



Illinois Environmental Protection Agency

Bureau of Land • 1021 North Grand Avenue East • P.O. Box 19276 • Springfield • Illinois • 62794-9276

RCRA FACILITY GROUNDWATER, LEACHATE AND GAS REPORTING FORM

This form must be used as a cover sheet for the notices and reports, identified below as required by: (1) a facility's RCRA interim status closure plan; (2) the RCRA interim status regulations; or (3) a facility's RCRA permit. All reports must be submitted to the Illinois EPA's Bureau of Land Permit Section. This form is for use by Hazardous Waste facilities only. Reporting for Solid Waste facilities should be submitted on a separate form. All reports submitted to the Illinois EPA's Bureau of Land Permit Section must contain an original, plus a minimum of two copies.

Note: This form is not to be used with permit or closure plan modification requests. The facility's approved permit or closure plan will state whether the document you are submitting is required as a report or a modification request.

Facility Name: Equilon Enterprises LLC dba Shell Oil Products US

Facility Address: 900 South Central Ave., Roxana, IL 62048

Site ID #: 1191150002 Fed ID #: ILD 080 012 305

Check the appropriate heading. Only one heading may be checked for each corresponding submittal. Check the appropriate sub-heading, where applicable. Attach the original and all copies behind this form.

LPC-160 Forms

Groundwater

____ Quarterly - Enter: 1, 2, 3, or 4

- Semi-Annual
 Annual
 Biennial

Leachate

____ Quarterly - Enter: 1, 2, 3, or 4

- Semi-Annual
 Annual
 Biennial

Groundwater Data (without LPC-160 Forms)

4 Quarterly - Enter: 1, 2, 3, or 4 Annual Semi-Annual Biennial

Well Construction Information

- Well Construction Forms, Boring Logs and/or Abandonment Forms
 Well Survey Data (e.g., Stick-up Elevation Data)

Notice of Statistically Significant Evidence of Groundwater Contamination
(35 Ill. Adm. Code 724.198)

Notice of Exceedence of Groundwater Concentration Limit (35 Ill. Adm. Code 724.199(h))

Notice of Alternate Source or Error in Sampling Analysis or Evaluation of Groundwater
(35 Ill. Adm. Code 724.199(i))

Gas Monitoring Reports

Other (identify)

December 2023 Monthly Report - Roxana Interim Groundwater Monitoring Program.

Original copy submitted to Springfield. Electronic copies submitted separately directly to Collinsville FOS

(Ali Al-Janabi), Amy Butler, and Visal Poornaka.



AECOM
100 N. Broadway,
20th Floor
St. Louis, MO 63102
www.aecom.com

314 429 0100 tel
314 429 0462 fax

December 30, 2023

Ms. Jacqueline M. Cooperider, PE
Manager, Permit Section
Illinois Environmental Protection Agency
Division of Land Pollution Control
Bureau of Land
1021 North Grand Avenue East
Springfield, Illinois 62702

December 2023 Monthly Report – Roxana Interim Groundwater Monitoring Program
Roxana, Illinois
1191150002 – Madison County
Equilon Enterprises LLC d/b/a Shell Oil Products US
Log No. PS23-032 (RCRA Permit B-43R)

Dear Ms. Cooperider:

On behalf of Equilon Enterprises LLC d/b/a Shell Oil Products US (Shell), AECOM Technical Services, Inc. (AECOM) is submitting this monthly groundwater report for your review. This report includes information required by Condition 1 of the Illinois Environmental Protection Agency's (IEPA's) letter dated August 1, 2023, which was in response to the July 6, 2023, *Notice of Water Production Well W-85 Damage*.

A virtual meeting was held on August 10, 2023, between IEPA, Shell and AECOM to clarify and discuss the conditions of the IEPA August 1, 2023, letter. A Class 1* Permit Modification Request dated August 11, 2023, was submitted providing a further discussion of the W-85 damage notification timeline, requesting removal of W-85 from the RCRA Post-Closure Permit (B-43R), and providing a proposal for installation of a new water production well (W-92) as a replacement for W-85. Condition 1 of the IEPA August 1, 2023, letter required monthly gauging and sampling of the groundwater monitoring wells in the Interim Groundwater Monitoring Network and submittal of reports due on the first calendar day of each month until a replacement for W-85 is installed and "capable of operating and contributing to the required combined minimum pumping rate of 3,000 gallons per minute."

Drilling for the new water production well W-92 began the week of November 13, 2023.

Groundwater Gauging

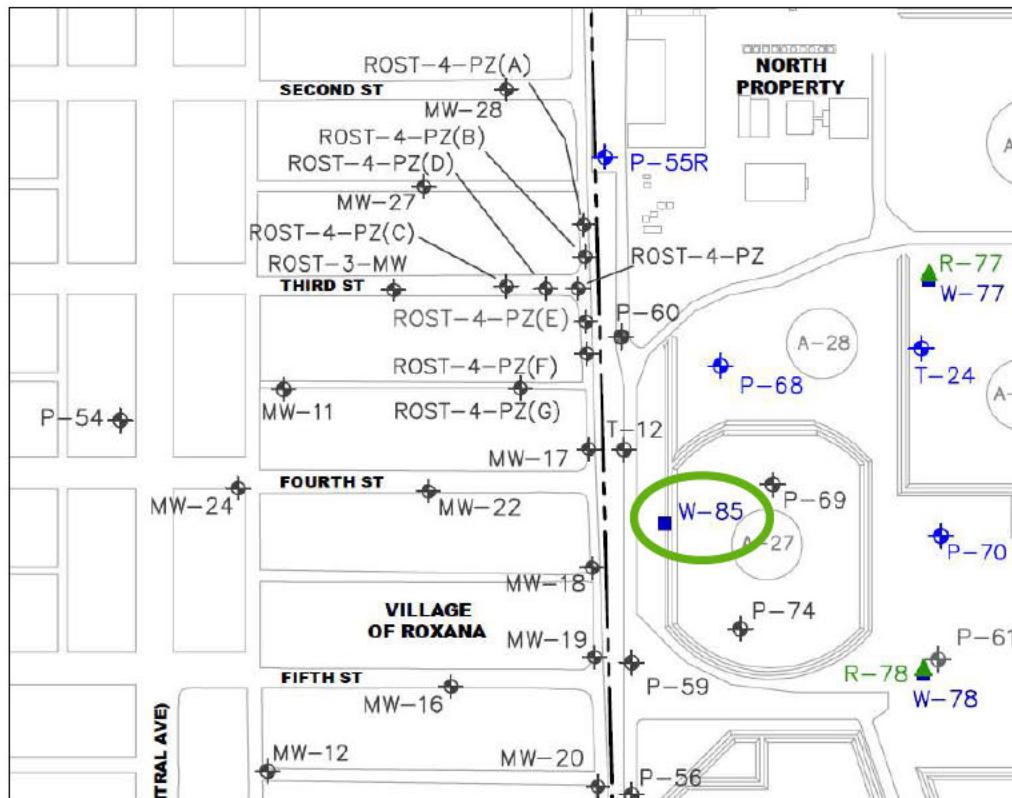
The monthly groundwater monitoring well gauging for December 2023 was conducted on December 5th through December 6th, 2023. This gauging was conducted in accordance with the Interim Groundwater Monitoring Program and the results can be found in **Table 1**. The potentiometric surface observed during the December 2023 gauging event is depicted on **Figure 1** and indicates an inward gradient with flow toward the WRR groundwater production wells.

Enclosed in **Attachment 1**, for completeness, are copies of the West Fenceline groundwater contour figures (Figures 3b) from the 1st Quarter 2023 (prior to shutdown of W-85), 2nd Quarter 2023 (about 3 weeks after shutdown of W-85), and 3rd Quarter 2023 (about 3.5 months after shutdown of W-85) reports. The next round of groundwater monitoring well gauging will be in early January and those results will be included in the next monthly report due on February 1, 2023.

Groundwater Sampling

Groundwater monitoring well sampling was performed on November 27th through December 5th, 2023, for the November/December 2023 (Nov/Dec 23) monthly sampling event. An expedited 5 day turnaround time was requested for sample analysis, but these analytical data are currently still being analyzed at the lab and have not been received by AECOM in their entirety. The preliminary¹ analytical results from the 4Q23 sampling event can be found in **Table 2**. These analytical data are currently undergoing internal reviews for quality and completeness. Preliminary² versions of **Figure 6** showing the 4Q23 dissolved phase benzene concentration contours in groundwater, and **Figure 7** showing the cross section of 4Q23 benzene groundwater analytical results along Chaffer Ave are also enclosed. The finalized 4Q23 analytical results and laboratory reports will be included in the 4Q23 Roxana Interim Groundwater Report. For completeness, the table of analytical results from the 4Q22 through 3Q23 quarterly sampling events is enclosed in **Attachment 2**.

The figure below depicts water production well W-85 and the surrounding groundwater monitoring wells.



¹ Data and information collected during the 4Q23 groundwater event are still under review and evaluation. Finalized versions will be included in the 4Q23 Roxana Interim Groundwater Monitoring Report.

² Data and information collected during the 4Q23 groundwater event are still under review and evaluation. Finalized versions will be included in the 4Q23 Roxana Interim Groundwater Monitoring Report.

The table below summarizes the preliminary 4Q23 benzene analytical results at the sample locations in the figure above as well as the comparability of these results to previous sampling events.

INTERIM WELL ID	*BENZENE (mg/L)	COMPARABILITY
MW-11	<0.0010	Comparable
MW-12	<0.0010	Comparable
MW-16	<0.0010	Comparable
MW-22	0.0061	Comparable
MW-27	<0.0010	Comparable
P-54	<0.0010	Comparable
P-56	<0.0010	Comparable
P-59	1.8	Increase
P-74	1.0	Increase
ROST-3-MW	<0.0010	Comparable
ROST-4-PZ(C)	<0.00010	Decrease
ROST-4-PZ(E)	0.00061 J	Decrease
ROST-4-PZ(G)	<0.0010	Comparable
T-12	1.5	Comparable

* Results are preliminary and have not yet been fully reviewed for quality or completeness.

Due to previously scheduled site activities and staff availability, November and December monthly sampling events were combined. The latest round of sampling began on November 27, 2023, and was completed on December 5, 2023. The finalized analytical results and laboratory reports from this sampling event will be included in the 4Q23 Roxana Interim Groundwater Report, if available.

The next round of groundwater sampling will take place during the 1st Quarter 2024 (1Q24) groundwater event, which will take place early to mid-January 2024. The preliminary analytical results from 1Q24 sampling will be shared in the monthly report that is due February 1, 2024, if available. The finalized analytical results and analytical reports from the 1Q24 sampling event will be included in the 1Q24 Roxana Interim Groundwater Monitoring Report.

Conclusions

The following conclusions are based on the data and information collected as part of the Nov/Dec 2023 monthly event:

- Groundwater level data indicate groundwater flow from the investigation area continues to move toward the groundwater production wells at the WRR.
- Based on the preliminary 4Q23 groundwater analytical data collected in early October 2023, benzene analytical results are generally comparable to results collected over the last several quarters. Two locations within the village of Roxana along the West Fenceline [ROST-4-PZ(C) and ROST-4-PZ(E)] showed a decrease in benzene concentrations. Two locations within the WRR, along the West Fenceline [P-59] and east of W-85 [P-74] showed a slight increase in benzene concentration [1.8 mg/L in 4Q23 from 0.89 mg/L in 3Q23 and 1.00 mg/L in 4Q23 from 0.42 mg/L in 3Q23, respectively].

Electronic copies of this submittal are being sent separately directly to Amy Butler, Visal Poornaka, and Ali Al-Janabi with the IEPA.

If you have any questions during your review, please contact Leroy Bealer, Shell Senior Program Manager, at leroy.bealer@shell.com (484-632-7955), or Wendy Pennington at wendy.pennington@aecom.com (314-452-8929).

Sincerely,



Mary Massa, PG
Geologist



Melissa Remiger
Environmental Scientist



Wendy Pennington, PE
Project Manager

Enclosures: RCRA Facility Groundwater, Leachate and Gas Reporting Form

Table 1 – Groundwater Monitoring Well Gauging Results

Table 2 – Preliminary Summary of Groundwater Monitoring Well Analytical Detections and Exceedances (4Q23)

Figure 1 – Groundwater Contours December 2023 – West Fenceline

Figure 6 – DRAFT 4Q23 Dissolved Phase Benzene Concentrations in GW

Figure 7 – DRAFT 4Q23 Cross-Section of Benzene GW Results – Chaffer

Attachment 1 – Groundwater Contour Figures at the West Fenceline

Groundwater Contours 1Q23-West Fenceline

Groundwater Contours 2Q23-West Fenceline

Groundwater Contours 3Q23-West Fenceline

Attachment 2 – Summary of Groundwater Monitoring Well Analytical Detections and Exceedances (4Q22-3Q23)

cc: Leroy Bealer, Shell
Thomas Morgan, Phillips 66
Amy Butler, IEPA, Springfield
Visal Poornaka, IEPA, Springfield
Ali Al-Janabi, IEPA, Collinsville
Michelle Knapp, Atlantic Richfield Company
Greensfelder, Hemker & Gale P.C.
Repositories – Roxana Public Library, website

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	COMMENTS
MW 01											
1Q23	442.83	1/3/2023	NE	40.50	NA	NA	NA	402.33	394.03 - 384.03 (48.80 - 58.80)	0.0	*
2Q23		4/3/2023	NE	40.76	NA	NA	NA	402.07		0.0	*
3Q23		7/6/2023	NE	40.51	NA	NA	NA	402.32		0.0	*
Aug-23		8/3/2023	NE	40.68	NA	NA	NA	402.15		0.0	*
Sept-23		9/7/2023	NE	40.71	NA	NA	NA	402.12		0.0	*
4Q23		10/2/2023	NE	41.06	NA	NA	NA	401.77		0.0	*
Nov-23		11/3/2023	NE	41.47	NA	NA	NA	401.36		0.0	*
Dec-23		12/6/2023	NE	41.89	NA	NA	NA	400.94		0.0	*
MW 02											
1Q23	443.93	1/3/2023	NE	41.74	NA	NA	NA	402.19	394.06 - 384.06 (49.87 - 59.87)	154.2	*
2Q23		4/3/2023	NE	42.03	NA	NA	NA	401.90		0.0	*
3Q23		7/5/2023	NE	41.71	NA	NA	NA	402.22		0.0	*
Aug-23		8/3/2023	NE	41.89	NA	NA	NA	402.04		147.7	*
Sept-23		9/7/2023	NE	41.82	NA	NA	NA	402.11		159.6	*
4Q23		10/2/2023	NE	42.27	NA	NA	NA	401.66		28.6	*
Nov-23		11/3/2023	NE	42.75	NA	NA	NA	401.18		96.4	*
Dec-23		12/5/2023	NE	43.15	NA	NA	NA	400.78		113.9	*
MW 03											
1Q23	430.23	1/3/2023	NE	27.80	NA	NA	NA	402.43	395.56 - 385.56 (34.67 - 44.67)	0.0	*
2Q23		4/3/2023	NE	28.03	NA	NA	NA	402.20		0.0	*
3Q23		7/6/2023	NE	27.75	NA	NA	NA	402.48		0.0	*
Aug-23		8/3/2023	NE	28.00	NA	NA	NA	402.23		0.0	*
Sept-23		9/7/2023	NE	28.18	NA	NA	NA	402.05		0.0	*
4Q23		10/2/2023	NE	28.48	NA	NA	NA	401.75		0.0	*
Nov-23		11/3/2023	NE	28.83	NA	NA	NA	401.40		0.0	*
Dec-23		12/6/2023	NE	29.23	NA	NA	NA	401.00		0.0	*
MW 04											
1Q23	441.31	1/3/2023	NE	38.95	NA	NA	NA	402.36	396.25 - 386.25 (45.06 - 55.06)	0.0	*
2Q23		4/3/2023	NE	39.21	NA	NA	NA	402.10		0.0	*
3Q23		7/6/2023	NE	38.96	NA	NA	NA	402.35		0.0	*
Aug-23		8/3/2023	NE	39.15	NA	NA	NA	402.16		0.0	*
Sept-23		9/7/2023	NE	39.13	NA	NA	NA	402.18		0.0	*
4Q23		10/2/2023	NE	39.57	NA	NA	NA	401.74		0.0	*
Nov-23		11/3/2023	NE	39.92	NA	NA	NA	401.39		0.0	*
Dec-23		12/6/2023	NE	39.34	NA	NA	NA	401.97		0.0	*
MW 05											
1Q23	429.98	1/3/2023	NE	27.48	NA	NA	NA	402.50	396.01 - 386.01 (33.97 - 43.97)	0.0	*
2Q23		4/3/2023	NE	27.68	NA	NA	NA	402.30		0.0	*
3Q23		7/6/2023	NE	27.53	NA	NA	NA	402.45		0.0	*
Aug-23		8/3/2023	NE	27.73	NA	NA	NA	402.25		0.0	*
Sept-23		9/7/2023	NE	27.83	NA	NA	NA	402.15		0.0	*
4Q23		10/2/2023	NE	28.16	NA	NA	NA	401.82		0.0	*
Nov-23		11/3/2023	NE	28.43	NA	NA	NA	401.55		0.0	*
Dec-23		12/5/2023	NE	28.91	NA	NA	NA	401.07		0.0	*
MW 06A											
1Q23	432.33	1/3/2023	NE	29.60	NA	NA	NA	402.73	398.48 - 388.48 (33.97 - 43.85)	0.0	*
2Q23		4/3/2023	NE	29.80	NA	NA	NA	402.53		0.0	*
3Q23		7/6/2023	NE	29.64	NA	NA	NA	402.69		0.0	*
Aug-23		8/3/2023	NE	29.90	NA	NA	NA	402.43		0.0	*
Sept-23		9/7/2023	NE	30.02	NA	NA	NA	402.31		0.0	*
4Q23		10/2/2023	NE	30.39	NA	NA	NA	401.94		0.0	*
Nov-23		11/3/2023	NE	30.60	NA	NA	NA	401.73		0.0	*
Dec-23		12/5/2023	NE	31.07	NA	NA	NA	401.26		0.0	*
MW 06B											
1Q23	432.37	1/3/2023	NE	29.65	NA	NA	NA	402.72	368.32 - 363.32 (64.05 - 69.05)	0.0	*
2Q23		4/3/2023	NE	29.85	NA	NA	NA	402.52		0.0	*
3Q23		7/6/2023	NE	29.71	NA	NA	NA	402.66		0.0	*
Aug-23		8/3/2023	NE	29.95	NA	NA	NA	402.42		0.0	*
Sept-23		9/7/2023	NE	30.06	NA	NA	NA	402.31		0.0	*
4Q23		10/2/2023	NE	30.41	NA	NA	NA	401.96		0.0	*
Nov-23		11/3/2023	NE	30.64	NA	NA	NA	401.73		0.0	*
Dec-23		12/5/2023	NE	31.10	NA	NA	NA	401.27		0.0	*

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	COMMENTS
MW 06C											
1Q23	432.18	1/3/2023	NE	29.44	NA	NA	NA	402.74	347.23 - 342.23 (84.95 - 89.95)	0.0	*
2Q23		4/3/2023	NE	29.69	NA	NA	NA	402.49		0.0	*
3Q23		7/6/2023	NE	29.52	NA	NA	NA	402.66		0.0	*
Aug-23		8/3/2023	NE	29.74	NA	NA	NA	402.44		0.0	*
Sept-23		9/7/2023	NE	29.86	NA	NA	NA	402.32		0.0	*
4Q23		10/2/2023	NE	30.20	NA	NA	NA	401.98		0.0	*
Nov-23		11/3/2023	NE	30.45	NA	NA	NA	401.73		0.0	*
Dec-23		12/5/2023	NE	30.90	NA	NA	NA	401.28		0.0	*
MW 06D											
1Q23	432.06	1/3/2023	NE	29.31	NA	NA	NA	402.75	327.34 - 322.34 (104.72 - 109.72)	0.0	*
2Q23		4/3/2023	NE	29.50	NA	NA	NA	402.56		0.0	*
3Q23		7/6/2023	NE	29.37	NA	NA	NA	402.69		0.0	*
Aug-23		8/3/2023	NE	29.61	NA	NA	NA	402.45		0.0	*
Sept-23		9/7/2023	NE	29.73	NA	NA	NA	402.33		0.0	*
4Q23		10/2/2023	NE	30.07	NA	NA	NA	401.99		0.0	*
Nov-23		11/3/2023	NE	30.30	NA	NA	NA	401.76		0.0	*
Dec-23		12/5/2023	NE	30.27	NA	NA	NA	401.79		0.0	*
MW 07											
1Q23	443.31	1/3/2023	NE	40.98	NA	NA	NA	402.33	400.39 - 390.39 (42.92 - 52.92)	0.4	*
2Q23		4/3/2023	NE	41.19	NA	NA	NA	402.12		0.0	*
3Q23		7/5/2023	NE	40.97	NA	NA	NA	402.34		33.8	*
Aug-23		8/3/2023	NE	41.16	NA	NA	NA	402.15		0.7	*
Sept-23		9/7/2023	NE	41.21	NA	NA	NA	402.10		0.0	*
4Q23		10/2/2023	NE	41.63	NA	NA	NA	401.68		0.0	*
Nov-23		11/3/2023	NE	41.87	NA	NA	NA	401.44		0.0	*
Dec-23		12/5/2023	NE	42.35	NA	NA	NA	400.96		1.4	*
MW 09											
1Q23	445.28	1/3/2023	NE	42.16	NA	NA	NA	403.12	399.24 - 389.24 (46.04 - 56.04)	0.0	*
2Q23		4/3/2023	NE	42.55	NA	NA	NA	402.73		0.0	*
3Q23		7/5/2023	NE	42.43	NA	NA	NA	402.85		0.0	*
Aug-23		8/3/2023	NE	42.65	NA	NA	NA	402.63		0.0	*
Sept-23		9/7/2023	NE	42.71	NA	NA	NA	402.57		0.0	*
4Q23		10/2/2023	NE	43.11	NA	NA	NA	402.17		0.0	*
Nov-23		11/3/2023	NE	43.41	NA	NA	NA	401.87		0.0	*
Dec-23		12/5/2023	NE	43.78	NA	NA	NA	401.50		0.0	*
MW 10											
1Q23	445.06	1/3/2023	NE	41.99	NA	NA	NA	403.07	400.63 - 390.63 (44.43 - 54.43)	0.0	*
2Q23		4/3/2023	NE	42.44	NA	NA	NA	402.62		0.0	*
3Q23		7/5/2023	NE	42.43	NA	NA	NA	402.63		0.0	*
Aug-23		8/3/2023	NE	42.55	NA	NA	NA	402.51		0.0	*
Sept-23		9/7/2023	NE	42.85	NA	NA	NA	402.21		0.0	*
4Q23		10/2/2023	NE	42.98	NA	NA	NA	402.08		0.0	*
Nov-23		11/3/2023	NE	43.27	NA	NA	NA	401.79		0.0	*
Dec-23		12/5/2023	NE	43.65	NA	NA	NA	401.41		0.0	*
MW 11											
1Q23	442.38	1/3/2023	NE	39.77	NA	NA	NA	402.61	400.72 - 390.72 (41.66 - 51.66)	0.1	*
2Q23		4/3/2023	NE	40.03	NA	NA	NA	402.35		0.0	*
3Q23		7/5/2023	NE	39.86	NA	NA	NA	402.52		0.0	*
Aug-23		8/3/2023	NE	40.05	NA	NA	NA	402.33		0.0	*
Sept-23		9/7/2023	NE	40.14	NA	NA	NA	402.24		0.0	*
4Q23		10/2/2023	NE	40.67	NA	NA	NA	401.71		0.0	*
Nov-23		11/3/2023	NE	41.08	NA	NA	NA	401.30		0.0	*
Dec-23		12/5/2023	NE	41.49	NA	NA	NA	400.89		0.0	*
MW 12											
1Q23	442.64	1/3/2023	NE	40.22	NA	NA	NA	402.42	400.72 - 390.72 (41.92 - 51.92)	0.0	*
2Q23		4/3/2023	NE	40.47	NA	NA	NA	402.17		0.0	*
3Q23		7/6/2023	NE	40.24	NA	NA	NA	402.40		0.0	*
Aug-23		8/3/2023	NE	40.42	NA	NA	NA	402.22		0.0	*
Sept-23		9/7/2023	NE	40.48	NA	NA	NA	402.16		0.0	*
4Q23		10/2/2023	NE	40.81	NA	NA	NA	401.83		0.0	*
Nov-23		11/3/2023	NE	41.24	NA	NA	NA	401.40		0.0	*
Dec-23		12/6/2023	NE	41.63	NA	NA	NA	401.01		0.0	*

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	COMMENTS
MW 13											
1Q23	430.30	1/4/2023	NE	27.80	NA	NA	NA	402.50	405.50 - 395.50 (24.80 - 34.80)	0.2	
2Q23		4/4/2023	NE	27.66	NA	NA	NA	402.64		0.8	
3Q23		7/6/2023	NE	27.46	NA	NA	NA	402.84		0.0	
Aug-23		8/4/2023	NE	27.83	NA	NA	NA	402.47		0.0	
Sept-23		9/7/2023	NE	28.04	NA	NA	NA	402.26		0.0	
4Q23		10/3/2023	NE	28.36	NA	NA	NA	401.94		0.0	
Nov-23		11/3/2023	NE	28.57	NA	NA	NA	401.73		0.0	
Dec-23		NS	NS	NS	NS	NS	NS	NS		NS	Inaccessible due to refinery construction
MW 14											
1Q23	434.61	1/4/2023	NE	31.95	NA	NA	NA	402.66	401.19 - 391.19 (33.42 - 43.42)	57.6	*
2Q23		4/6/2023	NE	32.32	NA	NA	NA	402.29		43.8	*
3Q23		7/7/2023	NE	31.86	NA	NA	NA	402.75		52.1	*
Aug-23		8/4/2023	NE	32.12	NA	NA	NA	402.49		6.3	*
Sept-23		9/7/2023	NE	32.21	NA	NA	NA	402.40		32.3	*
4Q23		10/4/2023	NE	32.52	NA	NA	NA	402.09		28.8	*
Nov-23		11/3/2023	NE	32.70	NA	NA	NA	401.91		69.1	*
Dec-23		12/5/2023	NE	33.09	NA	NA	NA	401.52		52.0	*
MW 16											
1Q23	443.60	1/3/2023	NE	41.27	NA	NA	NA	402.33	406.10 - 396.10 (37.50 - 47.50)	0.0	
2Q23		4/3/2023	NE	41.52	NA	NA	NA	402.08		0.0	
3Q23		7/7/2023	NE	41.33	NA	NA	NA	402.27		0.0	
Aug-23		8/3/2023	NE	41.43	NA	NA	NA	402.17		0.0	
Sept-23		9/7/2023	NE	41.43	NA	NA	NA	402.17		0.0	
4Q23		10/2/2023	NE	41.76	NA	NA	NA	401.84		0.0	
Nov-23		11/3/2023	NE	42.26	NA	NA	NA	401.34		0.0	
Dec-23		12/6/2023	NE	41.69	NA	NA	NA	401.91		0.0	
MW 17											
1Q23	441.78	1/3/2023	NE	39.44	NA	NA	NA	402.34	407.49 - 392.49 (34.29 - 49.29)	0.0	
2Q23		4/3/2023	NE	39.69	NA	NA	NA	402.09		0.0	
3Q23		7/5/2023	NE	39.52	NA	NA	NA	402.26		0.0	
Aug-23		8/3/2023	NE	39.57	NA	NA	NA	402.21		0.0	
Sept-23		9/7/2023	NE	39.55	NA	NA	NA	402.23		0.0	
4Q23		10/2/2023	NE	39.91	NA	NA	NA	401.87		0.0	
Nov-23		11/3/2023	NE	40.39	NA	NA	NA	401.39		0.0	
Dec-23		12/5/2023	NE	40.76	NA	NA	NA	401.02		0.0	
MW 18											
1Q23	442.24	1/3/2023	NE	40.03	NA	NA	NA	402.21	407.32 - 392.32 (34.92 - 49.92)	0.0	
2Q23		4/3/2023	NE	40.25	NA	NA	NA	401.99		0.0	
3Q23		7/5/2023	NE	40.08	NA	NA	NA	402.16		0.0	
Aug-23		8/3/2023	NE	40.13	NA	NA	NA	402.11		0.0	
Sept-23		9/7/2023	NE	40.05	NA	NA	NA	402.19		0.0	
4Q23		10/2/2023	NE	40.43	NA	NA	NA	401.81		0.0	
Nov-23		11/3/2023	NE	40.95	NA	NA	NA	401.29		0.0	
Dec-23		12/6/2023	NE	41.37	NA	NA	NA	400.87		0.0	
MW 19											
1Q23	442.98	1/3/2023	NE	40.77	NA	NA	NA	402.21	406.64 - 391.64 (36.34 - 51.34)	0.0	
2Q23		4/3/2023	NE	41.06	NA	NA	NA	401.92		0.0	
3Q23		7/5/2023	NE	40.74	NA	NA	NA	402.24		0.0	
Aug-23		8/3/2023	NE	40.92	NA	NA	NA	402.06		0.0	
Sept-23		9/7/2023	NE	40.79	NA	NA	NA	402.19		0.0	
4Q23		10/2/2023	NE	41.20	NA	NA	NA	401.78		0.0	
Nov-23		11/3/2023	NE	41.70	NA	NA	NA	401.28		0.0	
Dec-23		12/5/2023	NE	42.19	NA	NA	NA	400.79		0.0	
MW 20											
1Q23	443.86	1/3/2023	NE	41.70	NA	NA	NA	402.16	407.98 - 392.98 (35.88 - 50.88)	0.0	
2Q23		4/3/2023	NE	42.01	NA	NA	NA	401.85		0.0	
3Q23		7/5/2023	NE	41.72	NA	NA	NA	402.14		0.0	
Aug-23		8/3/2023	NE	41.86	NA	NA	NA	402.00		0.0	
Sept-23		9/7/2023	NE	41.74	NA	NA	NA	402.12		0.0	
4Q23		10/2/2023	NE	42.15	NA	NA	NA	401.71		0.0	
Nov-23		11/3/2023	NE	42.65	NA	NA	NA	401.21		0.0	
Dec-23		12/5/2023	NE	43.10	NA	NA	NA	400.76		0.0	

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.)	WELL HEAD PID (ppm)	COMMENTS
MW 21											
1Q23	444.01	1/3/2023	NE	41.80	NA	NA	NA	402.21	409.00 - 394.00 (35.01 - 50.01)	0.0	
2Q23		4/3/2023	NE	42.02	NA	NA	NA	401.99		0.0	
3Q23		7/5/2023	NE	41.91	NA	NA	NA	402.10		0.0	
Aug-23		8/3/2023	NE	41.97	NA	NA	NA	402.04		0.0	
Sept-23		9/7/2023	NE	41.95	NA	NA	NA	402.06		0.0	
4Q23		10/2/2023	NE	42.37	NA	NA	NA	401.64		0.0	
Nov-23		11/3/2023	NE	42.70	NA	NA	NA	401.31		0.0	
Dec-23		12/5/2023	NE	43.15	NA	NA	NA	400.86		0.0	
MW 22											
1Q23	442.38	1/3/2023	NE	39.93	NA	NA	NA	402.45	403.95 - 393.95 (38.43 - 48.43)	0.0	
2Q23		4/3/2023	NE	40.21	NA	NA	NA	402.17		0.0	
3Q23		7/6/2023	NE	40.04	NA	NA	NA	402.34		0.0	
Aug-23		8/3/2023	NE	40.14	NA	NA	NA	402.24		0.0	
Sept-23		9/7/2023	NE	40.16	NA	NA	NA	402.22		0.0	
4Q23		10/2/2023	NE	40.53	NA	NA	NA	401.85		0.0	
Nov-23		11/3/2023	NE	40.95	NA	NA	NA	401.43		0.0	
Dec-23		12/5/2023	NE	41.30	NA	NA	NA	401.08		0.0	
MW 23											
1Q23	431.57	1/3/2023	NE	29.06	NA	NA	NA	402.51	402.55 - 392.55 (29.02 - 39.02)	0.0	
2Q23		4/3/2023	NE	29.17	NA	NA	NA	402.40		0.0	
3Q23		7/6/2023	NE	29.00	NA	NA	NA	402.57		0.2	*
Aug-23		8/3/2023	NE	29.25	NA	NA	NA	402.32		0.0	
Sept-23		9/7/2023	NE	29.36	NA	NA	NA	402.21		0.0	
4Q23		10/3/2023	NE	29.81	NA	NA	NA	401.76		0.0	
Nov-23		11/3/2023	NE	30.00	NA	NA	NA	401.57		0.0	
Dec-23		12/6/2023	NE	30.45	NA	NA	NA	401.12		0.0	
MW 24											
1Q23	443.65	1/3/2023	NE	41.07	NA	NA	NA	402.58	404.04 - 394.04 (39.61 - 49.61)	0.0	
2Q23		4/3/2023	NE	41.36	NA	NA	NA	402.29		0.0	
3Q23		7/5/2023	NE	41.12	NA	NA	NA	402.53		0.0	
Aug-23		8/3/2023	NE	41.31	NA	NA	NA	402.34		0.0	
Sept-23		9/7/2023	NE	41.41	NA	NA	NA	402.24		0.0	
4Q23		10/2/2023	NE	41.76	NA	NA	NA	401.89		0.0	
Nov-23		11/3/2023	NE	42.15	NA	NA	NA	401.50		0.0	
Dec-23		12/5/2023	NE	42.50	NA	NA	NA	401.15		0.0	
MW 25											
1Q23	438.53	1/3/2023	NE	36.12	NA	NA	NA	402.41	402.94 - 392.94 (35.59 - 45.59)	98.6	
2Q23		4/3/2023	NE	36.35	NA	NA	NA	402.18		0.0	
3Q23		7/6/2023	NE	36.11	NA	NA	NA	402.42		141.2	
Aug-23		8/3/2023	NE	36.33	NA	NA	NA	402.20		26.4	
Sept-23		9/7/2023	NE	36.50	NA	NA	NA	402.03		120.1	
4Q23		10/2/2023	NE	36.74	NA	NA	NA	401.79		82.3	
Nov-23		11/3/2023	NE	37.07	NA	NA	NA	401.46		113.2	
Dec-23		12/5/2023	NE	37.52	NA	NA	NA	401.01		48.3	
MW 26											
1Q23	441.23	1/3/2023	NE	38.85	NA	NA	NA	402.38	403.08 - 393.08 (38.15 - 48.15)	0.0	
2Q23		4/3/2023	NE	39.14	NA	NA	NA	402.09		0.0	
3Q23		7/6/2023	NE	38.88	NA	NA	NA	402.35		0.0	
Aug-23		8/3/2023	NE	39.06	NA	NA	NA	402.17		0.0	
Sept-23		9/7/2023	NE	39.10	NA	NA	NA	402.13		0.0	
4Q23		10/2/2023	NE	39.45	NA	NA	NA	401.78		0.0	
Nov-23		11/3/2023	NE	39.83	NA	NA	NA	401.40		0.0	
Dec-23		12/6/2023	NE	40.25	NA	NA	NA	400.98		0.0	
MW 27											
1Q23	443.60	1/3/2023	NE	39.86	NA	NA	NA	403.74	403.81 - 393.81 (39.79 - 49.79)	0.0	
2Q23		4/3/2023	NE	40.57	NA	NA	NA	403.03		0.0	
3Q23		7/5/2023	NE	40.32	NA	NA	NA	403.28		0.0	
Aug-23		8/3/2023	NE	40.38	NA	NA	NA	403.22		0.0	
Sept-23		9/7/2023	NE	40.49	NA	NA	NA	403.11		0.0	
4Q23		10/2/2023	NE	40.70	NA	NA	NA	402.90		0.0	
Nov-23		11/3/2023	NE	40.99	NA	NA	NA	402.61		0.0	
Dec-23		12/5/2023	NE	41.40	NA	NA	NA	402.20		0.0	

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.)	WELL HEAD PID (ppm)	COMMENTS
MW 28											
1Q23	443.55	1/3/2023	NE	39.08	NA	NA	NA	404.47	409.94 - 399.94 (33.61 - 43.61)	0.0	
2Q23		4/3/2023	NE	39.68	NA	NA	NA	403.87		0.0	
3Q23		7/5/2023	NE	39.82	NA	NA	NA	403.73		0.0	
Aug-23		8/3/2023	NE	39.72	NA	NA	NA	403.83		0.0	
Sept-23		9/7/2023	NE	39.83	NA	NA	NA	403.72		0.0	
4Q23		10/2/2023	NE	39.98	NA	NA	NA	403.57		0.0	
Nov-23		11/3/2023	NE	40.20	NA	NA	NA	403.35		0.0	
Dec-23		12/5/2023	NE	40.57	NA	NA	NA	402.98		0.0	
P 52											
1Q23	444.75	1/3/2023	NE	38.43	NA	NA	NA	406.32	407.80 - 382.80 (36.95 - 61.95)	0.0	
2Q23		4/3/2023	NE	39.06	NA	NA	NA	405.69		0.0	
3Q23		7/5/2023	NE	39.66	NA	NA	NA	405.09		0.0	
Aug-23		8/3/2023	NE	39.90	NA	NA	NA	404.85		0.0	
Sept-23		9/7/2023	NE	40.11	NA	NA	NA	404.64		0.0	
4Q23		10/2/2023	NE	40.39	NA	NA	NA	404.36		0.0	
Nov-23		11/3/2023	NE	40.51	NA	NA	NA	404.24		0.0	
Dec-23		12/6/2023	NE	40.96	NA	NA	NA	403.79		0.0	
P 53											
1Q23	446.57	1/3/2023	NE	41.53	NA	NA	NA	405.04	406.26 - 381.26 (40.31 - 65.31)	0.0	
2Q23		4/3/2023	NE	42.16	NA	NA	NA	404.41		0.0	
3Q23		7/6/2023	NE	42.50	NA	NA	NA	404.07		0.0	
Aug-23		8/3/2023	NE	42.61	NA	NA	NA	403.96		0.0	
Sept-23		9/7/2023	NE	42.80	NA	NA	NA	403.77		0.0	
4Q23		10/3/2023	NE	43.10	NA	NA	NA	403.47		0.0	
Nov-23		11/3/2023	NE	43.28	NA	NA	NA	403.29		0.0	
Dec-23		12/6/2023	NE	43.73	NA	NA	NA	402.84		0.0	
P 54											
1Q23	442.52	1/3/2023	NE	39.87	NA	NA	NA	402.65	404.52 - 379.52 (38.00 - 63.00)	0.0	
2Q23		4/3/2023	NE	40.13	NA	NA	NA	402.39		0.0	
3Q23		7/5/2023	NE	39.90	NA	NA	NA	402.62		0.0	
Aug-23		8/3/2023	NE	40.11	NA	NA	NA	402.41		0.0	
Sept-23		9/7/2023	NE	40.25	NA	NA	NA	402.27		0.0	
4Q23		10/2/2023	NE	40.60	NA	NA	NA	401.92		0.0	
Nov-23		11/3/2023	NE	40.96	NA	NA	NA	401.56		0.0	
Dec-23		12/5/2023	NE	41.30	NA	NA	NA	401.22		0.0	
P 55R											
1Q23	444.01	1/3/2023	39.47	39.55	404.46	404.54	0.08	404.52	403.58 - 393.58 (40.43 - 50.43)	112.9	*
2Q23		4/3/2023	40.00	40.11	403.90	404.01	0.11	403.99		104.6	*
3Q23		7/5/2023	39.91	39.92	404.09	404.10	0.01	404.10		74.4	*
Aug-23		8/4/2023	40.07	40.09	403.92	403.94	0.02	403.94		69.2	*
Sept-23		9/7/2023	40.15	40.23	403.78	403.86	0.08	403.84		84.8	*
4Q23		10/2/2023	40.35	40.37	403.64	403.66	0.02	403.66		119.6	*
Nov-23		11/3/2023	40.56	40.61	403.40	403.45	0.05	403.44		112.3	
Dec-23		12/5/2023	40.86	40.89	403.12	403.15	0.03	403.12		127.5	
P 56											
1Q23	446.32	1/3/2023	NE	44.19	NA	NA	NA	402.13	405.50 - 380.50 (40.82 - 65.82)	9.0	
2Q23		4/3/2023	NE	44.46	NA	NA	NA	401.86		5.7	
3Q23		7/5/2023	NE	44.20	NA	NA	NA	402.12		0.0	
Aug-23		8/4/2023	NE	44.35	NA	NA	NA	401.97		0.0	
Sept-23		9/7/2023	NE	44.25	NA	NA	NA	402.07		0.0	
4Q23		10/2/2023	NE	44.54	NA	NA	NA	401.78		13.8	
Nov-23		11/3/2023	NE	45.09	NA	NA	NA	401.23		0.0	
Dec-23		12/5/2023	NE	45.44	NA	NA	NA	400.88		174.7	
P 57											
1Q23	447.15	1/3/2023	NE	44.94	NA	NA	NA	402.21	402.96 - 392.96 (44.19 - 54.19)	72.7	
2Q23		4/3/2023	NE	45.22	NA	NA	NA	401.93		22.9	
3Q23		7/5/2023	NE	44.92	NA	NA	NA	402.23		8.1	
Aug-23		8/4/2023	NE	45.16	NA	NA	NA	401.99		0.0	
Sept-23		9/7/2023	NE	45.11	NA	NA	NA	402.04		0.0	
4Q23		10/2/2023	NE	45.43	NA	NA	NA	401.72		0.5	
Nov-23		11/3/2023	NE	45.80	NA	NA	NA	401.35		0.0	
Dec-23		12/5/2023	NE	46.18	NA	NA	NA	400.97		0.7	

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	COMMENTS
P 58											
1Q23	445.16	1/3/2023	42.82	42.83	402.33	402.34	0.01	402.34	404.95 - 379.95 (40.21 - 65.21)	0.1	
2Q23		4/3/2023	NE	43.06	NA	NA	NA	402.10		3.0	
3Q23		7/5/2023	NE	42.82	NA	NA	NA	402.34		0.0	
Aug-23		8/4/2023	43.07	43.08	402.08	402.09	0.01	402.09		0.0	
Sept-23		9/7/2023	NE	43.06	NA	NA	NA	402.10		0.0	
4Q23		10/2/2023	NE	43.42	NA	NA	NA	401.74		0.0	
Nov-23		11/3/2023	NE	43.66	NA	NA	NA	401.50		0.0	
Dec-23		12/5/2023	NE	44.14	NA	NA	NA	401.02		0.0	
P 59											
1Q23	447.07	1/3/2023	NE	44.96	NA	NA	NA	402.11	399.16 - 374.16 (47.91 - 72.91)	132.6	*
2Q23		4/3/2023	NE	45.18	NA	NA	NA	401.89		201.2	*
3Q23		7/5/2023	NE	44.91	NA	NA	NA	402.16		161.8	*
Aug-23		8/4/2023	NE	45.06	NA	NA	NA	402.01		180.4	*
Sept-23		9/7/2023	NE	44.97	NA	NA	NA	402.10		223.7	*
4Q23		10/2/2023	NE	45.22	NA	NA	NA	401.85		205.6	*
Nov-23		11/3/2023	NE	45.84	NA	NA	NA	401.23		212.8	*
Dec-23		12/5/2023	NE	46.16	NA	NA	NA	400.91		208.6	*
P 60											
1Q23	446.88	1/3/2023	NE	44.46	NA	NA	NA	402.42	402.23 - 382.23 (44.65 - 64.65)	5.1	*
2Q23		4/3/2023	NE	44.72	NA	NA	NA	402.16		0.1	
3Q23		7/5/2023	NE	44.60	NA	NA	NA	402.28		0.0	*
Aug-23		8/4/2023	NE	44.76	NA	NA	NA	402.12		0.0	
Sept-23		9/7/2023	NE	44.72	NA	NA	NA	402.16		0.0	
4Q23		10/2/2023	NE	44.97	NA	NA	NA	401.91		0.4	
Nov-23		11/3/2023	NE	45.56	NA	NA	NA	401.32		0.6	
Dec-23		12/5/2023	NE	45.82	NA	NA	NA	401.06		17.9	
P 66											
1Q23	437.00	1/4/2023	34.39	35.91	401.09	402.61	1.52	402.31	402.28 - 377.28 (34.72 - 59.72)	159.8	*
2Q23		4/6/2023	34.79	36.21	400.79	402.21	1.42	401.93		58.9	
3Q23		7/7/2023	34.52	35.02	401.98	402.48	0.50	402.38		21.3	*
Aug-23		8/4/2023	34.61	35.70	401.30	402.39	1.09	402.17		109.2	*
Sept-23		9/7/2023	34.75	35.86	401.14	402.25	1.11	402.03		0.0	
4Q23		10/4/2023	34.91	36.35	400.65	402.09	1.44	401.80		0.0	
Nov-23		11/3/2023	35.13	36.49	400.51	401.87	1.36	401.60		1.4	
Dec-23		12/5/2023	35.54	36.85	400.15	401.46	1.31	400.15		2.3	
P 68											
1Q23	445.38	1/3/2023	42.97	43.03	402.35	402.41	0.06	402.40	401.62 - 376.62 (43.76 - 68.76)	86.2	*
2Q23		4/3/2023	43.25	43.36	402.02	402.13	0.11	402.11		146.2	*
3Q23		7/5/2023	43.17	43.19	402.19	402.21	0.02	402.21		114.3	*
Aug-23		8/4/2023	43.25	43.31	402.07	402.13	0.06	402.12		164.6	*
Sept-23		9/7/2023	44.20	44.28	401.10	401.18	0.08	401.16		253.2	
4Q23		10/2/2023	43.41	43.47	401.91	401.97	0.06	401.96		0.0	*
Nov-23		11/3/2023	43.91	43.98	401.40	401.47	0.07	401.46		93.3	
Dec-23		12/5/2023	44.25	44.35	401.03	401.13	0.10	401.03		208.8	
P 74											
1Q23	442.93	1/3/2023	NE	40.54	NA	NA	NA	402.39	399.10 - 374.10 (43.83 - 68.83)	0.0	*
2Q23		4/3/2023	NE	41.16	NA	NA	NA	401.77		0.0	*
3Q23		7/5/2023	NE	40.91	NA	NA	NA	402.02		10.6	*
Aug-23		8/4/2023	NE	41.02	NA	NA	NA	401.91		8.8	*
Sept-23		9/7/2023	NM	NM	NM	NM	NM	NM		NM	Inaccessible due to refinery construction
4Q23		10/2/2023	NE	41.11	NA	NA	NA	401.82		0.0	*
Nov-23		11/3/2023	NE	41.86	NA	NA	NA	401.07		27.6	*
Dec-23		12/5/2023	NE	42.18	NA	NA	NA	400.75		26.8	*
P 93A											
1Q23	445.37	1/3/2023	NE	43.13	NA	NA	NA	402.24	402.30 - 392.30 (43.07 - 53.07)	0.0	
2Q23		4/3/2023	NE	43.38	NA	NA	NA	401.99		0.0	
3Q23		7/5/2023	NE	43.10	NA	NA	NA	402.27		0.0	
Aug-23		8/4/2023	NE	43.35	NA	NA	NA	402.02		0.0	
Sept-23		9/7/2023	NE	43.35	NA	NA	NA	402.02		0.0	
4Q23		10/2/2023	NE	43.64	NA	NA	NA	401.73		0.0	
Nov-23		11/3/2023	NE	43.96	NA	NA	NA	401.41		0.0	
Dec-23		12/5/2023	NE	44.35	NA	NA	NA	401.02		0.2	

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.)	WELL HEAD PID (ppm)	COMMENTS
P 93B											
1Q23	446.70	1/3/2023	NE	44.47	NA	NA	NA	402.23	371.92 - 369.92 (74.78 - 76.78)	0.0	*
2Q23		4/3/2023	NE	44.74	NA	NA	NA	401.96		0.0	*
3Q23		7/5/2023	NE	44.43	NA	NA	NA	402.27		0.0	*
Aug-23		8/4/2023	NE	44.70	NA	NA	NA	402.00		0.0	*
Sept-23		9/7/2023	NE	44.65	NA	NA	NA	402.05		0.0	*
4Q23		10/2/2023	NE	44.98	NA	NA	NA	401.72		0.0	*
Nov-23		11/3/2023	NE	45.30	NA	NA	NA	401.40		0.0	*
Dec-23		12/5/2023	NE	45.80	NA	NA	NA	400.90		0.0	*
P 93C											
1Q23	446.55	1/3/2023	NE	44.31	NA	NA	NA	402.24	353.67 - 348.67 (92.88 - 97.88)	0.0	*
2Q23		4/3/2023	NE	44.57	NA	NA	NA	401.98		0.0	*
3Q23		7/5/2023	NE	44.30	NA	NA	NA	402.25		0.0	*
Aug-23		8/4/2023	NE	44.55	NA	NA	NA	402.00		0.0	*
Sept-23		9/7/2023	NE	44.52	NA	NA	NA	402.03		0.0	*
4Q23		10/2/2023	NE	44.83	NA	NA	NA	401.72		0.0	*
Nov-23		11/3/2023	NE	45.17	NA	NA	NA	401.38		0.0	*
Dec-23		12/5/2023	NE	45.55	NA	NA	NA	401.00		0.4	*
P 93D											
1Q23	446.97	1/3/2023	NE	44.67	NA	NA	NA	402.30	321.31 - 319.31 (125.66 - 127.66)	0.0	*
2Q23		4/3/2023	NE	44.92	NA	NA	NA	402.05		0.0	*
3Q23		7/5/2023	NE	44.64	NA	NA	NA	402.33		0.0	*
Aug-23		8/4/2023	NE	44.90	NA	NA	NA	402.07		0.0	*
Sept-23		9/7/2023	NE	44.85	NA	NA	NA	402.12		0.0	*
4Q23		10/2/2023	NE	45.21	NA	NA	NA	401.76		0.0	*
Nov-23		11/3/2023	NE	45.49	NA	NA	NA	401.48		0.0	*
Dec-23		12/5/2023	NE	45.88	NA	NA	NA	401.09		0.0	*
P 114R											
1Q23	429.48	1/4/2023	NE	27.07	NA	NA	NA	402.41	406.47 - 396.47 (23.01 - 33.01)	0.0	
2Q23		4/4/2023	NE	26.72	NA	NA	NA	402.76		21.8	
3Q23		7/6/2023	NE	26.50	NA	NA	NA	402.98		0.0	
Aug-23		8/4/2023	NE	27.00	NA	NA	NA	402.48		0.0	
Sept-23		9/7/2023	NE	27.30	NA	NA	NA	402.18		0.0	
4Q23		10/2/2023	NE	27.65	NA	NA	NA	401.83		0.0	
Nov-23		11/3/2023	NE	27.77	NA	NA	NA	401.71		50.1	
Dec-23		12/5/2023	NE	28.15	NA	NA	NA	401.33		0.0	
ROST 3 MW											
1Q23	442.52	1/3/2023	NE	39.77	NA	NA	NA	402.75	404.71 - 394.71 (37.81 - 47.81)	361.7	
2Q23		4/3/2023	NE	40.11	NA	NA	NA	402.41		0.0	
3Q23		7/5/2023	NE	40.00	NA	NA	NA	402.52		0.0	
Aug-23		8/3/2023	NE	40.10	NA	NA	NA	402.42		0.0	
Sept-23		9/7/2023	NE	40.17	NA	NA	NA	402.35		0.0	
4Q23		10/2/2023	NE	40.44	NA	NA	NA	402.08		0.0	
Nov-23		11/3/2023	NE	40.88	NA	NA	NA	401.64		0.0	
Dec-23		12/5/2023	NE	41.24	NA	NA	NA	401.28		0.0	
ROST 4 PZ											
1Q23	442.15	1/3/2023	NE	38.58	NA	NA	NA	403.57	407.22 - 397.22 (34.93 - 44.93)	0.3	
2Q23		4/3/2023	NE	39.30	NA	NA	NA	402.85		0.0	
3Q23		7/5/2023	NE	39.10	NA	NA	NA	403.05		0.0	
Aug-23		8/3/2023	NE	39.19	NA	NA	NA	402.96		0.0	
Sept-23		9/7/2023	NE	39.25	NA	NA	NA	402.90		0.0	
4Q23		10/2/2023	NE	39.48	NA	NA	NA	402.67		0.0	
Nov-23		11/3/2023	NE	39.62	NA	NA	NA	402.53		0.0	
Dec-23		12/5/2023	NE	39.81	NA	NA	NA	402.34		0.0	
ROST 4 PZ(A)											
1Q23	442.15	1/3/2023	NE	37.89	NA	NA	NA	404.26	407.38 - 397.38 (34.77 - 44.77)	0.0	
2Q23		4/3/2023	NE	38.75	NA	NA	NA	403.40		0.0	
3Q23		7/5/2023	NE	38.56	NA	NA	NA	403.59		0.0	
Aug-23		8/3/2023	NE	38.63	NA	NA	NA	403.52		0.0	
Sept-23		9/7/2023	NE	38.76	NA	NA	NA	403.39		0.0	
4Q23		10/2/2023	NE	39.06	NA	NA	NA	403.09		0.0	
Nov-23		11/3/2023	NE	39.59	NA	NA	NA	402.56		0.0	
Dec-23		12/5/2023	NE	39.95	NA	NA	NA	402.20		0.0	

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.) (ft btoc)	WELL HEAD PID (ppm)	COMMENTS
ROST 4 PZ(B)											
1Q23	442.40	1/3/2023	NE	38.54	NA	NA	NA	403.86	407.35 - 397.35 (35.05 - 45.05)	0.0	
2Q23		4/3/2023	NE	39.34	NA	NA	NA	403.06		0.0	
3Q23		7/5/2023	NE	39.15	NA	NA	NA	403.25		0.0	
Aug-23		8/3/2023	NE	39.20	NA	NA	NA	403.20		0.0	
Sept-23		9/7/2023	NE	39.24	NA	NA	NA	403.16		0.0	
4Q23		10/2/2023	NE	39.50	NA	NA	NA	402.90		0.0	
Nov-23		11/3/2023	NE	39.67	NA	NA	NA	402.73		0.0	
Dec-23		12/5/2023	NE	39.97	NA	NA	NA	402.43		0.0	
ROST 4 PZ(C)											
1Q23	442.97	1/3/2023	NE	39.65	NA	NA	NA	403.32	408.02 - 398.02 (34.95 - 44.95)	0.0	
2Q23		4/3/2023	NE	40.29	NA	NA	NA	402.68		0.0	
3Q23		7/5/2023	NE	40.10	NA	NA	NA	402.87		0.0	
Aug-23		8/3/2023	NE	40.21	NA	NA	NA	402.76		0.0	
Sept-23		9/7/2023	NE	40.27	NA	NA	NA	402.70		0.0	
4Q23		10/2/2023	NE	39.65	NA	NA	NA	403.42		0.0	
Nov-23		11/3/2023	NE	40.78	NA	NA	NA	402.19		0.0	
Dec-23		12/5/2023	NE	41.15	NA	NA	NA	401.82		0.0	
ROST 4 PZ(D)											
1Q23	442.92	1/3/2023	NE	39.44	NA	NA	NA	403.48	407.95 - 397.95 (34.97 - 44.97)	0.1	
2Q23		4/3/2023	NE	40.07	NA	NA	NA	402.85		0.0	
3Q23		7/5/2023	NE	40.05	NA	NA	NA	402.87		0.0	
Aug-23		8/3/2023	NE	40.01	NA	NA	NA	402.91		0.0	
Sept-23		9/7/2023	NE	40.10	NA	NA	NA	402.82		0.0	
4Q23		10/2/2023	NE	40.30	NA	NA	NA	402.62		0.0	
Nov-23		11/3/2023	NE	40.55	NA	NA	NA	402.37		0.0	
Dec-23		12/5/2023	NE	40.92	NA	NA	NA	402.00		0.0	
ROST 4 PZ(E)											
1Q23	441.98	1/3/2023	NE	38.51	NA	NA	NA	403.47	407.23 - 397.23 (34.75 - 44.75)	0.0	
2Q23		4/3/2023	NE	39.14	NA	NA	NA	402.84		0.0	
3Q23		7/5/2023	NE	38.96	NA	NA	NA	403.02		0.0	
Aug-23		8/3/2023	NE	39.03	NA	NA	NA	402.95		0.0	
Sept-23		9/7/2023	NE	39.15	NA	NA	NA	402.83		0.0	
4Q23		10/2/2023	NE	39.29	NA	NA	NA	402.69		0.0	
Nov-23		11/3/2023	NE	39.38	NA	NA	NA	402.60		0.0	
Dec-23		12/5/2023	NE	39.68	NA	NA	NA	402.30		0.0	
ROST 4 PZ(F)											
1Q23	442.12	1/3/2023	NE	38.73	NA	NA	NA	403.39	407.59 - 397.59 (34.53 - 44.53)	0.0	
2Q23		4/3/2023	NE	39.23	NA	NA	NA	402.89		0.0	
3Q23		7/5/2023	NE	39.07	NA	NA	NA	403.05		0.0	
Aug-23		8/3/2023	NE	39.11	NA	NA	NA	403.01		0.0	
Sept-23		9/7/2023	NE	39.15	NA	NA	NA	402.97		0.0	
4Q23		10/2/2023	NE	39.35	NA	NA	NA	402.77		0.0	
Nov-23		11/3/2023	NE	39.44	NA	NA	NA	402.68		0.0	
Dec-23		12/5/2023	NE	39.61	NA	NA	NA	402.51		0.0	
ROST 4 PZ(G)											
1Q23	442.20	1/3/2023	NE	39.74	NA	NA	NA	402.46	407.92 - 397.92 (34.28 - 44.28)	0.2	
2Q23		4/3/2023	NE	40.00	NA	NA	NA	402.20		0.0	
3Q23		7/5/2023	NE	39.82	NA	NA	NA	402.38		0.0	
Aug-23		8/3/2023	NE	39.96	NA	NA	NA	402.24		0.0	
Sept-23		9/7/2023	NE	39.97	NA	NA	NA	402.23		0.0	
4Q23		10/2/2023	NE	40.26	NA	NA	NA	401.94		0.0	
Nov-23		11/3/2023	NE	40.72	NA	NA	NA	401.48		0.0	
Dec-23		12/5/2023	NE	41.14	NA	NA	NA	401.06		0.0	
T 1											
1Q23	445.61	1/3/2023	NE	42.33	NA	NA	NA	403.28	398.61 - 388.61 (47.00 - 57.00)	0.0	*
2Q23		4/3/2023	NE	42.80	NA	NA	NA	402.81		0.0	*
3Q23		7/5/2023	NE	42.90	NA	NA	NA	402.71		0.0	*
Aug-23		8/4/2023	NE	42.99	NA	NA	NA	402.62		0.0	*
Sept-23		9/7/2023	NE	43.10	NA	NA	NA	402.51		0.0	*
4Q23		10/2/2023	NE	43.33	NA	NA	NA	402.28		0.0	*
Nov-23		11/3/2023	NE	43.71	NA	NA	NA	401.90		0.0	*
Dec-23		12/5/2023	NE	44.06	NA	NA	NA	401.55		0.0	*

TABLE 1
GROUNDWATER MONITORING WELL GAUGING RESULTS

WELL ID	TOP OF CASING (elev.)	DATE GAUGED	DEPTH TO PRODUCT (ft btoc)	DEPTH TO WATER (ft btoc)	WATER PRODUCT INTERFACE (elev.)	PRODUCT (elev.)	PRODUCT THICKNESS (ft)	CORRECTED WATER LEVEL (elev.)	SCREENED INTERVAL (elev.)	WELL HEAD PID (ppm)	COMMENTS
T 6											
1Q23	446.78	1/3/2023	NE	44.59	NA	NA	NA	402.19	394.27 - 380.02 (52.51 - 66.76)	0.1	*
2Q23		4/3/2023	NE	44.90	NA	NA	NA	401.88		0.0	*
3Q23		7/5/2023	NE	44.61	NA	NA	NA	402.17		0.0	*
Aug-23		8/4/2023	NE	44.84	NA	NA	NA	401.94		0.5	*
Sept-23		9/7/2023	NE	44.76	NA	NA	NA	402.02		0.0	*
4Q23		10/2/2023	NE	45.07	NA	NA	NA	401.71		2.4	*
Nov-23		11/3/2023	NE	45.45	NA	NA	NA	401.33		0.3	*
Dec-23		12/5/2023	NE	45.83	NA	NA	NA	400.95		6.9	*
T 12											
1Q23	444.99	1/3/2023	NE	42.75	NA	NA	NA	402.24	398.16 - 372.16 (46.83 - 72.83)	3.9	*
2Q23		4/3/2023	NE	42.93	NA	NA	NA	402.06		0.0	*
3Q23		7/5/2023	NE	42.74	NA	NA	NA	402.25		0.0	*
Aug-23		8/4/2023	NE	42.90	NA	NA	NA	402.09		0.0	*
Sept-23		9/7/2023	NE	42.84	NA	NA	NA	402.15		0.0	*
4Q23		10/2/2023	NE	43.09	NA	NA	NA	401.90		0.3	*
Nov-23		11/3/2023	NE	43.63	NA	NA	NA	401.36		0.5	*
Dec-23		12/5/2023	NE	43.99	NA	NA	NA	401.00		2.0	*
T 13											
1Q23	443.76	1/3/2023	NE	40.20	NA	NA	NA	403.56	399.95 - 373.95 (43.81 - 69.81)	0.0	*
2Q23		4/3/2023	NE	40.76	NA	NA	NA	403.00		0.0	*
3Q23		7/5/2023	NE	40.81	NA	NA	NA	402.95		0.0	*
Aug-23		8/3/2023	NE	40.93	NA	NA	NA	402.83		0.0	*
Sept-23		9/7/2023	NE	41.05	NA	NA	NA	402.71		0.0	*
4Q23		10/2/2023	NE	41.41	NA	NA	NA	402.35		0.0	*
Nov-23		11/3/2023	NE	41.64	NA	NA	NA	402.12		0.0	*
Dec-23		12/5/2023	NE	42.02	NA	NA	NA	401.74		0.0	*

NOTES:

1) Elevations presented in this table are relative to the 1988 NAVD datum.

2) The corrected water level elevations presented in this table were corrected by a specific gravity of 0.80 for the wells in which LNAPL was identified.

3) PID values measured with a 10.6 electron volt (eV) lamp photoionization detector.

4) btoc Below Top of Casing; ppm parts per million; NA Not Applicable; NE Not Encountered; NM Not Measured

5) * Indicates that the LNAPL and/or water level is above the top of the screened zone of the well.

6) Table includes comprehensive groundwater monitoring well gauging data for the last 4 quarters from the Village of Roxana Interim Groundwater Monitoring Program and select wells from the WRB Refining LP Wood River Refinery Program..

7) The screened interval for certain monitoring wells was adjusted based on an evaluation of the results of annual bottom depth gauging conducted in the first quarter of each year.

8) Top of casing and screened interval for the groundwater monitoring wells in the Roxana Interim Groundwater Monitoring Program and the WRR Program were adjusted based on surveying conducted in 2Q19, in accordance with Permit Condition IV.J.9, which requires wells be surveyed every five (5) years.

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

PRELIMINARY

			VOCs																	
			Acetone	Benzene	2-Butanone	n-Butylbenzene	sec-Butylbenzene	tert-Butylbenzene	Carbon tetrachloride	Chloroform	Chloromethane	Cymene (p-Isopropyltoluene)	Ethylbenzene	Isopropylbenzene (Cumene)	4-Methyl-2-pentanone (Methyl Isobutyl Ketone)	Methyl tert-Butyl Ether (MTBE)	Naphthalene	n-Propylbenzene		
Screening Values (mg/L)			6.3 ¹	0.005 ¹	4.2 ¹	0.35 ³	0.7 ³	0.7 ³	0.005 ¹	0.07 ¹			0.7 ¹	0.7 ¹	0.56	0.7 ¹	0.07 ¹	0.14 ¹		
Analytical Results (mg/L)																				
Location	Sample ID	Sample Date																		
P-57	P57-ROX-101723	10/17/2023	0.017 J	0.084	< 0.025	0.0031	0.0040	0.0039	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0015	0.022	< 0.025	< 0.0010	0.013	0.022		
P-58	P58-ROX-101723	10/17/2023	< 25	570	< 25	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 25	< 1	< 5	< 1		
P-59	P59-ROX-101823	10/18/2023	< 0.25	1.8	< 0.25	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.12	0.048	< 0.25	< 0.01	0.043 J	0.075		
P-74	P74-ROX-101723	10/17/2023	0.065 J	1	< 0.13	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0055	< 0.0050	0.016 J	0.0065	< 0.025	< 0.0050		
	P74-ROX-101723-DUP	10/17/2023	0.071 J	1	< 0.13	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	0.0050	< 0.0050	0.015 J	0.0065	< 0.025	< 0.0050		
P-93A	P93A-ROX-101823	10/18/2023	< 0.025	< 0.0010	< 0.025	< 0.0010	< 0.0010	0.00070 J	0.0012	0.0030	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	< 0.0010	< 0.0050	< 0.0010	
P-93B	P93B-ROX-101923	10/19/2023	< 130	610	< 130	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 5	< 130	< 5	< 25	< 5		
P-93C	P93C-ROX-101623	10/16/2023	< 0.025	0.013	< 0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	0.0025	< 0.0050	< 0.0010		
P-93D	P93D-ROX-101623	10/16/2023	< 0.025	< 0.0010	< 0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	0.00053 J	< 0.0050	< 0.0010	
P-114R	P114R-ROX-101823	10/18/2023	0.019 J	< 0.0010	< 0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	0.0015	< 0.0050	< 0.0010	
ROST-3-MW	ROST3MW-ROX-100623	10/6/2023	0.038	< 0.0010	< 0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	< 0.0010	< 0.0050	< 0.0010	
ROST-4-PZ(C)	ROST4PZ(C)-ROX-101623	10/16/2023	< 0.025	< 0.0010	< 0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	< 0.0010	< 0.0050	< 0.0010	
	ROST4PZ(C)-ROX-101623-DUP	10/16/2023	< 0.025	< 0.0010	< 0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	< 0.0010	< 0.0050	< 0.0010	
ROST-4-PZ(E)	ROST4PZ(E)-ROX-101323	10/13/2023	0.062	0.00061 J	0.0082 J	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	0.0054	0.00076 J	< 0.025	< 0.0010	0.0031 J	0.00075 J
ROST-4-PZ(G)	ROST4PZ(G)-ROX-101223	10/12/2023	0.033	< 0.0010	< 0.025	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.025	< 0.0010	< 0.0050	< 0.0010	
T-12	T12-ROX-101923	10/19/2023	< 0.25	1.5	< 0.25	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.013	0.019	< 0.25	< 0.01	< 0.05	0.031

SEE LAST PAGE OF TABLE FOR NOTES

TABLE 2
SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

PRELIMINARY

			VOCs								SVOCs							
			Tetrachloroethene	Toluene	Trichloroethene	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	m,p-Xylenes	o-Xylenes	Xylenes (total)	Aceanaphthene	Aceanaphthylene	Anthracene	Benz(a)anthracene	Benz(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene
Screening Values (mg/L)			0.005 ¹	0.7 ³	0.005 ¹	0.07 ³	0.07 ³	10 ¹		10 ¹	0.42 ¹	0.42 ³	2.1 ¹	0.00013 ¹	0.0002 ¹	0.00018 ¹	0.21 ³	0.00017 ¹
Location	Sample ID	Sample Date																
P-57	P57-ROX-101723	10/17/2023	< 0.0010	0.0031	< 0.0010	< 0.0010	< 0.0010	0.00075 J	< 0.0050	< 0.01	0.00022	< 0.00020	0.00014 J	0.000045 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020
P-58	P58-ROX-101723	10/17/2023	< 1	< 1	< 1	< 1	< 1	< 5	< 5	< 10	0.00046	< 0.00020	0.00018 J	0.000070 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020
P-59	P59-ROX-101823	10/18/2023	< 0.01	0.086	< 0.01	0.037	0.031	0.12	< 0.05	0.12	0.00056	< 0.00021	0.00029	0.000088 JB	< 0.00021	< 0.00021	< 0.00021	< 0.00021
P-74	P74-ROX-101723	10/17/2023	< 0.0050	0.0086	< 0.0050	< 0.0050	< 0.0050	0.011 J	< 0.025	0.011 J	< 0.00020	0.000075 J	< 0.00020	0.000057 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020
	P74-ROX-101723-DUP	10/17/2023	< 0.0050	0.0091	< 0.0050	< 0.0050	< 0.0050	0.01 J	< 0.025	0.01 J	< 0.00020	< 0.00020	0.00019 J	0.00019 J H	0.000091 J H	0.00015 J H	0.000048 J H	0.000092 J H
P-93A	P93A-ROX-101823	10/18/2023	0.0065	< 0.0010	0.00047 J	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	< 0.00020	< 0.00020	0.00036 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
P-93B	P93B-ROX-101923	10/19/2023	< 5	< 5	< 5	< 5	< 5	< 25	< 25	< 50	< 0.00021	< 0.00021	< 0.00021	< 0.00021	< 0.00021	< 0.00021	< 0.00021	< 0.00021
P-93C	P93C-ROX-101623	10/16/2023	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	< 0.00021	0.00018 J	< 0.00021	0.000038 JB	< 0.00021	< 0.00021	< 0.00021	< 0.00021
P-93D	P93D-ROX-101623	10/16/2023	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	< 0.00020	< 0.00020	0.000093 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020
P-114R	P114R-ROX-101823	10/18/2023	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	0.00099	< 0.00020	0.000085 J	0.000047 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020
ROST-3-MW	ROST3MW-ROX-100623	10/6/2023	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.000024 J	< 0.00011	< 0.00011	
ROST-4-PZ(C)	ROST4PZ(C)-ROX-101623	10/16/2023	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	0.00057	< 0.00019	0.00025	0.000039 JB	< 0.00019	< 0.00019	< 0.00019	< 0.00019
	ROST4PZ(C)-ROX-101623-DUP	10/16/2023	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	0.00060	< 0.00019	0.00024	< 0.00019	< 0.00019	< 0.00019	< 0.00019	< 0.00019
ROST-4-PZ(E)	ROST4PZ(E)-ROX-101323	10/13/2023	< 0.0010	< 0.0010	< 0.0010	0.01	< 0.0010	0.0048 J	< 0.0050	0.0053 J	0.00048	< 0.00020	0.00082	0.000036 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020
ROST-4-PZ(G)	ROST4PZ(G)-ROX-101223	10/12/2023	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0010	< 0.0050	< 0.0050	< 0.01	< 0.00020	< 0.00020	< 0.00020	0.000046 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020
T-12	T12-ROX-101923	10/19/2023	< 0.01	0.037	< 0.01	< 0.01	< 0.01	< 0.01	0.042 J	< 0.05	0.045 J	0.00029	< 0.00020	0.00014 J	0.000036 JB	< 0.00020	< 0.00020	< 0.00020

SUMMARY OF GROUNDWATER MONITORING WELL ANALYTICAL DETECTIONS AND EXCEEDANCES

			SVOCs																		
			Chrysene (1,2-Benzanthracene)	Dibenz(a,h)anthracene	Dibenzofuran	Diethyl phthalate	Dimethyl phthalate	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	1-Methylnaphthalene	2-Methylnaphthalene	2-Methylphenol (o-Cresol)	N-Nitrosodiphenylamine	Pentachlorophenol	Phenanthrene	Phenol	Pyrene			
Screening Values (mg/L)			0.012 ¹	0.0003 ¹	0.007 ³	5.6 ¹		0.28 ¹	0.28 ¹	0.00043 ¹	0.49 ³	0.028 ¹	0.35 ¹	0.0032 ²	0.001 ¹	0.21 ³	0.1 ¹	0.21 ¹			
Analytical Results (mg/L)																					
Location	Sample ID	Sample Date	P-57	P57-ROX-101723	10/17/2023	< 0.00020	< 0.00020	0.00051 J	< 0.0099	< 0.0099	0.000054 JB	0.00038	0.000044 JB	0.021	0.014	< 0.0099	< 0.0099	< 0.02	0.00033	0.0061 J	< 0.00020
P-58	P58-ROX-101723	10/17/2023	0.000043 J	< 0.00020	< 0.0099	< 0.0099	< 0.0099	0.000086 JB	0.0010	0.000034 JB	0.035	0.025	< 0.0099	0.000044 J	< 0.02	0.00079	0.22	0.00013 J			
P-59	P59-ROX-101823	10/18/2023	0.000068 J	< 0.00021	< 0.01	< 0.01	< 0.01	0.000019 JB	0.00040	< 0.00021	0.0098	0.013	< 0.01	< 0.01	0.0088 J*1	0.00065	0.013	0.00043			
P-74	P74-ROX-101723	10/17/2023	< 0.00020	< 0.00020	< 0.0098	< 0.0098	< 0.0098	0.000071 JB	< 0.00020	0.000041 JB	0.00043	0.00042	< 0.0098	< 0.0098	< 0.02	< 0.00020	0.02	< 0.00020			
	P74-ROX-101723-DUP	10/17/2023	0.000096 J H	0.00011 J H	< 0.0099	< 0.0099	< 0.0099	0.000049 J H B	< 0.00020	0.00011 J H	0.00046	0.00045	< 0.0099	< 0.0099	< 0.02	0.00040	0.023	0.0015			
P-93A	P93A-ROX-101823	10/18/2023	< 0.00020	< 0.00020	< 0.01	0.00034 J	< 0.01	0.000062 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.01	< 0.01	< 0.02	< 0.00020	< 0.01	< 0.00020		
P-93B	P93B-ROX-101923	10/19/2023	< 0.00021	< 0.00021	< 0.011	< 0.011	< 0.011	0.000055 JB	< 0.00021	< 0.00021	0.00015 J	0.00014 J	< 0.011	< 0.011	< 0.021	< 0.00021	0.2	< 0.00021			
P-93C	P93C-ROX-101623	10/16/2023	< 0.00021	< 0.00021	< 0.01	< 0.01	< 0.01	< 0.00021	< 0.00021	< 0.00021	< 0.00021	< 0.00021	< 0.01	< 0.01	< 0.021	< 0.00021	< 0.01	< 0.00021			
P-93D	P93D-ROX-101623	10/16/2023	0.000041 JB	< 0.00020	< 0.01	< 0.01	< 0.01	0.000014 JB	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.01	< 0.01	< 0.02	< 0.00020	< 0.01	0.000043 J			
P-114R	P114R-ROX-101823	10/18/2023	< 0.00020	< 0.00020	< 0.0098	< 0.0098	< 0.0098	0.000072 JB	< 0.00020	< 0.00020	0.00025	< 0.00020	< 0.0098	< 0.0098	< 0.02	< 0.00020	< 0.0098	< 0.00020			
ROST-3-MW	ROST3MW-ROX-100623	10/6/2023	< 0.00011	< 0.00011	< 0.0057	< 0.0057	< 0.0057	< 0.00011	< 0.00011	< 0.00011	0.000072 J	< 0.00011	< 0.0057	< 0.0057	< 0.011	< 0.00011	< 0.0057	< 0.00011			
ROST-4-PZ(C)	ROST4PZ(C)-ROX-101623	10/16/2023	< 0.00019	< 0.00019	0.00054 J	< 0.0097	< 0.0097	0.000066 JB	0.00057	< 0.00019	0.0081	0.00018 J	< 0.0097	< 0.0097	< 0.019	0.010	< 0.0097	< 0.00019			
	ROST4PZ(C)-ROX-101623-DUP	10/16/2023	< 0.00019	< 0.00019	0.00060 J	< 0.0096	< 0.0096	< 0.00019	0.00061	< 0.00019	0.0094	0.00028	< 0.0096	< 0.0096	< 0.019	0.0012	< 0.0096	< 0.00019			
ROST-4-PZ(E)	ROST4PZ(E)-ROX-101323	10/13/2023	0.000039 JB	< 0.00020	< 0.0098	< 0.0098	< 0.0098	< 0.00020	0.00059 B	< 0.00020	0.0079	0.0032	< 0.0098	< 0.0098	< 0.02	0.0042	< 0.0098	0.0013 JB			
ROST-4-PZ(G)	ROST4PZ(G)-ROX-101223	10/12/2023	< 0.00020	< 0.00020	< 0.0099	< 0.0099	< 0.0099	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.00020	< 0.0099	< 0.0099	< 0.02	< 0.00020	< 0.0099	< 0.00020			
T-12	T12-ROX-101923	10/19/2023	< 0.00020	< 0.00020	< 0.0098	< 0.0098	< 0.0098	0.000056 JB	0.00029	< 0.00020	0.016	0.022	< 0.0098	< 0.0098	< 0.02	0.00050	0.049	< 0.00020			

Notes

1 Denotes screening criteria source from 35 I.A.C. 620, Subpart D.

2 Denotes screening criteria source from 35 I.A.C. 742 (TACO), Appendix B, Table E.

3 Denotes screening criteria source from L EPA Toxicity Assessment Unit (Chemicals not in TACO, Tier 1 Tables).

Groundwater monitoring wells designated for sampling in the Interim Groundwater Monitoring Program, P-55R, P-66, and P-68, contained LNAPL; therefore, these wells were not sampled.

LABORATORY QUALIFIERS

J = The analyte was detected below the reporting limit. Result is estimated.

B = Indicates the analyte was detected in the method blank

*- = Indicates LCS and/or LCSD is outside acceptance limit, low biased

*1 = LCS/LCSD RPD is outside control limit

F1 = Indicates MS/MS recovery is outside acceptance limit.

H = Analyzed or extracted out of holding time criteria.

<#.## Indicates the analyte was not detected above the given reporting limit.

Data subject to in-progress analytical data review final
data will be provided in the 4th Quarter 2023 Roxana
Interim Groundwater Monitoring Program report.

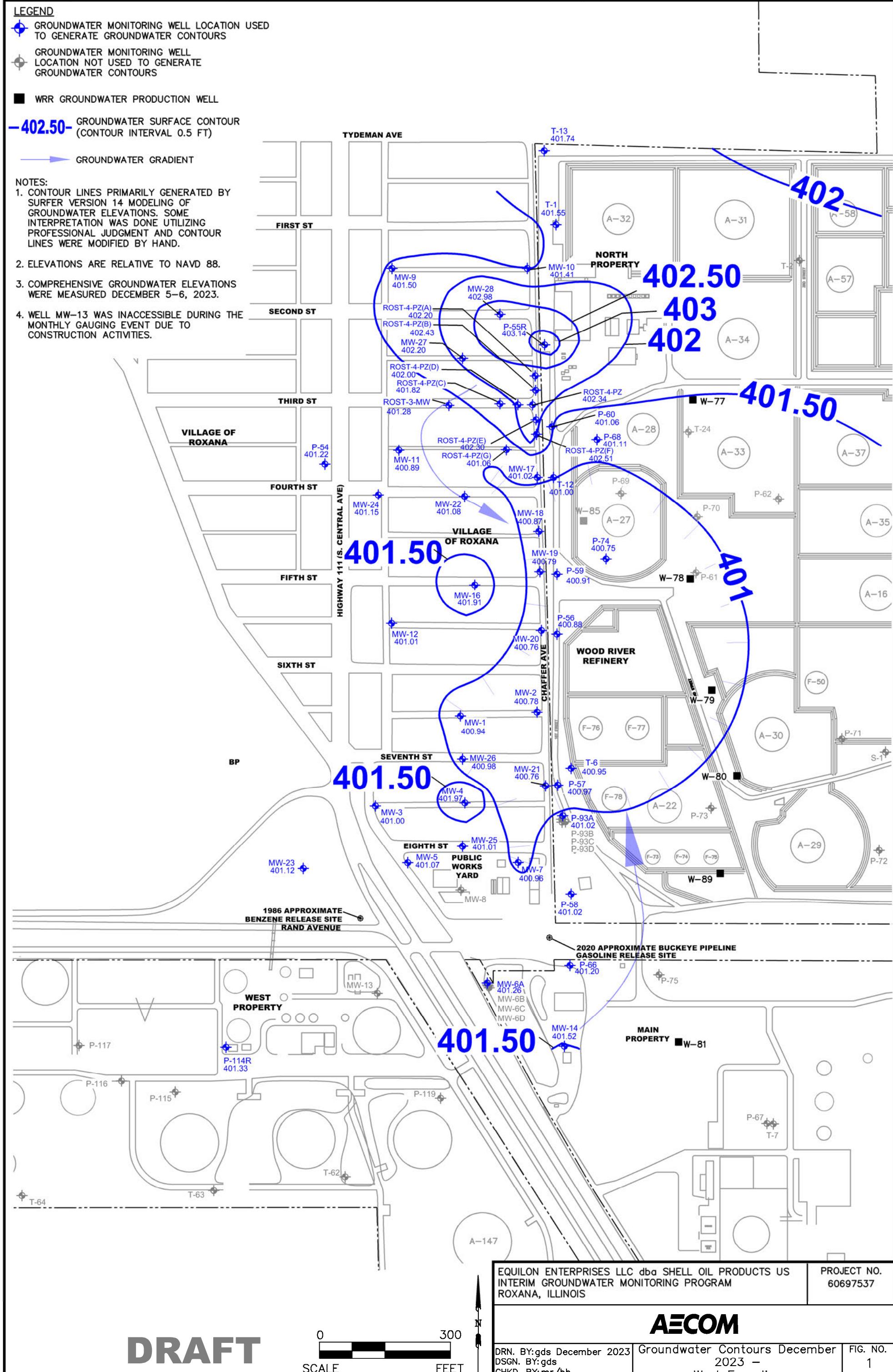
 Indicates a current exceedance of screening criteria.

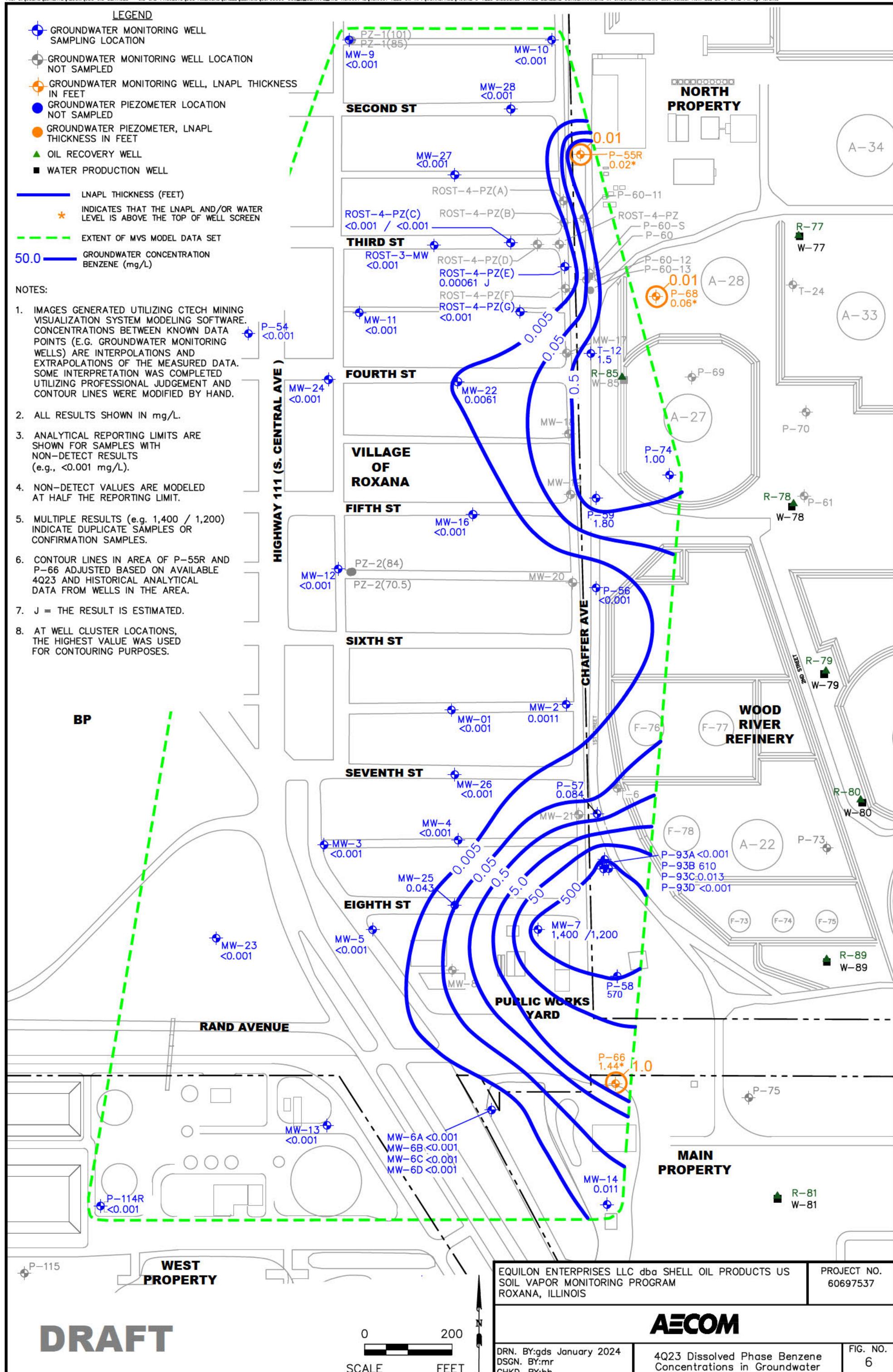
AECOM QUALIFIERS

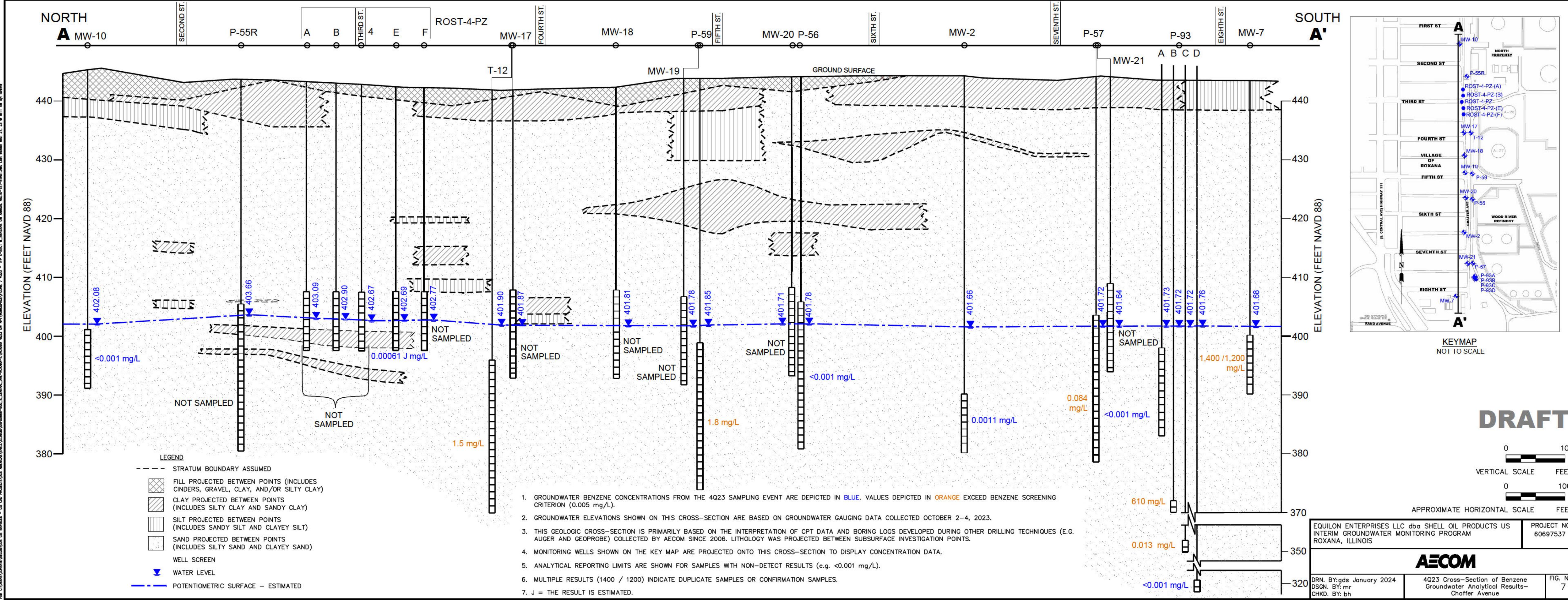
J = The result is estimated.

UJ = Estimated non-detect.

U = Result is non-detect.

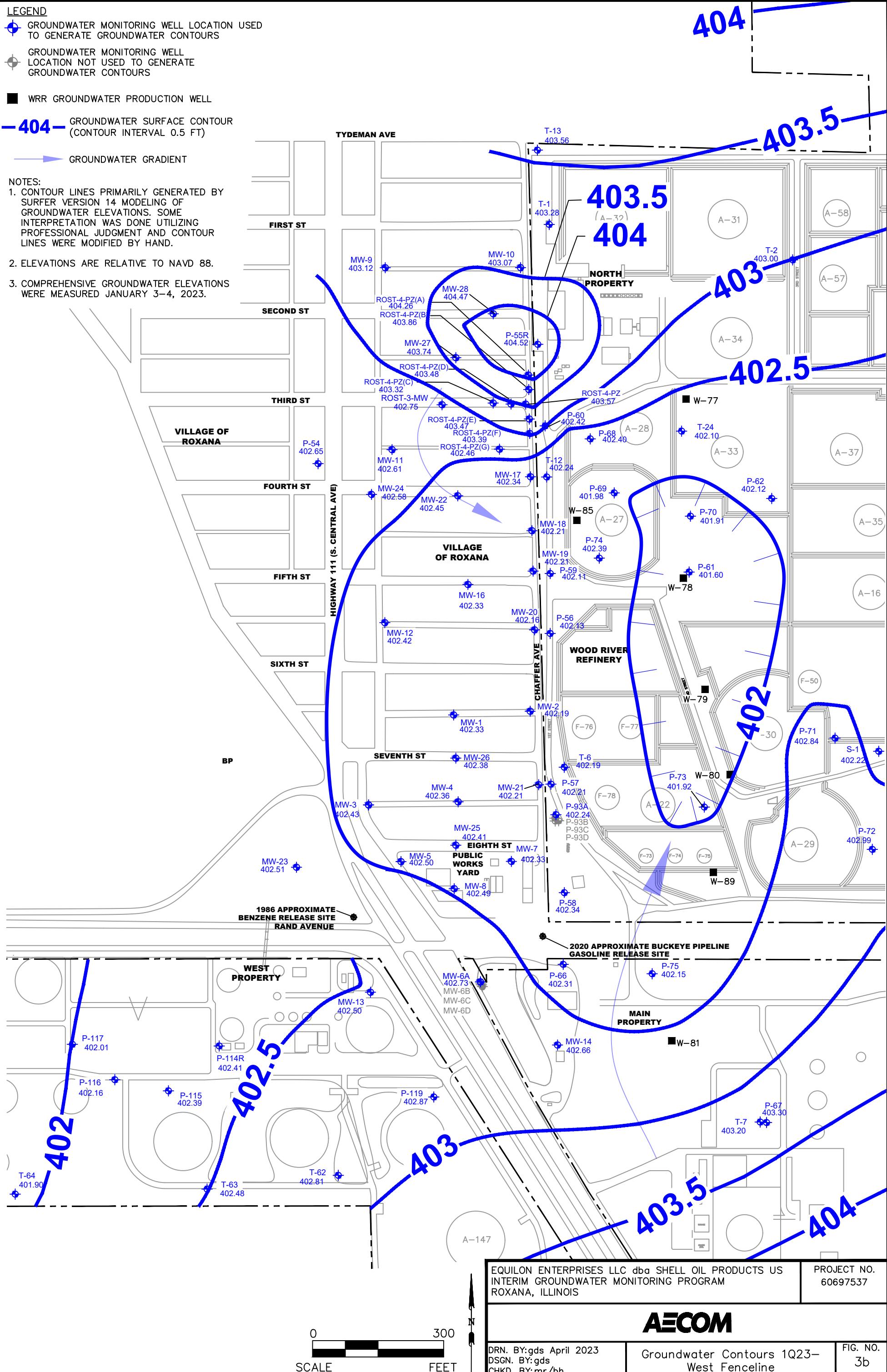






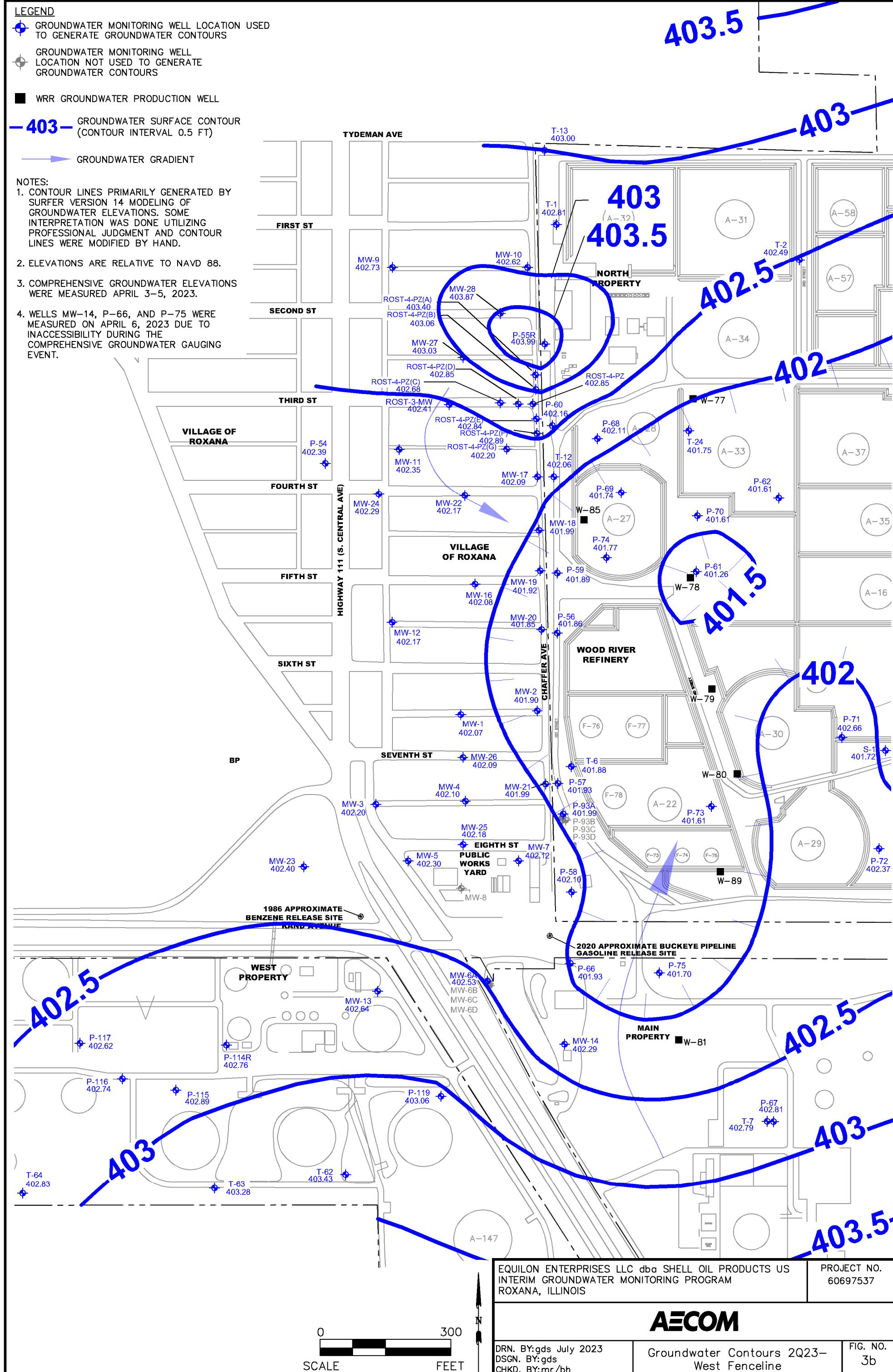
ATTACHMENT 1

File: C:\USERS\MERETAM\ACOM\GDS GIS SERVICES - GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00666-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 1Q23 GW RPT\2.WORKSPACE\PART2_20230315\FIGURE 3B GW CONTOURS 1Q23 WF.DWG Last edited: Mar. 17, 23 @ 4:36 PM by: lorente



ATTACHMENT 1

File: C:\USERS\LORENTE\AECOM\GDS GIS SERVICES - GIS CAD PROJECTS\DCS AMERICAS\SHILL\ILLINOIS\USF00666-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 2023 GW RPT\PART II\WORKSPACE\FIGURE 3B GW CONTOURS 2023.WF.DWG Last edited: Jul. 05, 23 @ 3:03 PM by: loren



ATTACHMENT 1

File: C:\USERS\HOREAA\ECOM\GIS SERVICES - GIS CAD PROJECTS\DCS AMERICAS\SHELL\ILLINOIS\USF00666-900_S_CENTRAL_AVE-ROXANA-IL\ROXANA 3023 GW RPT\WORKSPACE\FIGURE 3B GW CONTOURS 3023.WF.DWG Last edited: Sep. 27, 23 @ 10:21 AM by: horeaa

