	<0.30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-15	<0.27	<0.29	<0.24	<0.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-15	<0.50	<0.71	<0.50	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-16	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-7	Aug-07	ND	ND	0.93	6.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-07	0.4	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	2.1	8	0.3	2.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	1.9	2.3	0.79	6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	1.8	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-10	Insufficient amount of water to collect sample														
	May-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	<0.27	<1.0	<0.33	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra-chloro-ethene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	n-Butyl-benzene	Sec-butylbenzene	Tert-butylbenzene	P-Isopropyl-toluene	Isopropyl-benzene	n-Propyl-benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW-8	Aug-07	190	ND	0.92	7.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-07	243	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-08	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-08	68.1	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Dec-08	190	0.56	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-09	193	4.5	0.73	5.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-09	183	2.4	2.5	5.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	115	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	Insufficient amount of water to collect sample														
	Feb-10	Insufficient amount of water to collect sample														
	May-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	2.8	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	6.1	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	218	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	164	<1.0	<0.33	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-13	156	<2.0	<2.0	<3.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-14	57.2	<1.0	<0.31	<1.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-14	182	<0.22	<0.25	<0.30	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-15	178	<0.29	<0.24	<0.22	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-15	70.1	<0.2	<0.2	<0.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-15	4.1	<0.71	<0.50	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-16	6.6	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-16	<1.0	<1.0	<1.0	<1.0	<1.0	<10.0	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Jun-17	1.4	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Jul-18	Insufficient amount of water to collect sample														
	May-19	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-9	Aug-09	1.7	1.4	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	29	18.1	0.83	10.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-10	2.1	ND	ND	1.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-10	ND	ND	0.99	7.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	<0.27	<1.0	<0.33	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-09	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-09	1.7	1.4	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Feb-10	Well could not be located due to snow cover														
	May-10	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra- chloro- ethene	1,2,4- Trimethyl- benzene	1,3,5- Trimethyl- benzene	n-Butyl- benzene	Sec- butylbenzene	Tert- butylbenzene	P-Isopropyl- toluene	Isopropyl- benzene	n-Propyl- benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW-10	Aug-10	ND	ND	0.33	9.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-11	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	<1.0	<1.0	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	<0.27	<1.0	<0.33	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra-chloro-ethene	1,2,4-Trimethyl-benzene	1,3,5-Trimethyl-benzene	n-Butyl-benzene	Sec-butylbenzene	Tert-butylbenzene	P-Isopropyl-toluene	Isopropyl-benzene	n-Propyl-benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW-11	Aug-11	3,817	823	211	2,996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-12	1,712	17.7	123	1,016	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Oct-12	1,213	16	233	481	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-13	Well destroyed during pipe replacement project														
MW-11R	Nov-13	2,000	54.5	924	4,950	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-14	793	<10.0	300	1,600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-14	1,130	7.4	275	899	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-15	1,330	6.7	249	840	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-15	754	<7.1	176	549	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-16	1,400	3.9 J	320	1,218	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-16	960	2.5 J	1,500	1,008	7.2	290	<5	61	31	<5.0	<5.0	<5.0	<5.0	19	16
	Jun-17	<1	2.4	450	1,623	3.9	600	<1	90	51	<1	2	1	2	30	29
	Jul-18	650	1.1	250	3.4	2.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-19	0.95 J	<1.0	<1.0	0.84 J	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-20	20	<1.0	41	110	0.67 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-21	0.62 J	1.5 J	7.8	180	1.4 J	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-12	Jun-15	6.4	<1.5	178	1,150	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Aug-15	8.0	0.51 J	198	1,340	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Nov-15	11.4	25.3	238	1,440	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-16	6.4	0.62 J	180	1,108	350	<10.0	<1	990	390	13	16	4.3	21	59	96
	Nov-16	2.7	0.66 J	180	1,107	570	18	<1	1,200	450	15	17	4.3	21	56	120
	Jun-17	2.9	0.58J	160	1,110	<1	19	<1	810	290	14	14	4.1	19	50	79
	Jul-18	1.3	1.10	120	6.8	170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-19	1.6	0.65 J	110	750	200	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-20	2.7	0.58 J	88	4.8	170	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-21	5.5	<5.0	66	410 J	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-13	Jun-16	45	2,100	2,200	22,500	45	64 J	<20	960	450	8.6 J	15 J	<20.0	14 J	170	180
	Nov-16	19	920	1,000	7,500	20	<100.0	2.1 J	410	180	3.1 J	7.6 J	<10.0	5.5 J	84	85
	Jun-17	<100	1,400	1,500	15,000	66	520.00		780	410	<100	<100	<100	<100	140	150
	Jul-18	6.1	1,000	1,400	15,000	19	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-19	3.8 J	840	1,100	9,600	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-20	<50	710	1,400	510	<50	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-21	<50	550	1,200	2,700	76	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

Well ID	Parameter	Benzene	Toluene	Ethylbenzene	Xylene (Total)	Naphthalene	Acetone	Tetra- chloro- ethene	1,2,4- Trimethyl- benzene	1,3,5- Trimethyl- benzene	n-Butyl- benzene	Sec- butylbenzene	Tert- butylbenzene	P-Isopropyl- toluene	Isopropyl- benzene	n-Propyl- benzene
	CDPHE Standard*	5*	560*	700*	1,400*	140*	6,300*	5*	NE*	NE*	NE*	NE*	NE*	NE*	NE*	NE*
	Sample Date	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result	Result
MW-14	Jun-16	44	0.43 J	<1.0	0.46 J	1.3	51	<1	0.32 J	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Nov-16	38	<1.0	<1.0	<1.0	<1.0	<10.0	<1	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Jun-17	14	<1.0	<1.0	0.32 J	<1.0	<10.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Jul-18	16	<1.0	<1.0	0.3J	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	May-19	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-20	<1.0	<1.0	<1.0	<3.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	Jun-21	2.9	<2.0	<2.0	1.1 J	<2.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Footnotes:

All results and the standards are in micrograms per liter.

* Colorado Department of Public Health and Environment (CDPHE) Groundwater Organic Chemical Standards
(5 CCR 1002-41.5[c]3)

NE* - No CDPHE Groundwater Organic Chemical Standard established.

ND - Result was less than the following method detection limits:

Benzene - 0.3 µg/L

Toluene - 1.0 µg/L

Ethylbenzene - 0.3 µg/L

Xylene - 0.6 µg/L

NA - Sample not analyzed for parameter.

Figures in shaded print exceed the Colorado groundwater organic chemical standards.

J - Laboratory estimate; below the laboratory reporting limit but above the laboratory method detection limit.

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

[illegible]

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

2-Butanone (MEK)	Chloroform	Methylene Chloride	Trichloro- fluoro- methane	Carbon Disulfide
NE*	3.5*	NE*	NE*	NE*
Result	Result	Result	Result	Result
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
<10.0	<1.0	<1.0	<1.0	<1.0
<10	<1.0	<1.0	<1.0	0.69
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

2-Butanone (MEK)	Chloroform	Methylene Chloride	Trichloro-fluoro-methane	Carbon Disulfide
NE*	3.5*	NE*	NE*	NE*
Result	Result	Result	Result	Result
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
<50.0	<5.0	2.8 J	<5.0	<5.0
16	<1.0	<1.0	<1.0	0.88 J
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

[illegible]

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

2-Butanone (MEK)	Chloroform	Methylene Chloride	Trichloro- fluoro- methane	Carbon Disulfide
NE*	3.5*	NE*	NE*	NE*
Result	Result	Result	Result	Result
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
<10.0	<1.0	<1.0	1.3	<1.0
<10.0	<1.0	<1.0	<1.0	<1.0
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

2-Butanone (MEK)	Chloroform	Methylene Chloride	Trichloro- fluoro- methane	Carbon Disulfide
NE*	3.5*	NE*	NE*	NE*
<i>Result</i>	<i>Result</i>	<i>Result</i>	<i>Result</i>	<i>Result</i>
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

2-Butanone (MEK)	Chloroform	Methylene Chloride	Trichloro- fluoro- methane	Carbon Disulfide
NE*	3.5*	NE*	NE*	NE*
<i>Result</i>	<i>Result</i>	<i>Result</i>	<i>Result</i>	<i>Result</i>
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
<50.0	<5.0	<5.0	<5.0	<5.0
<10	<1	<1	<1	0.36
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
<10.0	<1.0	<1.0	<1.0	0.37 J
<10.0	<1.0	<1.0	<1.0	<1.0
<10	<1	<1	<1	0.36
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
<200.0	<20.0	20 J	<20.0	<20.0
<100.0	<10.0	<10.0	<10.0	<10.0
<1000	<100	<100	<100	<100
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

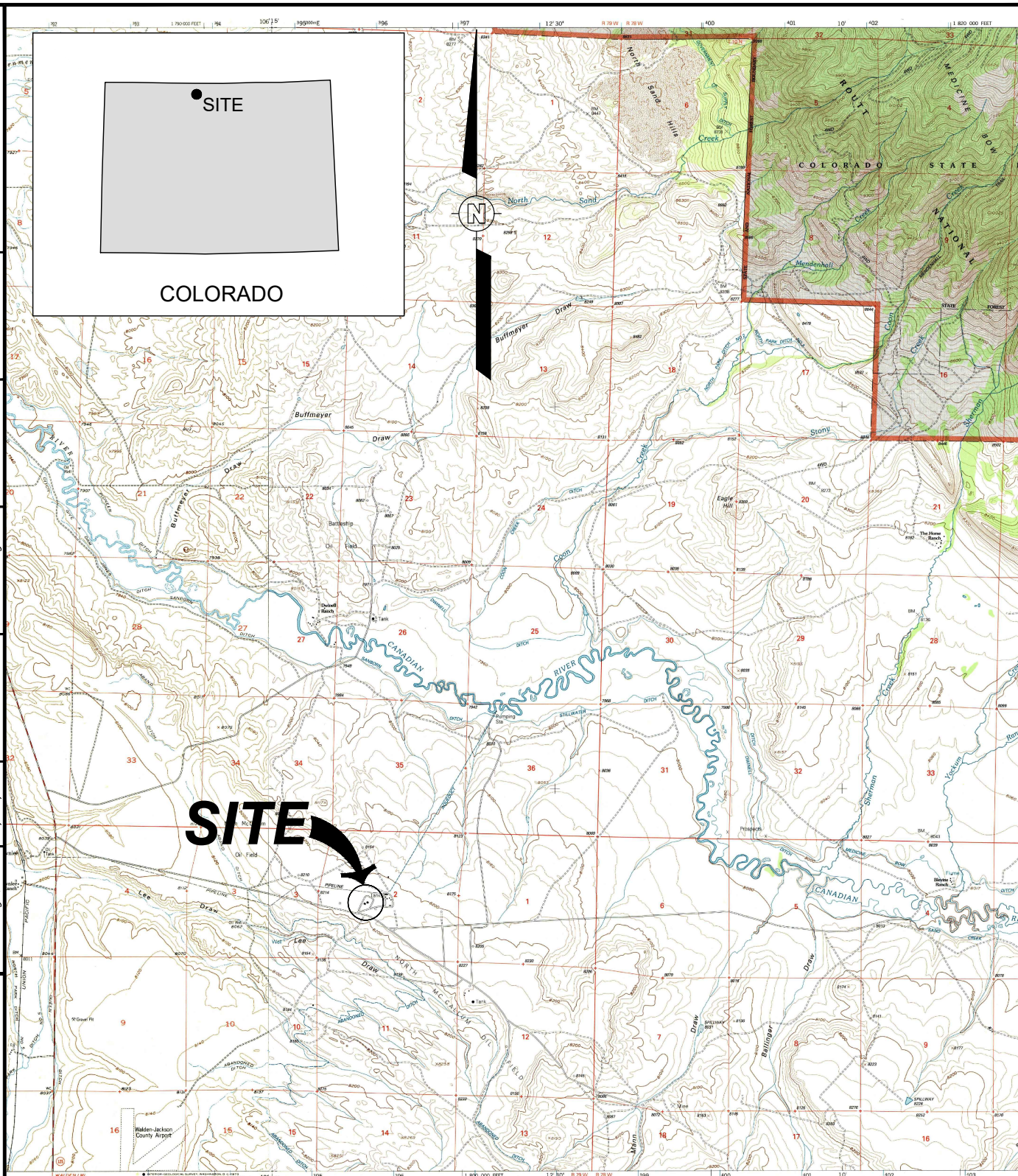
Table 2
Historical Groundwater Sampling Results Through June 2020
Praxair - Walden, Colorado

2-Butanone (MEK)	Chloroform	Methylene Chloride	Trichloro- fluoro- methane	Carbon Disulfide
NE*	3.5*	NE*	NE*	NE*
<i>Result</i>	<i>Result</i>	<i>Result</i>	<i>Result</i>	<i>Result</i>
7.4 J	0.89 J	<1.0	<1.0	<1.0
<10.0	<1.0	<1.0	0.5 J	<1.0
<10	<1.0	<1.0	0.43 J	<1.0
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA
NA	NA	NA	NA	NA

Figures

File: O:\PROJECT\Praxair_Walden_CO\631003885-A1.dwg
 Plot Date/Time: Aug 12, 2021 - 3:36pm
 Plotted By: Evan.Schlegel

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	8/12/21		E. Schlegel			631003885-A1



REFERENCE:

U.S.G.S. TOPOGRAPHIC MAP, 7.5 MINUTE SERIES, EAGLE HILL, COLORADO, AND COWDREY, COLORADO QUADRANGLES, DATED 2000 AND 1956.



500 Penn Center Boulevard,
 Suite 1000
 Pittsburgh, Pennsylvania 15235



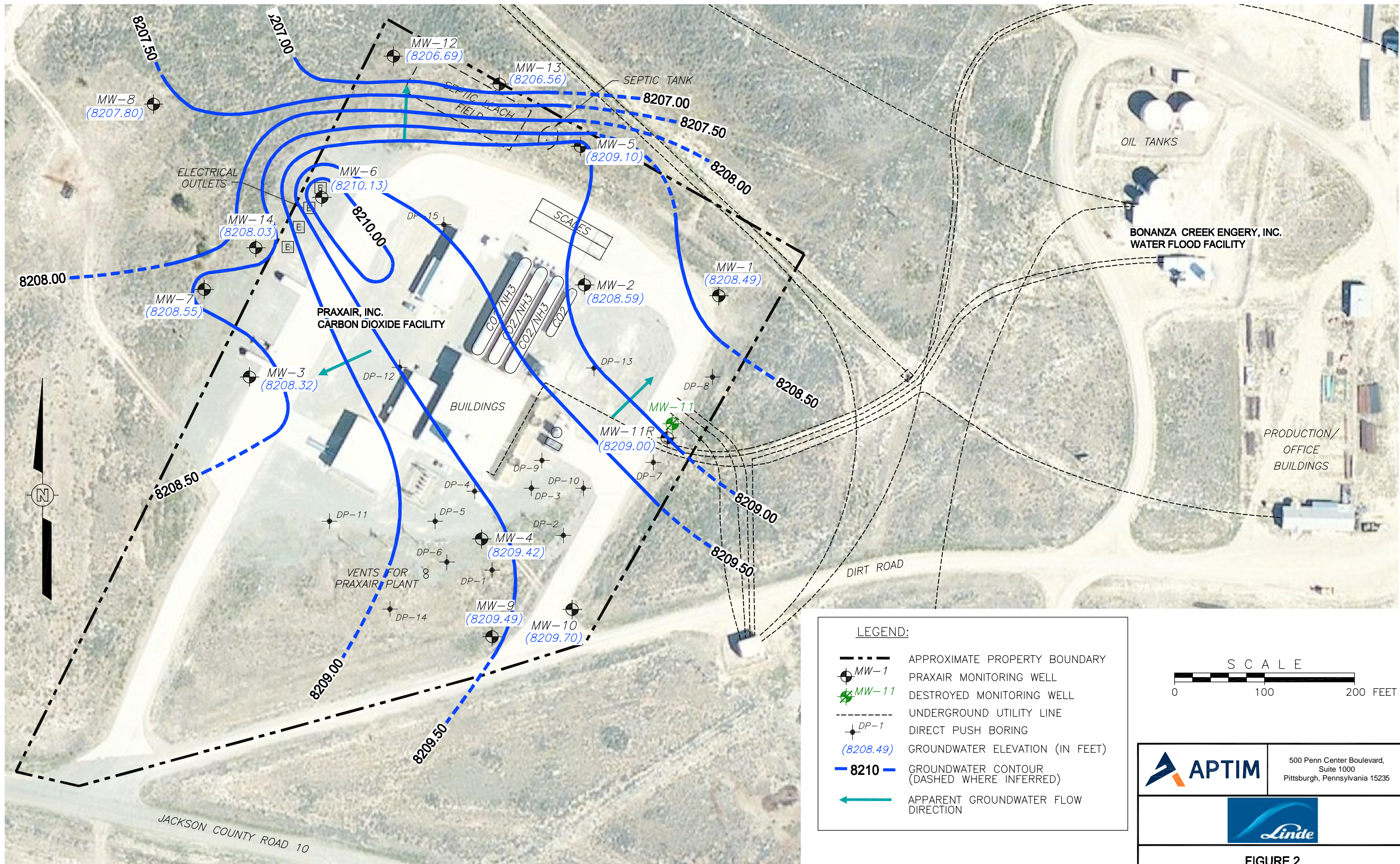
FIGURE 1

SITE LOCATION MAP

**PRAXAIR WALDEN FACILITY
 JACKSON COUNTY, COLORADO**

File: O:\PROJECT\Praxair_Walden_CO\631003885\631003885-B5.dwg
Plot Date/Time: Aug 12, 2021 - 4:25pm
Plotted By: Evan.Schlegel

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	8/12/21	--	E. Schlegel	M. Jennings	--	631003885-B5



REFERENCE:

THE BASE MAP, BONANZA CREEK ENERGY, INC. GROUNDWATER WELL LOCATIONS, AND ANALYTICAL RESULTS DERIVED FROM LT ENVIRONMENTAL DRAWING 034512007, DATED 2012.





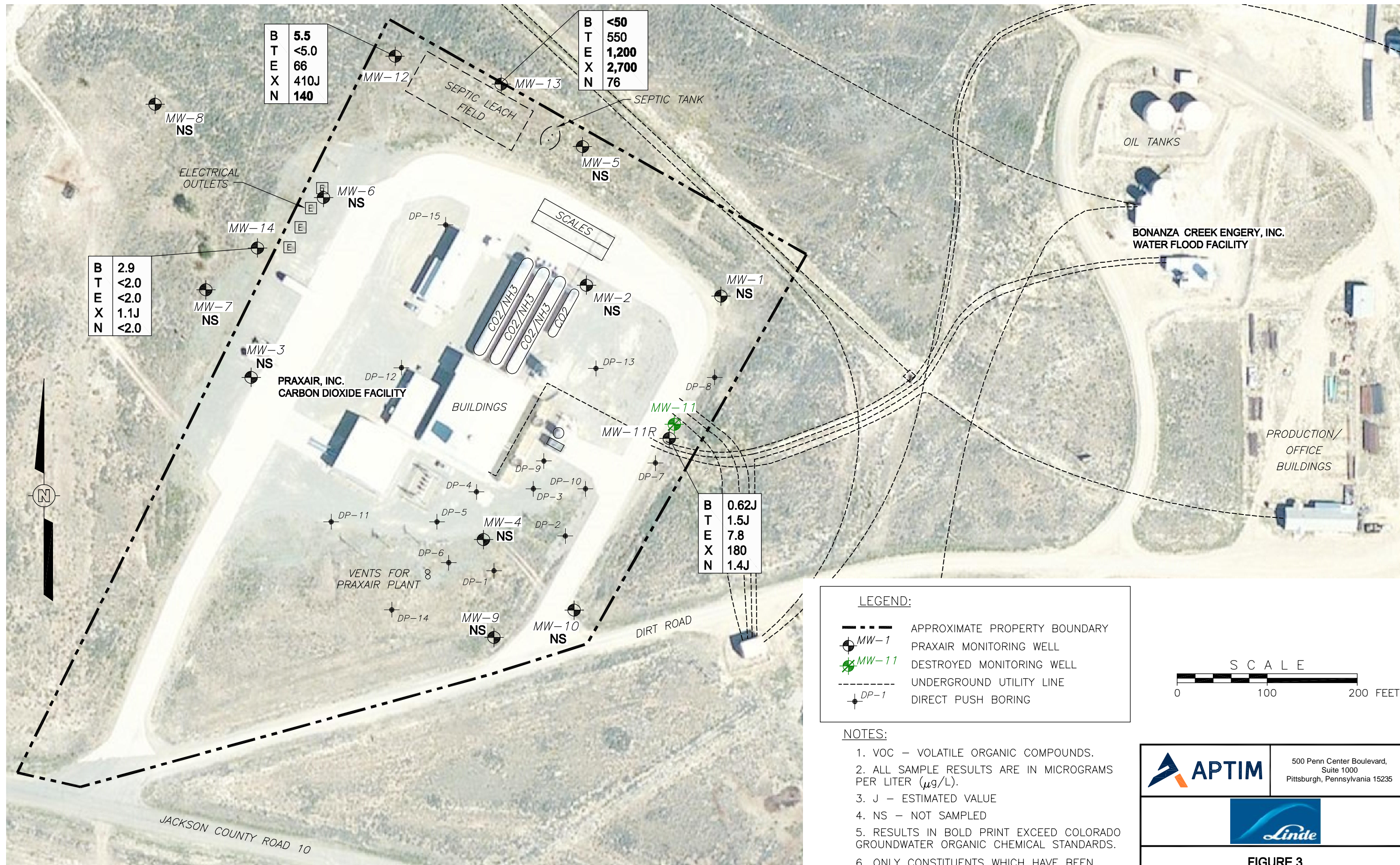
500 Penn Center Boulevard,
Suite 1000
Pittsburgh, Pennsylvania 15235



FIGURE 2
GROUNDWATER CONTOUR MAP
JUNE 2021
PRAXAIR WALDEN FACILITY
JACKSON COUNTY, COLORADO

File: O:\PROJECT\Praxair_Walden_CO\631003885\631003885-B6.dwg
Plot Date/Time: Aug 12, 2021 - 4:33pm
Plotted By: Evan.Schlegel

OFFICE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY	APPROVED BY	DRAWING NUMBER
Pittsburgh, PA	8/12/21	--	E. Schlegel	M. Jennings	--	631003885-B6



LEGEND:

- APPROXIMATE PROPERTY BOUNDARY
- MW-1 PRAXAIR MONITORING WELL
- MW-11 DESTROYED MONITORING WELL
- UNDERGROUND UTILITY LINE
- ✦ DP-1 DIRECT PUSH BORING

NOTES:

- VOC - VOLATILE ORGANIC COMPOUNDS.
- ALL SAMPLE RESULTS ARE IN MICROGRAMS PER LITER ($\mu\text{g/L}$).
- J - ESTIMATED VALUE
- NS - NOT SAMPLED
- RESULTS IN BOLD PRINT EXCEED COLORADO GROUNDWATER ORGANIC CHEMICAL STANDARDS.
- ONLY CONSTITUENTS WHICH HAVE BEEN DETECTED ABOVE LABORATORY DETECTION LIMITS ARE SHOWN.
- BTEXN - BENZENE, TOLUENE, ETHYLBENZENE, XYLENE, AND NAPHTHALENE.



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FIGURE 3
VOC CONCENTRATIONS
JUNE 2021
PRAXAIR WALDEN FACILITY
JACKSON COUNTY, COLORADO

REFERENCE:

THE BASE MAP, BONANZA CREEK ENERGY, INC. GROUNDWATER WELL LOCATIONS, AND ANALYTICAL RESULTS DERIVED FROM LT ENVIRONMENTAL DRAWING 034512007, DATED 2012.

Appendix A
Laboratory Data



GC/MS Volatiles

Case Narrative

Aptim

Praxair Walden

Work Order Number: 2106616

1. This report consists of 5 water samples. The samples were received intact by ALS on 06/23/21. The samples were received at 7.8°C.

The water samples were free of headspace prior to analysis.

Samples 2106616-1 and -5, provided for volatiles, had a pH > 2 at the time of analysis. All other samples had a pH < 2 at the time of analysis.

2. These samples were prepared according to SW-846, 3rd Edition procedures. Specifically, the water samples were prepared using purge and trap procedures based on Method 5030C.
3. The samples were analyzed using GC/MS according to the current revision of SOP 525 based on SW-846 Method 8260C. All positive results were quantitated against the initial calibration standards using the internal standard technique. The identification of positive results was achieved by a comparison of the retention time and mass spectrum of the sample versus the daily calibration standard.
4. All initial calibration criteria were met.
5. All initial calibrations are verified by comparing a second source standard calibration verification (ICV) against the calibration curve. All criteria for initial calibration verification were met.
6. Per the guidance in methods 8000 and 8260, all compounds in each of the daily (continuing) calibration verifications had sufficient response to support accurate quantitation of the data included in this report.
7. Methylene chloride, acetone and 2-butanone are common laboratory contaminants. In order to minimize the levels of these compounds detected in the gc/ms analysis, ALS has designated its volatile laboratory as a restricted access area. In addition, the laboratory has been equipped with a dedicated, air intake and exhaust system that operates under positive pressure in order to

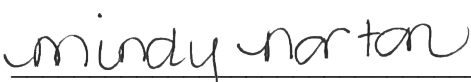


minimize cross contamination of these compounds. Due to fluctuations in ambient laboratory conditions, reported sample values for common laboratory contaminants may be due to lab contamination even if the compound in question is not detected in the associated method blank.

All method blank criteria were met.

8. All laboratory control sample and laboratory control sample duplicate recoveries and RPDs were within the acceptance criteria.
9. A matrix spike and matrix spike duplicate were not performed because of insufficient sample. A laboratory control sample and laboratory control sample duplicate were performed instead.
10. Sample 2106616-3RR1 was analyzed beyond the holding time requirements. See NCR #15295.
11. All surrogate recoveries were within acceptance criteria.
12. All internal standard recoveries were within acceptance criteria.
13. Due to the concentration of target analytes, samples were analyzed at a dilution. The reporting limits have been adjusted accordingly.
14. Manual integrations are performed when needed to provide consistent and defensible data following the guidelines in the current revision of SOP 939.

The data contained in the following report have been reviewed and approved by the personnel listed below. In addition, ALS certifies that the analyses reported herein are true, complete and correct within the limits of the methods employed.



Mindy Norton
Organics Primary Data Reviewer

8/6/21
Date



Organics Final Data Reviewer

8/06/21
Date

ALS
Data Qualifier Flags
Organics

- U or ND:** This flag indicates that the compound was analyzed for but not detected.
- J:** This flag indicates an estimated value. This flag is used as follows : (1) when estimating a concentration for tentatively identified compounds (TICs) where a 1:1 response is assumed; (2) when the mass spectral and retention time data indicate the presence of a compound that meets the volatile and semivolatile GC/MS identification criteria, and the result is less than the reporting limit (RL) but greater than the method detection limit (MDL); (3) when the retention time data indicate the presence of a compound that meets the GC identification criteria, and the result is less than the RL but greater than the MDL; and (4) the reported value is estimated.
- B:** This flag is used when the analyte is detected in the associated method blank as well as in the sample. It indicates probable blank contamination and warns the data user. This flag shall be used for a tentatively identified compound (TIC) as well as for a positively identified target compound.
- E:** This flag identifies compounds whose concentration exceeds the upper level of the calibration range.
- A:** This flag indicates that a tentatively identified compound is a suspected aldol-condensation product.
- X:** This flag indicates that the analyte was diluted below an accurate quantitation level.
- *:** This flag indicates that a spike recovery is equal to or outside the control criteria used.
- +:** This flag indicates that the relative percent difference (RPD) equals or exceeds the control criteria.

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Sample Number(s) Cross-Reference Table

OrderNum: 2106616

Client Name: Aptim

Client Project Name: Praxair Walden

Client Project Number:

Client PO Number:

Client Sample Number	Lab Sample Number	COC Number	Matrix	Date Collected	Time Collected
MW-11R	2106616-1		WATER	22-Jun-21	12:50
MW-12	2106616-2		WATER	22-Jun-21	11:25
MW-13	2106616-3		WATER	22-Jun-21	11:55
MW-14	2106616-4		WATER	22-Jun-21	11:55
Trip Blank	2106616-5		WATER	22-Jun-21	11:45



ALS Environmental - Fort Collins
CONDITION OF SAMPLE UPON RECEIPT FORM

Client: APTIM Workorder No: 2106616
 Project Manager: KMB Initials: AL Date: 06/23/2021

	N/A	YES	NO
1. Are airbills / shipping documents present and/or removable?	X		
Tracking number:			
2. Are custody seals on shipping containers intact?	X		
3. Are custody seals on sample containers intact?	X		
4. Is there a COC (chain-of-custody) present?		X	
5. Is the COC in agreement with samples received? (IDs, dates, times, # of samples, # of containers, matrix, requested analyses, etc.)		X	
6. Are short-hold samples present?			X
7. Are all samples within holding times for the requested analyses?		X	
8. Were all sample containers received intact? (not broken or leaking)		X	
9. Is there sufficient sample for the requested analyses?		X	
10. Are samples in proper containers for requested analyses? (form 250, <i>Sample Handling Guidelines</i>)		X	
11. Are all aqueous samples preserved correctly, if required? (excluding volatiles)	X		
12. Are all samples requiring no headspace (VOC, GRO, RSK/MEE, radon) free of bubbles > 6 mm (1/4 inch) diameter? (i.e. size of green pea)		X	
13. Were the samples shipped on ice?		X	
14. Were cooler temperatures measured at 0.1-6.0°C?	IR gun used*: #5		X
Cooler #: <u>1</u> Temperature (°C): <u>7.8</u> # of custody seals on cooler: <u>0</u> External µR/hr reading: <u>11</u> Background µR/hr reading: <u>12</u> Were external µR/hr readings ≤ two times background and within DOT acceptance criteria? YES			

* Please provide details here for NO responses to boxes above - for 2 thru 5 & 7 thru 12, notify PM & continue w/ login.

Were unpreserved bottles pH checked? NA

All client bottle ID's vs ALS lab ID's double-checked by JE

If applicable, was the client contacted? **YES / NO / NA** Contact: _____ Date/Time: _____

Project Manager Signature / Date: *Shirley Lummy* 6/24/21

GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Lab ID: VL210706-3MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 06-Jul-21

Date Analyzed: 06-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210706-3

QCBatchID: VL210706-3-1

Run ID: VL210706-3A

Cleanup: NONE

Basis: N/A

File Name: C2891

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	1	0.001	U	0.001	0.0003
100-41-4	ETHYLBENZENE	1	0.001	U	0.001	0.00033
91-20-3	NAPHTHALENE	1	0.001	U	0.001	0.00052
108-88-3	TOLUENE	1	0.001	U	0.001	0.00034
1330-20-7	TOTAL XYLENES	1	0.003	U	0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.0245		0.025	98	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.0255		0.025	102	84 - 118
2037-26-5	TOLUENE-D8	0.0249		0.025	99	85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

ALS -- Fort Collins

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GC/MS Volatiles

Method SW8260_25C

Method Blank

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Lab ID: VL210707-3MB

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07-Jul-21

Date Analyzed: 07-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210707-3

QCBatchID: VL210707-3-5

Run ID: VL210707-3A

Cleanup: NONE

Basis: N/A

File Name: C2921

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	DF	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	1	0.001	U	0.001	0.0003
100-41-4	ETHYLBENZENE	1	0.001	U	0.001	0.00033
91-20-3	NAPHTHALENE	1	0.001	U	0.001	0.00052
108-88-3	TOLUENE	1	0.001	U	0.001	0.00034
1330-20-7	TOTAL XYLENES	1	0.003	U	0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.025		0.025	100	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.0255		0.025	102	84 - 118
2037-26-5	TOLUENE-D8	0.0253		0.025	101	85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

ALS -- Fort Collins

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GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Field ID: MW-11R

Lab ID: 2106616-1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 22-Jun-21

Date Extracted: 06-Jul-21

Date Analyzed: 06-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210706-3

QCBatchID: VL210706-3-1

Run ID: VL210706-3A

Cleanup: NONE

Basis: As Received

File Name: C2910

Analyst: Audrey E. Wolfgang

Sample Aliquot: 10ML

Final Volume: 10ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	2	0.00062	J	0.002	0.0006
100-41-4	ETHYLBENZENE	2	0.0078		0.002	0.00066
91-20-3	NAPHTHALENE	2	0.0014	J	0.002	0.001
108-88-3	TOLUENE	2	0.0015	J	0.002	0.00068
1330-20-7	TOTAL XYLENES	1	0.18		0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.0488		0.05	98	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.051		0.05	102	84 - 118
2037-26-5	TOLUENE-D8	0.0507		0.05	101	85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

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GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Field ID: MW-12

Lab ID: 2106616-2

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 22-Jun-21

Date Extracted: 06-Jul-21

Date Analyzed: 06-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210706-3

QCBatchID: VL210706-3-1

Run ID: VL210706-3A

Cleanup: NONE

Basis: As Received

File Name: C2904

Analyst: Audrey E. Wolfgang

Sample Aliquot: 10ML

Final Volume: 10ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	5	0.0055		0.005	0.0015
100-41-4	ETHYLBENZENE	5	0.066		0.005	0.0016
91-20-3	NAPHTHALENE	5	0.14		0.005	0.0026
108-88-3	TOLUENE	5	0.005	U	0.005	0.0017
1330-20-7	TOTAL XYLENES	1	0.41	J	0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.121		0.125	97	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.125		0.125	100	84 - 118
2037-26-5	TOLUENE-D8	0.126		0.125	101	85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

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GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Field ID: MW-13

Lab ID: 2106616-3

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 22-Jun-21

Date Extracted: 06-Jul-21

Date Analyzed: 06-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210706-3

QCBatchID: VL210706-3-1

Run ID: VL210706-3A

Cleanup: NONE

Basis: As Received

File Name: C2905

Analyst: Audrey E. Wolfgang

Sample Aliquot: 10ML

Final Volume: 10ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	50	0.05	U	0.05	0.015
100-41-4	ETHYLBENZENE	50	1.2		0.05	0.016
91-20-3	NAPHTHALENE	50	0.076		0.05	0.026
108-88-3	TOLUENE	50	0.55		0.05	0.017
1330-20-7	TOTAL XYLENES	1	2.7		0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	1.2		1.25	96	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	1.27		1.25	101	84 - 118
2037-26-5	TOLUENE-D8	1.26		1.25	101	85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

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GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Field ID: MW-14

Lab ID: 2106616-4

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 22-Jun-21

Date Extracted: 06-Jul-21

Date Analyzed: 06-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210706-3

QCBatchID: VL210706-3-1

Run ID: VL210706-3A

Cleanup: NONE

Basis: As Received

File Name: C2906

Analyst: Audrey E. Wolfgang

Sample Aliquot: 10ML

Final Volume: 10ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	2	0.0029		0.002	0.0006
100-41-4	ETHYLBENZENE	2	0.002	U	0.002	0.00066
91-20-3	NAPHTHALENE	2	0.002	U	0.002	0.001
108-88-3	TOLUENE	2	0.002	U	0.002	0.00068
1330-20-7	TOTAL XYLENES	1	0.0011	J	0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.0493		0.05	99	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.0509		0.05	102	84 - 118
2037-26-5	TOLUENE-D8	0.0507		0.05	101	85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

ALS -- Fort Collins

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GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Field ID: Trip Blank

Lab ID: 2106616-5

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 22-Jun-21

Date Extracted: 06-Jul-21

Date Analyzed: 06-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210706-3

QCBatchID: VL210706-3-1

Run ID: VL210706-3A

Cleanup: NONE

Basis: As Received

File Name: C2907

Analyst: Audrey E. Wolfgang

Sample Aliquot: 10ML

Final Volume: 10ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	1	0.001	U	0.001	0.0003
100-41-4	ETHYLBENZENE	1	0.001	U	0.001	0.00033
91-20-3	NAPHTHALENE	1	0.001	U	0.001	0.00052
108-88-3	TOLUENE	1	0.001	U	0.001	0.00034
1330-20-7	TOTAL XYLENES	1	0.003	U	0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.0247		0.025	99	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.0253		0.025	101	84 - 118
2037-26-5	TOLUENE-D8	0.0249		0.025	100	85 - 115

Data Package ID: VL2106616-1

GC/MS Volatiles

Method SW8260_25 Revision C

Sample Results

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Field ID: MW-13

Lab ID: 2106616-3RR1

Sample Matrix: WATER

% Moisture: N/A

Date Collected: 22-Jun-21

Date Extracted: 07-Jul-21

Date Analyzed: 07-Jul-21

Prep Method: SW5030 Rev C

Prep Batch: VL210707-3

QCBatchID: VL210707-3-5

Run ID: VL210707-3A

Cleanup: NONE

Basis: As Received

File Name: C2940

Analyst: Audrey E. Wolfgang

Sample Aliquot: 10ML

Final Volume: 10ML

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Dilution Factor	Result	Result Qualifier	Reporting Limit	DL
71-43-2	BENZENE	500	0.5	U	0.5	0.15
100-41-4	ETHYLBENZENE	500	1.1		0.5	0.16
91-20-3	NAPHTHALENE	500	0.5	U	0.5	0.26
108-88-3	TOLUENE	500	0.51		0.5	0.17
1330-20-7	TOTAL XYLENES	1	2.7		0.003	

Surrogate Recovery

CASNO	Surrogate Analyte	Result	Flag	Spike Amount	Percent Recovery	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	12.5		12.5	100	85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	12.9		12.5	103	84 - 118
2037-26-5	TOLUENE-D8	12.7		12.5	102	85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

ALS -- Fort Collins

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Lab ID: VL210706-3LCS

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/06/2021
Date Analyzed: 07/06/2021
Prep Method: SW5030C

Prep Batch: VL210706-3
QCBatchID: VL210706-3-1
Run ID: VL210706-3A
Cleanup: NONE
Basis: N/A
File Name: C2887

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
71-43-2	BENZENE	0.01	0.00996	0.001		100	83 - 117%
100-41-4	ETHYLBENZENE	0.01	0.00945	0.001		95	81 - 113%
91-20-3	NAPHTHALENE	0.01	0.00827	0.001		83	71 - 131%
108-88-3	TOLUENE	0.01	0.00964	0.001		96	82 - 113%
179601-23-1	M+P-XYLENE	0.02	0.0192	0.001		96	82 - 115%
95-47-6	O-XYLENE	0.01	0.00962	0.001		96	81 - 115%

Lab ID: VL210706-3LCSD

Sample Matrix: WATER
% Moisture: N/A
Date Collected: N/A
Date Extracted: 07/06/2021
Date Analyzed: 07/06/2021
Prep Method: SW5030C

Prep Batch: VL210706-3
QCBatchID: VL210706-3-1
Run ID: VL210706-3A
Cleanup: NONE
Basis: N/A
File Name: C2890

Sample Aliquot: 10 ml
Final Volume: 10 ml
Result Units: MG/L
Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
71-43-2	BENZENE	0.01	0.00981	0.001		98	20	1
100-41-4	ETHYLBENZENE	0.01	0.00935	0.001		93	20	1
91-20-3	NAPHTHALENE	0.01	0.00886	0.001		89	20	7
108-88-3	TOLUENE	0.01	0.00929	0.001		93	20	4
179601-23-1	M+P-XYLENE	0.02	0.0184	0.001		92	20	4
95-47-6	O-XYLENE	0.01	0.00943	0.001		94	20	2

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

ALS -- Fort Collins

LIMS Version: 7.020

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.025	100		98		85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.025	103		104		84 - 118
2037-26-5	TOLUENE-D8	0.025	99		100		85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Lab ID: VL210707-3LCS

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/07/2021

Date Analyzed: 07/07/2021

Prep Method: SW5030C

Prep Batch: VL210707-3

QC Batch ID: VL210707-3-5

Run ID: VL210707-3A

Cleanup: NONE

Basis: N/A

File Name: C2913

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCS Result	Reporting Limit	Result Qualifier	LCS % Rec.	Control Limits
71-43-2	BENZENE	0.01	0.0102	0.001		102	83 - 117%
100-41-4	ETHYLBENZENE	0.01	0.00976	0.001		98	81 - 113%
91-20-3	NAPHTHALENE	0.01	0.00728	0.001		73	71 - 131%
108-88-3	TOLUENE	0.01	0.00984	0.001		98	82 - 113%
179601-23-1	M+P-XYLENE	0.02	0.02	0.001		100	82 - 115%
95-47-6	O-XYLENE	0.01	0.01	0.001		100	81 - 115%

Lab ID: VL210707-3LCSD

Sample Matrix: WATER

% Moisture: N/A

Date Collected: N/A

Date Extracted: 07/07/2021

Date Analyzed: 07/07/2021

Prep Method: SW5030C

Prep Batch: VL210707-3

QC Batch ID: VL210707-3-5

Run ID: VL210707-3A

Cleanup: NONE

Basis: N/A

File Name: C2915

Sample Aliquot: 10 ml

Final Volume: 10 ml

Result Units: MG/L

Clean DF: 1

CASNO	Target Analyte	Spike Added	LCSD Result	Reporting Limit	Result Qualifier	LCSD % Rec.	RPD Limit	RPD
71-43-2	BENZENE	0.01	0.0109	0.001		109	20	7
100-41-4	ETHYLBENZENE	0.01	0.0108	0.001		108	20	10
91-20-3	NAPHTHALENE	0.01	0.0085	0.001		85	20	15
108-88-3	TOLUENE	0.01	0.0107	0.001		107	20	9
179601-23-1	M+P-XYLENE	0.02	0.0217	0.001		108	20	8
95-47-6	O-XYLENE	0.01	0.0108	0.001		108	20	7

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

ALS -- Fort Collins

LIMS Version: 7.020

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GC/MS Volatiles

Method SW8260_25C

Laboratory Control Sample and Laboratory Control Sample Duplicate

Lab Name: ALS -- Fort Collins

Work Order Number: 2106616

Client Name: Aptim

ClientProject ID: Praxair Walden

Surrogate Recovery LCS/LCSD

CASNO	Target Analyte	Spike Added	LCS % Rec.	LCS Flag	LCSD % Rec.	LCSD Flag	Control Limits
460-00-4	4-BROMOFLUOROBENZENE	0.025	97		98		85 - 115
1868-53-7	DIBROMOFLUOROMETHANE	0.025	102		101		84 - 118
2037-26-5	TOLUENE-D8	0.025	99		101		85 - 115

Data Package ID: VL2106616-1

Date Printed: Friday, August 06, 2021

ALS -- Fort Collins

LIMS Version: 7.020

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CONTROLLED NON-CONFORMANCE REPORT

Non-Conformance

Initiated By: Tyler W. Knaebel on 7/19/2021

Event Type: Method Requirements Not Met -- Holding Time Exceeded

Event Explanation: Sample dilutions for 2106616-3RR1 (M,P-Xylene) and 2106643-8RR1 (Benzene) were performed 1 day outside of holding time criteria. The initial analyses for these samples were performed within holding time criteria.

Action To

Prevent Recurrence: Analyze samples with no holding time first so a dilution can be prepared for the same analytical run

Corrective Action

Corrective Action:

Department Manager Approval:

Approval Date:

Corrective Action Comments:

Workorders Affected

Workorder -- Procedure

2106616 -- SW8260_25

2106643 -- SW8260_25

No client contact information.

Approved By

Approval Date

PENDING

Associated Batches

The samples were originally associated with the following Batch(es):

VL210707-3A created on 7/7/2021

VL210706-3A created on 7/6/2021

All rework was completed in the following Batch(es):

Not Applicable

NCR Approval

Project Manager Approval:

Department Manager Approval:

QA Manager Approval: