AP – 110/
1RP-4014

GENERAL CORRESPONDENCE

2020

From:	Chavez, Carl J, EMNRD
To:	"Combs, Robert"
Cc:	Polak, Tiffany, EMNRD; Leik, Jason
Bcc:	Ames, Eric, EMNRD
Subject:	RE: Lea-Lovington Refinery AGWMR 2019 Update Request
Date:	Tuesday, September 22, 2020 9:20:00 AM

Robert, et al.,

Good morning! The New Mexico Oil Conservation Division (OCD) is currently evaluating the 2019 FWGWMR and the submitted information based on OCD's request of 9/15.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division (Albuquerque Office)
Energy Minerals and Natural Resources Department
5200 Oakland Avenue, NE
Albuquerque, New Mexico 87113
Ph. (505) 660-7923
E-mail: CarlJ.Chavez@state.nm.us
"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to:
http://www.emnrd.state.nm.us/OCD **and see "Publications")**

From: Combs, Robert <Robert.Combs@HollyFrontier.com>
Sent: Monday, September 21, 2020 4:06 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Polak, Tiffany, EMNRD <Tiffany.Polak@state.nm.us>; Leik, Jason <Jason.Leik@HollyFrontier.com>
Subject: [EXT] RE: Lea-Lovington Refinery AGWMR 2019 Update Request

Hi Carl,

Please see below for the requested information.

MW-31 LNAPL Recovery System:
Operation and maintenance (O&M) of the pneumatic skimmer pump system has continued throughout 2020. As described in Section 6.2 of the 2019 Annual Facility-Wide Groundwater Monitoring Report (2019 FWGWMR), O&M activities are conducted on a weekly basis with more intensive maintenance and optimization activities conducted on at least a quarterly basis. However, the second and third quarterly O&M and optimization events for 2020 were conducted later than usual (in June 2020 instead of April 2020, and in August 2020 instead of July 2020) due to the public health emergency and travel restrictions associated with the COVID-19 pandemic. Well MW-31 is only gauged during the quarterly events.
Fluid gauging and LNAPL recovery results from MW-31 through August 2020 are summarized in the attached table and recovery results are shown on the included graph. Approximately 184 gallons of LNAPL were recovered by the skimmer system from January 2020 through August 2020; and an approximate total of 1,021 gallons of LNAPL have been manually recovered or recovered by the

skimmer pump since February 2017. The next quarterly maintenance event is tentatively scheduled for October 8, 2020.

Tanks 1204 and 1207:

As described in the 2019 FWGWMR, leaks were discovered from product Tanks 1204 and 1207 during Praxair leak detection testing in November 2019. Leak detection testing is conducted every 5 years and no leaks were detected from these tanks during the previous testing completed in 2014. Both tanks were removed from service for internal inspection and have since been under repair for floor replacements. Analytical results of organic and inorganic constituents in groundwater to date are provided in the attached draft Tables 2 and 3, respectively. Only one semiannual groundwater monitoring event (in June 2020) and three quarterly water supply well sampling events (in January, June, and August 2020) have been conducted since 2019. Analytical results since 2014 indicate there are no impacts to groundwater associated with these tanks, as follows:

- LNAPL has not been detected in any wells in the vicinity of these tanks.
- VOCs have not been detected above the method quantitation limit (MQL) in wells immediately downgradient of these tanks since 2014 (wells MW-18, MW-25, and WW-North downgradient of Tank 1204; and wells MW-8, MW-13R, and MW-27 downgradient of Tank 1207).
- Concentrations of all constituents in wells surrounding these tanks are generally stable since 2014.

The next semiannual groundwater monitoring event is tentatively scheduled for October 8, 2020. Future groundwater monitoring event results will be used to further evaluate any potential impacts to groundwater in the vicinity of these tanks. A Final C-141 will be submitted under separate cover.

If you have any additional questions or would like to discuss, please let us know.

Thanks,
Robert

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Friday, September 18, 2020 1:04 PM
To: Combs, Robert <Robert.Combs@HollyFrontier.com>
Cc: Polak, Tiffany, EMNRD <Tiffany.Polak@state.nm.us>; Leik, Jason <Jason.Leik@HollyFrontier.com>
Subject: Lea-Lovington Refinery AGWMR 2019 Update Request

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Robert, et al.:

Okay. Thank you.

Have a nice weekend!

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division (Albuquerque Office)
Energy Minerals and Natural Resources Department
5200 Oakland Avenue, NE

Albuquerque, New Mexico 87113
Ph. (505) 660-7923
E-mail:CarlJ.Chavez@state.nm.us
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From: Combs, Robert <Robert.Combs@HollyFrontier.com>
Sent: Friday, September 18, 2020 12:31 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Polak, Tiffany, EMNRD <Tiffany.Polak@state.nm.us>; Leik, Jason <Jason.Leik@HollyFrontier.com>
Subject: [EXT] Lea-Lovington Refinery AGWMR 2019 Update Request

Carl,

Hope you're looking forward to the weekend!

I just wanted to update you that we have the data and are preparing our response to OCD's questions below. We expect to have this to you early next week.

Thanks,
Robert

Robert Combs
Environmental Specialist
HollyFrontier Navajo Refining LLC
Office: 575-746-5382
Cell: 575-308-2718
Email: Robert.Combs@HollyFrontier.com

From: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Sent: Tuesday, September 15, 2020 4:04 PM
To: Combs, Robert <Robert.Combs@HollyFrontier.com>
Cc: Polak, Tiffany, EMNRD <Tiffany.Polak@state.nm.us>
Subject: Lea-Lovington Refinery AGWMR 2019 Update Request

Robert,

Good afternoon.

Please find attached page 29 of the above subject report.

Could you please provide OCD with an update on the MW-31 LNAPL recovery system near the Asphalt Loading Rack? Also the results of the Tanks 1204 and 1207 impacts to groundwater from

releases?

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division (Albuquerque Office)
Energy Minerals and Natural Resources Department
5200 Oakland Avenue, NE
Albuquerque, New Mexico 87113
Ph. (505) 660-7923
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CONFIDENTIALITY NOTICE: This e-mail, and any attachments, may contain information that is privileged and confidential.If you received this message in error, please advise the sender immediately by reply e-mail and do not retain any paper or electronic copies of this message or any attachments.Unless expressly stated, nothing contained in this message should be construed as a digital or electronic signature or a commitment to a binding agreement.

LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
2/9/2017	105.04	98.92	6.12	3,719.22	100.52	99.81	0.71	3,719.24	7.50	7.50
3/3/2017	102.71	99.39	3.32	3,719.22	100.30	99.90	0.40	3,719.20	3.28	10.8
3/8/2017	101.21	99.57	1.64	3,719.32	99.95	99.83	0.12	3,719.32	1.19	12.0
3/15/2017	101.48	99.45	2.03	3,719.38	99.98	99.82	0.16	3,719.32	1.59	13.5
3/22/2017	101.84	99.34	2.50	3,719.41	100.07	99.99	0.08	3,719.17	1.72	15.3
3/29/2017	101.73	99.42	2.31	3,719.36	100.47	100.37	0.10	3,718.78	1.72	17.0
4/4/2017	101.79	99.47	2.32	3,719.31	100.27	100.11	0.16	3,719.03	1.85	18.8
4/12/2017	101.77	99.37	2.40	3,719.40	100.30	100.10	0.20	3,719.04	1.85	20.7
4/19/2017	101.71	99.40	2.31	3,719.38	100.27	100.17	0.10	3,718.98	1.72	22.4
4/24/2017	101.48	99.45	2.03	3,719.38	100.09	99.77	0.32	3,719.35	1.66	24.1
4/25/2017	100.68	99.67	1.01	3,719.33	99.83	99.78	0.05	3,719.38	0.96	25.0
4/26/2017	100.82	99.56	1.26	3,719.40	100.02	99.75	0.27	3,719.37	2.50	27.5
4/27/2017	100.51	99.61	0.90	3,719.41	99.88	99.73	0.15	3,719.41	1.50	29.0
4/28/2017	100.73	99.55	1.18	3,719.42	99.68	99.59	0.09	3,719.56	1.00	30.0
5/4/2017	101.44	99.52	1.92	3,719.33	100.33	99.74	0.59	3,719.33	1.45	31.5
5/11/2017	101.59	99.59	2.00	3,719.24	100.00	99.89	0.11	3,719.26	1.85	33.3
5/16/2017	101.78	99.62	2.16	3,719.19	100.30	99.83	0.47	3,719.26	1.45	34.8
5/18/2017	101.73	99.58	2.15	3,719.23	100.37	99.43	0.94	3,719.58	1.32	36.1
5/24/2017	101.85	99.38	2.47	3,719.37	100.89	99.98	0.91	3,719.04	1.72	37.8
5/31/2017	101.49	99.55	1.94	3,719.29	100.26	99.38	0.88	3,719.64	1.19	39.0
6/12/2017	103.28	99.50	3.78	3,719.03	100.80	99.96	0.84	3,719.07	2.51	41.5
6/23/2017	101.78	99.61	2.17	3,719.19	100.04	99.83	0.21	3,719.30	1.32	42.8
6/26/2017	101.71	99.70	2.01	3,719.13	100.27	99.87	0.40	3,719.23	1.45	44.3
6/29/2017	101.59	99.54	2.05	3,719.28	100.56	99.89	0.67	3,719.17	1.45	45.7
7/6/2017	100.78	99.65	1.13	3,719.33	100.02	99.63	0.39	3,719.47	1.72	47.5
7/11/2017	101.48	99.59	1.89	3,719.26	100.37	99.67	0.70	3,719.38	1.32	48.8
7/13/2017	103.58	99.91	3.67	3,718.64	101.13	100.42	0.71	3,718.63	1.98	50.8
7/18/2017	102.90	99.98	2.92	3,718.70	101.11	100.32	0.79	3,718.72	1.72	52.5
7/21/2017	101.54	99.54	2.00	3,719.29	--	--	--	--	1.32	53.8
8/22/2017	101.03	100.41	0.62	3,718.66	--	--	--	--	0.26	54.1
8/23/2017	101.01	100.04	0.97	3,718.97	--	--	--	--	0.26	54.3
8/29/2017	101.46	100.36	1.10	3,718.62	--	--	--	--	0.26	54.6
8/31/2017	101.45	100.35	1.10	3,718.63	--	--	--	--	0.26	54.9
9/5/2017	101.35	100.31	1.04	3,718.68	--	--	--	--	0.26	55.1
9/7/2017	101.13	100.25	0.88	3,718.77	--	--	--	--	0.26	55.4
9/11/2017	101.47	100.36	1.11	3,718.62	--	--	--	--	0.26	55.6
9/12/2017	101.45	100.35	1.10	3,718.63	--	--	--	--	0.26	55.9
9/14/2017	101.44	100.36	1.08	3,718.63	--	--	--	--	0.26	56.2
9/18/2017	101.47	100.27	1.20	3,718.70	--	--	--	--	0.26	56.4
9/19/2017	101.38	100.23	1.15	3,718.75	--	--	--	--	0.26	56.7
9/20/2017	101.44	100.32	1.12	3,718.66	--	--	--	--	0.26	57.0
9/22/2017	101.40	100.28	1.12	3,718.70	--	--	--	--	0.26	57.2
9/25/2017	101.47	100.25	1.22	3,718.71	--	--	--	--	0.26	57.5

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HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
9/26/2017	101.45	100.36	1.09	3,718.63	--	--	--	--	0.26	57.8
9/27/2017	101.45	100.35	1.10	3,718.63	--	--	--	--	0.26	58.0
9/28/2017	101.13	100.20	0.93	3,718.81	--	--	--	--	0.26	58.3
10/2/2017	101.47	100.25	1.22	3,718.71	--	--	--	--	0.26	58.5
10/3/2017	101.45	100.36	1.09	3,718.63	--	--	--	--	0.26	58.8
10/4/2017	102.67	100.14	2.53	3,718.60	--	--	--	--	0.26	59.1
10/5/2017	102.73	100.10	2.63	3,718.63	--	--	--	--	0.26	59.3
10/9/2017	101.44	100.36	1.08	3,718.63	--	--	--	--	0.26	59.6
10/10/2017	101.46	100.36	1.10	3,718.62	--	--	--	--	0.26	59.9
10/12/2017	102.67	100.14	2.53	3,718.60	--	--	--	--	0.26	60.1
10/13/2017	102.50	100.05	2.45	3,718.71	--	--	--	--	0.26	60.4
10/16/2017	102.46	100.05	2.41	3,718.71	--	--	--	--	0.26	60.7
10/17/2017	102.56	100.23	2.33	3,718.55	--	--	--	--	0.26	60.9
10/18/2017	102.22	100.23	1.99	3,718.61	--	--	--	--	0.26	61.2
10/19/2017	102.71	99.89	2.82	3,718.81	--	--	--	--	0.26	61.5
10/23/2017	102.62	100.15	2.47	3,718.60	--	--	--	--	0.26	61.7
10/24/2017	101.87	99.57	2.30	3,719.21	--	--	--	--	0.26	62.0
10/25/2017	101.88	99.87	2.01	3,718.96	--	--	--	--	0.26	62.2
10/31/2017	102.82	100.00	2.82	3,718.70	--	--	--	--	0.26	62.5
11/1/2017	102.70	100.02	2.68	3,718.70	--	--	--	--	0.26	62.8
11/2/2017	102.72	100.00	2.72	3,718.71	--	--	--	--	0.26	63.0
11/3/2017	102.41	100.05	2.36	3,718.72	--	--	--	--	0.26	63.3
11/6/2017	102.44	100.13	2.31	3,718.65	--	--	--	--	0.26	63.6
11/7/2017	102.23	100.20	2.03	3,718.63	--	--	--	--	0.26	63.8
11/8/2017	102.43	100.25	2.18	3,718.55	--	--	--	--	0.26	64.1
11/13/2017	102.60	100.07	2.53	3,718.67	--	--	--	--	0.26	64.4
11/14/2017	102.35	100.12	2.23	3,718.67	--	--	--	--	0.26	64.6
11/15/2017	102.10	100.17	1.93	3,718.68	--	--	--	--	0.26	64.9
11/16/2017	101.88	100.21	1.67	3,718.68	--	--	--	--	0.26	65.2
11/17/2017	101.85	100.27	1.58	3,718.63	--	--	--	--	0.26	65.4
11/20/2017	102.05	100.15	1.90	3,718.70	101.12	100.40	0.72	3,718.65	1.45	66.9
11/22/2017	101.20	100.40	0.80	3,718.64	100.94	100.45	0.49	3,718.64	0.53	67.4
11/28/2017	101.05	100.47	0.58	3,718.60	--	--	--	--	0.26	67.7
11/29/2017	101.26	100.58	0.68	3,718.48	--	--	--	--	0.26	67.9
11/30/2017	101.27	100.56	0.71	3,718.49	--	--	--	--	0.26	68.2
12/1/2017	101.27	100.55	0.72	3,718.50	--	--	--	--	0.26	68.5
12/4/2017	101.30	100.67	0.63	3,718.39	--	--	--	--	0.26	68.7
12/5/2017	101.37	100.66	0.71	3,718.39	--	--	--	--	0.26	69.0
12/6/2017	101.23	100.50	0.73	3,718.55	--	--	--	--	0.26	69.2
12/7/2017	101.33	100.54	0.79	3,718.50	--	--	--	--	0.26	69.5
12/8/2017	101.28	100.56	0.72	3,718.49	--	--	--	--	0.26	69.8
12/12/2017	102.78	100.12	2.66	3,718.60	--	--	--	--	0.26	70.0
12/13/2017	102.75	100.09	2.66	3,718.63	--	--	--	--	0.26	70.3

LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
12/14/2017	--	--	--	--	102.66	100.26	2.40	3,718.51	1.98	72.3
12/15/2017	101.28	100.48	0.80	3,718.56	--	--	--	--	0.26	72.6
12/18/2017	101.64	100.38	1.26	3,718.58	--	--	--	--	0.26	72.8
12/19/2017	101.60	100.34	1.26	3,718.62	--	--	--	--	0.26	73.1
12/21/2017	101.75	100.35	1.40	3,718.58	--	--	--	--	0.26	73.3
12/22/2017	101.66	100.43	1.23	3,718.53	--	--	--	--	0.26	73.6
1/2/2018	104.05	99.85	4.20	3,718.61	--	--	--	--	0.26	73.9
1/3/2018	104.10	99.93	4.17	3,718.54	--	--	--	--	0.26	74.1
1/4/2018	104.13	99.89	4.24	3,718.57	--	--	--	--	0.26	74.4
1/9/2018	104.14	99.88	4.26	3,718.57	--	--	--	--	0.26	74.7
1/12/2018	104.15	99.90	4.25	3,718.55	--	--	--	--	0.26	74.9
1/18/2018	104.63	99.82	4.81	3,718.54	--	--	--	--	0.26	75.2
1/19/2018	104.66	99.84	4.82	3,718.52	--	--	--	--	0.26	75.5
1/23/2018	104.68	99.93	4.75	3,718.44	--	--	--	--	0.26	75.7
1/26/2018	104.60	99.86	4.74	3,718.51	--	--	--	--	0.26	76.0
1/31/2018	105.51	99.70	5.81	3,718.49	--	--	--	--	0.26	76.2
2/2/2018	105.55	99.78	5.77	3,718.42	--	--	--	--	0.26	76.5
2/9/2018	--	--	--	--	105.68	99.35	6.33	3,718.75	1.72	78.2
2/14/2018	--	--	--	--	104.67	99.43	5.24	3,718.86	1.59	79.8
2/21/2018	--	--	--	--	105.51	99.73	5.78	3,718.47	1.45	81.3
3/6/2018	--	--	--	--	105.78	100.43	5.35	3,717.84	1.59	82.9
3/12/2018	--	--	--	--	105.77	100.35	5.42	3,717.91	1.32	84.2
3/16/2018	--	--	--	--	105.48	100.29	5.19	3,718.01	1.45	85.6
3/20/2018	--	--	--	--	106.26	99.75	6.51	3,718.32	1.06	86.7
3/21/2018	106.02	99.77	6.25	3,718.35	101.53	100.71	0.82	3,718.32	1.19	87.9
3/22/2018	102.04	100.06	1.98	3,718.78	101.38	100.78	0.60	3,718.29	1.32	89.2
3/26/2018	104.53	100.13	4.40	3,718.30	101.82	100.69	1.13	3,718.29	1.59	90.8
3/27/2018	102.45	100.06	2.39	3,718.71	101.53	100.79	0.74	3,718.26	1.19	92.0
3/28/2018	102.28	100.56	1.72	3,718.32	101.49	100.73	0.76	3,718.31	1.06	93.0
4/5/2018	105.55	100.05	5.50	3,718.19	101.34	100.90	0.44	3,718.20	5.00	98.0
4/11/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.72	99.7
4/16/2018	105.03	100.26	4.77	3,718.11	101.73	100.89	0.84	3,718.14	3.70	103
4/19/2018	105.15	100.37	4.78	3,718.00	101.89	100.81	1.08	3,718.18	2.64	106
4/20/2018	104.05	100.32	3.73	3,718.22	101.53	100.73	0.80	3,718.31	2.77	109
4/24/2018	105.19	100.38	4.81	3,717.98	101.79	100.88	0.91	3,718.14	3.96	113
4/25/2018	104.20	100.29	3.91	3,718.22	101.39	100.79	0.60	3,718.28	3.43	116
4/30/2018	105.17	100.40	4.77	3,717.97	101.67	100.80	0.87	3,718.22	3.96	120
5/1/2018	104.67	100.52	4.15	3,717.95	101.49	100.03	1.46	3,718.89	2.77	123
5/3/2018	104.55	100.58	3.97	3,717.92	101.40	100.67	0.73	3,718.38	3.17	126
5/8/2018	105.09	100.41	4.68	3,717.97	101.77	100.08	1.69	3,718.81	1.59	128
5/9/2018	106.02	99.69	6.33	3,718.41	101.56	100.77	0.79	3,718.27	1.85	130
5/10/2018	105.67	99.70	5.97	3,718.47	101.64	100.71	0.93	3,718.30	2.25	132
5/14/2018	104.63	99.82	4.81	3,718.54	101.55	100.87	0.68	3,718.19	2.64	134

LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
5/16/2018	104.32	100.58	3.74	3,717.96	101.49	100.98	0.51	3,718.10	2.25	137
5/17/2018	102.54	99.39	3.15	3,719.25	100.77	99.90	0.87	3,719.12	1.85	139
5/18/2018	102.09	100.1	1.99	3,718.74	101.35	100.81	0.54	3,718.27	1.85	140
5/21/2018	102.77	99.39	3.38	3,719.21	100.37	99.98	0.39	3,719.12	4.09	145
5/23/2018	101.78	99.57	2.21	3,719.23	99.89	99.83	0.06	3,719.33	1.85	146
5/24/2018	101.48	99.47	2.01	3,719.36	99.95	99.88	0.07	3,719.28	1.85	148
5/25/2018	101.44	99.61	1.83	3,719.25	100.29	99.83	0.46	3,719.26	1.98	150
5/30/2018	102.71	99.37	3.34	3,719.24	101.31	99.79	1.52	3,719.12	1.72	152
6/1/2018	101.79	99.47	2.32	3,719.31	100.32	99.89	0.43	3,719.21	1.85	154
6/4/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.45	155
6/6/2018	106.51	100.53	5.98	3,717.63	102.16	101.38	0.78	3,717.66	1.45	157
6/7/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.59	158
6/12/2018	105.03	100.26	4.77	3,718.11	101.73	100.29	1.44	3,718.64	1.59	160
6/14/2018	102.73	99.42	3.31	3,719.19	101.73	100.47	1.26	3,718.49	1.59	161
6/19/2018	101.44	99.54	1.90	3,719.31	100.33	99.74	0.59	3,719.33	1.72	163
6/20/2018	101.48	99.45	2.03	3,719.38	99.98	99.82	0.16	3,719.32	1.85	165
6/25/2018	101.20	100.4	0.80	3,718.64	100.94	100.45	0.49	3,718.64	1.85	167
6/27/2018	101.77	99.37	2.40	3,719.40	100.27	100.07	0.20	3,719.07	1.32	168
6/29/2018	101.57	99.82	1.75	3,719.06	100.73	99.87	0.86	3,719.16	1.72	170
7/3/2018	101.66	99.92	1.74	3,718.96	100.64	100.10	0.54	3,718.98	1.32	171
7/5/2018	101.45	99.79	1.66	3,719.10	100.32	99.81	0.51	3,719.27	1.32	173
7/10/2018	101.47	99.69	1.78	3,719.18	100.27	99.88	0.39	3,719.22	1.06	174
7/20/2018	101.21	99.57	1.64	3,719.32	100.21	99.83	0.38	3,719.28	1.19	175
7/25/2018	101.77	99.37	2.40	3,719.40	100.30	100.10	0.20	3,719.04	1.45	176
7/27/2018	101.78	99.62	2.16	3,719.19	100.30	99.83	0.47	3,719.26	1.32	178
7/30/2018	106.75	100.90	5.85	3,717.29	101.99	101.75	0.24	3,717.38	9.25	187
8/7/2018	101.48	99.45	2.03	3,719.38	100.09	99.77	0.32	3,719.35	1.32	188
8/10/2018	100.78	99.65	1.13	3,719.33	100.02	99.63	0.39	3,719.47	1.45	190
8/14/2018	103.58	99.91	3.67	3,718.64	101.13	100.42	0.71	3,718.63	1.59	191
8/16/2018	104.18	100.36	3.82	3,718.17	101.76	100.84	0.92	3,718.18	1.32	192
8/22/2018	101.73	99.58	2.15	3,719.23	100.37	99.43	0.94	3,719.58	1.59	194
8/23/2018	101.59	99.54	2.05	3,719.28	101.56	99.89	1.67	3,719.00	1.45	196
8/31/2018	106.02	99.77	6.25	3,718.35	101.53	100.71	0.82	3,718.32	1.72	197
9/3/2018	104.67	100.52	4.15	3,717.95	101.49	100.03	1.46	3,718.89	1.59	199
9/6/2018	105.67	99.70	5.97	3,718.47	101.64	100.71	0.93	3,718.30	1.72	201
9/11/2018	102.71	99.29	3.42	3,719.30	100.30	99.90	0.40	3,719.20	1.98	203
9/12/2018	101.77	99.37	2.40	3,719.40	100.30	100.10	0.20	3,719.04	1.59	204
9/19/2018	106.59	101.30	5.29	3,716.98	101.77	100.08	1.69	3,718.81	1.85	206
9/26/2018	104.57	101.46	3.11	3,717.19	102.55	100.20	2.35	3,718.57	1.85	208
10/1/2018	106.82	101.07	5.75	3,717.13	--	--	--	--	0.26	208
10/4/2018	106.78	101.09	5.69	3,717.12	102.77	101.91	0.86	3,717.12	4.76	213
10/5/2018	104.15	101.69	2.46	3,717.07	102.44	101.98	0.46	3,717.11	2.51	215
10/9/2018	105.96	101.36	4.60	3,717.04	102.64	102.01	0.63	3,717.05	4.49	220

LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
10/11/2018	105.12	101.55	3.57	3,717.02	102.57	102.10	0.47	3,716.99	3.43	223
10/16/2018	105.63	101.27	4.36	3,717.17	102.32	102.20	0.12	3,716.95	4.49	228
10/18/2018	106.58	101.63	4.95	3,716.71	102.87	102.53	0.34	3,716.58	3.70	231
10/23/2018	105.83	101.37	4.46	3,717.05	102.85	102.68	0.17	3,716.46	3.70	235
10/25/2018	105.67	101.73	3.94	3,716.78	101.86	101.53	0.33	3,717.58	4.49	240
10/30/2018	104.68	101.43	3.25	3,717.19	102.74	102.59	0.15	3,716.55	3.70	243
11/1/2018	105.23	101.77	3.46	3,716.82	102.56	101.98	0.58	3,717.09	3.70	247
11/6/2018	105.55	101.96	3.59	3,716.61	102.54	102.38	0.16	3,716.76	4.23	251
11/8/2018	105.78	101.68	4.10	3,716.80	102.68	102.53	0.15	3,716.61	2.64	254
11/13/2018	105.66	101.67	3.99	3,716.83	102.53	102.36	0.17	3,716.78	2.64	257
11/14/2018	105.23	101.78	3.45	3,716.81	102.47	102.26	0.21	3,716.87	3.96	260
11/20/2018	106.93	101.31	5.62	3,716.91	104.25	101.85	2.40	3,716.92	3.96	264
11/27/2018	106.59	101.4	5.19	3,716.90	102.55	101.78	0.77	3,717.26	3.96	268
11/29/2018	106.87	101.17	5.70	3,717.04	102.62	101.75	0.87	3,717.27	3.96	272
12/4/2018	105.87	101.36	4.51	3,717.05	102.59	101.83	0.76	3,717.21	2.64	275
12/5/2018	105.67	101.37	4.30	3,717.08	102.79	101.76	1.03	3,717.24	3.96	279
12/11/2018	106.48	101.66	4.82	3,716.70	102.86	101.82	1.04	3,717.17	3.96	283
12/12/2018	105.79	101.83	3.96	3,716.67	102.66	101.92	0.74	3,717.13	4.49	287
12/18/2018	105.87	101.56	4.31	3,716.88	102.55	101.36	1.19	3,717.61	3.96	291
12/20/2018	105.79	101.46	4.33	3,716.98	102.36	101.45	0.91	3,717.57	2.64	294
12/28/2018	107	101.2	5.80	3,716.99	103.59	101.90	1.69	3,716.99	5.28	299
1/8/2019	107.88	101.75	6.13	3,716.39	102.59	101.98	0.61	3,717.09	5.28	305
1/10/2019	106.86	101.68	5.18	3,716.62	102.76	101.73	1.03	3,717.27	6.60	311
1/15/2019	106.56	101.74	4.82	3,716.62	102.83	101.76	1.07	3,717.23	6.60	318
1/17/2019	106.78	101.62	5.16	3,716.68	102.62	101.86	0.76	3,717.18	5.28	323
1/23/2019	106.52	101.47	5.05	3,716.85	102.65	101.72	0.93	3,717.29	4.49	328
1/24/2019	106.72	101.45	5.27	3,716.83	102.73	101.82	0.91	3,717.20	5.28	333
1/30/2019	106.78	101.64	5.14	3,716.66	102.35	101.86	0.49	3,717.23	7.13	340
1/31/2019	105.89	101.63	4.26	3,716.82	102.72	101.84	0.88	3,717.18	4.49	345
2/5/2019	106.63	101.83	4.80	3,716.53	102.36	101.85	0.51	3,717.23	5.28	350
2/7/2019	105.87	101.63	4.24	3,716.83	102.83	101.86	0.97	3,717.15	4.49	354
2/12/2019	105.67	101.78	3.89	3,716.74	102.73	101.23	1.50	3,717.69	5.28	360
2/14/2019	105.73	101.63	4.10	3,716.85	102.82	101.93	0.89	3,717.09	3.96	364
2/20/2019	105.32	101.53	3.79	3,717.00	102.37	101.86	0.51	3,717.22	4.49	368
2/21/2019	105.33	101.86	3.47	3,716.73	102.83	102.46	0.37	3,716.65	3.96	372
2/26/2019	106.98	101.26	5.72	3,716.95	102.78	101.89	0.89	3,717.13	3.96	376
2/28/2019	105.86	101.75	4.11	3,716.73	102.63	101.64	0.99	3,717.36	2.64	379
3/7/2019	105.68	101.56	4.12	3,716.92	102.68	101.57	1.11	3,717.41	3.96	383
3/13/2019	105.47	101.56	3.91	3,716.95	102.56	101.57	0.99	3,717.43	3.96	387
3/14/2019	105.52	101.53	3.99	3,716.97	102.47	101.83	0.64	3,717.23	4.49	391
3/20/2019	105.63	101.58	4.05	3,716.91	102.76	101.89	0.87	3,717.13	5.28	396
3/21/2019	102.05	100.15	1.90	3,718.70	101.14	100.40	0.74	3,718.65	3.96	400
3/25/2019	102.77	99.88	2.89	3,718.80	101.30	99.96	1.34	3,718.98	3.96	404

LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

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	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
3/27/2019	102.45	100.05	2.40	3,718.72	101.57	100.58	0.99	3,718.42	2.64	407
4/1/2019 [3]	107.98	102.33	5.65	3,715.89	--	--	--	--	--	--
5/22/2019	108.14	102.56	5.58	3,715.67	--	--	--	--	35.0	442
5/24/2019	--	--	--	--	--	--	--	--	2.00	444
5/29/2019	--	--	--	--	--	--	--	--	14.0	458
5/31/2019	--	--	--	--	--	--	--	--	6.00	464
6/3/2019	--	--	--	--	--	--	--	--	5.00	469
6/7/2019	--	--	--	--	--	--	--	--	6.50	475
6/12/2019	--	--	--	--	--	--	--	--	9.00	484
6/14/2019	--	--	--	--	--	--	--	--	3.50	488
6/17/2019	105.61	103.21	2.40	3,715.56	--	--	--	--	4.00	492
6/20/2019	--	--	--	--	--	--	--	--	4.00	496
6/26/2019	--	--	--	--	--	--	--	--	9.00	505
7/2/2019	--	--	--	--	--	--	--	--	7.00	512
7/5/2019	--	--	--	--	--	--	--	--	0.00	512
7/11/2019	108.33	102.96	5.37	3,715.31	--	--	--	--	3.00	515
7/12/2019	--	--	--	--	--	--	--	--	3.00	518
7/15/2019	--	--	--	--	--	--	--	--	2.00	520
7/19/2019	--	--	--	--	--	--	--	--	6.00	526
7/23/2019	--	--	--	--	--	--	--	--	6.00	532
7/26/2019	--	--	--	--	--	--	--	--	3.00	535
7/31/2019	--	--	--	--	--	--	--	--	1.00	536
8/2/2019	--	--	--	--	--	--	--	--	6.00	542
8/7/2019	--	--	--	--	--	--	--	--	4.00	546
8/9/2019	--	--	--	--	--	--	--	--	2.00	548
8/13/2019	--	--	--	--	--	--	--	--	3.00	551
8/15/2019	--	--	--	--	--	--	--	--	2.00	553
8/20/2019	--	--	--	--	--	--	--	--	3.00	556
8/22/2019	--	--	--	--	--	--	--	--	2.00	558
8/29/2019	105.78	103.79	1.99	3,715.05	--	--	--	--	4.00	562
8/30/2019	--	--	--	--	--	--	--	--	8.00	570
9/3/2019	--	--	--	--	--	--	--	--	24.0	594
9/6/2019	--	--	--	--	--	--	--	--	15.0	609
9/10/2019	104.95	104.08	0.87	3,714.94	--	--	--	--	0.00	609
9/16/2019	--	--	--	--	--	--	--	--	35.0	644
9/20/2019	--	--	--	--	--	--	--	--	19.0	663
9/23/2019	--	--	--	--	--	--	--	--	21.0	684
9/27/2019	--	--	--	--	--	--	--	--	21.0	705
9/30/2019	--	--	--	--	--	--	--	--	17.0	722
10/3/2019	--	--	--	--	--	--	--	--	20.0	742
10/8/2019	--	--	--	--	--	--	--	--	30.0	772
10/10/2019	--	--	--	--	--	--	--	--	12.0	784
10/14/2019	--	--	--	--	--	--	--	--	19.0	803

LNAPL Gauging and Recovery Results, Monitoring Well MW-31
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

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	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
10/17/2019	--	--	--	--	--	--	--	--	2.25	805
10/21/2019	--	--	--	--	--	--	--	--	0.00	805
10/24/2019	104.97	104.32	0.65	3,715.77	--	--	--	--	0.00	805
11/15/2019	--	--	--	--	--	--	--	--	0.00	805
11/18/2019	--	--	--	--	--	--	--	--	0.00	805
11/22/2019	--	--	--	--	--	--	--	--	2.00	807
11/25/2019	--	--	--	--	--	--	--	--	4.00	811
11/26/2019	--	--	--	--	--	--	--	--	0.00	811
12/2/2019	--	--	--	--	--	--	--	--	4.00	815
12/6/2019	--	--	--	--	--	--	--	--	3.00	818
12/10/2019	--	--	--	--	--	--	--	--	4.00	822
12/23/2019	--	--	--	--	--	--	--	--	12.0	834
12/26/2019	--	--	--	--	--	--	--	--	3.00	837
1/6/2020	--	--	--	--	--	--	--	--	12.00	849
1/10/2020	--	--	--	--	--	--	--	--	7.00	856
1/13/2020	--	--	--	--	--	--	--	--	1.50	858
1/15/2020	104.87	104.51	0.36	3,714.60	--	--	--	--	2.50	860
1/20/2020	--	--	--	--	--	--	--	--	3.00	863
1/31/2020	--	--	--	--	--	--	--	--	9.00	872
2/4/2020	--	--	--	--	--	--	--	--	3.00	875
2/6/2020	--	--	--	--	--	--	--	--	2.00	877
2/12/2020	--	--	--	--	--	--	--	--	4.50	882
2/14/2020	--	--	--	--	--	--	--	--	1.00	883
2/17/2020	--	--	--	--	--	--	--	--	3.00	886
2/21/2020	--	--	--	--	--	--	--	--	3.00	889
2/24/2020	--	--	--	--	--	--	--	--	2.50	891
2/28/2020	--	--	--	--	--	--	--	--	3.50	895
3/2/2020	--	--	--	--	--	--	--	--	1.50	896
3/6/2020	--	--	--	--	--	--	--	--	2.00	898
3/9/2020	--	--	--	--	--	--	--	--	3.00	901
3/13/2020	--	--	--	--	--	--	--	--	3.00	904
3/17/2020	--	--	--	--	--	--	--	--	3.00	907
3/20/2020	--	--	--	--	--	--	--	--	2.00	909
3/30/2020	--	--	--	--	--	--	--	--	8.00	917
4/2/2020	--	--	--	--	--	--	--	--	2.00	919
4/7/2020	--	--	--	--	--	--	--	--	3.00	922
4/9/2020	--	--	--	--	--	--	--	--	1.00	923
4/13/2020	--	--	--	--	--	--	--	--	2.00	925
4/16/2020	--	--	--	--	--	--	--	--	2.00	927
4/20/2020	--	--	--	--	--	--	--	--	6.00	933
4/24/2020	--	--	--	--	--	--	--	--	2.00	935
4/27/2020	--	--	--	--	--	--	--	--	3.00	938
5/1/2020	--	--	--	--	--	--	--	--	4.00	942

LNAPL Gauging and Recovery Results, Monitoring Well MW-31

HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

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Date	Prior to Bailing or After Removing Skimmer[1,3]				After Bailing				LNAPL Volume Recovered (gal)	Cumulative LNAPL Recovered (gal)
	Initial Depth to Water (ft btoc)	Initial Depth to LNAPL (ft btoc)	Initial Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)	Final Depth to Water (ft btoc)	Final Depth to LNAPL (ft btoc)	Final Apparent LNAPL Thickness (feet)	Corrected Groundwater Elevation[2] (ft amsl)		
5/4/2020	--	--	--	--	--	--	--	--	3.00	945
5/8/2020	--	--	--	--	--	--	--	--	3.00	948
5/12/2020	--	--	--	--	--	--	--	--	4.00	952
5/15/2020	--	--	--	--	--	--	--	--	2.00	954
5/18/2020	--	--	--	--	--	--	--	--	4.00	958
5/22/2020	--	--	--	--	--	--	--	--	2.00	960
5/26/2020	--	--	--	--	--	--	--	--	3.00	963
5/29/2020	--	--	--	--	--	--	--	--	4.00	967
6/1/2020	--	--	--	--	--	--	--	--	2.00	969
6/5/2020	--	--	--	--	--	--	--	--	3.00	972
6/8/2020	--	--	--	--	--	--	--	--	2.00	974
6/15/2020	--	--	--	--	--	--	--	--	6.00	980
6/18/2020	107.28	104.41	2.87	3,714.28	--	--	--	--	3.00	983
6/23/2020	--	--	--	--	--	--	--	--	0.00	983
6/26/2020	--	--	--	--	--	--	--	--	1.00	984
6/29/2020	--	--	--	--	--	--	--	--	2.00	986
7/2/2020	--	--	--	--	--	--	--	--	1.00	987
7/7/2020	--	--	--	--	--	--	--	--	3.00	990
7/10/2020	--	--	--	--	--	--	--	--	2.00	992
7/13/2020	--	--	--	--	--	--	--	--	2.00	994
8/19/2020	109.27	104.48	4.79	3,713.88	--	--	--	--	--	--
8/24/2020	--	--	--	--	--	--	--	--	27.00	1,021

Notes:

LNAPL = Light Non-Aqueous Phase Liquid

ft btoc = feet below top of casing

ft amsl = feet above mean sea level

-- = not measured

[1] Passive skimmer (Petro-Bailer™) installed in well on August 17, 2017. Passive skimmer prohibits fluid gauging prior to removal from well.

[2] Groundwater elevation corrected for the presence of LNAPL using a specific gravity of 0.8317. Top of well casing elevation = 3,819.17 feet amsl.

[3] Pneumatic skimmer pump system (Geotech SpOILer System) installed on April 1, 2019. Fluid gauging conducted after skimmer pump removed from well and well equilibrates.

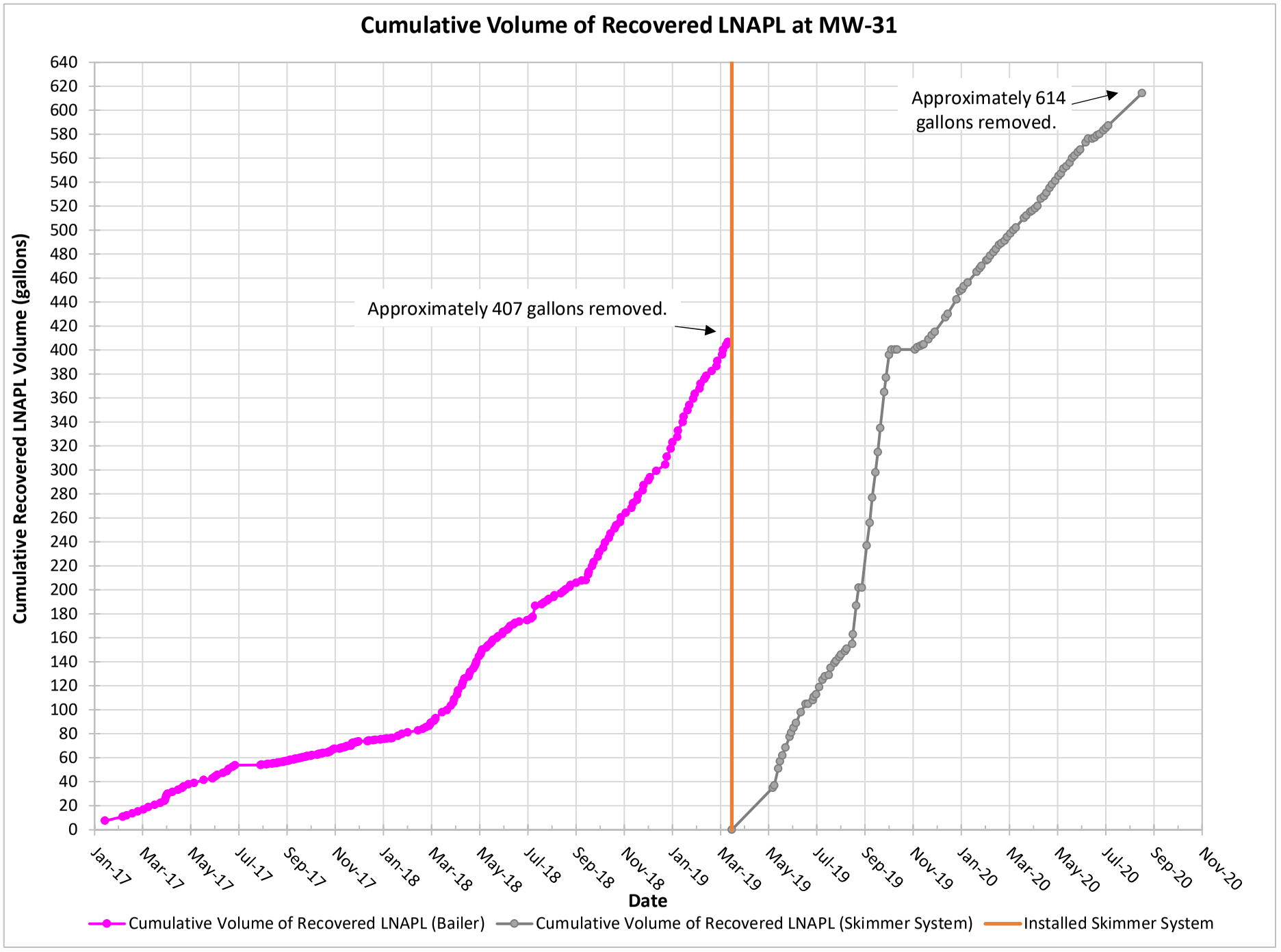
Cumulative Volume of Recovered LNAPL at MW-31
Cumulative Recovered LNAPL Volume (gallons)
640
620
600
580
560
540
520
500
480
460
440
420
400
380
360
340
320
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
Approximately 407 gallons removed.
Approximately 614 gallons removed.
Jan-17
Mar-17
May-17
Jul-17
Sep-17
Nov-17
Jan-18
Mar-18
May-18
Jul-18
Sep-18
Nov-18
Jan-19
Mar-19
May-19
Jul-19
Sep-19
Nov-19
Jan-20
Mar-20
May-20
Jul-20
Sep-20
Nov-20
Date
Cumulative Volume of Recovered LNAPL (Bailer)
Cumulative Volume of Recovered LNAPL (Skimmer System)
Installed Skimmer System

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-1	06/19/2009		<0.0050	0.012	<0.0050	0.031	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	<0.00020	<0.00020	<0.00020	- -	- -
	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/01/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/27/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/09/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000293 J	- -	- -	- -	- -	- -	- -	- -
	06/18/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000296 J	- -	- -	- -	- -	- -	- -	- -
MW-2	06/22/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.00084 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000696 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/07/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000942 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00293 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00719	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00812	<0.000372	<0.000372	<0.000332	<0.000311	0.00403 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00385 J	0.00228	0.00228	<0.000332	<0.000311	0.00721 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00214 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000912 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00260 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00260 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000728 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000475 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-3	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	02/26/2015	FD	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/07/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-4	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/13/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00044	0.00044	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.005	<0.0050	<0.0002	<0.0002	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00267 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00302 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000574 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000493 J	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-5	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/24/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000382 J	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.366
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00154 JB	0.0899 JB	0.0397 J
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00240 JB	<0.0314	<0.0247
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000880 J	0.0494 JB	0.0620 J
MW-6	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	0.0075	- -	- -	- -	- -	- -	- -	- -	- -
	06/18/2009	FD	<0.0050	<0.0050	<0.0050	<0.015	0.0074	- -	- -	- -	- -	- -	- -	- -	- -
	02/02/2010		<0.0050	0.013	<0.0050	<0.015	0.0099	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	0.015	<0.0050	<0.015	<0.0050	- -	- -	0.0017	- -	0.0017	<0.0010	- -	- -
	03/01/2011		<0.0050	0.018	<0.0050	<0.015	0.013	- -	0.0094	0.0062	<0.00020	0.0032	0.0255	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.0008	0.0008	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00116	0.00052	0.00064	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00292	0.00092	0.0020	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00123 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000859 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	06/18/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
MW-7	06/19/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/02/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/01/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/27/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000507 J	- -	- -
MW-8	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.0020	<0.0020	- -	<0.0020	<0.0020	- -	- -
	07/27/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000990 J	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-9	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/01/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-10	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/13/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/19/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	<0.00020	<0.00020	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	0.00028	0.00028	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00032	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-11	06/18/2009		0.10	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		0.20 E	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		0.078	0.021	<0.0050	<0.015	<0.0050	- -	0.00036	0.00036	- -	- -	0.00122	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		1.2	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00036	0.00036	- -	<0.00020	0.00089	- -	- -
	02/01/2012		7.8	0.051	<0.0050	0.20	0.096	<0.0050	0.0435	0.039	- -	0.0045	0.0035	- -	- -
	07/27/2012		0.049	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00022	0.00022	<0.00020	<0.00020	0.00023	- -	- -
	02/27/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2014		0.96	0.25	<0.0050	0.20	0.0064	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/20/2014		0.11	0.011	<0.0050	0.030	<0.0050	<0.0050	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	02/27/2015		0.0026	0.00099 J	<0.00078	0.0036	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.0010 J	- -	- -
	08/28/2015		0.00856	0.00194	0.00283 J	0.0158	<0.00100	0.000420 J	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/28/2015	FD	0.00922	0.00216	0.00305 J	0.0180	<0.00100	0.000467 J	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	03/09/2016		0.000627 J	0.000778 J	<0.000780	<0.00106	<0.00100	<0.000324	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	03/09/2016	FD	0.000772 J	0.000908 J	<0.000780	<0.00106	<0.00100	<0.000324	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/15/2016		DRY WELL - PLUGGED AND ABANDONED DECEMBER 2016												
MW-11R	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000392 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00167 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000350 J	<0.000413	<0.000413	<0.000368	<0.000345	0.000744 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000971 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00284 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000614 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000390 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000844 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-12	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	--		DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013												
MW-12R	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000362 J	- -	- -
	03/09/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000439	<0.000439	<0.000392	<0.000367	<0.000394	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00273 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00237 JB	- -	- -
	04/05/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00230 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00262 JB	- -	- -
	10/01/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00441 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00257 J	- -	- -
	04/04/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000708 J	- -	- -
	10/24/2019		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-13	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2010		0.016	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		0.0057	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	0.00091	- -	- -
	07/19/2011		0.0063	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/27/2015		0.00034 J	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000379 J	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		0.000397 J	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00270 JB	- -	- -
	04/05/2018		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -	- -	- -	- -	- -	- -
	09/26/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018												
MW-13R	10/01/2018		<0.000331	<0.000384	0.000506 J	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00134 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00164 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
	06/18/2020	FD	<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
MW-14	06/16/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	- -	- -	- -	- -	- -	- -	- -
	02/22/2013		- -	- -	- -	- -	- -	- -	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	02/28/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	--(1)	--(1)	--(1)	--(1)	--(1)	- -	- -
	02/27/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000530 J	- -	- -
	08/19/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000413	<0.000413	<0.000368	<0.000345	0.000642 J	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00318 JB	- -	- -
	09/27/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018												
MW-14R	10/01/2018		<0.000331	<0.000384	0.00186	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00278 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
MW-15	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.017	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0095	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.017	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.030	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0060	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.0056	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.013	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/21/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	0.011	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.0081	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00447 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000997 J	- -	- -
	08/27/2015	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00574	<0.000372	<0.000372	<0.000332	<0.000311	0.000595 J	- -	- -
	03/07/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00570	<0.000372	<0.000372	<0.000332	<0.000311	0.000534 J	- -	- -
	08/15/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00539	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/06/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00474 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00209 JB	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00217 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000915 JB	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00226 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000561 J	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-16	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/15/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00030	0.00030	- -	<0.00020	<0.00020	- -	- -
	07/15/2011	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000397 J	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00429 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000817 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000913 J	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												
MW-17	08/20/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	--		DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013												

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-17R	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000465 J	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00208 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00133	0.00133	<0.000332	<0.000311	0.00488 JB	- -	- -
	04/05/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00290 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00259 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00242 J	- -	- -
	04/04/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000493 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000373 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-18	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00021	0.00021	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00056	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000507 J	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000439	<0.000439	<0.000392	<0.000367	0.000507 J	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00205 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00283 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000389 J	- -	- -
MW-19	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/24/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00034	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/19/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/26/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	02/26/2015	FD	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000610 J	- -	- -
	03/08/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.00186	<0.00186	<0.00166	<0.00156	0.00818 J	- -	- -
	02/08/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00310 JB	- -	- -
	08/16/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00320 JB	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00216 JB	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-20	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/25/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000508 J	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00262 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00309 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00161 J	- -	- -
MW-21	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2011	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.00131	0.0010	<0.00020	0.00031	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000497 J	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.624
	08/17/2017		- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	0.00375 JB	0.0889 JB	0.124
	10/01/2018		- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	0.000383 JB	<0.0314	0.120
	10/24/2019		- -	- -	- -	- -	- -	- -	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0524 JB	0.196

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-22	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/31/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/24/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.819
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00363 JB	0.0786 JB	0.113
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00119 JB	<0.0314	0.104 J
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000635 J	0.0606 JB	0.0674 J
MW-23	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/19/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/25/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												
MW-24	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/30/2012	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000405 J	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00301 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00178 JB	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
MW-25	08/23/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/18/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/19/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	02/25/2015	FD	<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000728 J	- -	- -
	08/25/2015	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000581 J	- -	- -
	03/09/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/07/2017		0.000424 J	<0.000384	<0.000412	0.00207 J	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00347 JB	- -	- -
	08/16/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00233 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00159	0.00159	<0.000349	<0.000326	0.000731 JB	- -	- -
	04/05/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00118 JB	- -	- -
	10/01/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00274 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00201 J	- -	- -
	04/04/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000526 J	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00240 J	- -	- -
	10/24/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000637 J	- -	- -
	06/18/2020		0.000201 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-26	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00061	- -	- -
	02/26/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/25/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/17/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020												
MW-27	08/18/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/25/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	0.00099	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	0.00034	- -	- -
	02/01/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/26/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/21/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/27/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/26/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/08/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00241 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000380	<0.000380	<0.000339	<0.000317	0.00451 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000917 J	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	- -	- -	- -	- -	- -	- -	- -
MW-28	08/28/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/23/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00086	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	0.00022	- -	- -
	02/24/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/19/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/23/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.00033 J	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000774 J	- -	- -
	03/07/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000391	<0.000391	<0.000349	<0.000326	0.000459 J	- -	- -
	02/06/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00236 JB	- -	- -
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00119 JB	- -	- -
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-29	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/24/2010	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	02/28/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/14/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	01/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	0.0005	0.00050	- -	<0.00020	<0.00020	- -	- -
	07/24/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/26/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	0.00039 J	- -	- -
	08/27/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000329 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00224 J	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00197 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00246 J	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00175 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00419 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00142 J	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000903 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00164 JB	- -	- -
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00133 J	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000578 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/24/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000686 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.000719 J	- -	- -	- -	- -	- -	- -	- -

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
MW-30	06/21/2013		<0.0050	<0.0050	<0.0050	<0.015	- -	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/20/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/27/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	02/25/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	0.00072 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	0.00142 J	<0.00100	0.000887 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000964 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/08/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000911 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00107 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00111 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	02/09/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/16/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00376 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00799 JB	0.0792 J	0.0551 J
	08/16/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00336 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00141 JB	- -	- -
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00468 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00900 JB	- -	- -
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00549	<0.000372	<0.000372	<0.000332	<0.000311	0.00181 JB	- -	- -
	10/01/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00846	<0.000372	<0.000372	<0.000332	<0.000311	0.00484 JB	<0.0314	0.0391 J
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.0148	<0.000372	<0.000372	<0.000332	<0.000311	0.00110 J	- -	<0.0247
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00916	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	10/24/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.0110	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	0.0139	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	- -	- -
MW-32	06/15/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.507
	06/15/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.427
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00126 JB	0.0740 JB	0.167
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000662 JB	<0.0314	0.204
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00459 JB	<0.0314	0.360
	10/01/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00380 JB	<0.0314	0.350
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000633 J	0.0332 JB	0.209
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00114 J	0.0510 JB	0.272
	10/24/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000413	<0.000413	<0.000369	<0.000345	<0.000371	0.0316 JB	0.228
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	0.146
MW-33	06/15/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.105 B	3.14
	08/17/2017		0.000884 J	0.000627 J	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00306 JB	0.335 B	0.250
	04/05/2018		0.000363 J	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.00107	0.00107	<0.000332	<0.000311	0.00596 JB	0.205	0.175
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00271 JB	0.215	0.133
	04/04/2019		0.000401 J	<0.000384	<0.000412	<0.00106	<0.00100	0.000545 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00221 J	0.144	0.0707 J
	10/24/2019		0.000352 J	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00315 J	0.244 B	0.167
	06/18/2020		0.000244 J	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	0.229	0.0490 J
North Well	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	12/17/2014		<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	03/09/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	05/19/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		0.000425 J	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	12/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0621 J
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0531 J
	05/31/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000543 J	0.0448 JB	0.0359 J
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00295 JB	0.0888 JB	0.189
	12/14/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0375 J	0.0391 J
	02/23/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00187 JB	<0.0314	0.0821 JB
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	0.000455	0.000455 J	<0.000332	<0.000311	0.00110 JB	<0.0314	0.0385 J
	07/31/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00138 JB	<0.0314	0.0303 J
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00357 JB	<0.0314	0.0354 J
	01/23/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00136 J	<0.0314	<0.0247
	07/11/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0381 JB	<0.0247
	01/15/2020		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00108 J	0.0611 JB	<0.0247
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
South Well	06/22/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	08/24/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	- -	- -	- -	- -	- -	- -	- -
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	- -	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	- -	<0.00020	<0.00020	- -	- -
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/19/2013		0.0052	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	02/28/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	- -	- -
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	08/22/2014	FD	<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	- -	- -
	12/17/2014		0.0023	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	12/17/2014	FD	0.0023	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	- -	- -
	03/09/2015		0.0014	<0.00038	<0.00078	<0.0011	<0.0010	0.00039 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	03/09/2015	FD	0.0016	<0.00038	<0.00078	<0.0011	<0.0010	0.00037 J	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	- -	- -
	05/19/2015		0.0010 J	<0.00038	<0.00078	<0.0011	<0.0010	0.00052 J	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	05/19/2015	FD	0.00091 J	<0.00038	<0.00078	<0.0011	<0.0010	0.00054 J	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	- -	- -
	08/28/2015		0.00113	<0.000384	<0.000780	<0.00106	<0.00100	0.000518 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/28/2015	FD	0.000921 J	<0.000384	<0.000780	<0.00106	<0.00100	0.000527 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.000815 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	12/17/2015	FD	0.00119	<0.000384	<0.000780	<0.00106	<0.00100	0.000861 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00114 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	05/25/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00118 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	- -	- -
	08/18/2016		0.000451 J	<0.000384	<0.000780	<0.00106	<0.00100	0.00135 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0343 J	0.0303 J
	08/18/2016	FD	0.000509 J	<0.000384	<0.000780	<0.00106	<0.00100	0.00138 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0482 J
	12/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00228 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0961 J
	12/08/2016	FD	<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.118
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00199 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.101
	02/07/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00190 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.178 B
	05/31/2017		0.000503 J	<0.000384	<0.000412	<0.00106	<0.00100	0.00169 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0600 JB	0.0554 J
	05/31/2017	FD	0.000557 J	<0.000384	<0.000412	<0.00106	<0.00100	0.00168 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00329 J	0.0591 JB	0.0509 J
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00102 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00301 JB	0.0968 JB	0.0568 J
	08/17/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00112 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00550 JB	0.0891 JB	0.0536 J
	12/14/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00105 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0641 J
	12/14/2017	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00105 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00153 J	<0.0314	0.0629 J
	02/23/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00113 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00267 J	<0.0314	0.107 B
	02/23/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00118 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000428 J	<0.0314	0.117 B
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000874 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00579 JB	<0.0314	0.0740 J
	07/31/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00124 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00269 J	<0.0314	0.0969 J
	07/31/2018	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00126 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00207 J	<0.0314	0.0662 J
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000929 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000598 JB	<0.0314	0.0534 J
	01/23/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000966 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	0.0485 J	<0.0247
	01/23/2019	FD	<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00110 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000943 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00188 J	<0.0314	0.0593 J
	07/11/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00104 J	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0258 JB
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.000903 J	<0.000372	<0.000372	<0.000332	<0.000311	0.000746 J	0.0381 JB	<0.0247
	01/15/2020		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	0.00111 J	<0.000372	<0.000372	<0.000332	<0.000311	0.00102 J	0.0405 JB	<0.0247
	06/18/2020		0.000210 J	<0.000137	<0.000278	<0.000174	<0.00100	0.000757 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020		0.000168 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00108 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020	FD	0.000187 J	<0.000137	<0.000278	<0.000174	<0.00100	0.00102 J	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247

Table 2. Organic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	WQCC Volatiles (Method 8260, mg/L)						WQCC Semi-Volatiles (Method 8270, mg/L)					TPH (Method 8015, mg/L)	
			Benzene	Ethylbenzene	Toluene	Total Xylenes	Naphthalene	Chloroform	Total Naphthalene	Naphthalene	1-Methylnaphthalene	2-Methylnaphthalene	Total Phenols	TPH GRO (Low Fraction)	TPH DRO (High Fraction)
New Mexico WQCC Groundwater Standard			0.005	0.7	1	0.62	0.03	0.1	0.03	N/A	N/A	N/A	0.005	N/A	N/A
East Well	06/18/2009		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	--	--	--	--	--	--	--
	01/14/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	--	--	--	--	--	--	--
	08/25/2010		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	--	--	--	--	--	--	--
	03/03/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	--	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	--	--
	07/20/2011		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	--	<0.00020	<0.00020	--	--
	02/02/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	--	<0.00020	<0.00020	--	--
	07/30/2012		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	--	--
	08/27/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	09/26/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	10/22/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	12/27/2012		<0.0050	<0.0050	<0.0050	<0.015	--	<0.0050	<0.00020	<0.00020	<0.00020	--	<0.00020	--	--
	02/28/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00020	<0.00020	<0.00020	<0.00020	<0.00020	--	--
	08/22/2014		<0.0050	<0.0050	<0.0050	<0.015	<0.0050	<0.0050	<0.00010	<0.00010	<0.00010	<0.00010	<0.00020	--	--
	12/17/2014		<0.0010	<0.0010	<0.0010	<0.0015	<0.0020	<0.0010	<0.00050	<0.00050	<0.00050	<0.00050	<0.00050	--	--
	03/09/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00031	<0.00031	<0.00033	--	--
	05/19/2015		<0.00033	<0.00038	<0.00078	<0.0011	<0.0010	<0.00032	<0.00037	<0.00037	<0.00033	<0.00031	<0.00033	--	--
	08/28/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	12/17/2015		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	03/10/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	05/25/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	--	--
	08/18/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0357 J
	12/08/2016		<0.000331	<0.000384	<0.000780	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0673 J
	02/07/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	0.0552 J
	05/31/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000544 J	0.0590 JB	<0.0247
	08/17/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00403 JB	0.0847 JB	0.0335 J
	12/14/2017		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00192 J	0.0394 J	<0.0247
	02/23/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00330 J	<0.0314	0.0849 JB
	04/05/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00418 JB	<0.0314	<0.0282
	07/31/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00193 J	0.0327 JB	<0.0247
	10/01/2018		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00502 JB	<0.0314	<0.0247
	01/23/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00218 J	<0.0314	<0.0247
	04/04/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000431 J	<0.0314	<0.0247
	07/11/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	<0.000334	<0.0314	<0.0247
	10/24/2019		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.000657 J	0.0386 JB	<0.0247
	01/15/2020		<0.000331	<0.000384	<0.000412	<0.00106	<0.00100	<0.000324	<0.000372	<0.000372	<0.000332	<0.000311	0.00417 J	0.0353 JB	<0.0247
	06/18/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247
	08/19/2020		<0.0000941	<0.000137	<0.000278	<0.000174	<0.00100	<0.000111	<0.000159	<0.000159	<0.0000790	<0.000117	<0.00433	<0.0314	<0.0247

Notes:
Shading indicates detected result exceeded the New Mexico Water Quality Control Commission (WQCC) Groundwater Standard
N/A = Not Applicable, no New Mexico WQCC Groundwater Standard established for constituent
mg/L = milligrams per liter
FD = Field Duplicate
< = Not reported above laboratory reporting limit
-- = Not Analyzed
(1)= Not analyzed due to insufficient water volume
J = analyte was detected below the laboratory reporting limit (June 2009 to December 2014) or the method quantitation limit (February 2015 to August 2020), reported value is estimated
B = same analyte was detected in the associated laboratory blank or equipment blank; sample concentration is within 5 times the blank concentration
Samples collected for metals analysis (except for Total Mercury) were field- or lab-filtered with 0.45 micron filter
June 2009 to August 2014 analyses completed by ALS Laboratory Group, Houston, Texas
December 2014 analyses completed by Hall Environmental Analysis Laboratory in Albuquerque, New Mexico
February 2015 to present analyses completed by Pace Analytical National Center for Testing & Innovation (formerly ESC Lab Sciences) in Mount Juliet, Tennessee
Analytical data from 2009 to 2011 were provided by a previous consultant and could not be confirmed against the original data packages

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-1	06/19/2009		131	0.827	3.75	123	694	<0.0100	0.00914	0.147	0.175	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.974	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0124
	01/19/2010		266	0.249	5.84	145	1,240	0.0202	0.00634	0.164	0.236	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	2.72	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00615	0.00989
	08/18/2010		126	0.623	2.59	111	694	<0.0100	0.00841	0.117	0.182	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.62	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00538
	03/01/2011		100	0.502	1.84	83.4	580	<0.0100	0.00821	0.0984	0.189	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.62	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00689
	07/20/2011		34.7	0.623	1.14	73.9	492	<0.0100	0.00808	0.0903	0.168	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.485	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00832
	02/02/2012		29.9	0.773	< 1.00	65.4	392	<0.0100	0.00782	0.0843	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.780	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00766
	07/27/2012		27.3	0.944	< 2.00	59.5	358	0.0249	0.00870	0.0917	0.193	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.05	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00759
	02/27/2013		30.0	0.872	< 2.00	67.2	400	<0.0100	0.00857	0.0974	0.184	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.662	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0107
	08/21/2013		33.2	1.03	< 1.00	70.5	406	0.0158	0.00589	0.102	0.187	<0.00200	0.0160	<0.00500	<0.00500	<0.200	<0.00500	1.32	<0.000200	<0.00500	0.0164	<0.00500	<0.00500	<0.00500	0.00641
	02/27/2014		30.0	0.758	0.710	63.2	418	<0.0100	0.00775	0.111	0.169	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.690	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00874
	08/21/2014		26.6	1.10	1.23	68.0	395	0.0135	0.0102	0.138	0.109	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0172	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0242
	02/25/2015		26	1.1	1.5	66	390	<0.035	0.012	0.13	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00048 J	<0.0012	<0.000049	0.0025 J	<0.0049	<0.0074	<0.0028	0.0022 J	0.0067 J
	08/27/2015		27.3	0.961	1.70	72.2	441	<0.0350	0.0120	0.122	0.170	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.00191 J	<0.0000490	0.00236 J	<0.000350	0.00268	<0.000310	0.00187 J	<0.00256
	03/09/2016		28.9	1.09	1.76	68.1	- -	0.00841 JB	0.00292	0.121	0.155	<0.000160	0.0276	<0.000260	0.00141 JB	<0.0150	<0.000240	0.00102 JB	<0.0000490	0.00170 JB	0.000910 JB	0.00150 J	<0.000310	0.00246 J	0.00436 JB
	08/17/2016		38.4	1.04	1.93	69.3	436	0.00284 JB	0.0117	0.138	0.189	<0.000160	0.00112 JB	<0.000260	0.000802 JB	0.0529 JB	<0.000240	0.00295 JB	<0.0000490	0.00260 J	<0.000350	0.00278	<0.000310	0.00261 J	0.00377 J
	02/07/2017		54.6	0.978	2.91	78.9	- -	<0.0258	0.00618 J	0.163	0.190	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0124 J	<0.0000490	0.00549 J	0.0137	0.00237	<0.00155	0.00276 J	0.0160 J
	08/17/2017		61.5	1.07	2.58	68.1	453	0.0110 JB	0.00809	0.146	0.157	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.00371 J	0.000258	0.00229 J	0.0237	0.00228	<0.000310	0.00230 J	0.00494 J
	04/05/2018		48.3	1.04	2.14	63.4	- -	<0.00515	0.00762	0.152	0.176 J	<0.000160	<0.000540	<0.000260	0.000883 JB	<0.0150	<0.000240	0.00128 JB	<0.0000490	0.00252 JB	<0.000350	0.00250 B	<0.000310	0.00179 JB	0.0110 J
	10/01/2018		42.0	1.03	2.59	65.7	402	0.0143 JB	0.00687	0.141	0.143 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.000642 JB	<0.0000490	0.00242 J	<0.000350	0.00255	<0.000310	0.00163 J	0.00331 JB
	04/04/2019		42.0	1.06	2.80	59.8	- -	<0.00515	0.00585	0.155	0.160 J	<0.000160	<0.000540	<0.000260	0.000902 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00282 J	<0.000350	0.00246	<0.000310	0.00159 J	0.00554 J
	10/24/2019		50.2	1.10	2.72	61.2	389	<0.00515	0.00605	0.137	0.152 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	<0.000250	0.0000684 J	0.00331 J	<0.000350	0.00291	<0.000310	0.00163 J	0.00451 J
	06/18/2020		51.8	1.11	3.48	68.2	- -	<0.0554	0.00564	0.152	0.168 J	<0.000478	<0.00149	<0.000477	0.00362 J	<0.0489	<0.00249	<0.00132	<0.000100	0.00285 J	<0.000952	0.00255	<0.000513	<0.00754	<0.00996
	06/18/2020	FD	51.4	1.11	3.37	68.0	- -	<0.0554	0.00543	0.153	0.156 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00262 J	<0.000952	0.00204	<0.000513	<0.00754	<0.00996
MW-2	06/22/2009		252	0.765	2.69	66.8	988	0.0657	0.0386	0.0803	0.190	<0.00200	<0.00500	<0.00500	0.00621	<0.200	<0.00500	0.00583	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.110
	01/19/2010		246	0.672	3.39	55.1	966	<0.0100	<0.00500	0.00500	0.191	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00538	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0166
	08/16/2010		276	0.824	3.23	55.9	1,180	0.1367	<0.00500	0.193	0.155	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0204
	03/03/2011		221	0.763	3.49	57.6	1,010	<0.0100	<0.00500	0.176	0.171	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0117
	07/14/2011		190	0.647	2.98	58.4	966	<0.0100	<0.00500	0.160	0.192	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0230
	01/30/2012		214	0.784	3.43	75.1	1,230	<0.0100	<0.00500	0.130	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0255
	07/24/2012		201	0.898	3.24	76.3	908	<0.0100	<0.00500	0.140	0.233	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0191
	02/19/2013		213	0.810	3.90	86.6	834	0.0102	<0.00500	0.141	0.197	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0436
	08/20/2013		178	0.920	5.33	88.9	682	0.0346	<0.00500	0.118	0.216	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00721
	02/25/2014		139	0.693	5.25	79.4	616	0.0133	<0.00500	0.125	0.203	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0130
	08/21/2014		122	0.812	6.17	82.3	588	0.0143	<0.00500	0.112	0.147	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0214
	02/24/2015		130	0.92	7.9	94	710	<0.035	0.0037	0.090	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0034 J	<0.0049	<0.0074	<0.0028	0.0026 J	<0.0059
	08/28/2015		343	1.41	8.33	152	1,000	<0.0350	0.00355	0.111	0.213	<0.000160	0.000625 J	<0.000260	0.000548 J	<0.0141	<0.000240	0.000533 J	<0.0000490	0.00254 J	0.00115 J	0.00147 J	<0.000310	0.00340 J	0.00382 J
	03/07/2016		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		123	0.864	6.84	71.8	640	0.00451 JB	0.00304	0.105	0.235	<0.000160	0.000981 JB	<0.000260	0.000952 JB	<0.0150	<0.000240	0.000769 JB	0.0000534 JB	0.00282 J	0.00129 JB	0.00166 J	<0.000310	0.00297 J	0.00316 JB
	02/07/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		126	0.977	4.83	70.7	596	0.0175 JB	0.00351	0.100	0.180	<0.000160	0.00333	<0.000260	0.00159 J	<0.0150	<0.000240	0.000347 J	0.0000703 J	0.00288 J	0.00713	0.00161 J	<0.000310	0.00268 J	0.0179 J
	04/05/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		142	0.839	4.46	83.4	693	0.0168 JB	0.00357	0.100	0.183 J	<0.000160	0.00201 B	<0.000260	0.00136 JB	<0.0150	<0.000240	0.000750 JB	<0.0000490	0.00278 J	0.00641	0.00116 J	<0.000310	0.00317 J	0.0316 B
	04/04/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		159	0.914	3.46	75.0	602	<0.00515	0.00361	0.108	0.189 J	<0.000160	0.000871 J	<0.000260	0.00277 J	<0.0150	0.000263 J	<0.000250	0.0000719 J	0.00268 J	0.00412	0.00172 J	<0.000310	0.00346 J	0.0420
	06/18/2020		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			**250**	**1.6**	**10.0**	**600.0**	**1,000.0**	**5.0**	**0.01**	**2**	**0.75**	**0.005**	**0.05**	**0.05**	**1.0**	**1.0**	**0.015**	**0.2**	**0.002**	**1.0**	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
MW-3	06/16/2009		29.1	3.38	2.19	64.6	504	0.308	0.00815	0.115	0.160	<0.00200	0.00709	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.0151	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/14/2010		49.9	3.18	2.11	76.5	540	0.144	0.00703	0.119	0.148	<0.00200	0.00977	<0.00500	0.121	<0.200	<0.00500	0.00597	<0.000200	0.0200	0.00842	<0.00500	<0.00500	0.000625	0.0195
	01/14/2010	FD	49.8	3.18	2.11	75.0	552	0.142	0.00798	0.125	0.167	<0.00200	0.0105	<0.00500	0.148	<0.200	<0.00500	0.00699	<0.000200	0.0216	0.00960	<0.00500	<0.00500	0.000721	0.0230
	08/19/2010		72.7	2.99	1.52	77.7	518	0.0767	0.00935	0.127	0.151	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00790	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/24/2011		88.2	2.58	3.02	80.5	566	<0.0100	0.00892	0.124	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0524
	07/15/2011		67.3	2.37	2.59	74.7	568	<0.0100	0.0125	0.113	0.202	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00510	<0.00500	<0.00500	<0.00500	<0.00500	0.0156
	01/30/2012		65.6	2.94	2.37	86.3	472	<0.0100	0.0117	0.0831	0.168	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00621	<0.00500	<0.00500	<0.00500	<0.00500	0.00886
	07/25/2012		35.0	2.70	< 2.00	81.3	436	<0.0100	0.0152	0.0773	0.209	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00673
	02/27/2013		54.2	2.47	2.30	89.5	478	<0.0100	0.0156	0.101	0.186	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00546	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/22/2013		46.1	2.40	2.06	81.9	456	0.0185	0.0169	0.0782	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/26/2014		36.9	1.84	2.08	79.1	430	<0.0100	0.0179	0.0655	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00560	<0.00500	<0.00500	<0.00500	0.00527
	08/21/2014		30.0	1.84	1.53	78.0	420	0.0128	0.0183	0.0545	0.104	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/26/2015		31	1.5	1.9	74	420	<0.035	0.019	0.061	0.16 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.00094 J	<0.0049	<0.0074	<0.0028	0.00057 J	<0.0059
	02/26/2015	FD	32	1.6	2.0	74	420	<0.035	0.020	0.062	0.16 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0011 J	<0.0049	0.0085 J	<0.0028	0.00056 J	0.0088 J
	08/26/2015		27.3	1.55	1.88	77.6	520	<0.0350	0.0195	0.0529	0.166 J	<0.000160	0.000912 J	<0.000260	0.00101 J	<0.0141	<0.000240	0.000572 J	<0.0000490	<0.00160	0.000483 J	0.00269	<0.000310	0.000567 J	0.00296 J
	03/08/2016		23.9	1.32	1.84	65.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		24.4	1.16	1.81	66.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/07/2017		25.4	1.25	1.83	77.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		29.9	1.15	1.88	71.6	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/05/2018		26.9	0.896	1.75	73.1	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		30.9	0.783	1.79	74.5	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	04/04/2019		37.9	0.628	1.73	73.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		29.8	0.648	1.49	75.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	06/18/2020		30.9	0.442	1.84	76.5	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-4	06/16/2009		28.9	0.841	1.84	61.5	422	0.180	<0.00500	0.174	0.160	<0.00200	0.00534	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0120
	01/13/2010		29.3	1.10	1.67	66.7	416	0.0345	<0.00500	0.0932	0.177	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00102	<0.00500
	08/19/2010		26.1	1.10	1.10	65.8	324	0.0607	<0.00500	0.0862	0.136	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/28/2011		27.1	1.02	1.91	64.4	378	0.0131	<0.00500	0.0951	0.163	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00533
	07/15/2011		25.8	1.12	1.57	63.6	422	0.144	<0.00500	0.141	0.172	<0.00200	0.00619	<0.00500	<0.00500	<0.200	<0.00500	0.0114	<0.000200	<0.00500	0.0103	<0.00500	<0.00500	<0.00500	0.0211
	01/30/2012		30.0	1.08	1.71	73.4	388	0.0119	<0.00500	0.0796	0.150	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0147
	07/24/2012		28.9	1.18	< 2.00	69.4	414	<0.0100	<0.00500	0.0883	0.199	<0.00200	<0.00500	<0.00500	<0.00500	<0.20	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.0050	0.0102
	02/21/2013		26.6	1.05	< 2.00	75.5	360	<0.0100	0.00525	0.0841	0.157	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0116
	08/20/2013		26.4	1.20	1.72	71.6	382	<0.0100	0.00500	0.0902	0.156	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00506
	02/25/2014		26.9	0.877	2.02	75.5	390	<0.0100	<0.00500	0.0897	0.148	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00801
	08/20/2014		24.1	1.15	1.64	70.2	372	0.603	0.00501	0.213	0.111	<0.00200	<0.00500	<0.00500	<0.00500	0.241	<0.00500	0.00595	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0221
	02/24/2015		24	1.1	2.1	66	390	<0.035	0.0046	0.090	0.15 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00025 J	<0.0012	0.00011 J	0.0034 J	<0.0049	<0.0074	<0.0028	0.0016 J	<0.0059
	08/28/2015		28.8	1.26	2.32	63.8	479	<0.0350	0.00526	0.0930	0.157	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.00114 J	<0.0000490	0.00319 J	0.000482 J	0.00228	<0.000310	0.00168 J	0.00269 J
	08/15/2016		25.1	1.02	2.24	60.3	411	0.00568 JB	0.00564	0.0894	0.155	<0.000160	0.00117 JB	<0.000260	0.000614 JB	0.0640 JB	<0.000240	0.000588 JB	<0.0000490	0.00358 J	0.000488 JB	0.00272	<0.000310	0.00170 J	0.00298 J
	08/17/2017		34.0	1.17	2.39	57.5	384	0.0196 JB	0.00480	0.0871	0.139	<0.000160	0.000569 J	<0.000260	0.000818 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00313 J	0.00317 B	0.00220	<0.000310	0.00141 J	0.00637 J
	10/01/2018		62.6	1.04	2.60	53.6	574	0.0149 JB	0.00482	0.0965	0.135 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.000539 J	<0.0000490	0.00271 J	0.00139 J	0.00231	<0.000310	0.00139 J	0.00473 J
	10/24/2019		75.6	1.10	2.62	55.0	403	<0.00515	0.00478	0.107	0.145 J	<0.000160	0.00301	<0.000260	0.00323 J	<0.0150	0.000333 J	<0.000250	0.0000637 J	0.00302 J	0.00172 J	0.00272	<0.000310	0.00167 J	0.00736 J

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-5	06/16/2009		186	1.39	3.31	131	952	0.796	0.0233	0.0639	0.116	<0.00200	<0.00500	<0.00500	<0.00500	0.399	<0.00500	0.00670	<0.000200	0.0103	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/18/2010		26.4	0.781	4.91	80.6	508	<0.0100	<0.00500	0.0966	0.135	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/2010		18.5	1.13	3.43	77.7	440	0.0814	<0.00500	0.0967	0.0986	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/28/2011		29.8	1.03	2.91	70.5	570	0.123	<0.00500	0.100	0.0854	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0142	<0.000200	<0.00500	0.0112	<0.00500	<0.00500	<0.00500	0.0368
	07/19/2011		20.9	0.858	2.72	59.0	524	<0.0100	<0.00500	0.0968	0.0871	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0309
	01/31/2012		26.9	1.04	2.49	61.2	504	<0.0100	<0.00500	0.0972	0.0557	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00948
	01/31/2012	FD	27.1	1.05	2.54	62.0	436	<0.0100	<0.00500	0.0947	0.0728	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0119
	07/25/2012		15.9	1.10	2.22	50.1	434	0.0205	<0.00500	0.0931	0.134	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0562
	02/21/2013		10.9	1.04	2.01	40.8	412	0.0487	<0.00500	0.104	0.0997	<0.00200	<0.00500	<0.00500	0.0434	<0.200	<0.00500	0.0158	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00582	0.0289
	08/20/2013		13.9	1.16	2.05	44.2	448	<0.0100	<0.00500	0.105	0.100	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00507	0.0208
	02/25/2014		11.8	0.877	2.52	48.4	436	<0.0100	<0.00500	0.116	0.0893	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0114
	08/19/2014		8.71	1.16	1.68	44.6	478	0.148	<0.00500	0.123	<0.0200	<0.00200	0.00744	<0.00500	<0.00500	<0.200	<0.00500	0.00532	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00535	0.00626
	02/24/2015		21	1.4	2.2	43	520	0.038 J	0.0029	0.12	0.091 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0045 J	<0.0049	<0.0074	<0.0028	0.0040 J	0.0089 J
	08/24/2015		19.9	1.52	1.97	39.9	586	<0.0350	0.00410	0.121	0.0899 J	<0.000160	0.00111 J	<0.000260	0.00102 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.00476 J	0.000814 J	<0.000380	<0.000310	0.00410 J	0.00539 J
	08/17/2016		18.4	1.62	2.15	38.1	449	0.0155 JB	0.00425	0.119	0.108	<0.000160	0.00217 B	<0.000260	0.00122 JB	0.0974 JB	<0.000240	0.000764 JB	<0.0000490	0.00876	0.000540 JB	0.000502 J	<0.000310	0.00553 J	0.00590 J
	08/16/2017		16.0	1.85	2.26	34.2	479	0.0209 JB	0.00382	0.118	0.0893	<0.000160	0.00128 J	<0.000260	0.00261 J	<0.0150	<0.000240	0.000398 J	<0.0000490	0.00616	0.000700 JB	0.000574 J	<0.000310	0.00432 J	0.00391 J
	10/01/2018		23.8	1.31	2.57	26.8	440	<0.00515	0.00412	0.125	0.0529 J	<0.000160	<0.000540	<0.000260	0.00128 JB	<0.0150	<0.000240	<0.000250	<0.0000490	0.00259 J	0.000937 J	0.000695 J	<0.000310	0.00262 J	<0.00256
	10/24/2019		12.9	1.30	2.04	25.6	335	<0.00515	0.00370	0.110	0.0517 J	<0.000160	<0.000540	<0.000260	0.00242 J	<0.0150	<0.000240	<0.000250	0.0000584 J	0.00260 J	0.00131 J	0.000554 J	<0.000310	0.00152 J	0.00812 J
MW-6	06/18/2009		188	0.113	0.678	101	844	<0.0100	0.0201	0.186	0.175	<0.00200	<0.00500	<0.00500	<0.00500	0.418	<0.00500	2.86	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.00996
	06/18/2009	FD	168	<0.100	0.682	90.4	812	<0.0100	0.0221	0.200	0.192	<0.00200	<0.00500	<0.00500	<0.00500	0.219	<0.00500	2.76	<0.000200	<0.00500	0.00653	<0.00500	<0.00500	- -	0.0141
	02/02/2010		334	<0.100	0.822	90.2	1,400	<0.0200	0.0250	0.499	0.234	<0.00200	<0.00500	<0.00500	<0.00500	2.08	<0.00500	4.51	<0.000200	<0.00500	0.00634	<0.00500	<0.00500	0.0113	<0.00500
	08/19/2010		285	<0.100	< 1.00	111	1,350	0.0152	0.0456	0.376	0.244	<0.00200	<0.00500	<0.00500	<0.00500	1.86	<0.00500	6.61	<0.000200	<0.00500	0.00766	<0.00500	<0.00500	0.00785	<0.00500
	03/01/2011		282	<0.100	0.750	80.7	1,340	<0.0100	0.0390	0.404	0.271	<0.00200	<0.00500	<0.00500	<0.00500	0.711	<0.00500	5.58	<0.000200	<0.00500	0.00896	<0.00500	<0.00500	0.00659	<0.00500
	07/20/2011		174	<0.500	<0.500	114	970	<0.0100	0.0336	0.220	0.223	<0.00200	0.00972	<0.00500	<0.00500	1.57	<0.00500	4.51	<0.000200	<0.00500	0.00576	<0.00500	<0.00500	<0.00500	0.0176
	02/02/2012		58.4	0.313	< 1.00	88.0	398	<0.0100	<0.00500	0.0827	0.190	<0.00200	<0.00500	<0.00500	<0.00500	0.488	<0.00500	1.25	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00599	0.00858
	07/24/2012		77.7	0.217	< 2.00	80.1	690	<0.0100	0.0128	0.143	0.265	<0.00200	<0.00500	<0.00500	<0.00500	1.28	<0.00500	2.53	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0102	0.0194
	02/27/2013		65.4	0.368	< 2.00	77.1	542	<0.0100	0.0126	0.154	0.214	<0.00200	<0.00500	<0.00500	<0.00500	1.31	<0.00500	1.97	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00789	0.0123
	02/27/2013	FD	65.7	0.370	< 2.00	77.6	556	<0.0100	0.0124	0.158	0.216	<0.00200	<0.00500	<0.00500	<0.00500	1.33	<0.00500	2.02	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00833	0.0106
	08/21/2013		43.3	0.441	<0.200	76.6	502	0.0244	<0.00500	0.129	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.68	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00606	<0.00500
	02/27/2014		124	0.309	<0.500	51.0	814	<0.0100	0.0458	0.263	0.220	<0.00200	<0.00500	<0.00500	<0.00500	3.42	<0.00500	2.71	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00882	0.00622
	08/21/2014		132	0.230	< 1.00	34.4	832	0.0330	0.0185	0.363	0.167	<0.00200	<0.00500	<0.00500	<0.00500	0.268	<0.00500	3.06	<0.000200	<0.00500	0.00651	<0.00500	<0.00500	0.00744	0.0151
	02/25/2015		42	0.58	0.17	67	500	0.092 J	0.0061	0.19	0.19 J	<0.00070	<0.0014	<0.0023	<0.0053	0.015 J	0.00072 J	1.0	<0.000049	0.0026 J	<0.0049	<0.0074	<0.0028	0.0066 J	0.020 J
	08/27/2015		32.4	0.505	0.835	66.5	473	<0.0350	0.00539	0.152	0.181	<0.000160	<0.000540	<0.000260	0.000540 J	<0.0141	<0.000240	0.411	<0.0000490	0.00192 J	0.00134 J	0.00242	<0.000310	0.00463 J	0.00347 J
	03/10/2016		34.5	0.621	0.688	71.8	- -	0.00858 JB	0.00529	0.149	0.174	<0.000160	<0.000540	<0.000260	0.000554 J	<0.0150	<0.000240	0.138 B	<0.0000490	0.00202 JB	0.000974 JB	0.00298	<0.000310	0.00573 J	0.00327 JB
	08/17/2016		27.0	0.642	1.06	68.5	1,000	0.00297 JB	0.00654	0.131	0.196	<0.000160	0.000782 JB	<0.000260	0.00132 JB	<0.0150	<0.000240	0.0144	<0.0000490	0.00215 J	0.00121 JB	0.00316	<0.000310	0.00726 J	0.00362 JB
	02/07/2017		31.3	0.665	1.20	79.9	- -	<0.0258	0.00762 J	0.168	0.181	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0323	<0.0000490	0.00260 J	0.00285 J	0.00409	<0.00155	0.00537 J	<0.0128
	08/16/2017		46.8	0.761	1.52	73.8	463	0.0121 JB	0.00653	0.179	0.156	<0.000160	<0.000540	<0.000260	0.00294 J	<0.0150	<0.000240	0.737	<0.0000490	0.00380 J	0.0163	0.00417	<0.000310	0.00406 J	0.0262
	04/05/2018		55.8	0.719	2.04	76.7	- -	<0.00515	0.00668	0.161	0.173 J	<0.000160	<0.000540	<0.000260	0.00153 JB	<0.0150	<0.000240	0.0304	<0.0000490	0.00224 JB	0.00197 JB	0.00426	<0.000310	0.00345 J	0.0111 J
	10/01/2018		55.9	0.691	2.02	79.0	485	<0.00515	0.00716	0.148	0.154 J	<0.000160	0.000718 JB	<0.000260	0.000629 JB	<0.0150	<0.000240	0.0763	<0.0000490	0.00198 J	0.00116 J	0.00343	<0.000310	0.00340 J	0.0126 JB
	04/04/2019		47.4	0.717	2.04	72.9	- -	<0.00515	0.00793	0.150	0.173 J	<0.000160	0.000797 J	<0.000260	0.00112 J	<0.0150	<0.000240	0.106	<0.0000490	0.00266 J	0.000612 JB	0.00395	<0.000310	0.00358 J	0.0123 J
	10/24/2019		50.0	0.982	2.48	73.1	438	<0.00515	0.00739	0.143	0.156 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	0.00807	0.0000653 J	0.00276 J	0.000391 J	0.00394	<0.000310	0.00335 J	0.00752 J
	06/18/2020		55.4	1.03	3.00	75.2	- -	<0.0554	0.00798	0.147	0.174 J	<0.000478	<0.00149	<0.000477	0.00258 J	<0.0489	<0.00249	0.0294	<0.000100	0.00272 J	0.00194 J	0.00310	<0.000513	<0.00754	0.0360
	06/18/2020	FD	55.3	1.03	2.97	74.9	- -	<0.0554	0.00819	0.156	0.168 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.0289	<0.000100	0.00274 J	0.00231	0.00364	<0.000513	<0.00754	0.0336

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-7	06/19/2009		30.6	1.12	1.66	67.2	384	<0.0100	0.00923	0.169	0.161	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.127	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0137
	02/02/2010		28.0	0.854	1.72	62.2	350	<0.0200	0.00869	0.199	0.169	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.125	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/18/2010		27.2	0.570	1.12	60.2	370	0.0223	0.00532	0.252	0.161	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.343	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	03/01/2011		26.5	0.599	1.91	58.2	376	<0.0100	0.00525	0.237	0.161	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.441	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00593
	07/20/2011		23.3	0.626	1.35	56.8	396	<0.0100	0.00669	0.246	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.617	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/02/2012		25.5	0.633	1.66	61.5	356	<0.0100	<0.00500	0.229	0.166	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.550	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00746
	07/27/2012		23.6	0.796	2.01	55.2	342	0.0727	<0.00500	0.234	0.196	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.642	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0114
	02/27/2013		25.8	0.709	< 2.00	67.3	286	<0.0100	<0.00500	0.227	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.300	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00844
	08/21/2013		26.9	0.748	1.62	60.8	290	<0.0100	<0.00500	0.220	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.365	<0.000200	<0.00500	<0.00500	0.00600	<0.00500	<0.00500	<0.00500
	02/27/2014		31.0	0.501	1.50	62.1	408	0.0159	<0.00500	0.208	0.168	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.781	<0.000200	<0.00500	<0.00500	0.00540	<0.00500	<0.00500	0.00818
	08/21/2014		30.8	0.642	1.72	62.2	380	<0.0100	<0.00500	0.207	0.110	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.470	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00566
	02/25/2015		35	0.71	2.0	60	420	<0.035	0.0055	0.24	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00041 J	0.011	<0.000049	0.0011 J	<0.0049	<0.0074	<0.0028	0.0033 J	0.0083 J
	08/27/2015		38.4	0.866	2.28	66.9	471	<0.0350	0.00650	0.215	0.180	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.0184	<0.0000490	0.00175 J	<0.000350	0.00334	<0.000310	0.00236 J	<0.00256
MW-8	06/18/2009		219	0.730	3.46	73.3	798	<0.0100	0.00501	0.181	0.228	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00919	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0458
	01/18/2010		151	0.493	3.80	67.6	742	<0.0100	0.00726	0.157	0.215	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00545
	08/18/2010		279	0.560	7.08	65.3	1,260	0.0377	0.00676	0.204	0.170	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00501	0.00760
	02/25/2011		144	0.820	<0.500	87.5	694	<0.0100	<0.00500	0.106	0.175	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.281	<0.000200	<0.00500	0.00620	<0.00500	<0.00500	<0.00500	0.0316
	07/19/2011		313	0.522	4.49	72.4	1,460	<0.0100	<0.00500	0.229	0.278	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00928	0.0213
	02/01/2012		376	0.498	8.21	102	1,530	<0.0100	<0.00500	0.221	0.210	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00636	<0.000200	<0.00500	0.0119	<0.00500	<0.00500	0.00745	0.0339
	07/27/2012		224	0.490	8.55	122	1,080	<0.0100	<0.00500	0.160	0.294	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00523	<0.00500	<0.00500	0.00714	0.00888
	02/26/2013		246	0.371	11.1	118	1,080	<0.0100	0.00627	0.170	0.380	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00592	<0.000200	<0.00500	0.00999	<0.00500	<0.00500	0.00690	0.0188
	08/21/2013		101	0.513	9.49	129	788	<0.0100	<0.00500	0.119	0.266	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0208	<0.000200	<0.00500	0.0135	<0.00500	<0.00500	<0.00500	0.0107
	02/27/2014		368	0.417	1.43	88.1	1,440	0.747	<0.00500	0.233	0.284	<0.00200	0.0417	<0.00500	<0.00500	0.541	<0.00500	0.0240	<0.000200	<0.00500	0.0339	<0.00500	<0.00500	0.00916	0.0102
	08/21/2014		360	0.268	4.42	76.6	1,310	0.314	<0.00500	0.212	0.230	<0.00200	0.0404	<0.00500	<0.00500	0.274	<0.00500	0.0128	<0.000200	<0.00500	0.0258	<0.00500	<0.00500	0.00639	0.0181
	02/26/2015		220	0.49	7.0	86	960	0.11	0.0055	0.20	0.23	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.00083 J	<0.0049	<0.0074	<0.0028	0.0073 J	0.0059 J
	08/27/2015		258	0.368 J	8.80	88.5	1,260	<0.0350	0.00537	0.232	0.245	<0.000160	0.000562 J	0.000346 J	0.000544 J	<0.0141	<0.000240	0.00141 J	<0.0000490	0.000854 J	0.00204	0.00224	<0.000310	0.00891 J	0.00316 J
	03/08/2016		291	0.357	7.84	78.2	1,290	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/18/2016		94.1	0.537	3.67	71.4	593	0.0111 JB	0.00686	0.121	0.187	<0.000160	0.000982 JB	<0.000260	0.00175 JB	0.0152 J	0.000247 J	0.00123 JB	0.0000537 JB	0.00137 J	0.00243 B	0.00254	<0.000310	0.00245 J	0.00318 JB
	02/08/2017		50.7	0.760	3.02	78.6	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		29.4	0.798	4.02	76.1	699	0.0129 JB	0.00790	0.126	0.151	<0.000160	<0.000540	<0.000260	0.00265 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00207 J	0.00679	0.00278	<0.000310	0.00347 J	0.0133 J
	04/05/2018		170	0.599	5.61	77.1	877	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		159	0.653	6.49	85.8	807	0.00771 JB	0.00744	0.182	0.175 J	<0.000160	0.000757 JB	<0.000260	0.00160 JB	<0.0150	0.000279 JB	0.000389 JB	<0.0000490	0.00169 J	0.00867	0.00248	<0.000310	0.00486 J	0.0157 JB
	04/04/2019		148	0.552	6.29	76.0	819	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		169	0.669	5.98	87.2	765	<0.00515	0.00700	0.190	0.204	<0.000160	<0.000540	<0.000260	0.00143 J	<0.0150	<0.000240	<0.000250	0.0000632 J	0.00108 J	0.00560	0.00214	<0.000310	0.00473 J	0.0210 J
	06/18/2020		293	0.610	7.50	78.6	1,180	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-9	06/16/2009		23.0	1.69	0.748	73.2	380	0.0468	0.0373	0.0911	0.122	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/14/2010		23.9	1.78	1.72	74.4	450	0.0164	0.0351	0.0676	0.139	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.000656	<0.00500
	08/19/2010		21.8	1.64	1.32	75.2	412	0.115	0.0358	0.0649	0.121	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00961	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	03/01/2011		24.1	1.63	2.01	74.6	414	0.0112	0.0382	0.0586	0.131	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00662
	07/15/2011		24.9	1.65	1.78	70.2	434	0.0371	0.0374	0.0647	0.166	<0.00200	0.00741	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00511	<0.00500	<0.00500	<0.00500	0.00932
	01/31/2012		31.5	2.22	1.43	80.5	484	<0.0100	0.0341	0.0653	0.108	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00529
	07/25/2012		30.4	1.99	< 2.00	77.8	420	0.0306	0.0292	0.0721	0.182	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00708	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00716
	02/27/2013		31.3	1.11	2.82	79.1	440	<0.0100	0.0171	0.0766	0.154	<0.00200	<0.00500	<0.00500	<0.00500	0.702	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0167
	08/22/2013		35.7	1.80	3.01	74.0	466	0.0467	0.0246	0.0736	0.153	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/26/2014		54.0	1.48	3.17	71.5	452	0.0161	0.0224	0.0737	0.152	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00588	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/21/2014		197	0.655	2.35	111	932	2.47	<0.00500	0.174	0.124	<0.00200	0.205	<0.00500	0.00644	2.22	<0.00500	0.0903	<0.000200	0.00662	0.111	<0.00500	<0.00500	<0.00500	0.0334
	02/25/2015		49	0.69	3.5	69	440	<0.035	0.0087	0.10	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0014 J	<0.0049	<0.0074	<0.0028	0.0031 J	<0.0059
	08/26/2015		46.6	0.527	4.17	67.5	495	<0.0350	0.00744	0.108	0.163 J	<0.000160	<0.000540	<0.000260	0.000626 J	<0.0141	<0.000240	<0.000250	<0.0000490	<0.00160	0.000566 J	0.00297	<0.000310	0.00285 J	0.00258 J
	08/17/2016		81.8	0.544	3.11	73.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		100	0.441	3.73	73.9	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		232	0.489	9.00	110	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		220	0.291	5.70	108	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-10	06/16/2009		32.2	0.878	1.83	76.5	378	<0.0200	<0.00500	0.113	0.138	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0127
	01/13/2010		33.4	1.05	1.84	77.9	436	<0.0100	<0.00500	0.0815	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.000911	0.0133
	08/19/2010		31.7	1.07	1.91	79.8	508	0.0556	<0.00500	0.0798	0.129	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00569
	03/03/2011		32.8	0.945	2.06	79.1	422	<0.0100	<0.00500	0.0772	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0133
	07/15/2011		30.7	1.06	1.68	75.7	470	0.0318	<0.00500	0.0855	0.177	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	01/31/2012		42.9	1.00	1.85	87.4	444	<0.0100	<0.00500	0.0865	0.109	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0252
	07/25/2012		42.7	1.10	< 2.00	82.6	382	<0.0100	0.00516	0.0882	0.186	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00861
	02/27/2013		48.0	0.960	< 2.00	83.5	416	<0.0100	0.00546	0.0972	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00633
	08/22/2013		95.0	0.994	2.12	72.2	516	<0.0100	<0.00500	0.104	0.168	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00671
	02/26/2014		112	0.674	2.43	70.9	568	<0.0100	<0.00500	0.106	0.147	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00979
	08/21/2014		156	0.856	2.08	68.5	750	<0.0100	<0.00500	0.134	0.0998	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00939	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0114
	02/26/2015		120	0.71	2.1	68	540	<0.035	0.0043	0.12	0.17 J	<0.00070	0.0016 J	<0.0023	<0.0053	<0.014	0.00030 J	<0.0012	<0.000049	0.0026 J	<0.0049	<0.0074	<0.0028	0.0019 J	0.0060 J
	08/26/2015		115	1.19	1.92	102	551	<0.0350	0.00466	0.0982	0.154	<0.000160	0.000709 J	<0.000260	0.000803 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.00258 J	<0.000350	0.00283	<0.000310	0.00158 J	<0.00256
	08/17/2016		57.5	0.954	1.61	75.0	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		94.0	0.966	2.15	74.5	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		33.3	0.955	1.69	76.3	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		27.4	1.07	1.55	67.6	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-11	06/18/2009		204	0.579	1.23	43.1	994	<0.0100	<0.00500	0.194	0.199	<0.00200	<0.00500	<0.00500	<0.00500	0.571	<0.00500	0.387	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0212
	01/18/2010		164	0.527	1.37	71.4	842	<0.0100	<0.00500	0.147	0.238	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0559	<0.000200	<0.00500	0.0126	<0.00500	<0.00500	0.00635	<0.00500
	08/18/2010		146	0.616	2.38	50.6	802	0.0125	<0.00500	0.471	0.255	<0.00200	<0.00500	<0.00500	<0.00500	0.347	<0.00500	0.571	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00718	<0.00500
	02/25/2011		415	0.549	<0.500	82.3	1,510	<0.0100	<0.00500	0.241	0.244	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0101	<0.000200	<0.00500	0.00856	<0.00500	<0.00500	0.00878	0.0982
	07/19/2011		134	0.575	0.778	57.0	894	<0.0100	<0.00500	0.150	0.232	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0301	<0.000200	<0.00500	0.00846	<0.00500	<0.00500	0.00616	0.0265
	02/01/2012		175	0.749	<0.500	4.96	966	<0.0100	0.0176	1.40	0.288	<0.00200	<0.00500	<0.00500	<0.00500	1.77	<0.00500	1.05	<0.000200	<0.00500	0.0169	<0.00500	<0.00500	0.0138	0.0189
	07/27/2012		133	0.708	< 2.00	59.7	784	<0.0100	0.0128	0.827	0.374	<0.00200	<0.00500	<0.00500	<0.00500	2.02	<0.00500	2.54	<0.000200	<0.00500	0.0351	<0.00500	<0.00500	0.0330	<0.00500
	02/27/2013		140	0.576	3.11	32.6	908	<0.0100	0.00802	0.561	0.349	<0.00200	<0.00500	0.00604	<0.00500	<0.200	<0.00500	5.24	<0.000200	0.00631	0.0861	<0.00500	<0.00500	0.0127	0.0226
	02/27/2013	FD	143	0.585	3.23	32.0	908	<0.0100	0.00787	0.574	0.349	<0.00200	<0.00500	0.00574	<0.00500	<0.200	<0.00500	5.47	<0.000200	0.00619	0.0811	<0.00500	<0.00500	0.0125	0.0199
	08/21/2013		182	0.668	4.04	75.3	854	<0.0100	<0.00500	0.195	0.283	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	2.62	<0.000200	<0.00500	0.00869	<0.00500	<0.00500	0.00723	0.00547
	08/21/2013	FD	172	0.673	4.19	76.2	868	<0.0100	<0.00500	0.198	0.290	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	2.92	<0.000200	<0.00500	0.00906	<0.00500	<0.00500	0.00714	0.00592
	02/28/2014		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	08/20/2014		--[1]	--[1]	< 1.00	--[1]	--[1]	0.0129	<0.00500	0.820	0.361	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	1.10	<0.000200	<0.00500	0.0217	<0.00500	<0.00500	0.0269	0.0104
	02/27/2015		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	08/28/2015		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	08/28/2015	FD	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	03/09/2016		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	03/09/2016	FD	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	08/15/2016		DRY WELL - PLUGGED AND ABANDONED DECEMBER 2016																						
MW-11R	02/08/2017		- -	- -	- -	- -	972	<0.0258	0.00165 J	0.208	0.194	<0.000800	<0.00270	0.00157 J	0.0118 J	<0.0750	<0.00120	0.141	<0.0000490	0.00372 J	0.0115	0.00115 J	<0.00155	0.00580 J	<0.0128
	02/08/2017	FD	- -	- -	- -	- -	980	<0.0258	0.00181 J	0.198	0.186	<0.000800	<0.00270	0.00147 J	0.0105 J	<0.0750	<0.00120	0.133	<0.0000490	0.00316 J	0.00979 J	0.00135 J	<0.00155	0.00551 J	<0.0128
	08/17/2017		271	0.599	2.38	157	1,170	0.00988 JB	0.00225	0.156	0.162	<0.000160	<0.000540	<0.000260	0.00242 J	<0.0150	<0.000240	0.00888	<0.0000490	0.00115 J	0.0275	0.00123 J	<0.000310	0.00349 J	0.0152 J
	04/05/2018		- -	- -	- -	- -	1,080	<0.00515	0.00250	0.153	0.192 J	<0.000160	<0.000540	<0.000260	0.0151	0.0561 J	0.000668 JB	0.00304 J	<0.0000490	0.00146 JB	0.0849	0.00219 B	<0.000310	0.00298 J	0.168
	10/01/2018		293	0.587	3.94	116	1,220	0.00726 JB	0.00258	0.162	0.160 J	<0.000160	<0.000540	<0.000260	0.0248	<0.0150	0.000797 JB	0.00123 JB	<0.0000490	0.00119 J	0.00546	0.00206	<0.000310	0.00299 J	0.111
	04/04/2019		- -	- -	- -	- -	1,480	<0.00515	0.00284	0.180	0.203	<0.000160	<0.000540	<0.000260	0.0386	<0.0150	0.000793 J	0.000546 J	<0.0000490	0.00143 J	0.00305	0.00182 J	<0.000310	0.00396 J	0.132
	10/24/2019		344	0.574	6.23	130	1,330	<0.00515	0.00249	0.187	0.218	<0.000160	0.00179 J	<0.000260	0.0435	<0.0150	0.00131 J	<0.000250	0.0000675 J	0.000953 J	0.00148 J	0.00289	<0.000310	0.00537 J	0.126
	06/18/2020		- -	- -	- -	- -	1,280	<0.0554	0.00239	0.187	0.294	<0.000478	<0.00149	<0.000477	0.0351	<0.0489	<0.00249	<0.00132	<0.000100	<0.000953	0.00455	0.00181 J	<0.000513	<0.00754	0.108

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-12	06/16/2009		23.0	1.16	1.98	49.6	354	<0.0200	0.00516	0.0775	0.200	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	<0.0100
	01/18/2010		26.1	1.05	2.31	49.8	398	<0.0100	<0.00500	0.0755	0.235	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0219	<0.000200	<0.00500	0.0182	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/2010		25.8	1.22	2.00	50.3	340	0.115	0.00550	0.0756	0.176	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/2011		28.5	1.14	<0.500	50.8	402	<0.0100	0.00504	0.0760	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0185
	07/19/2011		26.8	0.856	2.91	51.2	410	<0.0100	<0.00500	0.0828	0.215	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00976	<0.000200	0.00575	0.00684	<0.00500	<0.00500	<0.00500	<0.00500
	--		DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013																						
MW-12R	08/21/2013		31.2	1.40	8.14	71.1	404	<0.0100	<0.00500	0.0937	0.194	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0129	<0.000200	0.00647	0.0103	<0.00500	<0.00500	<0.00500	0.00956
	02/27/2014		28.3	0.886	7.38	63.4	432	<0.0100	<0.00500	0.0767	0.193	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00992	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/2014		24.5	1.05	6.98	67.2	410	1.31	<0.00500	0.145	0.223	<0.00200	0.0516	<0.00500	<0.00500	0.867	<0.00500	0.0483	<0.000200	0.00554	0.0350	<0.00500	<0.00500	<0.00500	0.00962
	02/24/2015		29	1.1	7.0	63	500	0.037 J	0.0038	0.095	0.20	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0042 J	<0.0049	<0.0074	<0.0028	0.0019 J	0.0081 J
	08/25/2015		19.8	1.02	7.36	71.1	527	<0.0350	0.00413	0.102	0.233	<0.000160	<0.000540	<0.000260	<0.000520	<0.0141	<0.000240	0.00203 J	<0.0000490	0.00294 J	0.00191 J	0.000707 J	<0.000310	0.00270 J	0.00291 J
	03/09/2016		21.6	0.985	6.35	68.2	503	0.00398 J	0.0034	0.0972	0.214	<0.000160	0.000653 J	<0.000260	0.00331 J	<0.0150	<0.000240	0.00314 JB	<0.0000490	0.00348 J	0.00349 B	0.00121 J	<0.000310	0.00291 J	<0.00256
	08/18/2016		25.1	0.810	6.14	75.9	394	0.00468 JB	0.00294	0.111	0.274	<0.000160	0.00128 JB	<0.000260	0.00176 JB	<0.0150	0.000332 J	0.00250 J	0.0000689 JB	0.00267 J	0.00238 B	0.00151 J	<0.000310	0.00400 J	<0.00256
	02/08/2017		28.4	0.890	5.25	75.0	509	<0.0258	0.00348 J	0.133	0.273	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.0377	<0.0000490	0.00446 J	0.00769 J	0.00185 J	<0.00155	0.00430 J	0.0192 J
	08/16/2017		31.0	0.813	5.34	68.8	528	0.0102 JB	0.00270	0.118	0.229	<0.000160	0.000749 J	<0.000260	0.000969 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00285 J	0.00185 JB	0.00147 J	<0.000310	0.00422 J	0.00320 J
	04/05/2018		33.2	0.699	4.77	71.1	520	<0.00515	0.00275	0.128	0.281	<0.000160	<0.000540	<0.000260	0.00164 JB	<0.0150	<0.000240	0.000316 JB	<0.0000490	0.00206 JB	0.00187 JB	0.00169 JB	<0.000310	0.00464 J	0.00477 J
	04/05/2018	FD	31.3	0.730	4.78	71.7	535	<0.00515	0.00291	0.130	0.279	<0.000160	0.000595 JB	<0.000260	0.00170 JB	<0.0150	<0.000240	0.000435 JB	<0.0000490	0.00217 JB	0.00167 JB	0.00150 JB	<0.000310	0.00476 J	0.00779 J
	10/01/2018		32.9	0.685	4.88	82.9	503	<0.00515	0.00251	0.141	0.262	<0.000160	<0.000540	<0.000260	0.000867 JB	<0.0150	<0.000240	0.000932 JB	<0.0000490	0.00195 J	0.00181 J	0.00175 J	<0.000310	0.00458 J	0.00781 JB
	10/01/2018	FD	32.1	0.645	4.90	87.4	588	<0.00515	0.00292	0.154	0.249	<0.000160	0.000720 J	<0.000260	0.00150 J	<0.0150	0.000318 JB	0.000610 J	<0.0000490	0.00218 J	0.00205	0.00185 J	<0.000310	0.00502 J	0.00956 J
	04/04/2019		41.2	0.551	5.09	77.1	623	<0.00515	0.00250	0.167	0.295	<0.000160	0.000768 J	<0.000260	0.00330 J	<0.0150	<0.000240	0.000558 J	<0.0000490	0.00190 J	0.00530	0.00163 J	<0.000310	0.00582 J	0.0172 J
	04/04/2019	FD	41.8	0.534	5.61	76.1	624	<0.00515	0.00232	0.168	0.153 J	<0.000160	0.000775 JB	<0.000260	0.0100	<0.0150	<0.000240	0.000717 JB	<0.0000490	0.00168 J	0.00407	0.00206	<0.000310	0.00555 J	0.0148 J
	10/24/2019		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																						
MW-13	06/16/2009		425	0.220	2.65	138	1,790	<0.0200	<0.00500	0.0692	0.253	<0.00200	<0.00500	0.0285	<0.00500	<0.200	<0.00500	0.0176	<0.000200	<0.00500	0.0126	<0.00500	<0.00500	- -	0.0269
	01/18/2010		604	0.170	1.08	79.8	2,210	<0.0100	<0.00500	0.111	0.231	<0.00200	0.00728	0.00624	<0.00500	<0.200	<0.00500	0.0591	<0.000200	<0.00500	0.0110	<0.00500	<0.00500	0.0119	0.00769
	08/18/2010		390	0.278	< 1.00	144	1,720	0.0196	<0.00500	0.106	0.221	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.256	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0128	0.00618
	02/25/2011		340	0.281	<0.500	235	1,540	<0.0100	<0.00500	0.0692	0.242	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.225	<0.000200	<0.00500	0.0144	<0.00500	<0.00500	0.0170	0.0744
	07/19/2011		351	0.327	<0.500	244	1,960	<0.0100	<0.00500	0.0800	0.249	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.302	<0.000200	<0.00500	0.0121	<0.00500	<0.00500	0.0188	0.00785
	02/01/2012		418	0.322	<0.500	122	1,590	<0.0100	<0.00500	0.0752	0.228	<0.00200	<0.00500	0.00663	<0.00500	<0.200	<0.00500	0.341	<0.000200	<0.00500	0.0136	<0.00500	<0.00500	0.0128	0.0553
	07/26/2012		462	0.422	< 2.00	123	2,150	<0.0100	<0.00500	0.112	0.284	<0.00200	<0.00500	0.00644	<0.00500	<0.200	<0.00500	0.459	<0.000200	<0.00500	0.0108	<0.00500	<0.00500	0.0158	0.0361
	02/26/2013		430	0.366	< 2.00	135	1,610	0.0139	<0.00500	0.129	0.270	<0.00200	<0.00500	0.00657	<0.00500	<0.200	<0.00500	0.571	<0.000200	0.00568	0.0820	<0.00500	<0.00500	0.0123	0.0359
	08/21/2013		548	0.389	< 1.00	108	2,000	<0.0100	0.00590	0.159	0.265	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.705	<0.000200	<0.00500	0.0209	<0.00500	<0.00500	0.0153	0.00931
	02/27/2014		588	0.282	<0.500	106	2,380	0.0110	<0.00500	0.191	0.258	<0.00200	0.0140	0.00541	<0.00500	0.321	<0.00500	1.01	<0.000200	<0.00500	0.0300	<0.00500	<0.00500	0.0173	0.0291
	08/19/2014		485	< 1.00	< 1.00	87.2	1,900	0.0737	<0.00500	0.207	0.287	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.940	<0.000200	<0.00500	0.00650	<0.00500	<0.00500	0.0151	0.0115
	02/27/2015		550	0.38	0.056 J	59	1,600	<0.035	0.0034	0.23	0.24	<0.00070	<0.0014	0.0047 J	<0.0053	<0.014	<0.00024	0.82	<0.000049	0.0010 J	<0.0049	<0.0074	<0.0028	0.014	0.019 J
	08/26/2015		396	0.505	0.956	107	1,890	<0.0350	0.00301	0.197	0.231	<0.000160	<0.000540	0.00163 J	0.00208 J	<0.0141	<0.000240	0.383	- -	0.00143 J	0.00276	0.000710 J	<0.000310	0.0112	0.00592 J
	03/08/2016		217	0.552	2.53	75.7	972	0.00530 JB	0.00365	0.0976	0.196	<0.000160	<0.000540	<0.000260	0.00100 JB	0.0238 JB	0.000241 JB	0.00062 J	<0.0000490	0.00288 J	0.000721 JB	0.00144 J	<0.000310	0.00303 J	0.00418 JB
	08/17/2016		336	0.396	1.81	97.5	1,340	0.00748 JB	0.00398	0.149	0.223	<0.000160	0.00130 JB	0.00218	0.00287 JB	0.0220 JB	<0.000240	0.241	<0.0000490	0.00111 J	0.00409 B	0.000998 J	<0.000310	0.0119	0.0159 J
	02/08/2017		307	0.428	1.28	102	1,140	<0.0258	0.00409 J	0.150	0.217	<0.000800	<0.00270	0.00296 J	<0.00260	<0.0750	<0.00120	0.157	<0.0000490	0.00132 J	0.00726 J	0.000432 J	<0.00155	0.0123 J	0.0382 J
	08/17/2017		--(1)	--(1)	--(1)	--(1)	--(1)	0.00785 JB	0.00687	0.142	0.187	<0.000160	0.00128 J	<0.000260	0.00517	<0.0150	<0.000240	0.0258	<0.0000490	0.00193 J	0.0231	0.000828 J	<0.000310	0.0141	0.240
	04/05/2018		--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)	--(1)
	09/26/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018																						
MW-13R	10/01/2018		407	0.629	3.50	90.2	1,410	0.00533 JB	0.00260	0.194	0.169 J	<0.000160	0.00234 B	0.00460	0.0243	<0.0150	<0.000240	0.223	<0.0000490	0.0360	0.162	0.00161 J	<0.000310	0.00743 J	0.0775
	04/04/2019		464	0.326	3.66	94.8	1,980	<0.00515	0.00188 J	0.199	0.239	<0.000160	0.00802	0.00148 J	0.0162	<0.0150	<0.000240	0.0520	0.0000564 J	0.000861 J	0.0234	0.000961 J	<0.000310	0.0106	0.0335
	10/24/2019		354	0.410	4.02	74.5	1,360	<0.00515	0.00205	0.225	0.262	<0.000160	0.00255	0.000874 J	0.0104	<0.0150	<0.000240	0.0508	0.000152 J	0.000608 J	0.0127	0.000645 J	<0.000310	0.0102	0.0184 J
	06/18/2020		294	0.421	5.15	153	1,380	<0.0554	0.00238	0.127	0.274	<0.000478	<0.00149	0.000767 J	0.0110	<0.0489	<0.00249	0.0392	<0.000100	<0.000953	0.0103	0.00122 J	<0.000513	0.00887 J	0.0131 J
	06/18/2020	FD	297	0.413	5.28	153	1,310	<0.0554	0.00229	0.122	0.277	<0.000478	<0.00149	0.000716 J	0.00941	<0.0489	<0.00249	0.0374	<0.000100	<0.000953	0.00920	0.00104 J	<0.000513	0.00865 J	0.0128 J

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			**250**	**1.6**	**10.0**	**600.0**	**1,000.0**	**5.0**	**0.01**	**2**	**0.75**	**0.005**	**0.05**	**0.05**	**1.0**	**1.0**	**0.015**	**0.2**	**0.002**	**1.0**	**0.2**	**0.05**	**0.05**	**0.03**	**10.0**
MW-14	06/16/2009		93.0	0.851	5.16	60.9	540	<0.0200	<0.00500	0.0770	0.132	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0199	<0.000200	0.0215	<0.00501	<0.00500	<0.00500	- -	0.0255
	01/18/2010		103	0.810	6.03	59.0	598	<0.0100	<0.00500	<0.00500	<0.020	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/20/2010		74.1	0.986	2.76	61.3	340	0.103	<0.00500	0.0774	0.131	<0.00200	0.0119	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00964	0.0480	<0.00500	<0.00500	0.00527	<0.00500
	02/25/2011		58.2	0.918	2.32	58.7	440	0.0101	<0.00500	0.0778	0.151	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0234	<0.000200	0.00903	0.0138	<0.00500	<0.00500	0.00541	0.0532
	07/18/2011		48.4	1.05	1.36	53.0	482	0.176	0.00615	0.110	0.156	<0.00200	12.5	0.122	0.218	54.9	<0.00500	1.45	<0.000200	0.0860	6.81	<0.00500	<0.00500	0.00544	0.0446
	01/31/2012		59.7	0.984	1.58	58.3	444	<0.0100	<0.00500	0.0802	0.129	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.02760	<0.000200	0.00608	0.0186	<0.00500	<0.00500	<0.00500	0.0287
	07/25/2012		69.3	1.03	< 2.00	54.8	446	0.0116	<0.00500	0.0905	0.216	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0321	<0.000200	<0.00500	0.0240	<0.00500	<0.00500	<0.00500	0.0448
	02/21/2013		- -	- -	< 2.00	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	02/22/2013		71.9	0.795	- -	52.9	428	<0.0100	<0.00500	0.0900	0.174	<0.00200	<0.00500	<0.00500	0.0705	<0.200	<0.00500	0.0349	<0.000200	0.0121	0.0106	<0.00500	<0.00500	0.00591	0.148
	02/28/2014		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	08/20/2014		--[1]	--[1]	1.10	--[1]	534	0.573	<0.00500	0.125	0.203	<0.00200	0.0247	<0.00500	<0.00500	0.314	<0.00500	0.00919	<0.000200	0.00533	0.0178	<0.00500	<0.00500	0.00502	0.0134
	02/27/2015		--[1]	--[1]	--[1]	--[1]	--[1]	<0.035	0.0023	0.10	0.20 J	<0.00070	0.0026 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	--[1]	0.0040 J	<0.0049	<0.0074	<0.0028	0.0047 J	0.0070 J
	08/27/2015		104	0.940	1.96	44.6	611	<0.0350	0.00271	0.0998	0.188	<0.000160	0.00261	0.000326 J	0.00122 J	<0.0141	<0.000240	<0.000250	--[1]	0.00429 J	0.00190 J	0.00123 J	<0.000310	0.00485 J	0.00334 J
	08/19/2016		118	0.796	4.13	39.3	674	0.00385 JB	0.00244	0.124	0.216	<0.000160	0.00335 B	0.000476 J	0.00230 JB	<0.0150	<0.000240	0.00431 J	<0.0000490	0.00412 J	0.00253 B	0.00165 J	<0.000310	0.00554 J	0.00497 JB
	08/16/2017		--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]	<0.0000490	--[1]	--[1]	--[1]	--[1]	--[1]	--[1]
	09/27/2018		DRY WELL - PLUGGED AND ABANDONED SEPTEMBER 2018																						
MW-14R	10/01/2018		216	1.15	2.81	54.3	867	0.0120 JB	0.00317	0.159	0.160 J	<0.000160	<0.000540	<0.000260	0.00200 JB	<0.0150	<0.000240	0.0107	<0.0000490	0.00700	0.00515	0.00178 J	<0.000310	0.00339 J	0.00479 JB
	10/24/2019		518	0.873	4.96	61.1	1,840	<0.00515	0.00248	0.332	0.181 J	<0.000160	<0.000540	<0.000260	<0.000520	<0.0150	<0.000240	<0.000250	0.0000617 J	0.00242 J	<0.000350	0.00219	<0.000310	0.00509 J	<0.00256
MW-15	08/20/2010		221	0.921	3.22	77.6	776	0.0790	<0.00500	0.145	0.175	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0198
	02/24/2011		190	0.885	4.28	67.0	738	<0.0100	<0.00500	0.127	0.165	<0.00200	0.0102	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0385
	07/14/2011		236	0.701	4.18	60.9	940	<0.0100	<0.00500	0.173	0.201	<0.00200	0.0132	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00657	<0.00500	<0.00500	<0.00500	0.0122
	01/30/2012		304	0.840	4.09	78.6	1,330	<0.0100	<0.00500	0.180	0.178	<0.00200	0.00644	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00967
	07/24/2012		291	0.965	8.22	80.3	1,060	<0.0100	<0.00500	0.178	0.227	<0.00200	0.0110	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00636
	02/19/2013		254	0.819	5.12	76.0	882	0.0682	<0.00500	0.178	0.191	<0.00200	0.129	<0.00500	<0.00500	0.610	<0.00500	0.0198	<0.000200	<0.00500	0.0704	<0.00500	<0.00500	<0.00500	0.0160
	08/20/2013		379	0.910	6.82	71.3	1,280	<0.0100	<0.00500	0.232	0.194	<0.00200	0.00594	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00854
	08/20/2013	FD	381	0.931	6.83	72.7	1,230	<0.0100	<0.00500	0.232	0.188	<0.00200	0.00582	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00619
	02/24/2014		256	0.715	7.86	83.0	858	<0.0100	<0.00500	0.178	0.175	<0.00200	0.00910	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/24/2014	FD	263	0.832	8.07	82.5	810	<0.0100	<0.00500	0.178	0.174	<0.00200	0.00961	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	08/21/2014		148	1.02	8.52	97.5	690	0.0102	<0.00500	0.146	0.117	<0.00200	0.00513	<0.00500	<0.00500	<0.200	<0.00500	0.00509	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0149
	08/21/2014	FD	150	1.01	8.53	95.6	706	0.0136	<0.00500	0.153	0.119	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0213
	02/24/2015		150	0.90	8.4	94	650	0.052 J	0.0040	0.15	0.17 J	<0.00070	0.0034 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0024 J	<0.0049	<0.0074	<0.0028	0.0021 J	0.012 J
	08/27/2015		181	1.13	8.48	123	728	<0.0350	0.00424	0.146	0.167	<0.000160	0.00285	<0.000260	0.00109 J	<0.0141	0.000373 J	0.000492 J	<0.0000490	0.00249 J	0.000825 J	0.00232	<0.000310	0.00220 J	<0.00256
	08/27/2015	FD	234	1.46	8.47	158	729	<0.0350	0.00443	0.146	0.174	<0.000160	0.00272	<0.000260	<0.000520	0.0144 J	<0.000240	0.000276 J	<0.0000490	0.00254 J	0.000688 J	0.00253	<0.000310	0.00200 J	<0.00256
	03/07/2016		160	0.877	6.53	85.9	727	0.00537 JB	0.0042	0.14	0.156	<0.000160	0.00281	<0.000260	0.000956 J	<0.0150	0.000309 JB	0.000837 JB	<0.0000490	0.00240 J	0.00173 JB	0.00234	<0.000310	0.00248 J	0.00275 JB
	08/15/2016		169	0.685	5.19	93.2	721	0.00418 JB	0.00353	0.140	0.176	<0.000160	0.00128 JB	0.000281 J	0.00193 JB	<0.0150	<0.000240	0.00394 J	<0.0000490	0.00326 J	0.00597 B	0.00245	<0.000310	0.00275 J	0.00409 J
	08/15/2016	FD	165	0.738	5.09	93.3	723	0.00531 JB	0.00353	0.145	0.183	<0.000160	0.00130 JB	0.000293 J	0.000569 JB	0.0441 JB	<0.000240	0.00413 J	<0.0000490	0.00340 J	0.00598 B	0.00259	<0.000310	0.00281 J	0.00403 J
	02/06/2017		177	0.781	5.80	105	800	<0.0258	0.00342 J	0.160	0.198	<0.000800	<0.00270	<0.00130	<0.00260	<0.0750	<0.00120	0.00764 J	<0.0000490	0.00419 J	0.0145	0.00213	<0.00155	0.00275 J	0.0140 J
	08/16/2017		219	0.772	5.02	90.2	808	0.00788 JB	0.00362	0.161	0.161	<0.000160	0.00242	<0.000260	0.00189 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00183 J	0.00373 B	0.00191 J	<0.000310	0.00257 J	0.0104 J
	04/05/2018		222	0.644	4.28	111	808	<0.00515	0.00339	0.148	0.189 J	<0.000160	0.00201 B	<0.000260	0.00420 J	0.0281 J	0.000269 JB	0.00172 JB	<0.0000490	0.00433 J	0.00561	0.00170 JB	<0.000310	0.00290 J	0.0250 J
	10/01/2018		348	0.549	4.26	105	2,230	<0.00515	0.00329	0.162	0.157 J	<0.000160	0.00118 JB	<0.000260	0.00144 JB	<0.0150	<0.000240	0.00189 JB	<0.0000490	0.00136 J	0.00277	0.00215	<0.000310	0.00288 J	0.0199 JB
	04/04/2019		537	0.478	3.85	100	1,880	0.00581 JB	0.00294	0.189	0.180 J	<0.000160	0.00181 J	<0.000260	0.00800	<0.0150	0.000487 J	0.000601 J	<0.0000490	0.00170 J	0.00656	0.00134 J	<0.000310	0.00265 J	0.0714
	10/24/2019		437	0.592	3.29	111	1,370	<0.00515	0.00246	0.160	0.172 J	<0.000160	0.00321	<0.000260	0.00177 J	<0.0150	<0.000240	0.00280 J	0.0000657 J	0.00567	0.0322	0.00252	<0.000310	0.00273 J	0.128
	06/18/2020		288	0.720	3.88	117	988	<0.0554	0.00285	0.137	0.183 J	<0.000478	0.00504	<0.000477	0.00313 J	<0.0489	<0.00249	0.00176 J	<0.000100	0.00697	0.0396	0.00184 J	<0.000513	<0.00754	0.168

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-16	08/20/2010		25.3	0.930	1.13	73.7	406	0.0746	<0.00500	0.109	0.156	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00554	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0145
	02/24/2011		28.1	0.928	2.36	73.7	412	<0.0100	<0.00500	0.107	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00671	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0248
	07/15/2011		25.5	1.04	1.82	72.0	484	0.188	<0.00500	0.129	0.181	<0.00200	0.115	<0.00500	<0.00500	0.613	<0.00500	0.0164	<0.000200	<0.00500	0.0591	<0.00500	<0.00500	<0.00500	0.0176
	07/15/2011	FD	21.0	0.733	1.98	54.1	476	0.0374	<0.00500	0.118	0.185	<0.00200	0.0251	<0.00500	<0.00500	0.241	<0.00500	0.00820	<0.000200	<0.00500	0.0234	<0.00500	<0.00500	<0.00500	0.0166
	01/30/2012		27.9	0.994	1.79	77.6	398	<0.0100	<0.00500	0.0964	0.166	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00899
	07/24/2012		26.6	1.14	< 2.00	72.6	404	0.0102	<0.00500	0.0966	0.202	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0162	<0.000200	<0.00500	0.0112	<0.00500	<0.00500	<0.00500	0.0167
	02/20/2013		24.0	0.966	< 2.00	68.1	316	<0.0100	0.00547	0.0968	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00693
	08/20/2013		24.7	1.02	1.75	64.0	392	0.0260	<0.00500	0.105	0.192	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0219	<0.000200	<0.00500	0.0177	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/2014		23.9	0.766	1.83	62.3	362	<0.0100	<0.00500	0.0938	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0225	<0.000200	0.00516	0.0295	<0.00500	<0.00500	<0.00500	0.00786
	08/19/2014		21.7	0.975	1.41	64.9	362	0.335	<0.00500	0.104	0.209	<0.00200	0.00751	<0.00500	<0.00500	<0.200	<0.00500	0.00544	<0.000200	<0.00500	0.00667	<0.00500	<0.00500	<0.00500	0.00897
	02/24/2015		20	1.0	1.9	61	360	0.042 J	0.0051	0.098	0.17 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0042 J	<0.000049	0.0035 J	<0.0049	<0.0074	<0.0028	0.0016 J	0.014 J
	08/27/2015		21.3	1.07	2.34	66.0	408	<0.0350	0.00528	0.0936	0.176	<0.000160	<0.000540	<0.000260	0.000638 J	<0.0141	<0.000240	0.000312 J	<0.0000490	0.00293 J	<0.000350	0.00228	<0.000310	0.00156 J	0.00343 J
	08/15/2016		22.3	0.859	1.69	63.5	418	0.00512 JB	0.00434	0.0973	0.181	<0.000160	0.00122 JB	<0.000260	0.000659 JB	0.0571 JB	<0.000240	0.00916	<0.0000490	0.00631	0.0117	0.00246	<0.000310	0.00206 J	0.00454 J
	08/17/2017		25.5	0.940	1.94	66.4	392	0.0178 JB	0.00488	0.106	0.162	<0.000160	0.000796 J	<0.000260	0.00279 J	<0.0150	<0.000240	0.000295 J	<0.0000490	0.00256 J	0.00343 B	0.00257	<0.000310	0.00198 J	0.0285
	10/01/2018		28.1	0.900	2.16	67.8	386	<0.00515	0.00492	0.114	0.155 J	<0.000160	<0.000540	<0.000260	0.00200 JB	<0.0150	<0.000240	0.000783 JB	<0.0000490	0.00243 J	0.000934 J	0.00322	<0.000310	0.00228 J	0.00805 JB
	10/24/2019		32.0	1.01	2.10	69.8	432	<0.00515	0.00557	0.109	0.157 J	<0.000160	0.00107 J	<0.000260	0.00290 J	<0.0150	0.000400 J	0.00116 J	0.0000606 J	0.00251 J	0.00120 J	0.00358	<0.000310	0.00226 J	0.0369
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																						
MW-17	08/20/2010		426	0.517	4.27	72.6	1,650	0.146	<0.00500	0.180	0.157	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0142
	02/24/2011		412	0.435	5.33	80.0	1,634	<0.0100	<0.00500	0.152	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0478
	07/18/2011		336	0.753	4.07	82.7	1,850	<0.0100	<0.00500	0.141	0.165	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0126
	--		DAMAGED WELL - PLUGGED AND ABANDONED JUNE 2013																						
MW-17R	08/22/2013		246	0.602	3.44	81.7	1,190	0.0302	<0.00500	0.154	0.188	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0819	<0.000200	0.00531	0.0189	<0.00500	<0.00500	<0.00500	<0.00500
	02/27/2014		184	0.425	0.629	92.5	904	0.254	<0.00500	0.121	0.193	<0.00200	0.0121	<0.00500	<0.00500	<0.200	<0.00500	0.0342	<0.000200	<0.00500	0.0273	<0.00500	<0.00500	<0.00500	<0.00500
	08/22/2014		170	0.602	2.70	94.8	860	0.0459	<0.00500	0.153	0.120	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0989	<0.000200	<0.00500	0.0378	<0.00500	<0.00500	<0.00500	0.0243
	02/26/2015		150	0.65	2.6	75	670	0.046 J	0.0028	0.12	- -	<0.00070	0.0022 J	<0.0023	<0.0053	<0.014	0.00030 J	<0.0012	<0.000049	0.0013 J	<0.0049	<0.0074	<0.0028	0.0030 J	0.023 J
	08/27/2015		110	0.859	2.86	87.4	658	<0.0350	0.00320	0.0972	0.171	<0.000160	0.000967 J	<0.000260	0.000632 J	0.0218 J	<0.000240	0.00123 J	<0.0000490	0.00163 J	0.000779 J	0.00203	<0.000310	0.00267 J	<0.00256
	03/08/2016		65.3	0.722	2.55	76	465	0.0150 JB	0.00259	0.0739	0.161	<0.000160	<0.000540	0.000315 J	0.000717 J	<0.0150	<0.000240	0.0544	<0.0000490	0.000749 J	0.00103 JB	0.00185 J	<0.000310	0.00666 J	0.00412 JB
	08/17/2016		219	0.578	4.37	79.8	526	0.00299 JB	0.00251	0.143	0.199	<0.000160	0.00110 JB	<0.000260	0.00145 JB	<0.0150	<0.000240	0.00281 J	<0.0000490	0.00140 J	0.00147 JB	0.00143 J	<0.000310	0.00285 J	<0.00256
	02/09/2017		150	0.654	3.01	86.3	715	<0.0258	0.00292 J	0.0993	0.183	<0.000800	<0.00270	<0.00130	0.00839 J	<0.0750	<0.00120	0.0450	<0.0000490	0.00415 J	0.0112	0.00227	<0.00155	0.00227 J	<0.0128
	08/16/2017		60.0	0.770	2.21	85.9	502	0.00847 JB	0.00367	0.0723	0.154	<0.000160	0.00244	<0.000260	0.00105 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00161 J	0.00196 JB	0.00274	<0.000310	0.00179 J	0.00448 J
	04/05/2018		124	0.664	2.46	68.2	587	<0.00515	0.00353	0.107	0.166 J	<0.000160	0.00143 JB	<0.000260	0.00180 JB	<0.0150	<0.000240	<0.000250	<0.0000490	0.00161 JB	0.00233 B	0.00261 B	<0.000310	0.00165 JB	0.00823 J
	04/05/2018	FD	124	0.679	2.48	69.7	589	<0.00515	0.00350	0.109	0.172 J	<0.000160	0.00118 JB	<0.000260	0.00166 JB	<0.0150	<0.000240	0.000388 JB	<0.0000490	0.00161 JB	0.00229 B	0.00227 B	<0.000310	0.00163 JB	0.0116 J
	10/01/2018		136	0.631	2.88	79.7	682	0.00927 JB	0.00327	0.120	0.145 J	<0.000160	0.000817 JB	<0.000260	0.00143 JB	<0.0150	<0.000240	0.000555 JB	<0.0000490	0.00157 J	0.00309	0.00290	<0.000310	0.00189 J	0.0203 JB
	04/04/2019		94.5	0.627	2.21	78.5	568	<0.00515	0.00384	0.0984	0.150 J	<0.000160	0.00167 J	<0.000260	0.00167 J	<0.0150	<0.000240	0.000643 J	<0.0000490	0.00180 J	0.0335	0.00294	<0.000310	0.00168 J	0.0260
	04/04/2019	FD	94.3	0.629	2.53	78.5	562	<0.00515	0.00346	0.0972	0.185 J	<0.000160	0.00138 JB	<0.000260	0.00105 J	<0.0150	<0.000240	0.000563 JB	<0.0000490	0.00147 J	0.00314	0.00305	<0.000310	0.00162 J	0.0192 J
	10/24/2019		67.7	0.771	1.94	89.9	467	<0.00515	0.00378	0.0915	0.116 J	<0.000160	0.00223	<0.000260	0.000686 J	<0.0150	0.000244 J	<0.000250	0.0000572 J	0.00167 J	0.00478	0.00218	<0.000310	0.00166 J	0.0365
	06/18/2020		80.6	0.786	2.13	85.9	503	<0.0554	0.00386	0.0956	0.148 J	<0.000478	0.00178 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00174 J	0.00270	0.00256	<0.000513	<0.00754	0.0203 J
MW-18	08/23/2010		176	0.456	0.733	287	1,080	0.0787	<0.00500	0.0575	0.334	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.314	<0.000200	0.00561	0.0298	0.00548	<0.00500	0.0123	0.0772
	02/24/2011		286	0.514	4.14	298	1,240	0.0157	<0.00500	0.0766	0.330	<0.00200	0.0186	<0.00500	<0.00500	<0.200	<0.00500	0.00536	<0.000200	<0.00500	0.0144	0.00501	<0.00500	0.00883	0.0439
	07/18/2011		218	0.800	5.74	234	1,290	0.0244	<0.00500	0.05636	0.396	<0.00200	0.0111	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.0129	<0.00500	<0.00500	0.00666	0.0661
	01/31/2012		106	0.722	3.89	94.3	584	0.0113	<0.00500	0.0645	0.133	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0191
	07/25/2012		103	0.753	2.01	63.4	562	0.0110	<0.00500	0.0780	0.230	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00684
	02/22/2013		181	0.564	4.02	116	782	0.0742	<0.00500	0.105	0.249	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0129	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0138	0.0187
	08/22/2013		197	0.531	5.59	130	1,100	<0.0100	<0.00500	0.110	0.243	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00509	<0.00500	<0.00500	<0.00500	<0.00500
	02/26/2014		145	0.514	4.36	89.1	680	0.0213	<0.00500	0.0766	0.244	<0.00200	<0.00500	<0.00500	0.0215	<0.200	<0.00500	0.0117	<0.000200	<0.00500	0.00681	<0.00500	<0.00500	0.00701	0.0465
	08/20/2014		143	0.590	1.97	123	678	1.31	<0.00500	0.145	0.242	<0.00200	0.00506	<0.00500	<0.00500	0.637	<0.00500	0.0378	<0.000200	<0.00500	0.00634	<0.00500	<0.00500	<0.00500	0.0363
	02/26/2015		130	0.68	3.5	97	670	0.069 J	0.0026	0.10	0.26	<0.00070	<0.0014	<0.0023	0.0061 J	0.022 J	0.00026 J	<0.0012	<0.000049	0.0020 J	<0.0049	<0.0074	<0.0028	0.0039 J	0.017 J
	08/25/2015		136	0.703	2.73	65.8	844	<0.0350	0.00288	0.116	0.188 J	<0.000160	0.00118 J	<0.000260	0.000646 J	<0.0141	<0.000240	0.00120 J	<0.0000490	0.00612	0.00151 J	0.00178 J	<0.000310	0.00434 J	0.00669 J
	08/17/2016		162	0.557	3.71	53.4	799	<0.00200	0.00194 J	0.108	0.223	<0.000160	0.00195 JB	<0.000260	0.00214 JB	0.0201 J	<0.000240	0.00261 J	0.0000593 JB	0.00217 J	0.00139 JB	0.00173 J	<0.000310	0.00423 J	0.00992 JB
	08/16/2017		234	0.648	6.10	93.5	1,030	<0.00515	0.00174 J	0.135	0.169	<0.000160	0.00176 J	<0.000260	0.000766 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00174 J	0.00106 JB	0.00299	<0.000310	0.00434 J	0.00897 J
	10/01/2018		99.6	0.599	2.48	73.8	659	<0.00515	0.00225	0.0916	0.240	<0.000160	0.00185 JB	<0.000260	0.00231 JB	<0.0150	0.000351 JB	0.000538 JB	<0.0000490	0.00166 J	0.0101	0.00252	<0.000310	0.00428 J	0.0334 B
	10/24/2019		120	0.634	3.82	113	653	<0.00515	0.00232	0.0826	0.168 J	<0.000160	0.00258	<0.000260	0.00302 J	<0.0150	<0.000240	<0.000250	0.0000660 J	0.00193 J	0.00878	0.00190 J	<0.000310	0.00354 J	0.0682

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-19	08/23/2010		469	0.536	2.94	178	1,650	0.101	0.0476	0.229	<0.020	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00666	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0227
	02/24/2011		235	0.713	2.87	90.7	828	<0.0100	<0.00500	0.0764	0.180	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0318
	07/18/2011		688	0.734	3.66	142	2,880	<0.0100	<0.00500	0.0920	0.266	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00781	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0553
	01/31/2012		610	0.568	4.12	121	1,770	<0.0100	<0.00500	0.0688	0.350	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00553	<0.000200	<0.00500	0.00525	<0.00500	<0.00500	<0.00500	0.0345
	07/25/2012		1,130	0.450	5.11	117	3,570	0.0114	<0.00500	0.106	0.535	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00593	<0.000200	<0.00500	0.00664	<0.00500	<0.00500	<0.00500	0.0714
	02/26/2013		540	0.519	4.21	115	1,650	<0.0100	<0.00500	0.0870	0.300	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00566	<0.00500	<0.00500	<0.00500	0.0629
	08/22/2013		487	0.645	3.43	92.6	1,430	<0.0100	<0.00500	0.0857	0.241	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00512
	08/22/2013	FD	475	0.672	3.38	95.7	1,670	0.0182	<0.00500	0.0864	0.237	<0.00200	0.0143	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00900	<0.00500	<0.00500	<0.00500	<0.00500
	02/26/2014		264	0.576	2.34	72.3	850	0.0120	<0.00500	0.0793	0.227	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0157	<0.000200	<0.00500	0.0122	<0.00500	<0.00500	<0.00500	0.0333
	02/26/2014	FD	288	0.555	2.51	76.0	950	0.0435	<0.00500	0.0753	0.204	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0165	<0.000200	<0.00500	0.0123	<0.00500	<0.00500	<0.00500	0.0350
	08/19/2014		233	0.592	2.48	84.5	774	0.0461	<0.00500	0.269	0.279	<0.00200	0.0352	<0.00500	<0.00500	0.263	<0.00500	0.0204	<0.000200	<0.00500	0.0261	<0.00500	<0.00500	<0.00500	0.00854
	08/19/2014	FD	241	0.627	2.59	84.7	820	0.0208	<0.00500	0.0846	0.236	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0106	<0.000200	<0.00500	0.00943	<0.00500	<0.00500	<0.00500	0.00640
	02/26/2015		140	0.87	2.3	82	630	<0.035	0.0046	0.070	0.22	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0032 J	<0.0049	<0.0074	<0.0028	0.0025 J	0.014 J
	02/26/2015	FD	130	0.86	2.4	85	660	0.089 J	0.0046	0.069	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0030 J	<0.0049	<0.0074	<0.0028	0.0025 J	0.013 J
	08/26/2015		236	0.789	2.86	70.9	888	<0.0350	0.00422	0.0875	0.185 J	<0.000160	0.00105 J	<0.000260	0.000732 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.0107	0.00168 J	0.00138 J	<0.000310	0.00179 J	0.00486 J
	03/08/2016		297	0.749	2.81	63.2	1,170	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2016		470	0.749	2.93	90.3	1,660	0.00479 JB	0.00383	0.0919	0.191	<0.000160	0.00129 JB	<0.000260	0.000646 JB	0.0268 JB	<0.000240	0.00104 JB	<0.0000490	0.00287 J	0.000547 JB	0.00148 J	<0.000310	0.00312 J	0.00397 J
	02/08/2017		302	0.735	2.39	57.6	864	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/16/2017		236	0.832	2.02	57.8	907	0.00686 JB	0.00365	0.104	0.148	<0.000160	0.000704 J	<0.000260	0.00395 J	<0.0150	<0.000240	0.000510 J	<0.0000490	0.00328 J	0.0123	0.00143 J	<0.000310	0.00208 J	0.0241 J
	08/16/2017	FD	257	0.626	2.08	61.8	944	<0.00515	0.00351	0.103	0.151	<0.000160	0.000627 J	<0.000260	0.00304 J	<0.0150	<0.000240	0.000995 JB	<0.0000490	0.00317 J	0.00919	0.00138 J	<0.000310	0.00220 J	0.0207 J
	04/05/2018		176	0.797	1.48	61.3	722	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		292	0.706	2.96	85.6	1,270	0.00731 JB	0.00196 J	0.0939	0.145 J	<0.000160	0.000756 JB	0.00133 J	0.00446 JB	<0.0150	<0.000240	0.0179	<0.0000490	0.00480 J	0.0726	0.00109 J	<0.000310	0.00250 J	0.0926
	04/04/2019		276	0.647	2.32	81.8	1,090	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		323	0.671	3.76	126	1,220	<0.00515	0.00135 J	0.0639	0.162 J	<0.000160	<0.000540	0.00261	0.00138 J	<0.0150	<0.000240	0.0406	<0.0000490	0.00358 J	0.181	0.00146 J	<0.000310	0.00274 J	0.0196 J
	06/18/2020		299	0.657	2.88	168	1,290	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-20	08/23/2010		169	0.570	1.74	65.1	868	0.0891	<0.00500	0.122	0.143	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00970
	02/25/2011		187	0.603	2.58	66.3	840	<0.0100	<0.00500	0.120	0.150	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0643
	07/18/2011		148	0.765	2.06	51.3	1,020	<0.0100	<0.00500	0.134	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0278
	01/31/2012		174	0.641	2.51	61.4	726	<0.0100	<0.00500	0.114	0.149	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0171
	07/25/2012		189	0.742	2.24	56.0	848	<0.0100	<0.00500	0.107	0.217	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0187
	02/22/2013		155	0.570	2.26	55.8	600	0.0294	<0.00500	0.102	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0165
	08/20/2013		180	0.755	2.40	60.4	736	0.0104	<0.00500	0.102	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00966	<0.000200	<0.00500	0.0112	<0.00500	<0.00500	<0.00500	0.0242
	02/26/2014		159	0.664	2.70	53.4	696	<0.0100	<0.00500	0.112	0.173	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0107	<0.000200	<0.00500	0.00800	<0.00500	<0.00500	<0.00500	0.00954
	08/19/2014		138	0.574	2.09	58.5	672	0.290	<0.00500	0.108	0.194	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0116
	02/24/2015		120	0.65	2.6	56	690	0.038 J	0.0031	0.11	0.17 J	<0.00070	0.0020 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0024 J	<0.0049	<0.0074	<0.0028	0.0026 J	0.023 J
	08/25/2015		130	0.822	2.61	65.7	750	<0.0350	0.00396	0.108	0.180 J	<0.000160	0.000955 J	<0.000260	0.00109 J	<0.0141	<0.000240	<0.000250	<0.0000490	0.00167 J	0.000669 J	0.00141 J	<0.000310	0.00254 J	0.00578 J
	08/16/2016		137	0.663	2.50	59.9	652	0.00470 JB	0.00389	0.108	0.177	<0.000160	0.00177 JB	<0.000260	0.00552	0.0167 JB	0.000352 JB	0.000461 JB	<0.0000490	0.00236 J	0.000656 JB	0.00145 J	<0.000310	0.00275 J	0.00757 J
	08/17/2017		164	0.802	3.12	53.8	757	0.00779 JB	0.00353	0.112	0.152	<0.000160	0.000878 J	<0.000260	0.00200 J	<0.0150	<0.000240	0.000300 J	<0.0000490	0.00241 J	0.00383	0.00130 J	<0.000310	0.00222 J	0.0218 J
	10/01/2018		180	0.713	3.86	49.3	785	0.0130 JB	0.00195 J	0.119	0.156 J	<0.000160	0.00145 JB	0.00462	0.000825 JB	<0.0150	<0.000240	0.0259	<0.0000490	0.0270	0.142	0.00114 J	<0.000310	0.00196 J	0.0702
	10/24/2019		202	0.766	3.97	42.4	825	<0.00515	0.00342	0.139	0.164 J	<0.000160	0.00133 J	<0.000260	<0.000520	<0.0150	<0.000240	0.000407 J	<0.0000490	0.0144	0.0135	0.00136 J	<0.000310	0.00208 J	0.0260

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-21	08/23/2010		115	0.250	2.12	52.7	966	0.195	<0.00500	0.232	0.208	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0567	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00898	0.0307
	02/28/2011		182	0.257	3.02	56.7	1,050	<0.0100	<0.00500	0.258	0.257	<0.00200	0.00620	<0.00500	<0.00500	<0.200	<0.00500	0.102	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.0101	0.0184
	02/28/2011	FD	183	0.249	2.99	56.3	1,000	<0.0100	<0.00500	0.256	0.252	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.101	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00975	0.0213
	07/19/2011		191	0.163	2.62	57.0	1,250	<0.0100	<0.00500	0.242	0.225	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0346	<0.000200	<0.00500	0.00836	<0.00500	<0.00500	0.00873	0.0286
	01/31/2012		200	0.229	2.84	64.7	1,040	<0.0100	<0.00500	0.245	0.216	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0375	<0.000200	<0.00500	0.00746	<0.00500	<0.00500	0.00704	0.0170
	07/26/2012		186	0.306	2.64	60.4	1,130	<0.0100	<0.00500	0.244	0.261	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0380	<0.000200	<0.00500	0.00827	<0.00500	<0.00500	0.00862	0.0163
	02/22/2013		160	0.246	2.86	78.3	968	0.0818	<0.00500	0.224	0.286	<0.00200	0.0364	<0.00500	<0.00500	0.403	<0.00500	0.0467	<0.000200	<0.00500	0.0409	<0.00500	<0.00500	0.00962	0.0319
	08/20/2013		156	0.268	3.96	82.5	972	<0.0100	<0.00500	0.179	0.308	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0668	<0.000200	<0.00500	0.0219	<0.00500	<0.00500	0.00936	0.0195
	02/25/2014		134	0.213	3.78	75.9	918	<0.0100	<0.00500	0.187	0.335	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0709	<0.000200	<0.00500	0.0171	<0.00500	<0.00500	0.00939	0.0531
	08/19/2014		156	0.250	3.35	72.7	938	0.0299	<0.00500	0.180	0.350	<0.00200	<0.00500	<0.00500	<0.00500	0.344	<0.00500	0.0439	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00844	0.0208
	02/24/2015		160	0.32	3.7	70	1,100	<0.035	0.0017 J	0.21	0.36	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00032 J	0.028	<0.000049	0.00074 J	<0.0049	<0.0074	<0.0028	0.0089 J	0.025 J
	08/25/2015		197	0.341	3.06	77.0	1,430	<0.0350	0.00221	0.224	0.369	<0.000160	0.000810 J	<0.000260	0.000702 J	<0.0141	0.000854 J	0.0110	<0.0000490	<0.00160	0.00180 J	0.000525 J	<0.000310	0.00837 J	0.00615 J
	08/16/2016		131	0.253	4.05	71.7	- -	0.00210 JB	0.00147 J	0.171	0.460	<0.000160	0.00115 JB	<0.000260	0.000881 JB	<0.0150	<0.000240	0.00793	- -	0.000639 J	0.00167 JB	0.000702 J	<0.000310	0.00920 J	0.00432 J
	08/17/2017		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-22	08/23/2010		115	0.552	1.76	62.3	726	0.121	<0.00500	0.165	0.174	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0306	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00604	0.0916
	02/28/2011		117	0.587	2.36	68.6	678	<0.0100	<0.00500	0.146	0.173	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0108	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00616	0.0487
	07/19/2011		107	0.568	2.06	64.1	740	<0.0100	<0.00500	0.150	0.178	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00721	<0.000200	<0.00500	0.00546	<0.00500	<0.00500	0.00638	0.0203
	01/31/2012		141	0.570	2.26	74.3	766	<0.0100	<0.00500	0.151	0.141	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0103	<0.000200	<0.00500	0.00762	<0.00500	<0.00500	0.00501	0.0183
	07/26/2012		149	0.628	2.09	68.3	830	<0.0100	<0.00500	0.143	0.196	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00949	<0.000200	<0.00500	0.00839	<0.00500	<0.00500	0.00564	0.00680
	02/21/2013		178	0.500	2.30	80.4	798	0.0231	<0.00500	0.145	0.180	<0.00200	0.0305	<0.00500	<0.00500	0.269	<0.00500	0.0386	<0.000200	<0.00500	0.0520	<0.00500	<0.00500	0.00590	0.0208
	08/21/2013		176	0.606	2.94	83.0	890	<0.0100	<0.00500	0.137	0.210	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0233	<0.000200	<0.00500	0.0209	<0.00500	<0.00500	0.00658	0.00566
	02/25/2014		172	0.416	3.53	85.2	842	<0.0100	<0.00500	0.143	0.204	<0.00200	0.0133	<0.00500	<0.00500	<0.200	<0.00500	0.0238	<0.000200	<0.00500	0.0266	<0.00500	<0.00500	0.00632	0.0150
	08/20/2014		120	1.00	2.36	127	738	40.3	0.00642	0.141	0.239	<0.00200	0.184	<0.00500	0.00983	4.32	0.00743	0.0715	<0.000200	0.00881	0.0999	<0.00500	<0.00500	0.0336	0.0370
	02/24/2015		110	0.57	3.3	81	820	0.037 J	0.0025	0.18	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00077 J	0.0026 J	<0.000049	0.0014 J	<0.0049	<0.0074	<0.0028	0.012	0.019 J
	08/25/2015		118	0.618	4.85	81.1	928	0.0452 J	0.00279	0.167	0.208	<0.000160	0.00139 J	0.000337 J	0.000760 J	<0.0141	<0.000240	0.00253 J	<0.0000490	<0.00160	0.00240	<0.000380	<0.000310	0.00934 J	0.00438 J
	08/16/2016		128	0.577	5.86	57.6	827	0.00281 JB	0.00241	0.150	0.190	<0.000160	0.00199 JB	<0.000260	0.000854 JB	<0.0150	<0.000240	0.00134 JB	<0.0000490	0.00142 J	0.00143 JB	0.000387 J	<0.000310	0.00865 J	0.00380 J
	08/17/2017		87.4	0.644	48.6	53.6	700	0.00751 JB	0.00196 J	0.130	0.159	<0.000160	0.00103 J	<0.000260	0.000730 J	<0.0150	<0.000240	0.000893 J	<0.0000490	0.00161 J	0.0670	0.000652 J	<0.000310	0.00690 J	0.00439 J
	10/01/2018		34.3	0.652	12.9	46.7	883	0.00765 JB	0.00219	0.121	0.190 J	<0.000160	0.00267 B	<0.000260	0.00812	<0.0150	0.000354 JB	0.000828 JB	<0.0000490	0.00183 J	0.0219	0.000795 J	<0.000310	0.00585 J	0.0566
	10/24/2019		61.9	0.775	6.54	42.7	637	<0.00515	0.00238	0.122	0.184 J	<0.000160	0.00289	<0.000260	0.0144	<0.0150	0.000482 J	0.000636 J	<0.0000490	0.00214 J	0.0150	0.000956 J	<0.000310	0.00609 J	0.130
MW-23	08/23/2010		645	0.782	2.92	121	2,260	0.237	<0.00500	0.245	0.157	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00669	<0.000200	<0.00500	0.00859	<0.00500	<0.00500	<0.00500	0.0570
	02/28/2011		511	0.676	3.47	81.9	1,540	<0.0100	<0.00500	0.164	0.151	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00831	<0.000200	<0.00500	0.00930	<0.00500	<0.00500	<0.00500	0.0463
	07/19/2011		712	0.670	3.79	108	3,090	<0.0100	<0.00500	0.272	0.181	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00647	<0.000200	<0.00500	0.00912	<0.00500	<0.00500	<0.00500	0.0213
	02/01/2012		887	0.697	4.07	85.4	2,720	0.0108	<0.00500	0.268	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00658	<0.000200	<0.00500	0.00714	<0.00500	<0.00500	<0.00500	0.0207
	07/26/2012		774	0.750	3.45	100	3,060	<0.0100	<0.00500	0.252	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0101
	02/26/2013		662	0.690	3.46	93.9	2,040	<0.0100	<0.00500	0.170	0.196	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00944	<0.000200	<0.00500	0.0155	<0.00500	<0.00500	<0.00500	0.0179
	08/21/2013		530	0.808	3.29	115	1,910	<0.0100	<0.00500	0.141	0.207	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0315	<0.000200	<0.00500	0.0286	<0.00500	<0.00500	0.00533	0.00919
	02/25/2014		574	0.605	3.41	89.0	1,860	<0.0100	<0.00500	0.162	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0486	<0.000200	<0.00500	0.0410	<0.00500	<0.00500	<0.00500	0.0224
	08/21/2014		443	0.792	2.89	98.1	1,680	0.0606	<0.00500	0.147	0.138	<0.00200	0.0129	<0.00500	<0.00500	<0.200	<0.00500	0.157	<0.000200	0.00522	0.0719	<0.00500	<0.00500	<0.00500	0.0104
	02/25/2015		57	0.63	3.1	92	1,000	0.042 J	0.0024	0.11	0.21	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	0.00031 J	<0.0012	<0.000049	0.0017 J	<0.0049	<0.0074	<0.0028	0.0052 J	0.046 J
	08/25/2015		431	0.874	4.39	91.9	2,190	<0.0350	0.00255	0.152	0.195 J	<0.000160	0.00188 J	<0.000260	0.00198 J	<0.0141	0.000316 J	0.00167 J	<0.0000490	<0.00160	0.00187 J	0.00147 J	<0.000310	0.00508 J	0.00494 J
	08/17/2016		411	0.792	3.02	88.5	1,400	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		237	0.917	2.45	97.4	1,050	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		27.0	0.825	1.93	47.0	720	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		--[1]	--[1]	4.67	--[1]	--[1]	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																						

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-24	08/24/2010		34.6	2.31	2.40	53.9	422	0.187	<0.00500	0.0867	0.140	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00922
	02/28/2011		39.6	2.16	2.94	55.3	414	<0.0100	<0.00500	0.0878	0.154	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00634	<0.00500	<0.00500	<0.00500	0.0245
	07/14/2011		43.1	1.55	2.38	48.1	504	<0.0100	<0.00500	0.0932	0.173	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00543	<0.00500	<0.00500	<0.00500	0.0249
	02/01/2012		50.6	2.42	2.32	62.3	418	<0.0100	<0.00500	0.0946	0.127	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00760	<0.000200	<0.00500	0.00725	<0.00500	<0.00500	<0.00500	0.0101
	07/30/2012		51.8	2.42	2.39	55.1	420	<0.0100	<0.00500	0.0889	0.179	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00508	<0.000200	<0.00500	0.00758	<0.00500	<0.00500	<0.00500	0.0127
	07/30/2012	FD	55.5	2.34	2.34	58.8	446	<0.0100	<0.00500	0.0851	0.160	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00731	<0.00500	<0.00500	<0.00500	0.0155
	02/26/2013		46.6	2.39	2.05	68.6	442	<0.0100	<0.00500	0.0913	0.187	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0106	<0.000200	<0.00500	0.0165	<0.00500	<0.00500	<0.00500	0.0151
	08/21/2013		56.5	2.77	2.04	55.6	426	<0.0100	<0.00500	0.0856	0.183	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0146	<0.000200	<0.00500	0.0157	<0.00500	<0.00500	<0.00500	0.00684
	02/27/2014		37.3	2.28	2.11	51.3	396	0.0247	<0.00500	0.0803	0.197	<0.00200	0.0128	<0.00500	<0.00500	<0.200	<0.00500	0.0139	<0.000200	<0.00500	0.0213	<0.00500	<0.00500	<0.00500	0.0207
	08/21/2014		29.2	2.76	2.39	44.0	368	0.270	<0.00500	0.0901	0.117	<0.00200	0.258	<0.00500	0.00634	1.28	<0.00500	0.0383	<0.000200	0.00911	0.135	<0.00500	<0.00500	<0.00500	0.0114
	02/25/2015		24	2.7	2.8	42	360	0.040 J	0.0055	0.078	0.19 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0025 J	<0.0049	<0.0074	<0.0028	0.0026 J	0.013 J
	08/25/2015		25.5	2.75	2.95	43.2	494	<0.0350	0.00600	0.0765	0.177 J	<0.000160	<0.000540	<0.000260	0.000742 J	<0.0141	<0.000240	0.000287 J	<0.0000490	0.00185 J	0.000580 J	0.00102 J	<0.000310	0.00239 J	0.00575 J
	08/16/2016		26.0	2.78	2.83	42.9	407	0.00364 JB	0.00606	0.0725	0.168	<0.000160	0.00155 JB	<0.000260	0.00302 JB	0.0247 JB	<0.000240	0.000485 JB	<0.0000490	0.00290 J	0.000402 JB	0.00140 J	<0.000310	0.00237 J	0.00752 J
	08/17/2017		40.5	2.96	2.86	45.2	388	0.0133 JB	0.00539	0.0724	0.137	<0.000160	0.00205	<0.000260	0.00136 J	<0.0150	<0.000240	0.000648 J	<0.0000490	0.00245 J	0.00205 B	0.00140 J	<0.000310	0.00209 J	0.00720 J
	10/01/2018		35.8	2.65	3.80	35.3	397	0.0128 JB	0.00565	0.0801	0.136 J	<0.000160	0.00110 JB	<0.000260	0.00636 B	<0.0150	0.000379 JB	0.00140 JB	<0.0000490	0.00228 J	0.0114	0.000648 J	<0.000310	0.00283 J	0.150
	10/24/2019		34.8	2.93	3.69	41.7	344	<0.00515	0.00556	0.0794	0.152 J	<0.000160	0.00101 J	<0.000260	0.00158 J	<0.0150	0.000342 J	0.00107 J	0.0000560 J	0.00279 J	0.00167 J	0.000408 J	<0.000310	0.00298 J	0.0285
MW-25	08/23/2010		178	0.871	2.42	182	946	0.244	<0.00500	0.246	0.174	<0.00200	0.0476	<0.00500	<0.00500	<0.200	<0.00500	0.0109	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0194
	02/28/2011		256	0.729	2.83	93.9	998	<0.0100	<0.00500	0.205	0.198	<0.00200	0.0537	<0.00500	<0.00500	<0.200	<0.00500	0.00715	<0.000200	<0.00500	0.00516	<0.00500	<0.00500	0.00535	0.0424
	07/18/2011		77.8	1.12	3.64	96.2	634	0.0444	<0.00500	0.186	0.173	<0.00200	0.00732	<0.00500	<0.00500	<0.200	<0.00500	0.00608	<0.000200	<0.00500	0.00832	<0.00500	<0.00500	<0.00500	0.00556
	02/01/2012		175	0.813	4.56	84.4	820	<0.0100	<0.00500	0.228	0.175	<0.00200	0.00744	<0.00500	<0.00500	<0.200	<0.00500	0.00804	<0.000200	<0.00500	0.00708	<0.00500	<0.00500	0.00602	0.00582
	07/26/2012		133	0.892	37.1	144	1,110	<0.0100	<0.00500	0.178	0.220	<0.00200	0.00961	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0102
	02/26/2013		109	0.710	19.4	113	788	<0.0100	<0.00500	0.149	0.241	<0.00200	0.00822	<0.00500	<0.00500	<0.200	<0.00500	0.0104	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00807	0.0148
	08/22/2013		314	0.696	3.36	74.7	1,350	<0.0100	<0.00500	0.224	0.262	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0122	<0.000200	<0.00500	0.0210	<0.00500	<0.00500	0.00862	<0.00500
	08/22/2013	FD	310	0.684	3.42	74.3	1,350	<0.0100	<0.00500	0.226	0.263	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0127	<0.000200	<0.00500	0.0210	<0.00500	<0.00500	0.00860	0.00607
	02/26/2014		293	0.476	2.98	69.3	1,100	<0.0100	<0.00500	0.220	0.231	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00881	<0.000200	<0.00500	0.00775	<0.00500	<0.00500	0.00724	0.0210
	02/26/2014	FD	289	0.546	2.98	68.6	1,090	<0.0100	<0.00500	0.213	0.218	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00882	<0.000200	<0.00500	0.00701	<0.00500	<0.00500	0.00645	0.0205
	08/19/2014		302	<0.500	3.06	79.5	1,230	0.285	<0.00500	0.198	0.265	<0.00200	0.154	<0.00500	<0.00500	0.814	<0.00500	0.0456	<0.000200	0.00573	0.100	<0.00500	<0.00500	0.00749	0.0106
	08/19/2014	FD	319	<0.500	2.76	83.5	1,200	0.291	<0.00500	0.201	0.263	<0.00200	0.185	<0.00500	0.00504	0.968	<0.00500	0.0511	<0.000200	0.00638	0.113	<0.00500	<0.00500	0.00764	0.0120
	02/25/2015		38	0.73	3.1	69	870	0.13	0.0023	0.20	0.23	<0.00070	0.0016 J	<0.0023	<0.0053	<0.014	0.00050 J	<0.0012	<0.000049	0.0029 J	0.0056 J	<0.0074	<0.0028	0.0078 J	0.0086 J
	02/25/2015	FD	180	0.71	3.1	69	840	<0.035	0.0023	0.20	0.22	<0.00070	0.0017 J	<0.0023	<0.0053	<0.014	0.00026 J	<0.0012	<0.000049	0.0011 J	0.0054 J	<0.0074	<0.0028	0.0080 J	0.014 J
	08/25/2015		211	0.693	2.96	72.6	1,110	<0.0350	0.00287	0.227	0.216	<0.000160	0.00160 J	0.00119 J	<0.000520	<0.0141	<0.000240	0.00279 J	<0.0000490	<0.00160	0.00514	0.00109 J	<0.000310	0.00732 J	0.00472 J
	08/25/2015	FD	207	0.631	2.9	71.1	1,140	<0.0350	0.00296	0.231	0.214	<0.000160	0.00170 J	0.00113 J	0.00103 J	<0.0141	<0.000240	0.00287 J	<0.0000490	<0.00160	0.00528	0.00102 J	<0.000310	0.00748 J	0.00497 J
	03/09/2016		345	0.618	2.65	68.5	1,140	0.00206 JB	0.00229	0.301	0.214	<0.000160	0.000609 J	0.00141 J	0.000781 J	0.0403 J	<0.000240	0.0386	<0.0000490	0.00171 JB	0.00572 B	0.00054 J	<0.000310	0.00852 J	0.00590 JB
	08/16/2016		292	0.637	1.44	73.9	976	0.00850 JB	0.00248	0.285	0.228	<0.000160	0.00166 JB	0.00171 J	0.00107 JB	0.0293 JB	<0.000240	0.0314	<0.0000490	0.00139 J	0.00617	0.000689 J	<0.000310	0.00928 J	0.00584 J
	08/16/2016	FD	287	0.638	1.50	73.5	1,010	0.00458 JB	0.00262	0.284	0.223	<0.000160	0.00155 JB	0.00179 J	0.000790 JB	0.0474 JB	<0.000240	0.0326	<0.0000490	0.00131 J	0.00570	0.000791 J	<0.000310	0.00939 J	0.00627 J
	02/07/2017		298	0.567	1.64	93.4	1,000	<0.0258	0.00261 J	0.322	0.227	<0.000800	<0.00270	0.00382 J	0.00406 J	<0.0750	<0.00120	0.0478	<0.0000490	0.00306 J	0.0165	0.000505 J	<0.00155	0.0104 J	<0.0128
	08/16/2017		280	0.791	1.52	68.4	996	0.00773 JB	0.00227	0.206	0.171	<0.000160	0.00158 J	0.00522	0.00310 J	<0.0150	<0.000240	<0.000250	0.0000544 J	0.00113 J	0.0556	0.00162 J	<0.000310	0.00588 J	0.0276
	08/16/2017	FD	287	0.600	1.57	71.2	1,050	0.00864 JB	0.00242	0.210	0.181	<0.000160	0.00153 J	0.00520	0.00289 J	<0.0150	<0.000240	<0.000250	<0.0000490	0.00124 J	0.0551	0.00128 J	<0.000310	0.00606 J	0.0262
	04/05/2018		82.6	0.568	2.16	76.4	1,380	<0.00515	0.00232 B	0.293	0.234	<0.000160	0.00101 JB	0.0114	0.00712	<0.0150	<0.000240	0.00523	<0.0000490	0.00158 JB	0.0125	0.00112 JB	<0.000310	0.00814 J	0.0133 J
	04/05/2018	FD	401	0.605	2.17	79.5	1,360	0.102	0.00226 B	0.299	0.229	<0.000160	0.000990 JB	0.0117	0.00671	0.0304 J	0.000307 JB	0.00709	<0.0000490	0.00121 JB	0.0120	0.00107 JB	<0.000310	0.00828 J	0.0153 J
	10/01/2018		284	0.518	3.89	105	1,090	0.0144 JB	0.00260	0.177	0.210	<0.000160	0.00110 JB	0.00874	0.00398 JB	<0.0150	0.000733 JB	0.0225	<0.0000490	0.00111 J	0.0123	0.000987 J	<0.000310	0.00919 J	0.00965 JB
	10/01/2018	FD	288	0.508	3.86	110	1,180	<0.00515	0.00246	0.192	0.209	<0.000160	0.000896 J	0.00925	0.00468 J	<0.0150	0.000421 J	0.0221	<0.0000490	0.00111 J	0.0122	0.000917 J	<0.000310	0.0101	0.00804 J
	04/04/2019		224	0.509	3.84	103	1,040	0.00661 JB	0.00262	0.195	0.225	<0.000160	<0.000540	0.00634	0.00495 J	<0.0150	0.000358 J	0.0317	<0.0000490	0.00163 J	0.0120	0.000430 J	<0.000310	0.00984 J	0.00846 J
	04/04/2019	FD	224	0.500	4.57	104	1,030	<0.00515	0.00243	0.184	0.139 J	<0.000160	<0.000540	0.00605	0.00384 J	<0.0150	0.000480 J	0.0377	<0.0000490	0.00118 J	0.0106	0.000395 J	<0.000310	0.00927 J	0.00656 J
	10/24/2019		232	0.586	3.89	112	986	<0.00515	0.00264	0.223	0.230	<0.000160	0.000564 J	0.0124	0.0791	<0.0150	0.00292	0.0597	0.0000625 J	0.00130 J	0.0149	0.00122 J	<0.000310	0.0102	0.234
	10/24/2019	FD	223	0.572	3.91	107	1,010	<0.00515	0.00261	0.235	0.242	<0.000160	0.000541 J	0.0121	0.0867	<0.0150	0.00509	0.0758	0.0000660 J	0.00137 J	0.0162	0.000627 J	<0.000310	0.00970 J	0.212
	06/18/2020		368	0.467	3.96	<0.594	1,460	<0.0554	0.00274	0.127	0.297	<0.000478	<0.00149	0.0158	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00121 J	0.0104	<0.000657	<0.000513	0.0115 J	<0.00996

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-26	08/24/2010		217	0.484	2.88	98.5	958	0.115	<0.00500	0.131	0.169	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0156	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0254
	02/28/2011		202	0.517	3.86	125	940	<0.0100	<0.00500	0.110	0.187	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00890	<0.000200	<0.00500	0.00734	<0.00500	<0.00500	0.00602	0.0328
	07/14/2011		184	<0.500	3.95	128	1,030	<0.0100	<0.00500	0.0994	0.192	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00679	<0.000200	<0.00500	0.00792	<0.00500	<0.00500	0.00546	0.00949
	02/01/2012		196	0.568	3.68	131	952	<0.0100	<0.00500	0.0854	0.163	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0122	<0.000200	<0.00500	0.0133	<0.00500	<0.00500	<0.00500	0.00949
	07/26/2012		179	0.647	3.11	121	940	0.0121	<0.00500	0.0966	0.214	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00694	<0.000200	<0.00500	0.00568	<0.00500	<0.00500	0.00559	0.0117
	02/26/2013		144	0.640	4.78	138	760	0.0134	<0.00500	0.103	0.189	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0635	<0.000200	<0.00500	0.0558	<0.00500	<0.00500	<0.00500	0.0233
	08/22/2013		222	0.611	5.55	133	1,170	0.0319	<0.00500	0.0910	0.209	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0174	<0.000200	<0.00500	0.00539	<0.00500	<0.00500	0.00577	0.00877
	02/26/2014		187	0.470	3.11	146	944	0.0236	<0.00500	0.0739	0.198	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00979	<0.000200	<0.00500	0.0128	<0.00500	<0.00500	0.00583	<0.00500
	08/21/2014		67.8	0.511	3.18	78.9	644	0.132	0.00816	0.138	0.167	<0.00200	0.0152	<0.00500	<0.00500	<0.200	<0.00500	0.00938	<0.000200	<0.00500	0.00900	<0.00500	<0.00500	0.00548	0.00770
	02/25/2015		190	0.71	2.3	110	790	0.051 J	0.0024	0.099	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	0.058 J	<0.00024	0.0022 J	<0.000049	0.0011 J	<0.0049	<0.0074	<0.0028	0.0041 J	0.015 J
	08/25/2015		220	0.670	2.93	143	1,160	<0.0350	0.00263	0.0990	0.181 J	<0.000160	0.000822 J	0.000366 J	0.000593 J	<0.0141	<0.000240	0.00175 J	<0.0000490	<0.00160	0.00104 J	<0.000380	<0.000310	0.00440 J	0.00418 J
	08/17/2016		223	0.645	2.28	122	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		301	0.162	4.06	92.1	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/2018		235	0.466	--	126	1,020	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/2019		244	0.722	4.11	132	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/13/2020		DRY WELL - PLUGGED AND ABANDONED AUGUST 2020																						
MW-27	08/18/2010		115	0.644	5.10	118	752	0.218	<0.00500	0.100	0.152	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0534	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00544	0.0453
	02/25/2011		144	0.595	<0.500	78.5	746	<0.0100	<0.00500	0.0985	0.139	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0336	<0.000200	<0.00500	0.00769	<0.00500	<0.00500	0.00625	0.0294
	07/20/2011		150	0.510	1.69	73.2	812	0.0378	<0.00500	0.112	0.165	<0.00200	0.0353	<0.00500	<0.00500	0.393	<0.00500	0.0179	<0.000200	<0.00500	0.0415	<0.00500	<0.00500	0.00571	0.0121
	02/01/2012		164	0.691	2.43	99.8	676	<0.0100	<0.00500	0.0902	0.126	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00556	<0.00800	<0.00500	0.00533	<0.00500	<0.00500	<0.00500	0.0121
	07/26/2012		164	0.680	2.95	65.3	754	0.0155	<0.00500	0.118	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00587	<0.000200	<0.00500	0.00737	<0.00500	<0.00500	<0.00500	0.0117
	02/26/2013		199	0.647	2.77	70.7	756	<0.0100	<0.00500	0.120	0.184	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0586	<0.000200	0.00513	0.0593	<0.00500	<0.00500	<0.00500	0.0104
	08/20/2013		315	0.562	7.12	75.5	1,180	0.0440	<0.00500	0.162	0.222	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0239	<0.000200	<0.00500	0.0189	<0.00500	<0.00500	0.00899	<0.00500
	02/27/2014		298	0.415	8.00	89.3	1,150	<0.0100	<0.00500	0.139	0.232	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0134	<0.000200	<0.00500	0.0286	<0.00500	<0.00500	0.00680	0.00624
	08/21/2014		256	0.540	4.99	85.1	1,100	0.210	<0.00500	0.126	0.160	<0.00200	0.0447	<0.00500	<0.00500	0.278	<0.00500	0.0636	<0.000200	<0.00500	0.0592	<0.00500	<0.00500	0.00648	0.0182
	02/27/2015		170	1.0	3.8	96	790	<0.035	0.0033	0.084	0.30	<0.00070	0.0038 J	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0029 J	<0.0049	0.0080 J	<0.0028	0.0098 J	<0.0059
	08/26/2015		139	2.27	2.94	95.2	690	<0.0350	0.00353	0.0571	0.264	<0.000160	0.00256	<0.000260	0.000627 J	<0.0141	<0.000240	0.00206 J	<0.0000490	0.0139	0.00405	0.00318	<0.000310	0.00550 J	<0.00256
	08/18/2016		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/08/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/2017		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/05/2018		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/01/2018		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	04/04/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	10/24/2019		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/18/2020		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-28	08/24/2010		71.2	1.66	1.70	60.3	440	0.129	<0.00500	0.0846	0.153	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/23/2011		106	1.57	<0.500	67.4	540	<0.0100	<0.00500	0.0923	0.147	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0190
	07/14/2011		106	1.28	2.40	67.8	732	<0.0100	<0.00500	0.103	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00658	<0.000200	<0.00500	0.00696	<0.00500	<0.00500	<0.00500	0.0113
	01/30/2012		80.6	1.68	2.53	81.1	572	<0.0100	<0.00500	0.0746	0.152	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0113
	07/24/2012		74.9	1.79	2.33	81.6	500	<0.0100	<0.00500	0.0830	0.204	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00812
	02/19/2013		65.5	1.61	2.57	88.4	468	<0.0100	<0.00500	0.0883	0.174	<0.00200	<0.00500	<0.00500	0.203	<0.200	<0.00500	0.0275	<0.000200	0.0100	<0.00500	<0.00500	<0.00500	<0.00500	0.0466
	08/20/2013		70.4	1.77	2.42	77.4	480	<0.0100	<0.00500	0.0790	0.168	<0.00200	<0.00500	<0.00500	0.0101	<0.200	<0.00500	0.00874	<0.000200	<0.00500	0.00561	<0.00500	<0.00500	<0.00500	0.0168
	02/24/2014		71.7	1.30	2.60	74.2	480	<0.0100	<0.00500	0.0836	0.180	<0.00200	<0.00500	<0.00500	0.00514	<0.200	<0.00500	0.00509	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00674
	08/19/2014		70.0	1.65	2.31	78.2	512	0.947	<0.00500	0.106	0.205	<0.00200	0.0238	<0.00500	0.0396	0.760	<0.00500	0.0128	<0.000200	<0.00500	0.0129	<0.00500	<0.00500	<0.00500	0.0335
	02/23/2015		70	1.6	2.8	72	500	<0.035	0.0040	0.090	0.17 J	<0.00070	<0.0014	<0.0023	0.0055 J	<0.014	<0.00024	<0.0012	<0.000049	0.0018 J	<0.0049	<0.0074	<0.0028	0.0025 J	0.017 J
	08/27/2015		142	3.07	3.08	143	549	<0.0350	0.00433	0.0849	0.171	<0.000160	<0.000540	<0.000260	0.00598	0.0385 J	<0.000240	0.000680 J	<0.0000490	0.00186 J	<0.000350	0.00220	<0.000310	0.00238 J	0.00393 J
	03/07/2016		73.1	1.62	3.31	70.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/15/2016		73.2	1.37	3.08	70.6	612	0.00413 JB	0.00448	0.0819	0.167	<0.000160	0.00104 JB	<0.000260	0.00860	0.0226 JB	<0.000240	0.000376 JB	<0.0000490	0.00221 J	0.000525 JB	0.00268	<0.000310	0.00266 J	0.00540 J
	02/06/2017		79.1	1.63	3.92	98.4	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	08/17/2017		66.3	1.82	4.02	97.5	524	0.0112 JB	0.00383	0.0715	0.136	<0.000160	<0.000540	<0.000260	0.00523	<0.0150	<0.000240	<0.000250	<0.0000490	0.00227 J	0.00178 JB	0.00158 J	<0.000310	0.00252 J	0.00955 J
	04/05/2018		63.1	1.74	4.11	99.7	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/01/2018		63.6	1.76	3.91	92.2	490	0.0229 JB	0.00430	0.0754	0.135 J	<0.000160	0.000809 JB	<0.000260	0.00409 JB	<0.0150	<0.000240	0.000260 JB	<0.0000490	0.00187 J	0.00286	0.00237	<0.000310	0.00250 J	0.0226 JB
	04/04/2019		75.3	1.76	3.69	80.1	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
	10/24/2019		87.8	2.04	3.40	79.9	519	<0.00515	0.00394	0.0920	0.144 J	<0.000160	0.000804 J	<0.000260	0.00468 J	<0.0150	0.000284 J	0.00166 J	0.0000569 J	0.00182 J	0.00149 J	0.00177 J	<0.000310	0.00242 J	0.0290
	06/18/2020		103	2.11	3.45	76.8	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -	- -
MW-29	08/24/2010		456	0.753	2.18	167	726	0.0261	<0.00500	0.0644	0.189	<0.00200	0.0317	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0375
	08/24/2010	FD	132	0.741	2.15	100	742	<0.0100	<0.00500	0.0652	0.186	<0.00200	0.0321	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0301
	02/28/2011		119	0.819	3.05	101	670	<0.0100	<0.00500	0.0630	0.195	<0.00200	0.0694	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0267
	07/14/2011		135	0.707	2.61	71.6	798	<0.0100	<0.00500	0.0652	0.189	<0.00200	0.162	<0.00500	<0.00500	<0.200	<0.00500	0.00532	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0240
	01/30/2012		152	0.769	3.22	96.3	898	<0.0100	<0.00500	0.0580	0.181	<0.00200	0.106	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0240
	07/24/2012		250	0.828	4.08	90.1	1,120	<0.0100	<0.00500	0.0978	0.249	<0.00200	0.261	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0162
	02/26/2013		159	0.788	2.90	82.4	722	<0.0100	<0.00500	0.0857	0.182	<0.00200	0.0690	<0.00500	<0.00500	<0.200	<0.00500	0.0471	<0.000200	<0.00500	0.0334	<0.00500	<0.00500	<0.00500	0.0132
	08/20/2013		152	0.934	2.95	96.2	654	<0.0100	<0.00500	0.0738	0.187	<0.00200	0.117	<0.00500	<0.00500	<0.200	<0.00500	0.0159	<0.000200	<0.00500	0.00667	<0.00500	<0.00500	<0.00500	<0.00500
	02/27/2014		141	0.811	3.22	74.4	660	<0.0100	<0.00500	0.0725	0.171	<0.00200	0.250	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0115
	02/27/2014	FD	141	0.819	3.37	74.3	690	<0.0100	<0.00500	0.0764	0.183	<0.00200	0.261	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00739
	08/20/2014		177	0.809	3.44	72.9	826	0.188	<0.00500	0.106	0.134	<0.00200	0.331	<0.00500	<0.00500	0.697	<0.00500	0.0754	<0.000200	0.00594	0.0777	<0.00500	<0.00500	<0.00500	0.00902
	02/25/2015		250	0.95	5.6	90	1,000	<0.035	0.0020	0.13	0.26	<0.00070	0.24	<0.0023	<0.0053	<0.014	<0.00024	<0.0012	<0.000049	0.0012 J	<0.0049	<0.0074	<0.0028	0.0062 J	0.013 J
	08/27/2015		247	0.573	6.77	81.8	1,220	<0.0350	0.00246	0.0884	0.238	<0.000160	0.130	<0.000260	0.000784 J	<0.0141	<0.000240	0.00153 J	<0.0000490	0.00111 J	0.000629 J	0.00169 J	<0.000310	0.00641 J	0.00333 J
	03/08/2016		- -	- -	- -	- -	- -	0.00829 JB	0.00465	0.0757	0.165	<0.000160	0.00111 J	<0.000260	0.000558 J	<0.0150	<0.000240	0.000652 JB	<0.0000490	0.00482 J	0.00069 JB	0.00190 J	<0.000310	0.00213 J	<0.00256
	08/17/2016		171	0.693	4.61	81.5	349	<0.00200	0.00253	0.0851	0.204	<0.000160	0.00897	<0.000260	0.000863 JB	<0.0150	<0.000240	0.00135 JB	<0.0000490	0.00204 J	0.00119 JB	0.00140 J	<0.000310	0.00380 J	0.00330 JB
	02/09/2017		- -	- -	- -	- -	- -	<0.0258	0.00263 J	0.0932	0.203	<0.000800	0.00552 J	<0.00130	0.00328 J	<0.0750	<0.00120	0.0150 J	<0.0000490	0.00291 J	0.00524 J	0.00148 J	<0.00155	0.00391 J	<0.0128
	08/17/2017		201	0.723	4.76	86.4	920	0.00798 JB	0.00242	0.0870	0.172	<0.000160	0.0178	<0.000260	0.00489 J	<0.0150	<0.000240	0.000305 J	<0.0000490	0.00200 J	0.00567	0.00181 J	<0.000310	0.00451 J	0.0308
	04/05/2018		- -	- -	- -	- -	- -	<0.00515	0.00299	0.174	0.215	<0.000160	0.0268	<0.000260	0.00876	<0.0150	0.000398 JB	0.000735 JB	<0.0000490	0.00174 JB	0.0427	0.00163 JB	<0.000310	0.00571 J	0.162
	10/01/2018		175	0.490	5.62	113	1,010	<0.00515	0.00307	0.256	0.193 J	<0.000160	0.0293	<0.000260	0.00362 J	<0.0150	<0.000240	0.00110 J	<0.0000490	0.00122 J	0.00607	0.00193 J	<0.000310	0.00618 J	0.0644
	04/04/2019		- -	- -	- -	- -	- -	0.0106 JB	0.00252	0.109	0.203	<0.000160	0.0171	<0.000260	0.00635	<0.0150	<0.000240	0.000417 J	<0.0000490	0.00157 J	0.00320	0.00116 J	<0.000310	0.00448 J	0.0829
	10/24/2019		264	0.674	5.33	87.7	1,000	<0.00515	0.00227	0.117	0.193 J	<0.000160	0.0528	<0.000260	0.00457 J	<0.0150	<0.000240	0.00139 J	0.0000693 J	0.00144 J	0.00230	0.00168 J	<0.000310	0.00539 J	0.0628
	10/24/2019	FD	258	0.649	5.32	87.9	1,060	<0.00515	0.00230	0.113	0.207	<0.000160	0.0560	<0.000260	0.00949	<0.0150	0.000462 J	0.00170 J	0.0000681 J	0.00145 J	0.00382	0.00161 J	<0.000310	0.00535 J	0.0811
	06/18/2020		- -	- -	- -	- -	- -	<0.0554	0.00259	0.0880	0.194 J	<0.000478	0.0163	<0.000477	0.00330 J	<0.0489	<0.00249	<0.00132	<0.000100	0.00169 J	0.00189 J	0.00136 J	<0.000513	<0.00754	0.0215 J

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
MW-30	06/21/2013		51.2	1.87	3.51	96.7	426	0.0436	0.00588	0.0424	0.164	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	0.00913	<0.00500	0.00554	<0.00500	<0.00500	<0.00500
	08/20/2013		63.7	1.59	2.85	87.0	438	<0.0100	<0.00500	0.0761	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0589	<0.000200	<0.00500	0.0263	<0.00500	<0.00500	<0.00500	<0.00500
	02/27/2014		64.0	1.07	2.96	90.0	476	0.0201	<0.00500	0.0672	0.180	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0644	<0.000200	0.00588	0.0516	<0.00500	<0.00500	<0.00500	<0.00500
	08/22/2014		61.1	1.45	2.75	84.5	444	0.132	<0.00500	0.0736	<0.0200	<0.00200	0.0137	<0.00500	<0.00500	<0.200	<0.00500	0.148	<0.000200	0.00597	0.0485	<0.00500	<0.00500	<0.00500	<0.00500
	02/25/2015		75	1.4	3.1	81	460	0.077 J	0.0043	0.073	0.16 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0066 J	<0.000049	0.0027 J	<0.0049	<0.0074	<0.0028	0.0018 J	<0.0059
	08/28/2015		83.6	1.61	3.97	86.2	525	<0.0350	0.00478	0.0757	0.163	<0.000160	<0.000540	<0.000260	0.000922 J	<0.0141	<0.000240	0.00315 J	<0.0000490	0.00248 J	0.00109 J	0.00177 J	<0.000310	0.00203 J	<0.00256
	03/08/2016		70.6	1.3	3.53	83	450	0.00402 JB	0.00375	0.0711	0.152	<0.000160	0.0032	<0.000260	0.000933 J	<0.0150	<0.000240	0.000911 JB	<0.0000490	0.00219 J	0.000955 JB	0.00253	<0.000310	0.00187 J	<0.00256
	03/08/2016	FD	70.4	1.3	3.54	83	464	0.00986 JB	0.00457	0.071	0.154	<0.000160	0.00148 J	<0.000260	0.00123 JB	<0.0150	0.000299 JB	0.000664 JB	<0.0000490	0.00479 J	0.000797 JB	0.00175 J	0.000842 J	0.00197 J	0.00268 JB
	08/16/2016		71.6	1.29	3.24	87.5	534	0.00299 JB	0.00476	0.0734	0.175	<0.000160	0.00110 JB	<0.000260	<0.000520	<0.0150	<0.000240	0.00222 JB	<0.0000490	0.00263 J	0.000470 JB	0.00198 J	<0.000310	0.00223 J	<0.00256
	08/16/2016	FD	75.5	1.29	3.22	87.7	491	0.0189 JB	0.00479	0.0733	0.175	<0.000160	0.00110 JB	<0.000260	0.00371 JB	<0.0150	<0.000240	0.00228 JB	<0.0000490	0.00252 J	0.000495 JB	0.00210	<0.000310	0.00224 J	<0.00256
	02/09/2017		71.7	1.26	3.52	87.3	497	<0.0258	0.00428 J	0.0852	0.182	<0.000800	<0.00270	<0.00130	0.00675 J	<0.0750	<0.00120	0.0332	<0.0000490	0.00302 J	0.00266 J	0.00191 J	<0.00155	0.00227 J	<0.0128
	08/16/2017		68.3	1.31	3.38	78.9	468	0.0259 JB	0.00436	0.0735	0.159	<0.000160	0.00104 J	<0.000260	0.000947 J	<0.0150	<0.000240	0.000987 J	<0.0000490	0.00229 J	0.00289	0.00205	<0.000310	0.00216 J	0.00591 J
	08/16/2017	FD	68.4	1.05	3.50	82.2	479	0.0132 JB	0.00431	0.0727	0.158	<0.000160	0.00103 J	<0.000260	0.000862 J	<0.0150	<0.000240	0.000551 JB	<0.0000490	0.00218 J	0.00280	0.00196 J	<0.000310	0.00213 J	0.00628 J
	04/05/2018		70.8	1.19	3.35	77.2	474	<0.00515	0.00457	0.0723	0.184 J	<0.000160	0.000946 JB	<0.000260	0.00170 JB	<0.0150	<0.000240	0.000941 JB	<0.0000490	0.00218 JB	0.00870	0.00199 JB	<0.000310	0.00217 JB	0.0335
	10/01/2018		76.7	1.11	3.52	81.2	517	0.00689 J	0.00486	0.0819	0.154 J	<0.000160	0.000984 J	<0.000260	0.00169 J	<0.0150	<0.000240	0.000769 J	<0.0000490	0.00231 J	0.00755	0.00205	<0.000310	0.00223 J	0.0432
	10/01/2018	FD	76.3	1.09	3.70	80.6	509	0.00560 J	0.00421	0.0843	0.145 J	<0.000160	0.00111 J	<0.000260	0.00121 J	<0.0150	<0.000240	0.000398 J	<0.0000490	0.00243 J	0.00804	0.00218	<0.000310	0.00234 J	0.0449
	04/04/2019		78.5	1.06	3.61	69.4	513	<0.00515	0.00424	0.0850	0.181 J	<0.000160	0.00225	<0.000260	0.00232 J	<0.0150	<0.000240	0.000363 J	<0.0000490	0.00240 J	0.00473	0.00215	<0.000310	0.00223 J	0.0511
	10/24/2019		85.0	1.24	3.29	71.7	479	0.00831 J	0.00381	0.0903	0.171 J	<0.000160	0.00162 J	<0.000260	0.00273 J	<0.0150	<0.000240	0.00286 J	0.0000605 J	0.00199 J	0.00417	0.00174 J	<0.000310	0.00208 J	0.0682
	10/24/2019	FD	86.0	1.23	3.18	72.6	501	<0.00515	0.00414	0.0871	0.174 J	<0.000160	0.00245	<0.000260	0.00275 J	<0.0150	<0.000240	0.000416 J	0.0000596 J	0.00198 J	0.00409	0.00179 J	<0.000310	0.00206 J	0.0528
	06/18/2020		91.7	1.20	3.31	71.2	520	<0.0554	0.00408	0.0896	0.182 J	<0.000478	0.00542	<0.000477	0.00274 J	<0.0489	<0.00249	<0.00132	<0.000100	0.00208 J	0.00435	0.00207	<0.000513	<0.00754	0.0437
MW-32	08/17/2017		109	2.77	<0.0197	99.4	683	0.0212 JB	0.00332	0.188	0.564	<0.000160	<0.000540	0.00108 J	0.000684 J	<0.0150	<0.000240	0.536	<0.0000490	0.0141	0.00430	<0.000380	<0.000310	0.00888 J	0.00320 J
	04/05/2018		165	1.12	1.74	143	939	0.00732 JB	0.00281	0.244	0.253	<0.000160	0.000888 JB	0.000847 JB	0.00193 JB	<0.0150	<0.000240	0.772	<0.0000490	0.00489 J	0.0195	0.000443 JB	<0.000310	0.0166	0.0122 J
	10/01/2018		34.7	0.357 B	<0.0197	47.4	383	0.00589 J	0.00652	0.176	0.0321 J	<0.000160	<0.000540	<0.000260	0.000794 J	<0.0150	0.000283 J	0.0499	<0.0000490	0.00348 J	0.00357	<0.000380	<0.000310	0.00146 J	<0.00256
	10/01/2018	FD	34.9	0.360 B	<0.0197	47.7	451	0.0111 J	0.00619	0.179	0.0332 J	<0.000160	<0.000540	0.000302 J	0.00105 J	<0.0150	0.000273 J	0.0561	<0.0000490	0.00350 J	0.00382	<0.000380	<0.000310	0.00148 J	<0.00256
	04/04/2019		159	0.478	1.10	146	940	0.00526 JB	0.00198 J	0.384	0.184 J	<0.000160	<0.000540	0.00109 J	0.00918	<0.0150	<0.000240	0.349	<0.0000490	0.00259 J	0.00792	<0.000380	<0.000310	0.00751 J	0.0128 J
	10/24/2019		90.5	0.453	7.15	173	745	<0.00515	0.00353	0.341	0.188 J	<0.000160	<0.000540	0.000415 J	0.00397 J	<0.0150	<0.000240	0.278	0.0000640 J	0.00197 J	0.0150	0.000492 J	<0.000310	0.00884 J	0.0379
	10/24/2019	FD	89.1	0.422	7.08	172	827	<0.00515	0.00342	0.345	0.213	<0.000160	<0.000540	0.000372 J	0.00418 J	<0.0150	<0.000240	0.262	0.0000644 J	0.00209 J	0.0130	<0.000380	<0.000310	0.00883 J	0.0405
	06/18/2020		92.7	0.355	6.25	<0.594	872	<0.0554	0.00323	0.454	0.207	<0.000478	<0.00149	<0.000477	0.00255 J	<0.0489	<0.00249	0.0616	<0.000100	0.00132 J	0.00557	<0.000657	<0.000513	0.00769 J	0.0147 J
MW-33	08/17/2017		74.7	2.26	<0.0197	57.1	792	0.0123 JB	0.00377	0.218	0.447	<0.000160	<0.000540	0.000834 J	0.00129 J	0.0373 J	<0.000240	0.985	<0.0000490	0.00531	0.000613 J	<0.000380	<0.000310	0.00325 J	0.00358 J
	04/05/2018		84.1	1.15	<0.0197	15.4	902	<0.00515	0.0104	0.380	0.304	<0.000160	0.00155 JB	<0.000260	0.00292 JB	0.0351 J	<0.000240	1.77	<0.0000490	0.000146 JB	0.00170 JB	<0.000380	<0.000310	0.00269 J	0.00546 J
	10/01/2018		118	0.859	<0.0197	13.8	1,170	0.00613 J	0.00411	0.481	0.194 J	<0.000160	<0.000540	<0.000260	<0.000520	0.0186 J	<0.000240	1.79	<0.0000490	0.000602 J	0.00312	<0.000380	<0.000310	0.00829 J	<0.00256
	04/04/2019		137	0.729	<0.0197	12.4	1,230	0.00865 JB	0.00179 J	0.476	0.150 J	<0.000160	<0.000540	<0.000260	0.00411 J	0.0299 J	<0.000240	1.39	<0.0000490	0.00158 J	0.00157 JB	<0.000380	<0.000310	0.0131	0.00566 J
	10/24/2019		160	0.748	<0.0197	7.98	1,160	<0.00515	0.00228	0.496	0.158 J	<0.000160	<0.000540	<0.000260	<0.000520	0.0209 J	<0.000240	1.02	<0.0000490	0.00183 J	0.00323	<0.000380	<0.000310	0.0167	0.00581 J
	06/18/2020		145	0.770	<0.0500	12.8	1,220	<0.0554	0.00202	0.500	0.163 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.816	<0.000100	0.00268 J	0.00409	<0.000657	<0.000513	0.0241	<0.00996

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
North Well	06/18/2009		140	0.933	2.72	80.6	664	<0.0100	0.00536	0.0997	0.151	<0.00200	0.0104	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	<0.00500
	01/14/2010		143	0.793	2.90	74.2	638	<0.0100	<0.00500	0.107	0.172	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00134	0.00920
	08/24/2010		127	0.932	1.81	80.4	594	<0.0100	0.00552	0.100	0.147	<0.00200	<0.00500	<0.00500	0.00856	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.0161	<0.00500	<0.00500	<0.00500	<0.00500
	03/03/2011		137	0.932	2.76	75.2	804	<0.0100	0.00503	0.0968	0.159	<0.00200	0.0199	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0695
	07/20/2011		124	0.803	2.07	76.5	628	<0.0100	<0.00500	0.106	0.142	<0.00200	0.0140	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	02/02/2012		149	0.977	2.54	82.1	656	0.0126	<0.00500	0.0944	0.132	<0.00200	0.0145	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	07/30/2012		121	0.986	2.63	72.7	528	<0.0100	0.00523	0.106	0.159	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0178
	02/19/2013		105	1.02	2.54	83.3	496	<0.0100	0.00693	0.0998	0.162	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	0.00537	<0.00500	<0.00500	<0.00500	0.00873
	08/22/2014		57.3	0.462	2.73	37.6	532	0.0170	0.00530	0.106	<0.0200	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0119
	12/17/2014		110	0.91	3.0	69	- -	<0.0100	0.00579	0.0985	0.121	<0.00100	0.00101	<0.00100	0.00108	0.0180	<0.00100	<0.00100	<0.00020	0.00346	<0.00100	0.00359	<0.00100	0.00179	0.00315
	03/09/2015		11	0.098 J	2.7	7.3	520	<0.035	0.0055	0.11	0.15	<0.00070	<0.0014	<0.0023	0.012 J	<0.014	0.00062 J	<0.0012	<0.000049	0.0032 J	<0.0049	0.0097 J	<0.0028	0.0016 J	0.015 J
	05/19/2015		110	0.88	3.2	73	550	<0.035	0.0060	0.11	0.14 J	<0.00070	0.0018 J	<0.0023	0.015 J	<0.014	0.00074 J	<0.0012	<0.000049	0.0042 J	<0.0049	0.0033	<0.0028	0.0018 J	0.017 J
	08/28/2015		193	1.55	4.34	127	593	<0.0350	0.00551	0.103	0.155	<0.000160	0.000676 J	<0.000260	0.00121 J	<0.0141	<0.000240	0.000878 J	<0.0000490	0.00306 J	<0.000350	0.00332	<0.000310	0.00156 J	<0.00256
	12/17/2015		121	0.982	3.46	76.7	588	<0.0350	0.00572	0.104	0.155 J	<0.000160	0.00103 J	<0.000260	0.00216 J	0.0158 J	<0.000240	0.000476 J	<0.0000490	<0.00160	0.000388 J	0.00342	<0.000310	0.00160 J	0.00427 J
	03/10/2016		136	0.939	3.34	74.1	575	0.00383 J	0.00557	0.108	0.138	<0.000160	0.00106 J	<0.000260	0.00183 JB	0.0200 J	<0.000240	0.000748 J	<0.0000490	0.00307 JB	0.000364 JB	0.00342	<0.000310	0.00161 J	0.00420 JB
	05/25/2016		128	0.941	3.03	75.1	634	<0.00200	0.00451	0.104	0.166	<0.000160	<0.000540	<0.000260	0.0141	<0.0150	0.000323 J	0.00281 J	<0.0000490	0.00272 J	0.000909 J	0.00365	<0.000310	0.00159 J	0.0101 J
	08/18/2016		129	0.872	5.76	70.9	626	0.00295 JB	0.00548	0.111	0.157	<0.000160	0.00139 JB	<0.000260	0.00146 JB	<0.0150	<0.000240	0.00101 JB	0.0000503 JB	0.00293 J	0.00103 JB	0.00367	<0.000310	0.00176 J	0.00285 JB
	12/08/2016		156	0.942	3.23	74.3	676	0.00412 JB	0.00544	0.122	0.127	<0.000160	0.00108 J	<0.000260	0.00236 J	<0.0150	<0.000240	0.000506 JB	<0.0000490	0.00281 J	<0.000350	0.00333	<0.000310	0.00177 J	0.00374 J
	02/07/2017		148	0.893	3.55	82.9	613	<0.0258	0.00615 J	0.143	0.163	<0.000800	<0.00270	<0.00130	0.00320 J	<0.0750	<0.00120	<0.00125	<0.0000490	0.00293 J	<0.00175	0.00336	<0.00155	0.00188 J	<0.0128
	05/31/2017		150	0.836	3.27	75.9	597	<0.00515	0.00559	0.127	0.149	<0.000160	0.00101 J	<0.000260	0.00435 J	<0.0150	<0.000240	0.000388 JB	<0.0000490	0.00280 J	0.000572 J	0.00322	<0.000310	0.00183 J	0.00513 JB
	08/17/2017		135	0.740	3.19	76.5	662	0.0185 JB	0.00569	0.113	0.142	<0.000160	0.00110 J	<0.000260	0.00355 J	<0.0150	0.000261 J	0.00121 JB	<0.0000490	0.00282 J	0.000633 J	0.00347	<0.000310	0.00177 J	0.00834 J
	12/14/2017		133	0.816	3.13	77.3	616	0.00620 JB	0.00598	0.109	0.135	<0.000160	0.00142 J	<0.000260	0.00253 JB	0.0491 J	0.000679 J	0.00115 J	<0.0000490	0.00282 J	0.000606 J	0.00355	<0.000310	0.00183 J	0.00679 J
	02/23/2018		133	0.948	3.46	76.5	603	0.00601 JB	0.00621	0.109	0.189 J	<0.000160	0.00134 JB	<0.000260	0.00292 J	<0.0150	<0.000240	0.000796 JB	<0.0000490	0.00304 J	0.000612 JB	0.00371	<0.000310	0.00176 J	0.00383 J
	04/05/2018		131	0.878	3.09	75.6	584	0.0183 JB	0.00657	0.118	0.156 J	0.000910 JB	0.000849 JB	0.000894 JB	0.0135	0.0237 J	0.00120 JB	0.00467 J	<0.0000490	0.00380 J	0.00244 B	0.00397	<0.000310	0.00270 J	0.0298
	07/31/2018		121	0.881	3.03	74.7	584	0.00795 JB	0.00596	0.104	0.169 J	0.000172 JB	0.00117 J	<0.000260	0.00470 J	<0.0150	0.000793 J	0.000983 J	<0.0000490	0.00283 J	0.000634 J	0.00362	<0.000310	0.00173 J	0.00798 J
	10/01/2018		121	0.797	3.11	79.9	573	0.00570 J	0.00632	0.112	0.128 J	<0.000160	0.00116 J	<0.000260	0.00233 J	<0.0150	0.000674 J	0.00161 J	<0.0000490	0.00302 J	0.000651 J	0.00409	<0.000310	0.00177 J	0.00386 J
	01/23/2019		120	0.775	2.86	75.6	550	0.0108 J	0.00621	0.110	0.152	<0.000160	0.00139 J	<0.000260	0.00259 JB	<0.0150	0.000378 J	0.00193 J	<0.0000490	0.00293 J	0.00114 JB	0.00393	<0.000310	0.00184 J	0.00809 J
	04/04/2019		120	0.776	3.17	74.9	590	0.00882 JB	0.00599	0.118	0.169 J	<0.000160	0.00137 J	<0.000260	0.0129	0.0185 J	0.000607 J	0.00509	<0.0000490	0.00295 J	0.00101 JB	0.00375	<0.000310	0.00194 J	0.0199 J
	07/11/2019		121	0.931	3.29	77.5	571	<0.00515	0.00582	0.111	0.146 J	<0.000160	0.00162 JB	<0.000260	0.00322 JB	<0.0150	0.000313 JB	0.00042 J	<0.0000490	0.00303 J	0.000416 J	0.00414	<0.000310	0.00173 J	0.006 J
	10/24/2019		122	0.930	2.57	76.8	484	<0.00515	0.00483	0.106	0.149 J	<0.000160	0.00115 J	<0.000260	0.00265 J	<0.0150	<0.000240	0.0172	0.0000637 J	0.00279 J	0.000441 J	0.00306	<0.000310	0.00148 J	0.0105 J
	01/15/2020		117	0.860	2.94	77.5	549	0.0222 JB	0.00611	0.105	0.152 J	<0.000160	0.00159 J	<0.000260	0.0459	<0.0150	0.00257	0.00113 JB	<0.0000490	0.00298 J	0.00184 JB	0.00381	<0.000310	0.00195 J	0.0282
	06/18/2020		118	0.953	2.92	78.6	548	<0.0554	0.00601	0.106	0.150 J	<0.000478	0.00178 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00297 J	0.000965 J	0.00412	<0.000513	<0.00754	<0.00996
	08/19/2020		111	0.837	2.82	78.3	568	<0.0554	0.00592	0.0976	0.150 J	<0.000478	0.00178 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00284 J	<0.000952	0.00352	<0.000513	<0.00754	<0.00996

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
South Well	06/22/2009		497	0.665	3.02	106	1,450	<0.0100	<0.00500	0.154	0.189	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	<0.00500
	01/14/2010		498	0.686	3.27	113	1,520	0.0176	<0.00500	0.138	0.229	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0224	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00236	0.0207
	08/24/2010		477	0.651	2.18	101	1,760	<0.0100	<0.00500	0.172	0.186	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00576	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0329
	03/03/2011		549	0.647	3.24	122	1,840	<0.0100	<0.00500	0.147	0.261	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0226	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500
	07/20/2011		420	0.687	2.48	103	1,600	<0.0100	<0.00500	0.157	0.195	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00777
	02/02/2012		368	0.756	3.02	89.0	1,210	<0.0100	<0.00500	0.117	0.165	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00777
	07/30/2012		135	1.01	2.53	73.3	582	<0.0100	<0.00500	0.103	0.160	<0.00200	0.0111	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0401
	02/19/2013		359	0.743	2.88	99.2	1,170	<0.0100	0.00576	0.149	0.197	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0172
	02/28/2014		352	0.575	0.660	99.2	1,210	<0.0100	<0.00500	0.131	0.195	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00571	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0155
	08/22/2014		435	0.720	3.00	100	1,480	<0.0100	<0.00500	0.136	0.144	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.00670	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0159
	08/22/2014	FD	437	0.724	3.00	107	1,480	0.0689	<0.00500	0.145	<0.0200	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	0.0103	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0214
	12/17/2014		390	0.63	3.2	91	- -	<0.0100	0.00431	0.125	0.159	<0.00100	0.00178	<0.00100	0.00128	0.0277	<0.00100	0.00422	<0.00020	0.00242	<0.00100	0.00387	<0.00100	0.00227	0.0163
	12/17/2014	FD	390	0.63	3.2	90	- -	<0.0100	0.00422	0.126	0.162	<0.00100	0.00179	<0.00100	0.00136	0.0226	<0.00100	0.00409	<0.00020	0.00203	<0.00100	0.00359	<0.00100	0.00217	0.0151
	03/09/2015		340	0.82	2.7	99	1,100	<0.035	0.0040	0.14	0.20	<0.00070	0.0015 J	<0.0023	0.032	<0.014	0.0031	0.0046 J	<0.000049	0.0020 J	<0.0049	0.012 J	<0.0028	0.0021 J	0.049 J
	03/09/2015	FD	340	0.82	650	98	1,100	0.037 J	0.0042	0.14	0.20	<0.00070	<0.0014	<0.0023	0.019 J	<0.014	0.0026	0.0030 J	<0.000049	0.0021 J	<0.0049	0.015 J	<0.0028	0.0021 J	0.025 J
	05/19/2015		330	0.76	3.2	92	1,100	<0.035	0.0023	0.14	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0088 J	<0.000049	0.0022 J	<0.0049	0.0034	<0.0028	0.0021 J	<0.0059
	05/19/2015	FD	340	0.76	3.1	95	1,000	<0.035	0.0024	0.14	0.18 J	<0.00070	<0.0014	<0.0023	<0.0053	<0.014	<0.00024	0.0081 J	<0.000049	0.0023 J	<0.0049	0.0032	<0.0028	0.0021 J	<0.0059
	08/28/2015		426	0.810	3.48	107	1,440	<0.0350	0.00436	0.137	0.194	<0.000700	0.00156 J	<0.00230	<0.00530	0.0168 J	0.000477 J	0.00776 J	<0.0000490	0.00204 J	<0.00490	0.00360	<0.00280	0.00214 J	0.00662 J
	08/28/2015	FD	382	0.734	3.50	95.9	1,320	<0.0350	0.00430	0.133	0.197	<0.000160	0.00127 J	<0.000260	0.00376 J	<0.0141	<0.000240	0.00654	0.0000599 J	0.00199 J	<0.000350	0.00328	<0.000310	0.00205 J	0.00638 J
	12/17/2015		400	0.751	3.35	115	1,400	<0.0350	0.00426	0.138	0.235	<0.000160	0.00205	<0.000260	0.00257 J	<0.0141	<0.000240	0.00564	<0.0000490	<0.00160	0.000645 J	0.00334	<0.000310	0.00238 J	0.00388 J
	12/17/2015	FD	402	0.752	3.47	114	1,360	<0.0350	0.00425	0.136	0.193 J	<0.000160	0.00160 J	<0.000260	0.00250 J	<0.0141	<0.000240	0.00546	<0.0000490	<0.00160	0.000442 J	0.00343	<0.000310	0.00238 J	0.00430 J
	03/10/2016		354	0.76	3.53	103	1,100	0.00624 J	0.00425	0.118	0.211	<0.000160	0.00135 J	<0.000260	0.00864	<0.0150	0.000256 J	0.00332 JB	<0.0000490	0.00204 JB	0.000524 JB	0.00354	<0.000310	0.00230 J	0.0119 JB
	05/25/2016		361	0.743	3.11	101	1,620	<0.00200	0.00433	0.124	0.214	<0.000160	0.00139 J	<0.000260	0.00384 J	<0.0150	<0.000240	0.00551	<0.0000490	0.00196 J	<0.000350	0.00374	<0.000310	0.00249 J	0.00351 J
	05/25/2016	FD	377	0.741	3.11	102	1,440	<0.00200	0.00459	0.125	0.224	<0.000160	0.00196 J	<0.000260	0.00445 J	<0.0150	<0.000240	0.00535	<0.0000490	0.00194 J	<0.000350	0.00343	<0.000310	0.00247 J	0.00394 J
	08/18/2016		381	0.692	3.18	98.2	1,420	<0.00200	0.00419	0.134	0.224	<0.000160	0.00138 J	<0.000260	0.00444 JB	<0.0150	<0.000240	0.00250 J	0.0000764 JB	0.00188 J	0.00106 JB	0.00326	<0.000310	0.00257 J	0.00833 JB
	08/18/2016	FD	385	0.695	3.18	97.6	1,390	0.00377 JB	0.00370	0.137	0.233	<0.000160	0.00165 J	<0.000260	0.00485 JB	<0.0150	<0.000240	0.00270 J	0.0000788 JB	0.00201 J	0.00128 JB	0.00318	<0.000310	0.00262 J	0.00936 JB
	12/08/2016		419	0.772	3.27	105	1,300	0.00439 JB	0.00310	0.120	0.188	<0.000160	0.000590 J	<0.000260	0.00192 J	<0.0150	<0.000240	0.00796	<0.0000490	0.00181 J	<0.000350	0.00373	<0.000310	0.00257 J	0.00418 J
	12/08/2016	FD	425	0.777	3.27	106	1,310	0.00364 JB	0.00313	0.120	0.194	<0.000160	0.000601 J	<0.000260	0.00215 J	<0.0150	0.000317 J	0.00673	<0.0000490	0.00184 J	<0.000350	0.00307	<0.000310	0.00253 J	0.00420 J
	02/07/2017		379	0.712	3.41	115	1,110	0.00532 J	0.00343	0.117	0.223	<0.000160	0.000753 J	<0.000260	0.00340 J	<0.0150	0.000385 JB	0.00227 J	<0.0000490	0.00190 J	<0.000350	0.00337	<0.000310	0.00229 J	0.00405 J
	02/07/2017	FD	375	0.723	3.77	114	1,170	<0.0258	0.00424 J	0.140	0.228	<0.000800	<0.00270	<0.00130	0.00352 J	<0.0750	<0.00120	0.00308 J	<0.0000490	0.00217 J	<0.00175	0.00338	<0.00155	0.00266 J	<0.0128
	05/31/2017		433	0.636	3.20	101	1,350	<0.00515	0.00327	0.144	0.209	<0.000160	0.000988 J	<0.000260	0.00419 J	<0.0150	<0.000240	0.00311 J	0.0000506 J	0.00174 J	<0.000350	0.00303	<0.000310	0.00235 J	0.00458 JB
	05/31/2017	FD	426	0.619	3.16	101	1,330	0.00778 JB	0.00326	0.139	0.197	<0.000160	0.00106 J	<0.000260	0.00419 J	<0.0150	<0.000240	0.00315 J	0.0000515 J	0.00163 J	0.000376 J	0.00338	<0.000310	0.00236 J	0.00426 JB
	08/17/2017		406	0.579	2.96	97.7	1,260	0.00883 JB	0.00392	0.125	0.191	<0.000160	0.00187 J	<0.000260	0.00229 J	<0.0150	<0.000240	0.00253 JB	<0.0000490	0.00183 J	<0.000350	0.00353	<0.000310	0.00230 J	0.00365 J
	08/17/2017	FD	400	0.577	2.94	92.4	1,460	0.00607 JB	0.00413	0.127	0.191	<0.000160	0.00204	<0.000260	0.00364 J	<0.0150	<0.000240	0.00182 JB	<0.0000490	0.00185 J	<0.000350	0.00338	<0.000310	0.00232 J	0.00339 J
	12/14/2017		383	0.625	2.97	92.4	1,290	<0.00515	0.00417	0.125	0.176	<0.000160	0.00221	<0.000260	0.00500 B	<0.0150	<0.000240	0.00223 J	<0.0000490	0.00180 J	0.000406 J	0.00357	<0.000310	0.00237 J	0.00659 J
	12/14/2017	FD	405	0.625	3.03	94.4	1,410	<0.00515	0.00417	0.129	0.184	<0.000160	0.00223	<0.000260	0.00526 B	<0.0150	0.000263 J	0.00259 J	<0.0000490	0.00185 J	0.000357 J	0.00356	<0.000310	0.00244 J	0.00474 J
	02/23/2018		429	0.746	3.28	103	1,410	0.00900 JB	0.00419	0.143	0.258	<0.000160	0.00265 B	<0.000260	0.00656	<0.0150	0.000278 JB	0.00225 J	<0.0000490	0.00191 J	0.000488 JB	0.00453	<0.000310	0.00245 J	0.00958 J
	02/23/2018	FD	432	0.735	3.27	104	1,270	0.0243 JB	0.00603	0.145	0.222	0.00194	0.00432 B	0.00187 J	0.00829	0.0231 J	0.00195 J	0.00373 J	0.0000945 J	0.00411 J	0.00243	0.00571	0.000372 J	0.00424 J	0.0115 J
	04/05/2018		406	0.676	2.98	99.9	1,300	0.0142 JB	0.00434	0.140	0.202	<0.000160	0.00311 B	<0.000260	0.00598	<0.0150	<0.000240	0.00245 JB	<0.0000490	0.00184 JB	<0.000350	0.00335 B	<0.000310	0.00252 J	0.00408 J
	07/31/2018		409	0.752	3.14	103	1,420	0.0109 JB	0.00377	0.130	0.239	0.000179 JB	0.00186 J	<0.000260	0.00235 JB	<0.0150	0.000264 J	0.00101 J	<0.0000490	0.00208 J	0.000389 J	0.00413	<0.000310	0.00220 J	0.0461
	07/31/2018	FD	396	0.685	3.20	97.5	1,230	<0.00515	0.00401	0.133	0.203	0.000172 JB	0.00180 J	<0.000260	0.00179 JB	<0.0150	<0.000240	0.00143 J	<0.0000490	0.00197 J	0.000463 J	0.00326	<0.000310	0.00219 J	0.0262
	10/01/2018		368	0.625	3.00	97.0	1,360	<0.00515	0.00431	0.138	0.177 J	<0.000160	0.00169 J	<0.000260	0.00177 J	<0.0150	<0.000240	0.00219 J	0.0000509 J	0.00219 J	0.00308	0.00386	<0.000310	0.00238 J	0.148
	01/23/2019		396	0.601	2.67	90.1	1,100	0.0343 J	0.00407	0.140	0.204	<0.000160	0.00230	<0.000260	0.00274 JB	<0.0150	<0.000240	0.00228 J	<0.0000490	0.00209 J	0.00157 JB	0.00348	<0.000310	0.00241 J	0.230
	01/23/2019	FD	382	0.606	2.64	88.3	1,100	0.00963 J	0.00424	0.136	0.197	<0.000160	0.00199 J	<0.000260	0.00225 JB	<0.0150	<0.000240	0.00187 J	<0.0000490	0.00202 J	0.00131 JB	0.00396	<0.000310	0.00234 J	0.0889
	04/04/2019		344	0.619	3.18	97.3	1,280	<0.00515	0.00421	0.140	0.612	<0.000160	0.00110 J	<0.000260	0.00172 J	<0.0150	<0.000240	0.00382 J	<0.0000490	0.00226 J	0.000640 JB	0.00325	<0.000310	0.00238 J	0.0510
	07/11/2019		360	0.741	3.48	97.3	1,190	<0.00515	0.00375	0.126	0.198 J	<0.000160	0.00178 JB	<0.000260	0.00191 JB	<0.0150	0.00054 JB	0.00269 J	<0.0000490	0.00229 J	0.000881 J	0.00384	<0.000310	0.00223 J	0.101
	10/24/2019		335	0.798	2.80	86.8	992	<0.00515	0.00405	0.119	0.190 J	<0.000160	0.000880 J	<0.000260	0.000922 J	<0.0150	<0.000240	0.00155 J	0.0000822 J	0.00212 J	0.00157 J	0.00343	<0.000310	0.00188 J	0.0189 J
	01/15/2020		328	0.692	3.12	94.7	1,010	0.00859 JB	0.00287	0.122	0.184 J	<0.000160	0.000722 J	<0.000260	0.00316 JB	<0.0150	0.000365 JB	0.0101 B	<0.0000490	0.00215 J	0.0106	0.00482	<0.000310	0.00245 J	0.0942
	06/18/2020		330	0.784	3.10	95.7	1,090	<0.0554	0.00430	0.116	0.183 J	<0.000478	0.00168 J	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00210 J	<0.000952	0.00360	<0.000513	<0.00754	0.0142 J
	08/19/2020		333	0.690	2.99	96.1	1,040	<0.0554	0.00419	0.105	0.190 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.00168 J	<0.000100	0.00206 J	<0.000952	0.00417	<0.000513	<0.00754	0.0193 J
	08/19/2020	FD	341	0.684	2.99	95.8	1,070	<0.0554	0.00419	0.105	0.192 J	<0.000478	<0.00149	<0.000477	<0.00250	<0.0489	<0.00249	0.00145 J	<0.000100	0.00200 J	<0.000952	0.00394	<0.000513	<0.00754	0.0194 J

Table 3. Inorganic Constituent Concentrations in Groundwater
HollyFrontier Navajo Refining LLC, AP-110, Lovington, New Mexico

DRAFT

Monitor Well	Sample Date	Duplicate	Chloride (mg/L)	Fluoride (mg/L)	Nitrate-Nitrite (as N, mg/L)	Sulfate (mg/L)	Total Dissolved Solids (mg/L)	Aluminum (mg/L)	Arsenic (mg/L)	Barium (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Iron (mg/L)	Lead (mg/L)	Manganese (mg/L)	Total Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	Selenium (mg/L)	Silver (mg/L)	Uranium (mg/L)	Zinc (mg/L)
New Mexico WQCC Groundwater Standard			250	1.6	10.0	600.0	1,000.0	5.0	0.01	2	0.75	0.005	0.05	0.05	1.0	1.0	0.015	0.2	0.002	1.0	0.2	0.05	0.05	0.03	10.0
East Well	06/18/2009		107	0.980	2.59	84.0	554	0.0131	<0.00500	0.0820	0.143	<0.00200	<0.00500	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	- -	0.0291
	01/14/2010		138	0.991	2.70	72.7	676	<0.0100	<0.00500	0.0941	0.154	<0.00200	0.0119	<0.00500	0.00953	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	0.00111	0.0146
	08/25/2010		106	1.00	0.523	74.5	522	<0.0100	<0.00500	0.0873	0.136	<0.00200	0.0145	<0.00500	0.00745	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0347
	03/03/2011		135	0.905	2.68	75.6	644	<0.0100	<0.00500	0.0970	0.152	<0.00200	0.0189	<0.00500	<0.00500	<0.200	0.00662	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00936
	07/20/2011		124	0.810	1.83	73.8	596	<0.0100	<0.00500	0.104	0.142	<0.00200	0.0200	<0.00500	<0.00500	<0.200	0.0116	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0937
	02/02/2012		150	0.967	2.56	81.4	664	0.0150	<0.00500	0.0993	0.145	<0.00200	0.0166	<0.00500	<0.00500	<0.200	0.00988	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0937
	07/30/2012		144	0.962	2.40	80.9	636	<0.0100	<0.00500	0.0922	0.136	<0.00200	0.0157	<0.00500	0.00774	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0166
	02/28/2014		138	0.899	0.564	80.6	658	0.0104	<0.00500	0.116	0.158	<0.00200	0.0139	<0.00500	<0.00500	<0.200	<0.00500	<0.00500	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0317
	08/22/2014		124	0.914	2.71	78.5	614	<0.0100	<0.00500	0.103	<0.0200	<0.00200	0.0119	<0.00500	<0.00500	<0.200	<0.00500	0.00812	<0.000200	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.0156
	12/17/2014		120	0.90	2.7	73	- -	<0.0100	0.00436	0.0905	0.120	<0.00100	0.0112	<0.00100	<0.00100	0.143	<0.00100	0.00430	<0.00020	0.00241	<0.00100	0.00395	<0.00100	0.00181	0.0147
	03/09/2015		120	1.1	2.6	81	570	<0.035	0.0046	0.10	0.15	<0.00070	0.012	<0.0023	0.068	<0.014	0.0012 J	0.0021 J	<0.000049	0.0023 J	<0.0049	0.010 J	<0.0028	0.0018 J	0.086
	05/19/2015		120	0.90	2.8	78	560	<0.035	0.0050	0.10	0.14 J	<0.00070	0.012	<0.0023	<0.0053	<0.014	<0.00024	0.0016 J	<0.000049	0.0028 J	<0.0049	0.0037	<0.0028	0.0019 J	0.013 J
	08/28/2015		206	1.75	3.00	145	603	<0.0350	0.00445	0.0981	0.149	<0.000700	0.00866 J	<0.00230	<0.00530	0.0248 J	0.000241 J	0.0129	<0.0000490	0.00236 J	<0.00490	0.00388	<0.00280	0.00174 J	0.0284 J
	12/17/2015		114	1.03	3.01	80.9	621	0.0668 J	0.00507	0.0997	0.167 J	<0.000160	0.00866	<0.000260	0.00143 J	<0.0141	<0.000240	0.00217 J	<0.0000490	<0.00160	0.000365 J	0.00387	<0.000310	0.00188 J	0.0101 J
	03/10/2016		112	1.01	3.01	78.9	562	0.00534 J	0.00454	0.0926	0.143	<0.000160	0.00835	<0.000260	0.000987 J	<0.0150	<0.000240	0.00274 JB	<0.0000490	0.00246 JB	0.000662 JB	0.00384	<0.000310	0.00166 J	0.0260 B
	05/25/2016		114	1.01	2.70	80.0	608	<0.00200	0.00483	0.0906	0.154	<0.000160	0.00902	<0.000260	0.0315	<0.0150	0.00141 J	0.00181 JB	<0.0000490	0.00217 J	<0.000350	0.00376	<0.000310	0.00181 J	0.0399
	08/18/2016		104	0.915	3.12	74.4	555	0.00258 JB	0.00454	0.0939	0.162	<0.000160	0.00451 B	<0.000260	0.00196 JB	0.0337 J	<0.000240	0.00346 J	<0.0000490	0.00288 J	0.00121 JB	0.00386	<0.000310	0.00194 J	0.0291 B
	12/08/2016		104	1.02	2.88	79.9	582	0.00471 JB	0.00464	0.0858	0.122	<0.000160	0.00702	<0.000260	0.00390 J	<0.0150	<0.000240	0.00178 J	<0.0000490	0.00254 J	<0.000350	0.00384	<0.000310	0.00172 J	0.0269
	02/07/2017		112	0.975	3.26	88.7	498	<0.0258	0.00523 J	0.105	0.158	<0.000800	0.00749 J	<0.00130	<0.00260	<0.0750	<0.00120	0.00214 J	<0.0000490	0.00260 J	<0.00175	0.00358	<0.00155	0.00201 J	0.0141 J
	05/31/2017		110	0.926	2.91	81.5	532	<0.00515	0.00462	0.0928	0.144	<0.000160	0.00662	<0.000260	0.0259	<0.0150	0.00115 J	0.00132 J	<0.0000490	0.00228 J	0.000529 J	0.00351	<0.000310	0.00184 J	0.0297
	08/17/2017		109	0.812	3.02	83.0	547	0.0583 J	0.00476	0.0903	0.134	<0.000160	0.00699	<0.000260	0.000968 J	<0.0150	<0.000240	0.000802 JB	<0.0000490	0.00237 J	<0.000350	0.00396	<0.000310	0.00181 J	0.00556 J
	12/14/2017		108	0.883	2.88	83.3	560	0.0284 JB	0.00527	0.0881	0.128	0.000195 J	0.00619	0.000334 J	0.00244 JB	0.0331 J	0.000575 J	0.00129 J	<0.0000490	0.00286 J	0.000638 J	0.00386	<0.000310	0.00221 J	0.00987 J
	02/23/2018		110	1.04	3.06	82.7	564	0.0326 JB	0.00531	0.0893	0.150 J	0.000266 J	0.00730	0.000381 J	0.00559	0.0313 J	0.00188 J	0.000591 JB	<0.0000490	0.00303 J	0.000904 JB	0.00491	<0.000310	0.00212 J	0.0340
	04/05/2018		110	0.968	2.81	81.3	543	0.00660 JB	0.00515	0.0947	0.148 J	<0.000160	0.00555	<0.000260	0.00183 JB	<0.0150	0.000365 JB	0.000358 JB	<0.0000490	0.00243 JB	0.000394 JB	0.00402	<0.000310	0.00195 JB	0.0666
	07/31/2018		110	1.03	2.93	84.8	578	0.0113 JB	0.00384	0.0902	0.132 J	0.000193 JB	0.00369	<0.000260	0.00911	<0.0150	0.000287 J	0.00145 J	<0.0000490	0.00244 J	0.000789 J	0.00374	<0.000310	0.00182 J	0.210
	10/01/2018		109	0.871	2.92	88.2	583	0.00755 J	0.00534	0.0961	0.114 J	<0.000160	0.00537	<0.000260	0.00189 J	<0.0150	0.000589 J	0.000543 J	<0.0000490	0.00277 J	<0.000350	0.00472	<0.000310	0.00189 J	0.0536
	01/23/2019		103	0.861	2.66	80.8	525	0.0301 J	0.00520	0.0908	0.137	0.000279 J	0.00585	0.000346 J	0.00249 JB	0.0297 J	0.000666 J	0.000402 J	<0.0000490	0.00287 J	0.00104 JB	0.00382	<0.000310	0.00231 J	0.0208 J
	04/04/2019		110	0.877	2.93	81.8	560	<0.00515	0.00472	0.0919	0.195 J	<0.000160	0.00504	<0.000260	0.0109	<0.0150	0.000844 J	0.000373 JB	<0.0000490	0.00243 J	<0.000350	0.00341	<0.000310	0.00193 J	0.0476
	07/11/2019		112	1.02	3.09	84.7	557	<0.00515	0.00495	0.0952	0.142 J	<0.000160	0.00647 B	<0.000260	0.00995 B	<0.0150	0.000637 JB	<0.000250	<0.0000490	0.00266 J	0.000563 J	0.00341	<0.000310	0.00186 J	0.0128 J
	10/24/2019		111	1.04	2.71	79.2	547	<0.00515	0.00454	0.0937	0.138 J	<0.000160	0.00320	<0.000260	<0.000520	<0.0150	<0.000240	0.000903 J	0.0000613 J	0.00260 J	0.000377 J	0.00393	<0.000310	0.00168 J	0.00418 J
	01/15/2020		114	0.967	2.84	83.5	549	<0.00515	0.00436	0.0986	0.143 J	<0.000160	0.000797 J	<0.000260	0.000843 JB	<0.0150	<0.000240	0.00221 JB	<0.0000490	0.00269 J	0.000845 JB	0.00564	<0.000310	0.00209 J	0.00523 J
	06/18/2020		124	1.04	2.84	85.3	568	<0.0554	0.00489	0.0965	0.140 J	<0.000478	0.00504	<0.000477	<0.00250	<0.0489	<0.00249	<0.00132	<0.000100	0.00258 J	<0.000952	0.00420	<0.000513	<0.00754	0.0300
	08/19/2020		119	0.928	2.79	86.1	592	<0.0554	0.00516	0.0909	0.148 J	<0.000478	0.00348	<0.000477	<0.00250	<0.0489	<0.00249	0.00242 J	<0.000100	0.00254 J	<0.000952	0.00419	<0.000513	<0.00754	<0.00996

Notes:
Shading indicates detected result exceeded the New Mexico Water Quality Control Commission (WQCC) Groundwater Standard
mg/L = milligrams per liter
< = Not reported above laboratory reporting limit
-- = Not Analyzed
(1)= Not analyzed due to insufficient water volume
J = analyte was detected below the laboratory reporting limit (June 2009 to December 2014) or the method quantitation limit (February 2015 to August 2020), reported value is estimated
B = same analyte was detected in the associated laboratory blank or equipment blank; sample concentration is within 5 times the blank concentration
FD = Field Duplicate
Samples collected for metals analysis (except for Total Mercury) were field- or lab-filtered with 0.45 micron filter
June 2009 to August 2014 analyses completed by ALS Laboratory Group, Houston, Texas
December 2014 analyses completed by Hall Environmental Analysis Laboratory in Albuquerque, New Mexico
February 2015 to present analyses completed by Pace Analytical National Center for Testing & Innovation (formerly ESC Lab Sciences) in Mount Juliet, Tennessee
Analytical data from 2009 to 2011 were provided by a previous consultant and could not be confirmed against the original data packages

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LEGEND

- LW - CITY OF LOVINGTON WATER WELL
- RAIL
- FENCE

BASEMAP: WORLD IMAGERY (CLARITY) - ESRI AND THEIR DATA PARTNERS, 2018.

N

1 inch = 700 feet

0 345 690 1,380

Feet

REFINERY VICINITY MAP

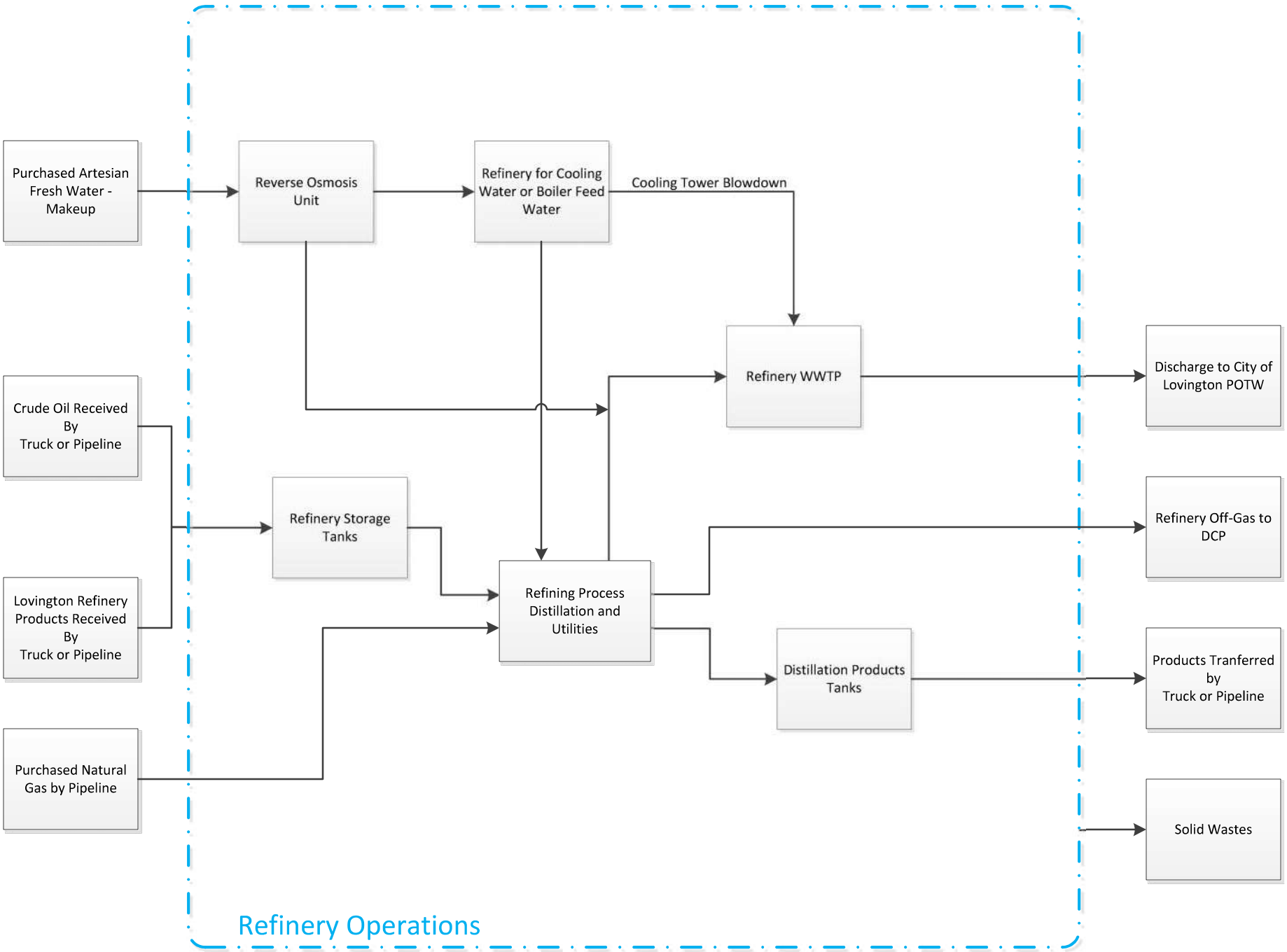
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

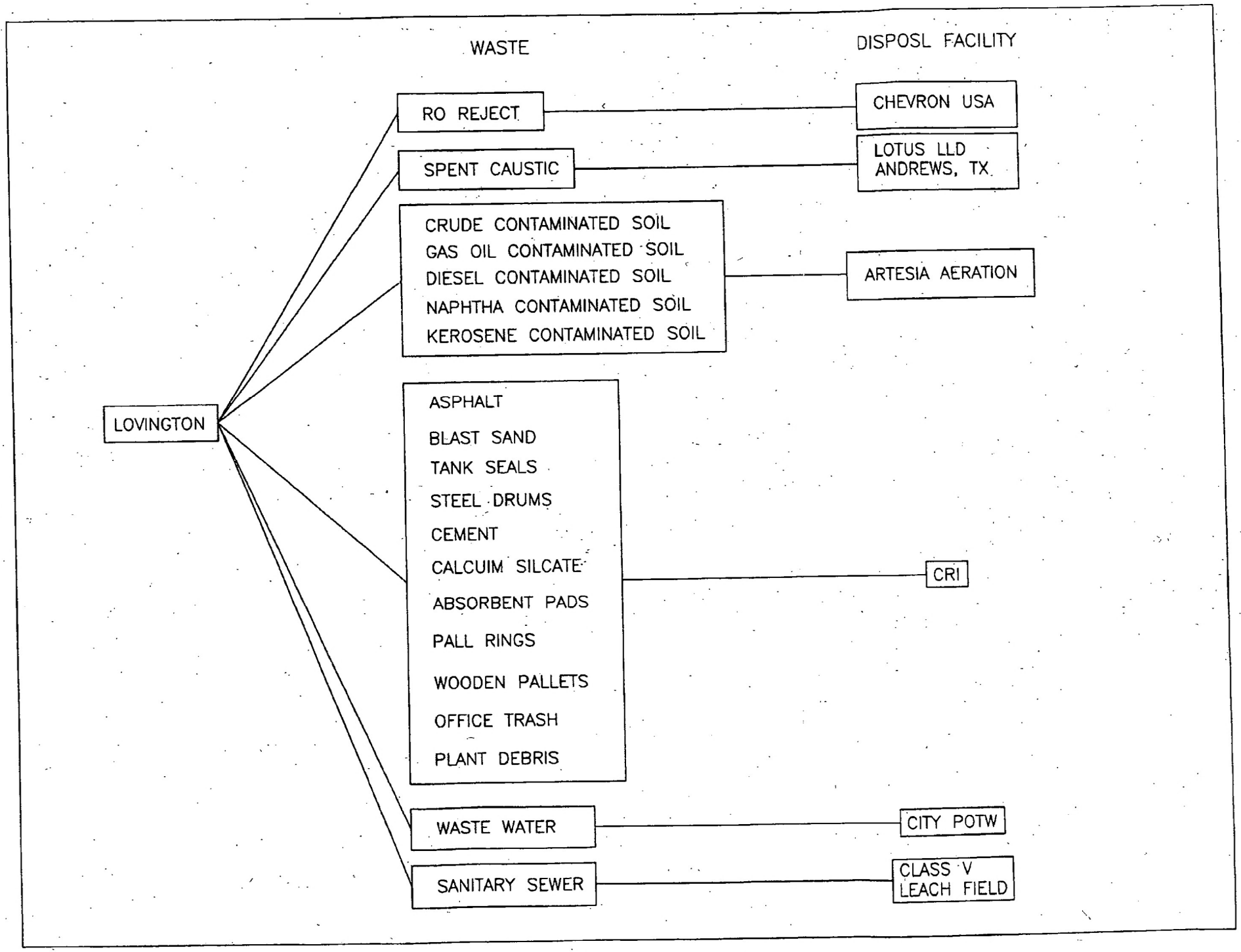
PROJECT NO: 330769	MXD: 330769_1
AUTHOR: S. RAY	DATE: 3/12/2020

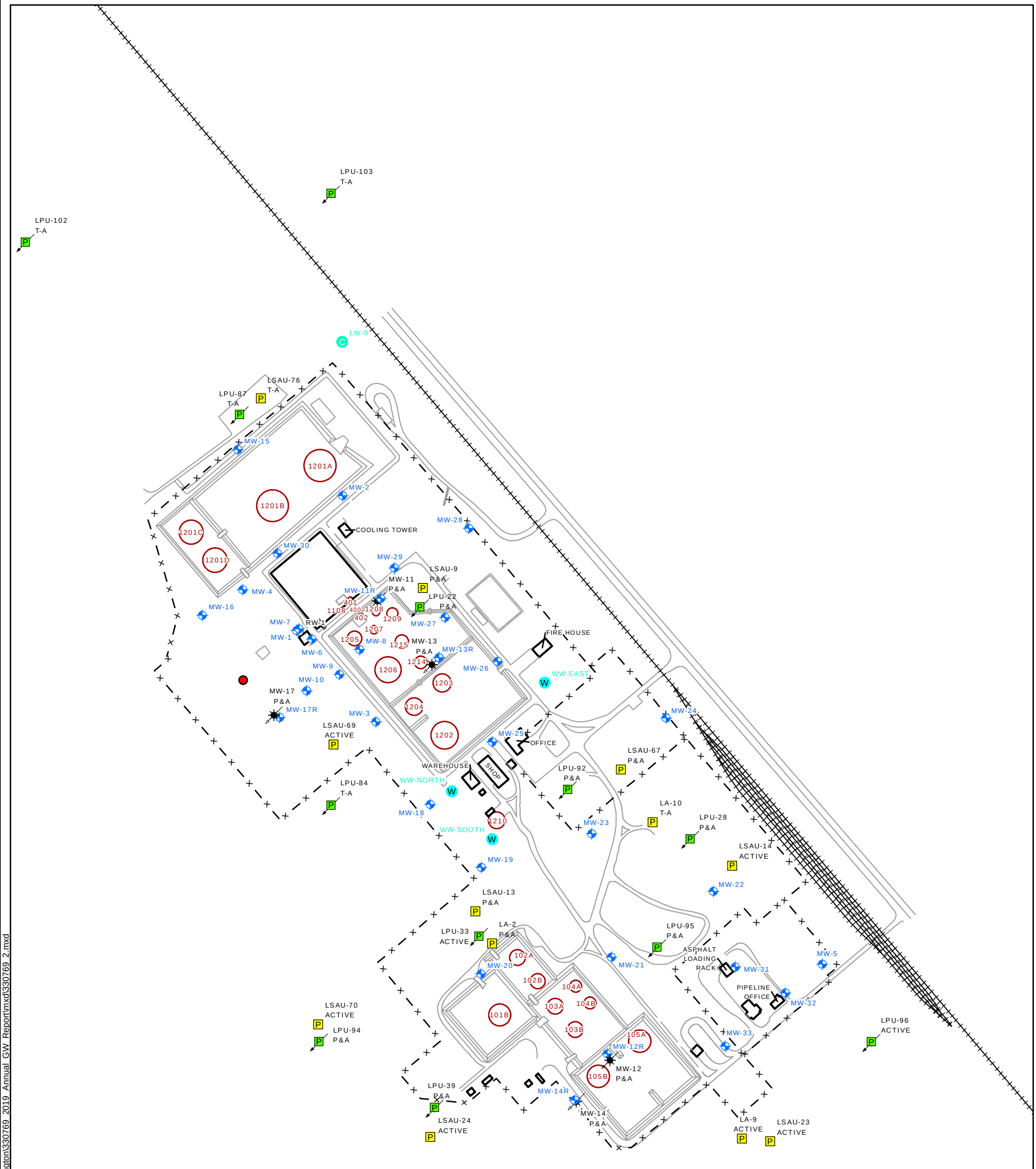
TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 1

Lovington Refinery Process Flow Diagram




WASTE
DISPOSL FACILITY
LOVINGTON
RO REJECT
SPENT CAUSTIC
CRUDE CONTAMINATED SOIL
GAS OIL CONTAMINATED SOIL
DIESEL CONTAMINATED SOIL
NAPHTHA CONTAMINATED SOIL
KEROSENE CONTAMINATED SOIL
ASPHALT
BLAST SAND
TANK SEALS
STEEL DRUMS
CEMENT
CALCUIM SILCATE
ABSORBENT PADS
PALL RINGS
WOODEN PALLETS
OFFICE TRASH
PLANT DEBRIS
WASTE WATER
SANITARY SEWER
CHEVRON USA
LOTUS LLD
ANDREWS, TX
ARTESIA AERATION
CRI
CITY POTW
CLASS V
LEACH FIELD



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LEGEND

- MONITORING WELL
- MONITORING WELL - PLUGGED AND ABANDONED
- OIL PRODUCTION WELL
- OIL PRODUCTION - CONVERTED TO INJECTION WELL
- RECOVERY WELL
- WATER WELL
- CITY OF LOVINGTON WATER WELL
- FLARE
- RAIL
- FENCE
- BUILDINGS
- TANKS

N

0 250 500 1,000

FEET

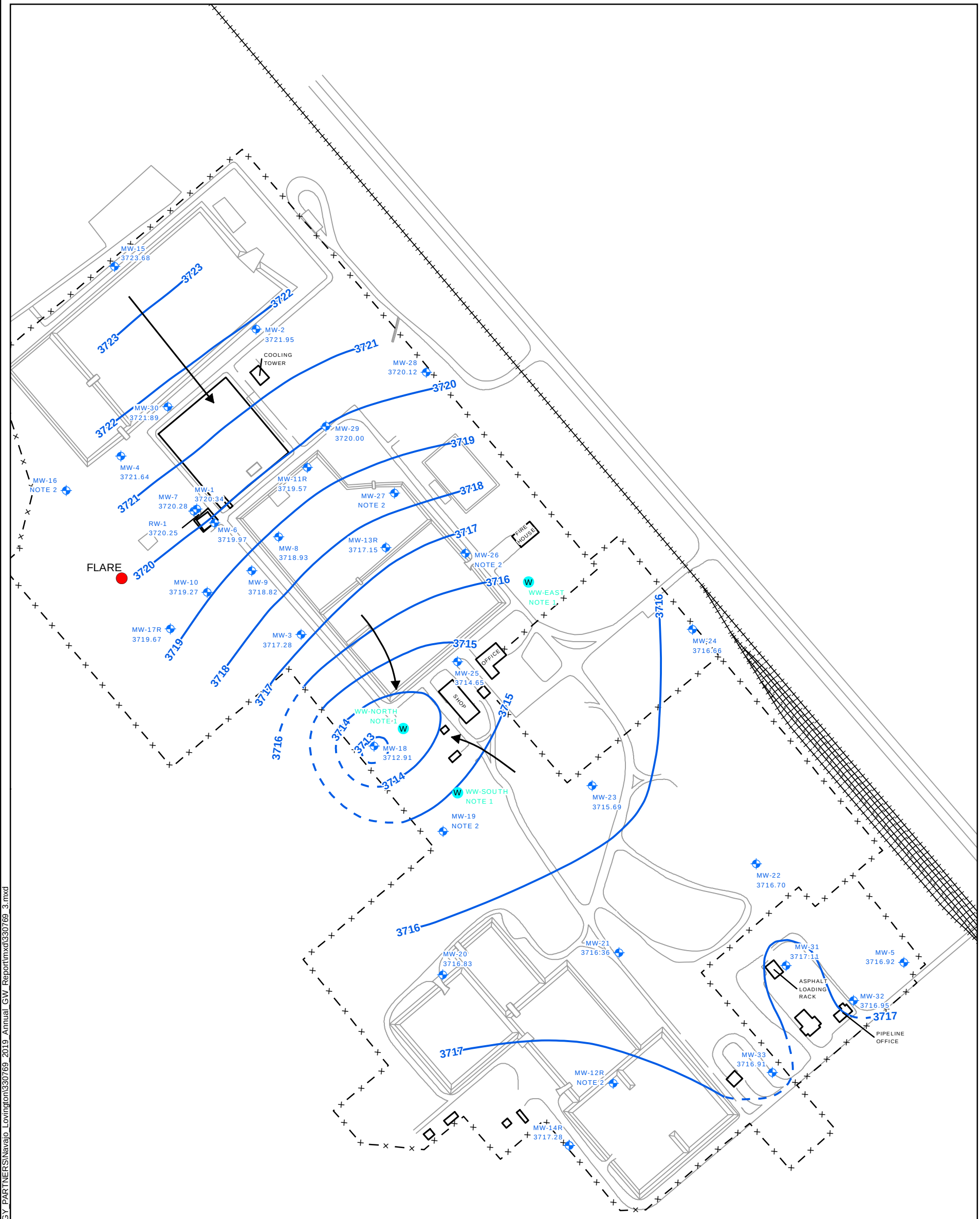
REFINERY SITE PLAN

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_2
AUTHOR: SRAY	DATE: 12/19/2019

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE
2



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NOTE:
1. WATER WELLS NOT ACCESSIBLE FOR GAUGING.
2. WATER LEVEL COULD NOT BE MEASURED DUE TO INTERFERENCE FROM DEDICATED PUMP.
3. WELLS GAUGED ON APRIL 4, 2019, EXCEPT MW-31 WAS GAUGED ON APRIL 1, 2019, BEFORE SKIMMER SYSTEM WAS INSTALLED.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FLARE
- FENCE
- RAIL
- GROUNDWATER FLOW DIRECTION
- 3723.68 GROUNDWATER ELEVATION (FEET)
- BUILDINGS

N

0 170 340 680
FEET

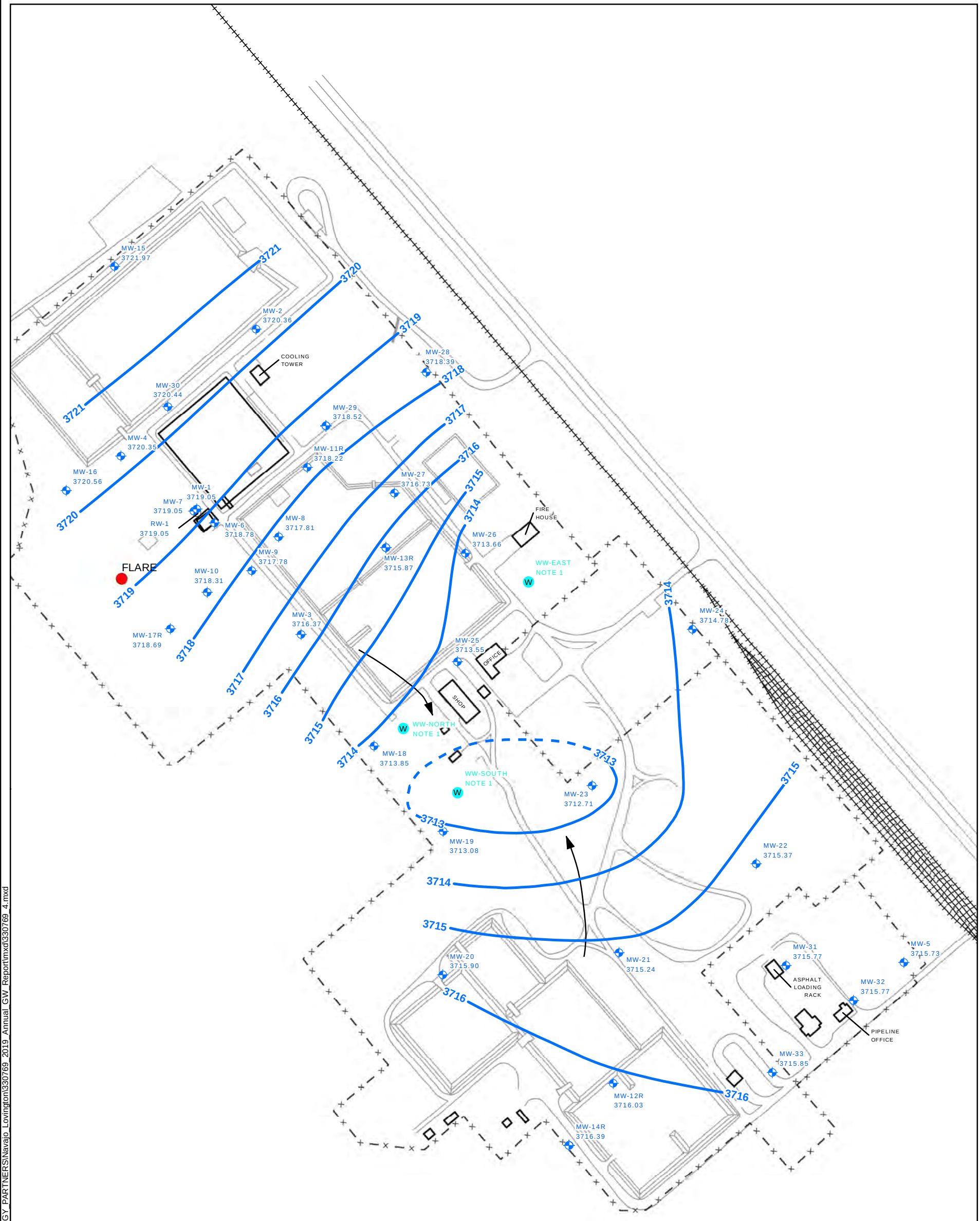
GROUNDWATER POTENTIOMETRIC SURFACE MAP - APRIL 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_3
AUTHOR: SRAY	DATE: 3/12/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 3



Document Path: S:\1-PROJECTS\HOLLY ENERGY PARTNERS\Navajo Lovington\330769 2019 Annual GW Report\mxd\330769 4.mxd

NOTE:
1. WATER WELL NOT ACCESSIBLE FOR GAUGING.
2. WELLS GAUGED ON OCTOBER 24, 2019.

LEGEND

- GROUNDWATER CONTOURS (DASHED WHERE INFERRED)
- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- FLARE
- FENCE
- RAIL
- GROUNDWATER FLOW DIRECTION
- 3721.97 GROUNDWATER ELEVATION (FEET)
- BUILDINGS

N

0 175 350 700
FEET

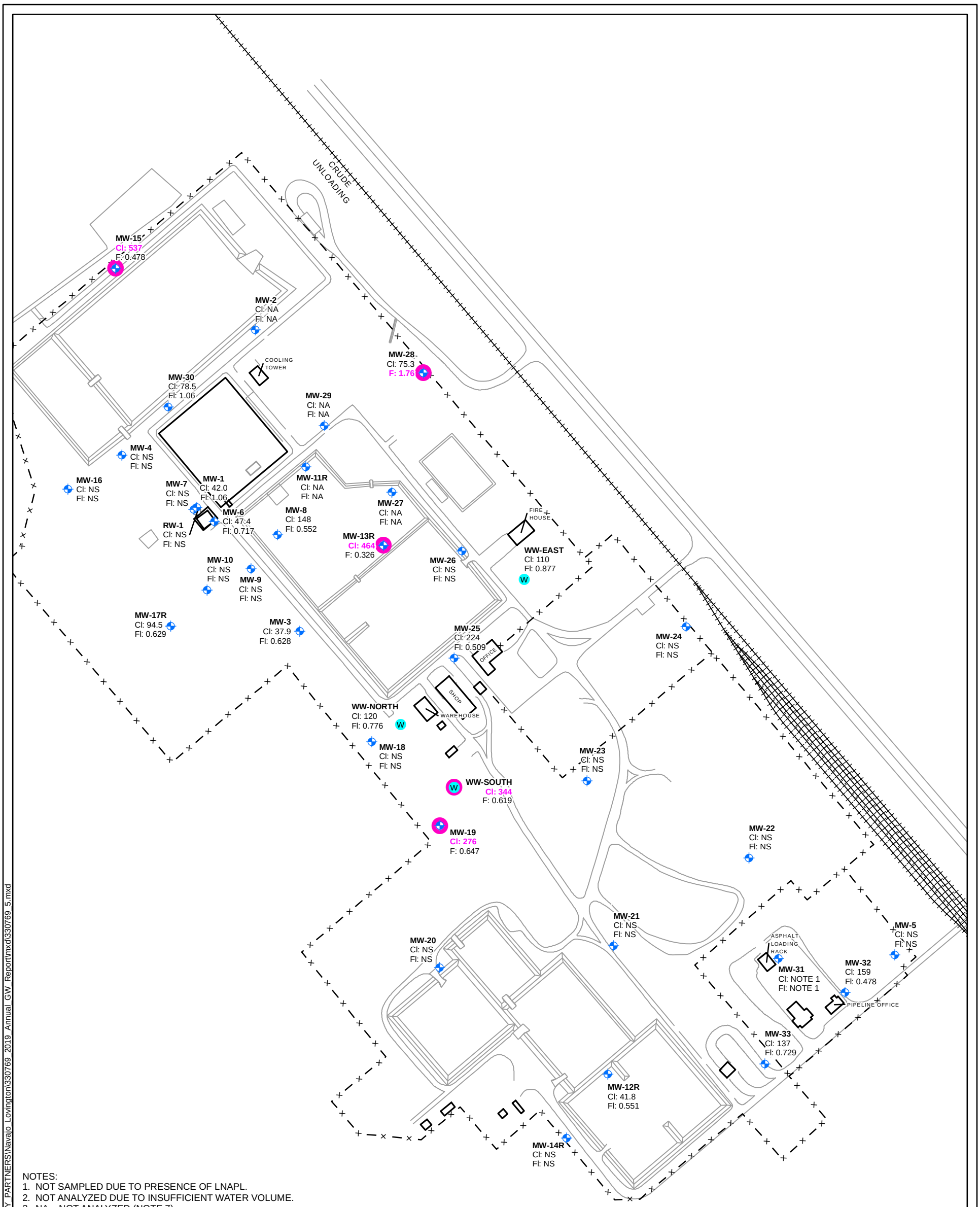
GROUNDWATER POTENTIOMETRIC SURFACE MAP - OCTOBER 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_4
AUTHOR: SRAY	DATE: 3/12/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE
4



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 7).
4. NS = NOT SAMPLED (NOTE 7).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. CHLORIDE AND FLUORIDE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY ANIONS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.
7. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Cl: 78.5 - CHLORIDE CONCENTRATION (WQCC STANDARD = 250 mg/L)
F: 1.06 - FLUORIDE CONCENTRATION (WQCC STANDARD = 1.6 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

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LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

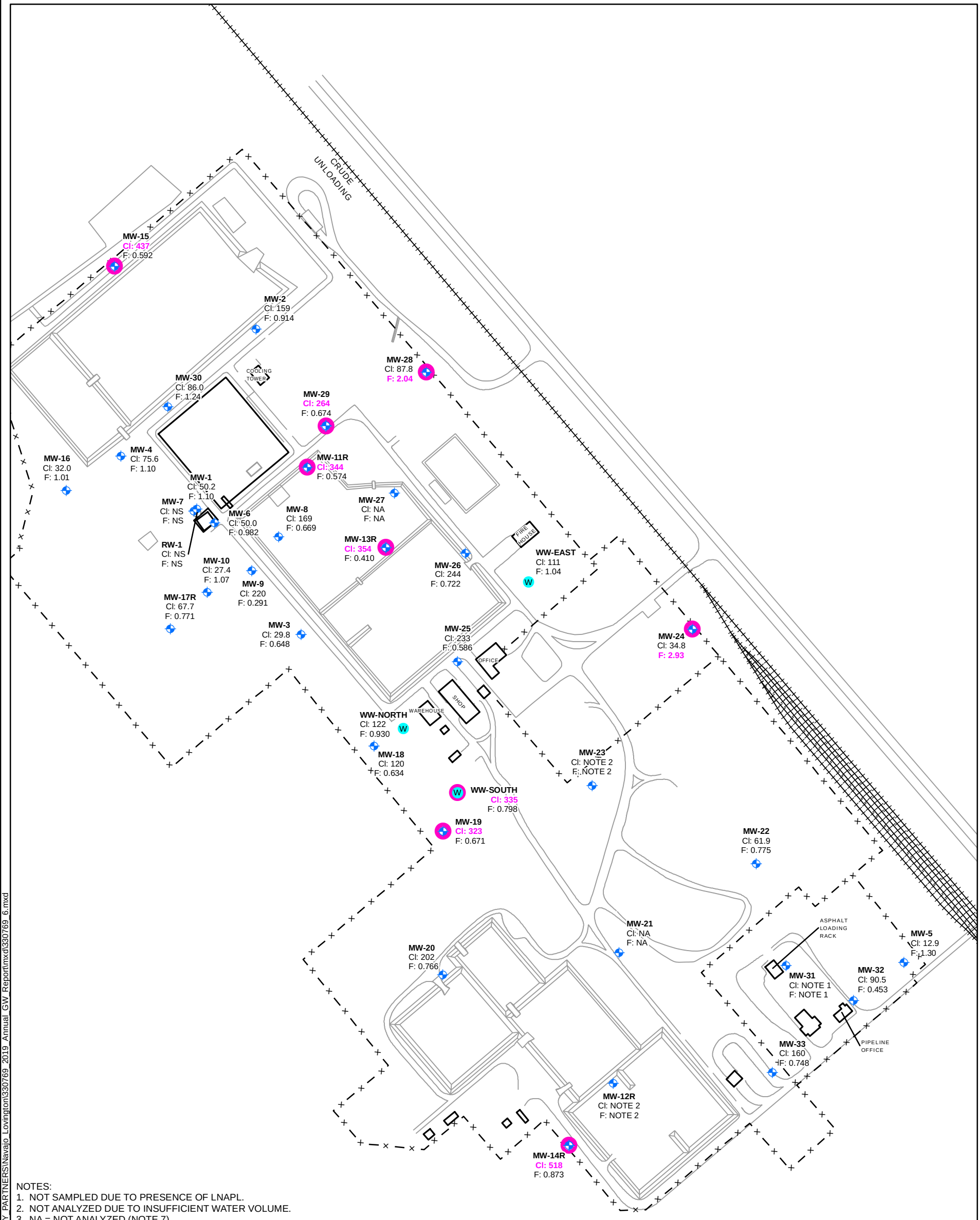
ANIONS
CONCENTRATION MAP - APRIL 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_5
AUTHOR: SRAY	DATE: 3/12/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE
5



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 7).
4. NS = NOT SAMPLED (NOTE 7).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. CHLORIDE AND FLUORIDE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE THEY ARE THE ONLY ANIONS THAT EXCEEDED THEIR RESPECTIVE WQCC STANDARDS.
7. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Cl: 86 - CHLORIDE CONCENTRATION (WQCC STANDARD = 250 mg/L)
F: 1.24 - FLUORIDE CONCENTRATION (WQCC STANDARD = 1.6 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

ANIONS CONCENTRATION MAP - OCTOBER 2019

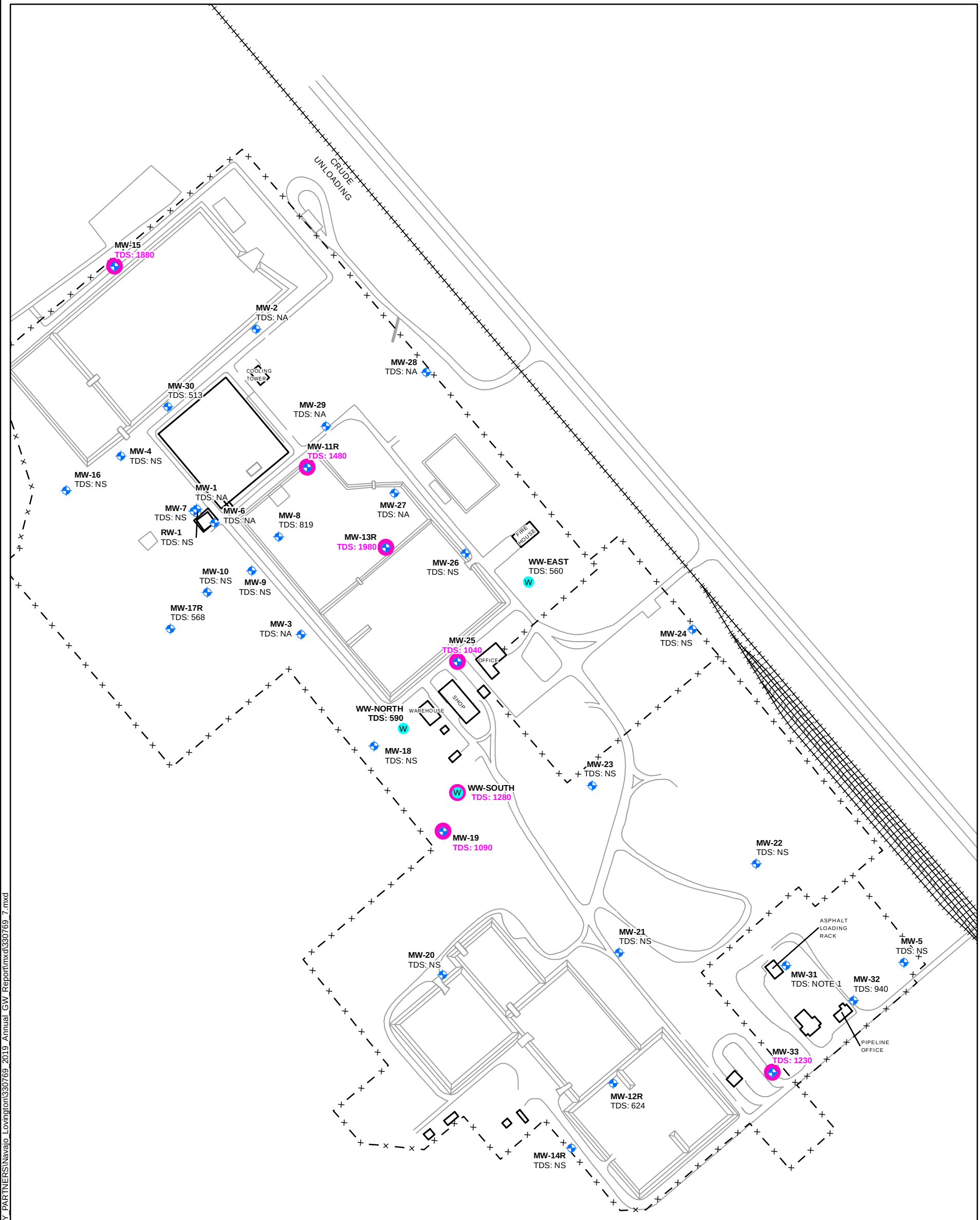
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_6
AUTHOR: SRAY	DATE: 3/12/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 6

Document Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\330769_2019_Annual_GW_Report\mxd\330769_6.mxd



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NA = NOT ANALYZED (NOTE 5).
3. NS = NOT SAMPLED (NOTE 5).
4. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
5. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
TDS: 513 - TOTAL DISSOLVED SOLIDS CONCENTRATION (WQCC STANDARD = 1,000 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - APRIL 2019

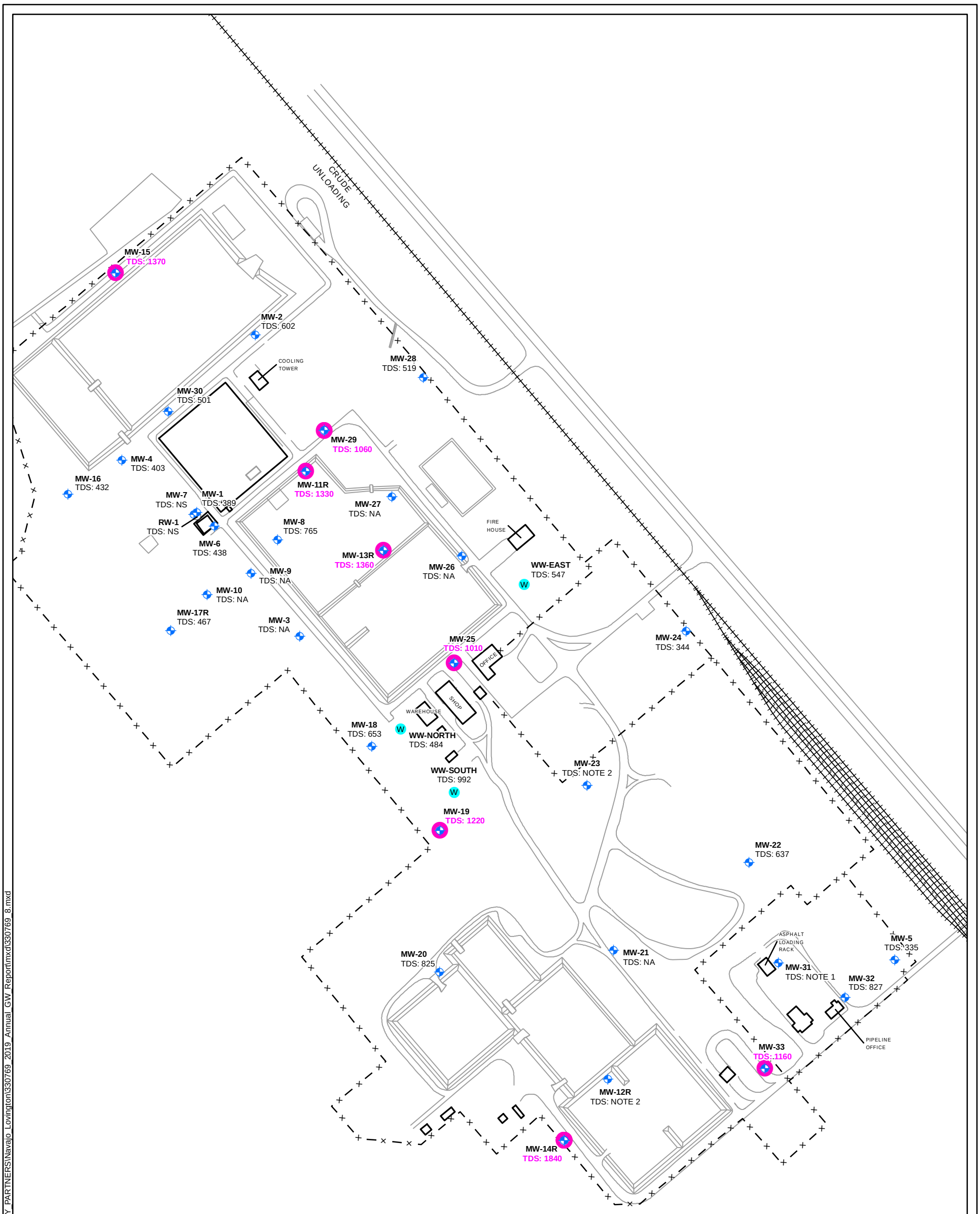
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_7
AUTHOR: SRAY	DATE: 3/16/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 7

Document Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\330769_2019_Annual_GW_Report\mxd\330769_7.mxd



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 6).
4. NS = NOT SAMPLED (NOTE 6).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
TDS: 501 - TOTAL DISSOLVED SOLIDS CONCENTRATION (WQCC STANDARD = 1,000 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700

FEET

TOTAL DISSOLVED SOLIDS CONCENTRATION MAP - OCTOBER 2019

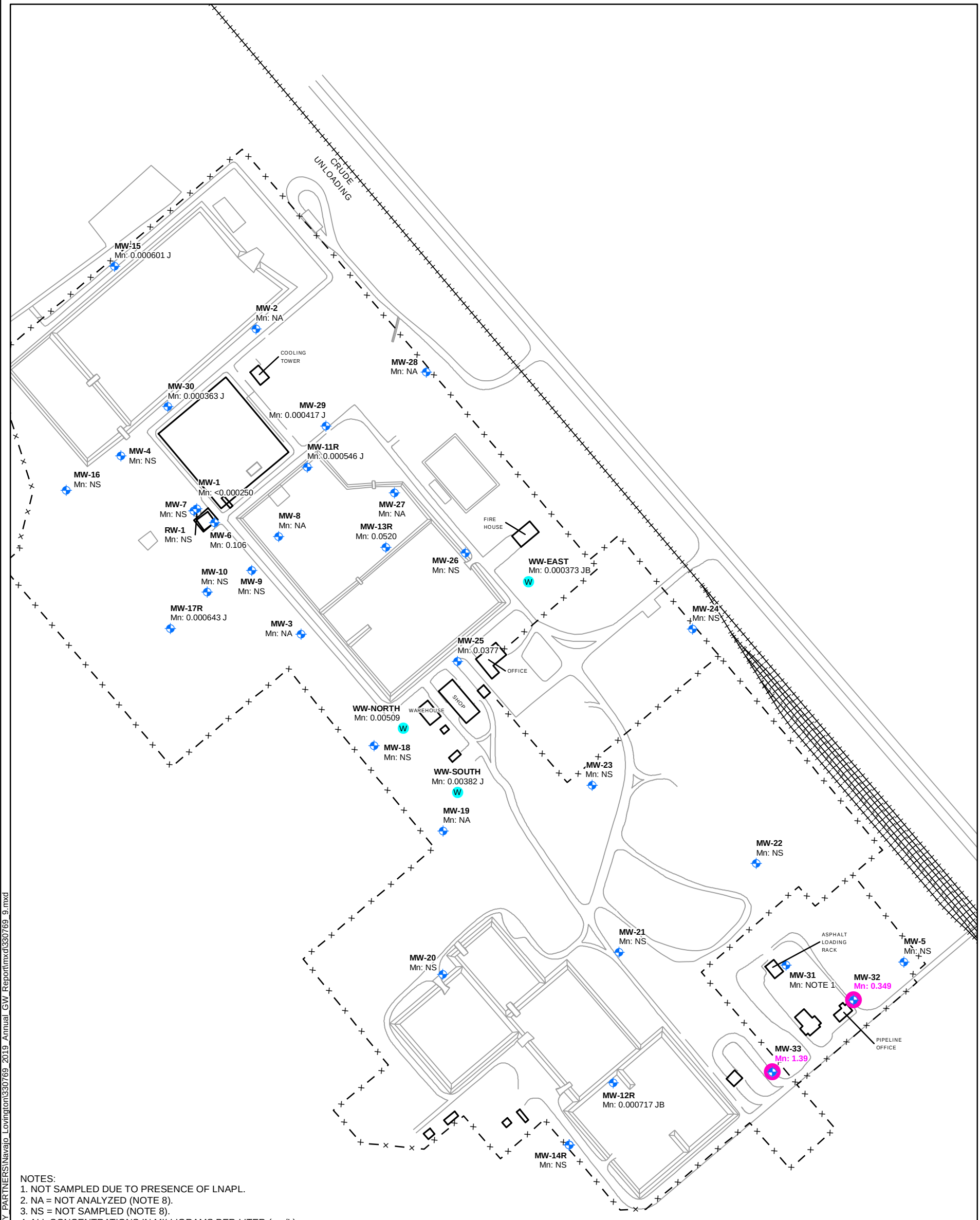
HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_8
AUTHOR: SRAY	DATE: 3/12/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 8

Document Path: S:\1-PROJECTS\HOLLY_ENERGY_PARTNERS\Navajo_Lovington\330769_2019_Annual_GW_Report\mxd\330769_8.mxd



NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NA = NOT ANALYZED (NOTE 8).
3. NS = NOT SAMPLED (NOTE 8).
4. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
5. MANGANESE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE IT IS THE ONLY METAL THAT EXCEEDED ITS RESPECTIVE WQCC STANDARD.
6. J = ANALYTE DETECTED BELOW REPORTING LIMIT, ESTIMATED VALUE.
7. B = ANALYTE DETECTED IN ASSOCIATED LABORATORY METHOD BLANK; SAMPLE CONCENTRATION IS WITHIN 5 TIMES THE BLANK CONCENTRATION.
8. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Mn: 0.106 - MANGANESE CONCENTRATION (WQCC STANDARD = 0.2 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700
FEET

METALS CONCENTRATION MAP - APRIL 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_9
AUTHOR: SRAY	DATE: 3/16/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 9

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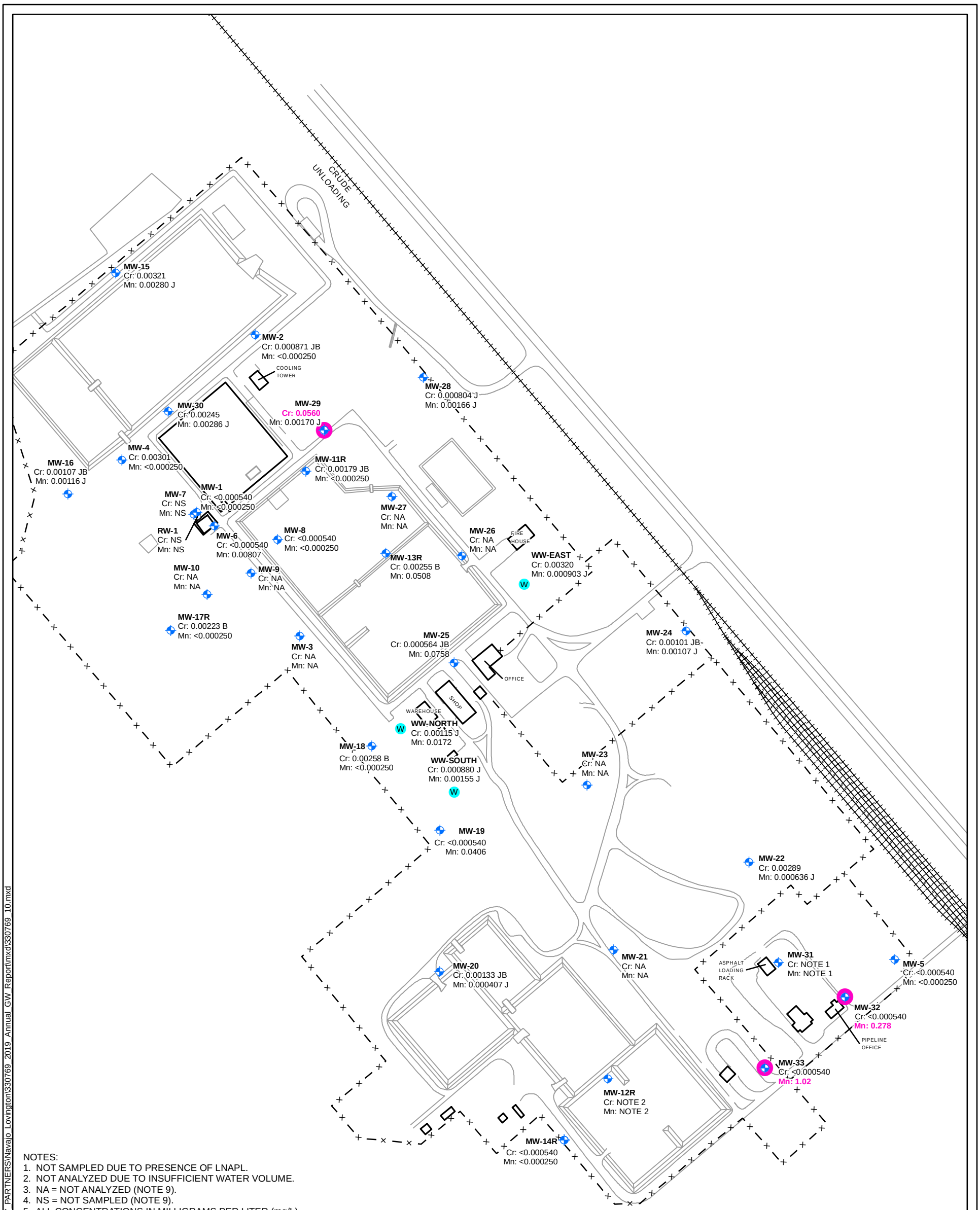

NOTES:
1. NOT SAMPLED DUE TO PRESENCE OF LNAPL.
2. NOT ANALYZED DUE TO INSUFFICIENT WATER VOLUME.
3. NA = NOT ANALYZED (NOTE 9).
4. NS = NOT SAMPLED (NOTE 9).
5. ALL CONCENTRATIONS IN MILLIGRAMS PER LITER (mg/L).
6. DISSOLVED MANGANESE CONCENTRATIONS SHOWN FOR ALL WELLS BECAUSE IT IS THE ONLY METAL THAT EXCEEDED ITS RESPECTIVE WQCC STANDARD.
7. J = ANALYTE DETECTED BELOW REPORTING LIMIT, ESTIMATED VALUE.
8. B = SAMPLE CONCENTRATION WITHIN 5 TIMES THE METHOD BLANK CONCENTRATION.
9. IN ACCORDANCE WITH DECEMBER 2017 REVISED FACILITY-WIDE GROUNDWATER MONITORING WORK PLAN.

LABEL KEY:
Cr: 0.00320 - CHROMIUM CONCENTRATION (WQCC STANDARD = 0.05 mg/L)
Mn: 0.0172 - MANGANESE CONCENTRATION (WQCC STANDARD = 0.2 mg/L)

PINK HIGHLIGHTED VALUES IN EXCEEDANCE OF WATER QUALITY CONTROL COMMISSION (WQCC) STANDARD.

LEGEND

- MONITORING WELL
- RECOVERY WELL
- WATER WELL
- WQCC STANDARD EXCEEDED AT THIS LOCATION
- RAIL
- FENCE
- BUILDINGS

N

0 175 350 700

FEET

METALS CONCENTRATION MAP - OCTOBER 2019

HOLLYFRONTIER NAVAJO REFINING LLC
AP-110, LOVINGTON REFINERY, LOVINGTON, NM

PROJECT NO: 330769	MXD: 330769_10
AUTHOR: SRAY	DATE: 3/12/2020

TRC
505 EAST HUNTLAND DRIVE
SUITE 250
AUSTIN, TEXAS 78752
(512) 329-6080

FIGURE 10

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