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By Mike Buchanan at 4:07 pm, May 13, 2024

**ENSOLUM**

March 25, 2023

Jicarilla Apache Nation, Environmental Protection Office

Mr. Keith Manwell

25 Hawks Drive

Dulce, New Mexico 87528

Re: 2023 Annual Groundwater Monitoring Report

Jicarilla Contract 147-6

Rio Arriba County, New Mexico

Harvest Four Corners, LLC

NMOCD Incident No: NAUTOFAB000298

Review of the 2023
Annual Groundwater
Monitoring Report for
Jicarilla Contract
147-6: Accepted for the
record.

Mr. Manwell:

Ensolum, LLC (Ensolum), on behalf of Harvest Four Corners, LLC (Harvest), presents this *2023 Annual Groundwater Monitoring Report* to the Jicarilla Apache Nation Environmental Protection Office (JANEPO) to document groundwater monitoring activities conducted at the Jicarilla Contract 147-6 natural gas production site (Site) during 2023. The Site is located within Unit Letter C, Section 6 within Township 25 North and Range 5 West, Rio Arriba County, New Mexico (Figure 1). The Site is adjacent to a tributary of Tapacito Creek, which drains into Largo Wash.

There are currently eight monitoring wells onsite, which are gauged annually for groundwater elevations. Four monitoring wells (MW-3, MW-6, MW11, and MW-14), are sampled annually. This report presents the results of the 2023 monitoring events.

SITE BACKGROUND

The source of groundwater impact is a former unlined dehydrator pit previously operated by the Gas Company of New Mexico (GCNM/PNM). In July 1998, over 12,000 cubic yards of impacted soil were excavated from the Site. A groundwater sample collected from the open excavation at approximately 26 feet below ground surface (bgs) contained 1,400 micrograms per liter (µg/L) of benzene, 4,500 µg/L of toluene, 580 µg/L of ethylbenzene, and 6,800 µg/L of total xylenes (collectively referred to as BTEX). In January 1999, five monitoring wells (MW-1, MW-2, MW-3, MW-4, and MW-5) were installed. Based on the analytical results of groundwater sampling, an additional five monitoring wells (MW-6, MW-7, MW-8, MW-9, and MW-10) were installed in 1999 and 2000. Over time, three monitoring wells (MW-4, MW-5, and MW-7) located near a wash adjacent to the Site were destroyed by erosion. Records regarding these activities are documented in previous groundwater reports submitted to the JANEPO and New Mexico Oil Conservation Division (NMOCD), under Incident No: NAUTOFAB000298.

Williams purchased the GCNM facility from PNM in 2000 and assumed environmental liability for the former unlined dehydrator pit. Between 2000 and December 2012, Williams monitored groundwater quality in the monitoring wells at the Site. Williams installed two monitoring wells (MW-11 and MW-12) on October 21, 2013, to better understand Site conditions. Williams installed

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776 East 2nd Ave | Durango, CO 81301 | ensolum.com

two additional monitoring wells (MW-13 and MW-14) on November 20, 2017. In 2018, Harvest purchased the facility from Williams and assumed environmental liability for the Site. Monitoring well MW-12 was destroyed by erosion before the 2020 groundwater sampling event and monitoring wells MW-9 and MW-13 were destroyed by erosion between the 2020 and 2021 sampling events.

SITE GROUNDWATER CLEANUP STANDARDS

JANEPO requires groundwater-quality standards be met as presented by the New Mexico Water Quality Control Commission (NMWQCC) and listed in Title 20, Chapter 6, Part 2, Section 3103 (20.6.2.3103) of the New Mexico Administrative Code (NMAC). The following standards are presented for the constituents of concern (COCs) at the Site:

- Benzene: 5 µg/L
- Toluene: 1,000 µg/L
- Ethylbenzene: 700 µg/L
- Total Xylenes: 620 µg/L

GROUNDWATER SAMPLING ACTIVITIES AND RESULTS

On June 12, 2023, Ensolum personnel conducted groundwater-level measurements from all monitoring wells, and collected samples from wells MW-3, MW-6, MW-11, and MW-14. Upgradient monitoring wells MW-1, MW-2, MW-8, and MW-10 have not been sampled since 2013, before which eight consecutive groundwater sampling events demonstrated dissolved BTEX concentrations to be in compliance with the NMWQCC standards. Static groundwater-level monitoring included recording depth-to-groundwater using an oil/water interface probe. The interface probe was decontaminated with Alconox™ soap and rinsed with distilled water prior to each measurement to prevent cross-contamination. Measured depths-to-groundwater and calculated groundwater elevations are presented in Table 1. The inferred groundwater flow direction is to the north-northwest, as indicated on the groundwater potentiometric surface map presented in Figure 2.

GROUNDWATER SAMPLING

Groundwater from monitoring wells MW-3, MW-6, MW-11, and MW-14 was purged and sampled using a disposable bailer. Purging was accomplished by removing stagnant groundwater from the monitoring well prior to collecting a sample. Field measurements of groundwater quality parameters, including temperature, pH, and electrical conductivity were collected during the purging process.

Following well purging, groundwater samples were placed directly into laboratory-provided containers and labeled with the date and time of collection, well designation, project name, sample collector's name, and parameters to be analyzed. Containers were immediately sealed and packed on ice to preserve samples. Samples were submitted to Hall Environmental Analysis Laboratory (HEAL) in Albuquerque, New Mexico, for analysis of BTEX by United State Environmental Protection Agency (EPA) Method 8021B. Proper chain-of-custody procedures were followed documenting the date and time sampled, sample number, type of sample, sample collector's name, preservative used, analyses required, and sample collector's signature.

GROUNDWATER ANALYTICAL RESULTS

During the June 2023 sampling event, dissolved BTEX constituents were not detected above the laboratory reporting limit in groundwater from wells MW-11 and MW-14. Groundwater from well MW-3 contained dissolved benzene and total xylenes concentrations that exceed the NMWQCC

standards with concentrations of 240 µg/L and 1,500 µg/L, respectively. Groundwater from well MW-6 contained dissolved benzene concentrations that exceed the NMWQCC standards with a concentration of 570 µg/L. Analytical results are summarized in Table 2 and depicted on Figure 2, with complete laboratory analytical reports attached as Appendix A.

CONCLUSION

Laboratory analytical results indicate groundwater collected from monitoring well MW-3 contains concentrations of benzene and total xylenes that exceed the NMWQCC groundwater standards. Additionally, monitoring well MW-6 contained a concentration of dissolved benzene that exceeds the NMWQCC groundwater standard. Dissolved BTEX concentrations are within range of historical sampling results and continue to decrease over time in monitoring wells MW-3 and MW-6. The impacted groundwater plume appears to remain stable, with similar gradient and flow direction. Natural attenuation via biodegradation appears to be an effective remedial option for this Site based on reductions in all dissolved BTEX constituents, with only benzene and total xylenes left to remediate. Groundwater sample results from downgradient well MW-14 contained no detectable concentrations of BTEX, indicating the dissolved phase impacts are not migrating downgradient.

RECOMMENDATIONS

Based on current and historical data gathered at the Site, Ensolum/Harvest recommend continued annual gauging of all wells on Site and annual sampling of monitoring wells MW-3, MW-6, MW-11, and MW-14, to monitor impacts to groundwater and assess the continued natural attenuation of petroleum hydrocarbons in groundwater at the Site.

A subsequent annual report summarizing groundwater remediation and monitoring activities in 2024 will be submitted to the JANEPO by March 31, 2025.

Ensolum appreciates the opportunity to provide this report to the JANEPO. Please contact either of the undersigned with any questions.

Sincerely,

Ensolum, LLC



Reece Hanson
Staff Geologist
(970) 210-9803
rhanson@ensolum.com



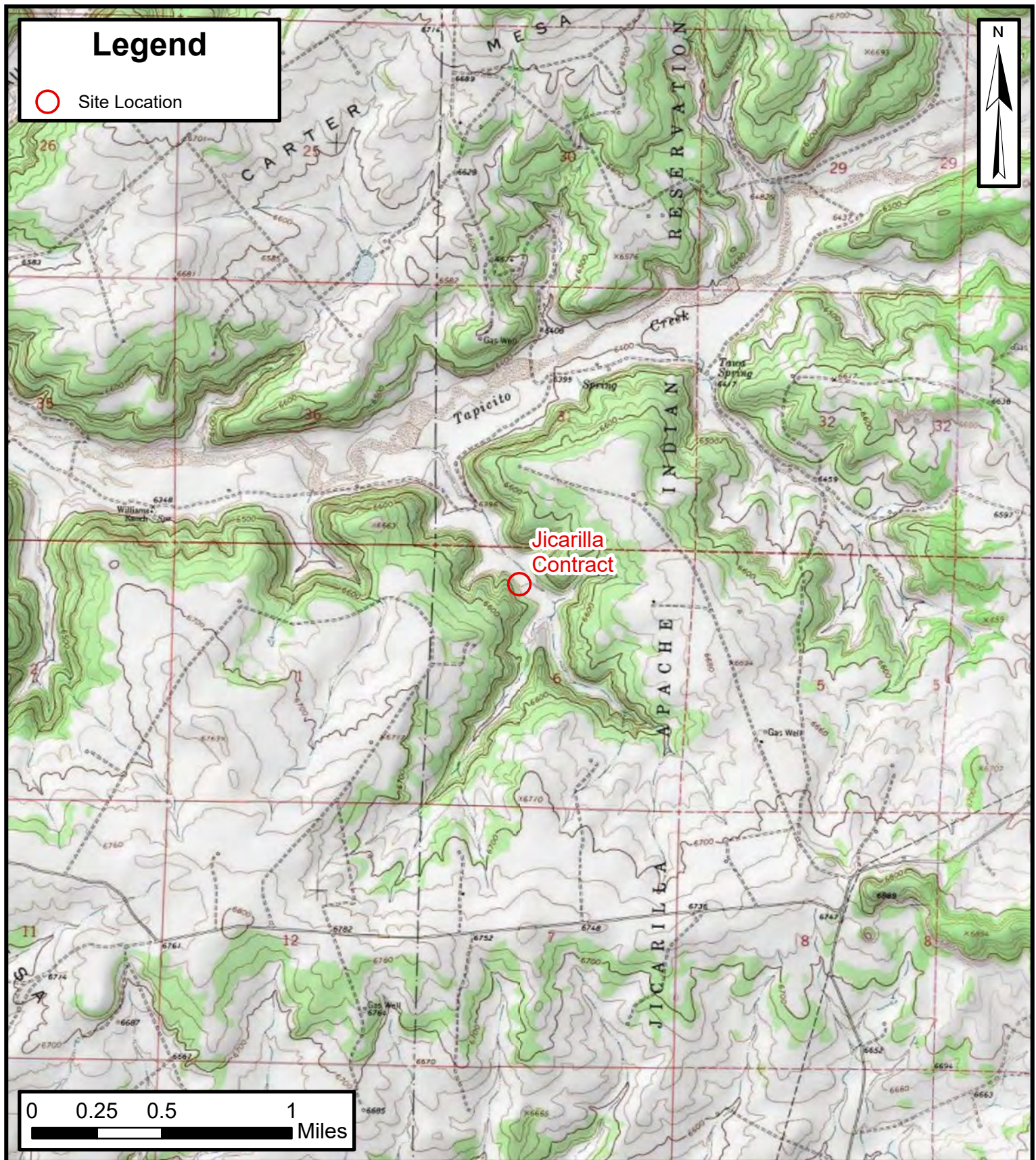
Brooke Herb
Senior Geologist
(970) 403-6824
bherb@ensolum.com

Attachments:

- Figure 1: Site Location Map
- Figure 2: Groundwater Elevation Contour Map and Analytical Results (June 2023)
- Table 1: Groundwater Elevation
- Table 2: Groundwater Analytical Results
- Appendix A: Sample Collection Forms
- Appendix B: Laboratory Analytical Report



FIGURES



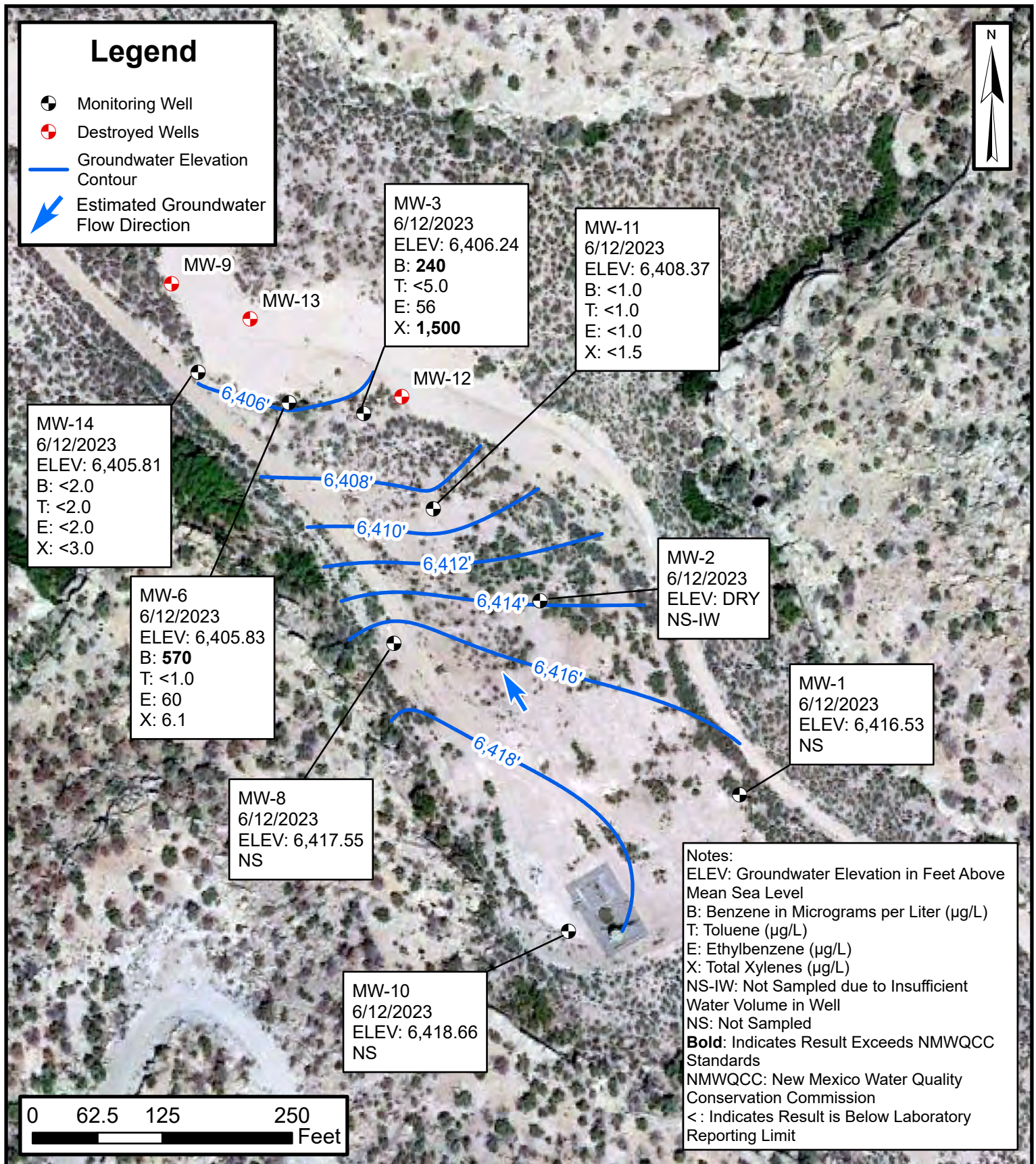
Site Location Map

Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 36.43371, -107.40344
 Rio Arriba County, New Mexico

FIGURE

1





Groundwater Elevation and Analytical Results (June 2023)

Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 36.43371, -107.40344
 Rio Arriba County, New Mexico

FIGURE
2

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TABLES



TABLE 1 GROUNDWATER ELEVATION Jicarilla Contract 147-6 Harvest Four Corners, LLC Rio Arriba County, New Mexico						
Well Identification	Date	Top of Casing Elevation (feet amsl)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-1	3/4/2013	6,435.75	21.85	NP	NP	6,413.90
	6/25/2013*	6,440.95	22.51	NP	NP	6,418.44
	12/2/2013		21.11	NP	NP	6,419.84
	6/16/2014		21.82	NP	NP	6,419.13
	6/18/2015		21.90	NP	NP	6,419.05
	9/25/2015		21.72	NP	NP	6,419.23
	12/18/2015		21.61	NP	NP	6,419.34
	6/14/2016		21.99	NP	NP	6,418.96
	6/26/2018		23.19	NP	NP	6,417.76
	6/26/2019		23.12	NP	NP	6,417.83
	6/15/2020		24.27	NP	NP	6,416.68
	5/28/2021		24.47	NP	NP	6,416.48
	6/6/2022		25.11	NP	NP	6,415.84
	6/12/2023		24.42	NP	NP	6,416.53
MW-2	3/4/2013	6,432.70	22.34	22.33	0.01	6,411.17
	6/25/2013*	6,437.27	22.90	NP	NP	6,414.37
	12/2/2013		21.76	NP	NP	6,415.51
	6/16/2014		22.39	NP	NP	6,414.88
	12/2/2014		22.33	NP	NP	6,414.94
	6/18/2015		22.41	NP	NP	6,414.86
	9/25/2015		22.76	NP	NP	6,414.51
	12/18/2015		22.31	NP	NP	6,414.96
	6/14/2016		22.46	NP	NP	6,414.81
	6/27/2017		23.06	NP	NP	6,414.21
	6/26/2018		DRY	NP	NP	DRY
	6/26/2019		DRY	NP	NP	DRY
	6/15/2020		DRY	NP	NP	DRY
	5/28/2021		DRY	NP	NP	DRY
	6/6/2022		DRY	NP	NP	DRY
	6/12/2023		DRY	NP	NP	DRY
MW-3	3/4/2013	6,422.80	21.26	NP	NP	6,401.54
	6/25/2013*	6,427.87	21.37	NP	NP	6,406.50
	12/2/2013		21.44	NP	NP	6,406.43
	6/16/2014		20.73	NP	NP	6,407.14
	12/9/2014		21.59	NP	NP	6,406.28
	6/18/2015		20.58	NP	NP	6,407.29
	9/25/2015		21.61	NP	NP	6,406.26
	12/18/2015		21.38	NP	NP	6,406.49
	6/14/2016		20.57	NP	NP	6,407.30
	6/27/2017		21.04	NP	NP	6,406.83
	12/1/2017**	6,427.63	21.72	21.70	0.02	6,405.93
	6/26/2018		21.28	NP	NP	6,406.35
	6/26/2019		21.08	NP	NP	6,406.55
	6/15/2020		21.60	NP	NP	6,406.03
	5/28/2021		21.54	NP	NP	6,406.09
	6/6/2022		21.72	NP	NP	6,405.91
	6/12/2023		21.39	NP	NP	6,406.24



TABLE 1
GROUNDWATER ELEVATION
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba County, New Mexico

Well Identification	Date	Top of Casing Elevation (feet amsl)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-4	3/4/2013	DEST	DEST	DEST	DEST	DEST
MW-5	3/4/2013	DEST	DEST	DEST	DEST	DEST
MW-6	3/4/2013	6,426.77	25.61	NP	NP	6,401.16
	6/25/2013*	6,431.94	26.14	NP	NP	6,405.80
	12/2/2013		26.08	NP	NP	6,405.86
	6/16/2014		25.39	NP	NP	6,406.55
	12/2/2014		26.31	NP	NP	6,405.63
	6/18/2015		25.21	NP	NP	6,406.73
	9/25/2015		26.47	NP	NP	6,405.47
	12/18/2015		26.09	NP	NP	6,405.85
	6/14/2016		25.26	NP	NP	6,406.68
	6/27/2017		25.80	NP	NP	6,406.14
	12/1/2017**	6,431.71	26.34	26.32	0.02	6,405.39
	6/26/2018		26.27	NP	NP	6,405.44
	6/26/2019		25.85	NP	NP	6,405.86
	6/15/2020		26.29	NP	NP	6,405.42
	5/28/2021		26.00	NP	NP	6,405.71
	6/6/2022		26.27	NP	NP	6,405.44
	6/12/2023		25.88	NP	NP	6,405.83
MW-7	3/4/2013	DEST	DEST	DEST	DEST	DEST
MW-8	3/4/2013	6,430.33	16.36	NP	NP	6,413.97
	6/25/2013*	6,435.14	17.31	NP	NP	6,417.83
	12/2/2013		17.65	NP	NP	6,417.49
	6/16/2014		16.82	NP	NP	6,418.32
	12/2/2014		16.79	NP	NP	6,418.35
	6/18/2015		16.62	NP	NP	6,418.52
	9/25/2015		17.35	NP	NP	6,417.79
	12/18/2015		16.58	NP	NP	6,418.56
	6/14/2016		16.80	NP	NP	6,418.34
	6/27/2017		17.33	NP	NP	6,417.81
	6/26/2018		17.61	NP	NP	6,417.53
	6/26/2019		17.37	NP	NP	6,417.77
	6/15/2020		17.90	NP	NP	6,417.24
	5/28/2021		17.48	NP	NP	6,417.66
	6/6/2022		17.86	NP	NP	6,417.28
	6/12/2023		17.59	NP	NP	6,417.55
MW-9	3/4/2013	6,423.04	28.55	NP	NP	6,394.49
	6/25/2013*	6,428.08	28.83	NP	NP	6,399.25
	12/2/2013		28.65	NP	NP	6,399.43
	6/16/2014		28.08	NP	NP	6,400.00
	12/2/2014		28.45	NP	NP	6,399.63
	6/18/2015		27.83	NP	NP	6,400.25
	9/25/2015		28.86	NP	NP	6,399.22
	12/18/2015		28.52	NP	NP	6,399.56
	6/14/2016		28.64	NP	NP	6,399.44
	6/27/2017		28.29	NP	NP	6,399.79
	6/26/2018		28.45	NP	NP	6,399.63



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 Rio Arriba County, New Mexico

Well Identification	Date	Top of Casing Elevation (feet amsl)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-9	6/26/2019	6,428.08	28.11	NP	NP	6,399.97
	6/15/2020		28.78	NP	NP	6,399.30
	5/28/2021	DEST	DEST	DEST	DEST	DEST
MW-10	3/4/2013	6,435.38	20.90	20.89	0.01	6,415.29
	6/25/2013*		21.59	NP	NP	6,418.89
	12/2/2013		20.93	NP	NP	6,419.55
	6/16/2014		21.14	NP	NP	6,419.34
	12/2/2014		21.17	NP	NP	6,419.31
	6/18/2015		21.01	NP	NP	6,419.47
	9/25/2015		21.56	NP	NP	6,418.92
	12/18/2015		21.01	NP	NP	6,419.47
	6/14/2016	6,440.48	21.12	NP	NP	6,419.36
	6/27/2017		21.63	NP	NP	6,418.85
	6/26/2018		21.76	NP	NP	6,418.72
	6/26/2019		21.56	NP	NP	6,418.92
	6/15/2020		22.10	NP	NP	6,418.38
	5/28/2021		21.75	NP	NP	6,418.73
	6/6/2022		22.04	NP	NP	6,418.44
	6/12/2023		21.82	NP	NP	6,418.66
MW-11	12/2/2013		24.38	NP	NP	6,409.08
	6/16/2014		24.35	NP	NP	6,409.11
	12/2/2014		24.46	NP	NP	6,409.00
	6/18/2015	6,433.46	24.30	NP	NP	6,409.16
	9/25/2015		24.68	NP	NP	6,408.78
	12/18/2015		24.32	NP	NP	6,409.14
	6/14/2016		24.30	NP	NP	6,409.16
	6/27/2017		24.36	NP	NP	6,409.10
	12/1/2017**		24.35	NP	NP	6,408.51
	6/26/2018		24.43	NP	NP	6,408.43
	6/26/2019		24.22	NP	NP	6,408.64
	6/15/2020	6,432.86	24.69	NP	NP	6,408.17
	5/28/2021		24.46	NP	NP	6,408.40
	6/6/2022		24.74	NP	NP	6,408.12
	6/12/2023		24.49	NP	NP	6,408.37
MW-12	12/2/2013		21.87	NP	NP	6,407.75
	6/16/2014		21.65	NP	NP	6,407.97
	12/2/2014		22.20	NP	NP	6,407.42
	6/18/2015	6,429.62	21.50	NP	NP	6,408.12
	9/25/2015		22.38	NP	NP	6,407.24
	12/18/2015		22.03	NP	NP	6,407.59
	6/14/2016		21.49	NP	NP	6,408.13
	6/27/2017		21.98	NP	NP	6,407.64
	12/1/2017**		22.25	NP	NP	6,406.49
	6/26/2018	6,428.74	22.21	NP	NP	6,406.53
	6/26/2019		15.29	NP	NP	6,413.45
	6/15/2020	DEST	DEST	DEST	DEST	DEST



TABLE 1 GROUNDWATER ELEVATION Jicarilla Contract 147-6 Harvest Four Corners, LLC Rio Arriba County, New Mexico						
Well Identification	Date	Top of Casing Elevation (feet amsl)	Depth to Groundwater (feet BTOC)	Depth to Product (feet BTOC)	Product Thickness (feet)	Groundwater Elevation (feet AMSL)
MW-13	12/1/2017	6,422.01	13.10	NP	NP	6,408.91
	6/26/2018		DRY	NP	NP	DRY
	6/26/2019		DRY	NP	NP	DRY
	6/15/2020		DRY	NP	NP	DRY
	6/15/2020	DEST	DEST	DEST	DEST	DEST
MW-14	12/1/2017	6,428.45	23.28	NP	NP	6,405.17
	6/26/2018		23.50	NP	NP	6,404.95
	6/26/2019		22.50	NP	NP	6,405.95
	6/15/2020		22.98	NP	NP	6,405.47
	5/28/2021		23.06	NP	NP	6,405.39
	6/6/2022		23.29	NP	NP	6,405.16
	6/12/2023		22.64	NP	NP	6,405.81

Notes:

* Top of casing elevation was resurveyed on 6/19/2013

** Top of casing elevation was resurveyed on 1/3/2018

AMSL: above mean sea level

BTOC: below top of casing

DEST: well has been destroyed

NP: no product

UNK: unknown



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-1	1/28/1999	<0.5	1.5	<0.5	2.6
	4/14/1999	<0.5	<0.5	<0.5	<1.5
	9/27/1999	<0.5	<0.5	<0.5	<1.5
	11/15/1999	<0.5	<0.5	<0.5	<1.5
	2/13/2001	<1	<1	<1	<1
	5/9/2001	<1	<1	<1	<1
	11/2/2001	<1.0	3.1	<2.0	<2.0
	3/20/2010	<1.0	<1.0	<1.0	<3.0
	6/22/2010	<1.0	<1.0	<1.0	<3.0
	9/16/2010	<1.0	<1.0	<1.0	<3.0
	12/8/2010	<1.0	<1.0	<1.0	<3.0
	3/10/2011	<1.0	<1.0	<1.0	<3.0
	6/15/2011	<1.0	<1.0	<1.0	<3.0
	9/13/2011	<1.0	<1.0	<1.0	<3.0
	1/6/2012	<1.0	<1.0	<1.0	<3.0
	4/6/2012	<1.0	<1.0	<1.0	<3.0
	6/12/2012	<1.0	<1.0	<1.0	<3.0
	9/27/2012	<1.0	<1.0	<1.0	<3.0
	12/7/2012	<1.0	<1.0	<1.0	<3.0
	3/4/2013	<1.0	<1.0	<1.0	<2.0
	6/25/2013	<2.0	<2.0	<2.0	<4.0
MW-2	1/28/1999*	490	38	<5	1,700
	4/14/1999*	230	<5	<5	671
	10/14/1999	55	<0.5	2.6	196.5
	11/15/1999	130	<0.5	15	272
	3/20/2000	140	5.3	120	440*
	6/6/2000	52	<0.5	48	46
	2/13/2001	124	14.8	72.3	681
	5/9/2001	35.4	15.1	27	23
	11/2/2001	150	3.4	120	1,200
	9/24/2003	2.8	5.1	2.8	<5.0
	12/17/2003	2.5	5.9	<2.0	<5.0
	9/19/2004	<2.0	3.2	<2.0	<5.0
	12/4/2004	<2.0	2.4	<2.0	<5.0



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-2	3/9/2005*	23	13	<10	<25
	9/17/2005	<2.0	<2.0	4.3	<5.0
	12/1/2005	<2.0	2.8	<2.0	<5.0
	3/20/2010	<1.0	<1.0	<1.0	<3.0
	6/22/2010	<1.0	<1.0	<1.0	<3.0
	9/16/2010	<1.0	<1.0	<1.0	4.8
	12/8/2010	<1.0	<1.0	<1.0	<3.0
	3/10/2011	<1.0	<1.0	<1.0	<3.0
	6/15/2011	<1.0	<1.0	<1.0	<3.0
	9/13/2011	<1.0	<1.0	<1.0	17.8
	1/6/2012	<1.0	<1.0	<1.0	<3.0
	4/6/2012	<1.0	<1.0	<1.0	<3.0
	6/12/2012	<1.0	<1.0	<1.0	<3.0
	9/27/2012	<1.0	<1.0	<1.0	18.5
	12/7/2012	<1.0	<1.0	<1.0	<3.0
	3/4/2013	NS	NS	NS	NS
	6/25/2013	<2.0	<2.0	8.1	19
MW-3	1/28/1999	7,100	5,900	260	4,130
	4/14/1999	6,700	3,100	220	3,360
	9/27/1999*	5,800	2,800	260	3,560
	11/15/1999*	5,200	1,800	200	2,970
	3/20/2000*	3,900	460	230	1,710
	6/7/2000*	4,400	64	190	1,232
	2/13/2001	7,250	1,660	305	5,800
	5/9/2001	7,810	1,860	531	7,610
	11/2/2001	6,700	7,400	420	7,900
	9/24/2003*	5,800	7,300	320	5,700
	12/17/2003	4,900	5,300	280	5,200
	9/19/2004*	5,400	9,500	310	6,500
	12/4/2004*	5,700	11,000	330	7,100
	3/9/2005*	4,700	7,900	280	5,600
	6/16/2005*	6,100	9,800	380	6,600
	9/17/2005	4,500	10,000	260	5,900
	12/1/2005*	5,570	9,970	324	6,760



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-3	3/20/2010	3,590	1,990	252	2,310
	6/22/2010	2,710	1,080	191	1,170
	9/16/2010	3,240	3,630	219	2,210
	12/8/2010	2,950	3,380	229	1,900
	3/10/2011	1,800	729	122	1,900
	6/15/2011	2,150	1,710	124	1,000
	9/13/2011	3,460	4,500	330	4,670
	1/6/2012	1,790	1,970	144	1,400
	4/6/2012	1,900	127	955	1,040
	6/12/2012	2,700	203	4,990	2,890
	9/27/2012	2,070	194	4,380	2,690
	12/7/2012	1,650	145	1,810	1,630
	3/4/2013	1,200	720	88	680
	6/25/2013	2,300	3,300	250	4,000
	12/2/2013	2,900	7,700	350	5,700
	6/16/2014	1,700	1,400	120	3,100
	12/2/2014	910	600	110	1,500
	6/18/2015	2,300	7,300	300	6,000
	6/14/2016	930	820	130	2,200
	6/27/2017	1,500	1,700	280	4,700
	6/26/2018	540	<50	<50	2,100
	6/26/2019	100	13	15	310
	6/15/2020	570	110	200	2,000
	5/28/2021	180	<2.0	91	590
	6/6/2022	280	3.3	2.4	1,800
	6/12/2023	240	<5.0	56	1,500
MW-4	1/28/1999*	1,500	10,000	810	9,300
	4/14/1999*	280	30	5.0	500
	9/27/1999	56	<0.5	3.6	22
	11/15/1999	120	<0.5	8.1	41.5
	3/20/2000	250	<0.5	45	47
	6/7/2000	270	1.6	5.6	10.2
	2/13/2001	353	3.85	69.5	59.8
	5/9/2001	684	6.10	110	97.2



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-4	11/2/2001	480	7.9	84	34
	9/24/2003	190	45	57	60
	12/17/2003	200	2.9	58	<5.0
	12/4/2004	170	<2.0	49	<5.0
	9/19/2004	55	<2.0	14	<5.0
	3/9/2005	68	<2.0	22	18
	6/16/2005	130	<2.0	40	<5.0
	9/17/2005	100	<2.0	38	55
	12/6/2005	100	<2.0	36.6	<5.0
	4/6/2012	NS	NS	NS	NS
	6/12/2012	NS	NS	NS	NS
	9/27/2012	NS	NS	NS	NS
	12/7/2012	NS	NS	NS	NS
	3/4/2013	<2.0	<2.0	<2.0	<4.0
	6/25/2013	DEST	DEST	DEST	DEST
MW-5	1/28/1999*	1,600	10,000	820	9,500
	4/14/1999*	310	26	3.6	479
	9/27/1999	<0.5	<0.5	1.5	2
	11/15/1999*	<2.5	6	39.0	<3.0
	3/20/2000	5.1	<0.5	210.0	8.0
	6/7/2000	1.5	<0.5	3.3	2.9
	2/13/2001	3.49	<1	222	31.5
	5/9/2001	4.68	20.8	244	28.7
	11/2/2001	2.8	<2.0	200	13
	3/4/2013	DEST	DEST	DEST	DEST
MW-6	9/27/1999*	16,000	460.0	280	1,299
	11/15/1999*	20,000	940	330	1,640
	3/20/2000*	18,000	630	380	1,530
	6/7/2000*	19,000	820	370	1,960
	2/13/2001	22,300	60	358	1,560
	5/9/2001	33,900	2,310	577	3,820
	11/2/2001	31,000	2,200	730	4,500
	9/24/2003*	18,000	1,200	370	2,000
	12/17/2003*	21,000	<400	500	2,200



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-6	12/4/2004*	16,000	120	360	1,800
	9/19/2004*	18,000	1,900	380	2,300
	3/9/2005*	19,000	810	410	2,100
	6/16/2005*	24,000	<400	620	2,500
	9/17/2005	15,000	370	380	1,400
	12/1/2005*	15,600	957	460	2,580
	3/20/2010	19,400	10,900	570	3,330
	6/22/2010	13,500	<100	411	16,740
	9/16/2010	10,200	2,190	280	1,410
	12/8/2010	10,000	495	380	1,510
	3/10/2011	13,000	4,260	380	1,740
	6/15/2011	14,400	518	364	1,450
	9/13/2011	12,300	2,570	498	2,730
	1/6/2012	11,600	730	339	1,660
	4/6/2012	13,800	333	3,070	1,590
	6/12/2012	13,000	406	1,010	1,560
	9/27/2012	10,300	360	3,430	2,070
	12/7/2012	10,200	315	1,540	1,760
	3/4/2013	7,900	180	5.4	300
	6/25/2013	10,000	270	340	920
	12/2/2013	8,400	250	250	930
	6/16/2014	9,300	<100	270	350
	12/2/2014	6,600	120	210	700
	6/18/2015	5,600	<10	<10	120
	12/18/2015	NS	NS	NS	NS
	6/14/2016	5,200	<50	170	200
	6/27/2017	4,400	<5.0	140	130
	6/26/2018	4,900	<5.0	180	240
	6/26/2019	4,300	<5.0	150	280
	6/15/2020	3,800	<5.0	150	230
	5/28/2021	640	<5.0	62	14
	6/6/2022	810	<20	71	<40
	6/12/2023	570	<1.0	60	6.1



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-7	10/14/1999	30	120	8.9	165
	11/15/1999	0.5	1.3	0.5	4.6
	3/20/2000	5.5	0.8	0.9	4.7
	6/7/2000	<0.5	<0.5	<0.5	<1.5
	2/13/2001	<1	<1	<1	<1
	5/9/2001	4.00	<1	<1	<1
	11/2/2001	16	<2.0	<2.0	2
	4/6/2012	NS	NS	NS	NS
	6/12/2012	NS	NS	NS	NS
	9/27/2012	NS	NS	NS	NS
	12/7/2012	NS	NS	NS	NS
	3/4/2013	DEST	DEST	DEST	DEST
MW-8	3/20/2000*	2,400	2,300	55.0	540
	6/7/2000*	1,100	130	27.0	106.7
	2/13/2001	613	16.2	13.0	12.4
	5/9/2001	182	3.65	6.98	2.41
	11/2/2001	370	<2.0	8.9	2.0
	9/24/2003	78	2.2	4.2	<5.0
	12/17/2003	55	<2.0	3.2	<5.0
	12/4/2004	19	<2.0	<2.0	<5.0
	9/19/2004	81	<2.0	2.8	<5.0
	3/9/2005	210*	4.6	5.2	8.6
	6/16/2005	43	<2.0	<2.0	<5.0
	9/17/2005	38	<2.0	<2.0	<5.0
	12/1/2005	23	<2.0	<2.0	<5.0
	3/20/2010	6.3	<1.0	<1.0	<3.0
	6/22/2010	3.0	<1.0	<1.0	<3.0
	9/16/2010	22.9	<1.0	<1.0	<3.0
	12/8/2010	<1.0	<1.0	<1.0	<3.0
	3/10/2011	2	<1.0	<1.0	<3.0
	6/15/2011	4.1	<1.0	<1.0	<3.0
	9/13/2011	1.9	<1.0	<1.0	<3.0
	1/6/2012	2.4	<1.0	<1.0	<3.0
	4/6/2012	<1.0	<1.0	<1.0	<3.0



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-8	6/12/2012	2.5	<1.0	<1.0	<3.0
	9/27/2012	<1.0	<1.0	<1.0	<3.0
	12/7/2012	<1.0	<1.0	<1.0	<3.0
	3/4/2013	<1.0	<1.0	<1.0	<2.0
MW-9	3/20/2000	<0.5	1.4	<0.5	1.5
	6/7/2000	<0.5	<0.5	<0.5	<1.5
	2/13/2001	<1	<1	<1	<1
	5/9/2001	<1	<1	<1	<1
	11/2/2001	150	<2.0	<2.0	<2.0
	9/24/2003	86	<2.0	<2.0	<5.0
	12/17/2003	69	<2.0	<2.0	<5.0
	12/4/2004	5.2	<2.0	<2.0	<5.0
	9/19/2004	45	<2.0	<2.0	<5.0
	3/9/2005	3.8	<2.0	<2.0	<5.0
	6/16/2005	<2.0	<2.0	<2.0	<5.0
	9/17/2005	<2.0	<2.0	<2.0	<5.0
	12/1/2005	<2.0	<2.0	<2.0	<5.0
	3/20/2010	<1.0	<1.0	<1.0	<3.0
	6/22/2010	<1.0	<1.0	<3.0	<3.0
	9/16/2010	8.6	<1.0	<1.0	<3.0
	12/8/2010	7.8	<1.0	<1.0	<3.0
	3/10/2011	<1.0	<1.0	<1.0	<3.0
	6/15/2011	<1.0	<1.0	<1.0	<3.0
	9/13/2011	<1.0	<1.0	<1.0	<3.0
	1/6/2012	<1.0	<1.0	<1.0	<3.0
	4/6/2012	<1.0	<1.0	<1.0	<3.0
	6/12/2012	<1.0	2.1	<1.0	<3.0
	9/27/2012	<1.0	<1.0	<1.0	<3.0
	12/7/2012	<1.0	<1.0	<1.0	<3.0
	3/4/2013	<2.0	<2.0	<2.0	<4.0
	6/25/2013	<2.0	<2.0	<2.0	<4.0
	6/27/2017	<1.0	<1.0	<1.0	<1.5
	6/26/2018	<1.0	<1.0	<1.0	<1.5
	6/26/2019	<1.0	<1.0	<1.0	<2.0



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-9	6/15/2020	<1.0	<1.0	<1.0	<2.0
	5/28/2021	DEST	DEST	DEST	DEST
MW-10	3/20/2000	0.8	2.9	<0.5	1.5
	6/7/2000	<0.5	<0.5	<0.5	<1.5
	2/13/2001	<1	<1	1.5	<1
	5/9/2001	<1	<1	<1	<1
	11/2/2001	<1.0	<2.0	<2.0	<2.0
	4/6/2012	NS	NS	NS	NS
	6/12/2012	NS	NS	NS	NS
	9/27/2012	NS	NS	NS	NS
	12/7/2012	<1.0	<1.0	<1.0	<3.0
	3/4/2013	NS	NS	NS	NS
	6/25/2013	<2.0	<2.0	<2.0	<4.0
MW-11	12/2/2013	<1.0	6.5	2.7	39
	6/27/2017	<1.0	<1.0	<1.0	<1.5
	12/1/2017	<1.0	<1.0	<1.0	<2.0
	6/26/2018	<1.0	<1.0	<1.0	<1.5
	6/26/2019	<1.0	<1.0	<1.0	<2.0
	6/15/2020	<1.0	<1.0	<1.0	<2.0
	5/28/2021	<1.0	<1.0	<1.0	<2.0
	6/6/2022	<1.0	<1.0	<1.0	<2.0
	6/12/2023	<1.0	<1.0	<1.0	<1.5
MW-12	12/2/2013	12	<1.0	74	<2.0
	6/16/2014	3.0	<1.0	42	<2.0
	12/2/2014	2.7	<1.0	29	<2.0
	6/18/2015	6.5	<1.0	36	<1.5
	9/25/2015	<1.0	<1.0	16	<1.5
	12/18/2015	11	<1.0	56	<2.0
	6/14/2016	5.2	<1.0	28	<2.0
	6/27/2017	1.6	<1.0	22	<1.5
	12/1/2017	2.1	<1.0	25	<2.0
	6/26/2018	<1.0	<1.0	4.7	<1.5
	6/26/2019	2.5	<1.0	3.6	<2.0
	6/15/2020	DEST	DEST	DEST	DEST



TABLE 2
GROUNDWATER ANALYTICAL RESULTS
 Jicarilla Contract 147-6
 Harvest Four Corners, LLC
 Rio Arriba, New Mexico

Well Identification	Sample Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
NMWQCC Standards		5	1,000	700	620
MW-13	12/1/2017	<2.0	<2.0	<2.0	<4.0
	6/26/2019	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	6/15/2020	NS-Dry	NS-Dry	NS-Dry	NS-Dry
	5/28/2021	DEST	DEST	DEST	DEST
MW-14	12/1/2017	<2.0	<2.0	<2.0	<4.0
	6/26/2018	8.1	<1.0	<1.0	47
	6/26/2019	13	<1.0	<1.0	25
	6/15/2020	NS	NS	NS	NS
	5/28/2021	<2.0	<2.0	<2.0	<4.0
	6/6/2022	<2.0	<2.0	<2.0	<4.0
	6/12/2023	<2.0	<2.0	<2.0	<3.0

Notes:

DEST: monitoring well is destroyed

µg/L: micrograms per liter

NMWQCC: New Mexico Water Quality Control Commission

NS: not sampled

<: indicates results is less than laboratory reporting detection limit

*: indicates sample was diluted

**: Sample identified as MW-4 on laboratory reports was later determined to be an unknown well and MW-4 was determined to be destroyed

Concentrations in **bold** and shaded exceed the New Mexico Water Quality Control Commission Standards, 20.6.2 of the New Mexico Administrative Code



APPENDIX A

Sample Collection Forms

Released to Imaging: 5/13/2024 4:10:47 PM

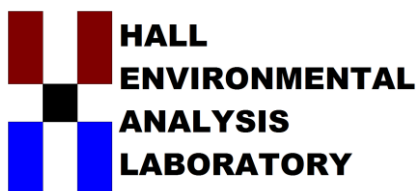
Date:

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APPENDIX B

Laboratory Analytical Report



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 28, 2023

Reese Hanson

Harvest

1755 Arroyo Dr.

Bloomfield, NM 87413

TEL: (505) 632-4475

FAX:

RE: Jicarilla Contract 147 6

OrderNo.: 2306818

Dear Reese Hanson:

Hall Environmental Analysis Laboratory received 4 sample(s) on 6/15/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a light blue horizontal line.

Andy Freeman

Laboratory Manager

4901 Hawkins NE

Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2306818
Date Reported: 6/28/2023

CLIENT: Harvest

Client Sample ID: MW-11

Project: Jicarilla Contract 147 6

Collection Date: 6/12/2023 1:20:00 PM

Lab ID: 2306818-001

Matrix: AQUEOUS

Received Date: 6/15/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA	
Benzene	ND	1.0		µg/L	1	6/23/2023 5:55:16 PM	R97702
Toluene	ND	1.0		µg/L	1	6/23/2023 5:55:16 PM	R97702
Ethylbenzene	ND	1.0		µg/L	1	6/23/2023 5:55:16 PM	R97702
Xylenes, Total	ND	1.5		µg/L	1	6/23/2023 5:55:16 PM	R97702
Surr: 1,2-Dichloroethane-d4	120	70-130		%Rec	1	6/23/2023 5:55:16 PM	R97702
Surr: Dibromofluoromethane	119	70-130		%Rec	1	6/23/2023 5:55:16 PM	R97702
Surr: Toluene-d8	96.1	70-130		%Rec	1	6/23/2023 5:55:16 PM	R97702

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Page 1 of 6

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order 2306818
Date Reported: 6/28/2023

CLIENT: Harvest

Client Sample ID: MW-3

Project: Jicarilla Contract 147 6

Collection Date: 6/12/2023 1:41:00 PM

Lab ID: 2306818-002

Matrix: AQUEOUS

Received Date: 6/15/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA	
Benzene	240	5.0		µg/L	5	6/22/2023 7:33:51 PM	SL97656
Toluene	ND	5.0		µg/L	5	6/22/2023 7:33:51 PM	SL97656
Ethylbenzene	56	5.0		µg/L	5	6/22/2023 7:33:51 PM	SL97656
Xylenes, Total	1500	75		µg/L	50	6/23/2023 6:23:05 PM	R97702
Surr: 1,2-Dichloroethane-d4	93.1	70-130		%Rec	5	6/22/2023 7:33:51 PM	SL97656
Surr: Dibromofluoromethane	93.9	70-130		%Rec	5	6/22/2023 7:33:51 PM	SL97656
Surr: Toluene-d8	101	70-130		%Rec	5	6/22/2023 7:33:51 PM	SL97656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

CLIENT: Harvest

Client Sample ID: MW-6

Project: Jicarilla Contract 147 6

Collection Date: 6/12/2023 2:35:00 PM

Lab ID: 2306818-003

Matrix: AQUEOUS

Received Date: 6/15/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA	
Benzene	570	10		µg/L	10	6/23/2023 6:50:54 PM	R97702
Toluene	ND	1.0		µg/L	1	6/22/2023 8:01:30 PM	SL97656
Ethylbenzene	60	1.0		µg/L	1	6/22/2023 8:01:30 PM	SL97656
Xylenes, Total	6.1	1.5		µg/L	1	6/22/2023 8:01:30 PM	SL97656
Surr: 1,2-Dichloroethane-d4	90.5	70-130		%Rec	1	6/22/2023 8:01:30 PM	SL97656
Surr: Dibromofluoromethane	92.1	70-130		%Rec	1	6/22/2023 8:01:30 PM	SL97656
Surr: Toluene-d8	97.8	70-130		%Rec	1	6/22/2023 8:01:30 PM	SL97656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

CLIENT: Harvest

Client Sample ID: MW-14

Project: Jicarilla Contract 147 6

Collection Date: 6/12/2023 2:57:00 PM

Lab ID: 2306818-004

Matrix: AQUEOUS

Received Date: 6/15/2023 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: RAA	
Benzene	ND	2.0	D	µg/L	2	6/22/2023 8:29:06 PM	SL97656
Toluene	ND	2.0	D	µg/L	2	6/22/2023 8:29:06 PM	SL97656
Ethylbenzene	ND	2.0	D	µg/L	2	6/22/2023 8:29:06 PM	SL97656
Xylenes, Total	ND	3.0	D	µg/L	2	6/22/2023 8:29:06 PM	SL97656
Surr: 1,2-Dichloroethane-d4	107	70-130	D	%Rec	2	6/22/2023 8:29:06 PM	SL97656
Surr: Dibromofluoromethane	113	70-130	D	%Rec	2	6/22/2023 8:29:06 PM	SL97656
Surr: Toluene-d8	102	70-130	D	%Rec	2	6/22/2023 8:29:06 PM	SL97656

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	PQL	Practical Quantitative Limit	RL	Reporting Limit
	S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306818

28-Jun-23

Client: Harvest
Project: Jicarilla Contract 147 6

Sample ID: 100ng lcs	SampType: LCS		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: LCSW	Batch ID: SL97656		RunNo: 97656							
Prep Date:	Analysis Date: 6/22/2023		SeqNo: 3551248		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	112	70	130			
Toluene	19	1.0	20.00	0	97.5	70	130			
Surr: 1,2-Dichloroethane-d4	12		10.00		119	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		91.0	70	130			
Surr: Dibromofluoromethane	12		10.00		118	70	130			
Surr: Toluene-d8	9.6		10.00		96.0	70	130			

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBW	Batch ID: SL97656		RunNo: 97656							
Prep Date:	Analysis Date: 6/22/2023		SeqNo: 3551257		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		107	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		88.6	70	130			
Surr: Dibromofluoromethane	11		10.00		112	70	130			
Surr: Toluene-d8	9.9		10.00		98.6	70	130			

Sample ID: 100NG LCS	SampType: LCS4		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: BatchQC	Batch ID: R97702		RunNo: 97702							
Prep Date:	Analysis Date: 6/23/2023		SeqNo: 3553294		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0	109	80	120			
Toluene	18	1.0	20.00	0	89.9	80	120			
Ethylbenzene	18	1.0	20.00	0	87.7	80	120			
Xylenes, Total	56	1.5	60.00	0	92.6	80	120			
Surr: 1,2-Dichloroethane-d4	11		10.00		113	70	130			
Surr: 4-Bromofluorobenzene	9.1		10.00		90.5	70	130			
Surr: Dibromofluoromethane	12		10.00		118	70	130			
Surr: Toluene-d8	8.9		10.00		89.5	70	130			

Sample ID: mb	SampType: MBLK		TestCode: EPA Method 8260B: Volatiles Short List							
Client ID: PBW	Batch ID: R97702		RunNo: 97702							
Prep Date:	Analysis Date: 6/23/2023		SeqNo: 3553307		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306818

28-Jun-23

Client: Harvest

Project: Jicarilla Contract 147 6

Sample ID: mb	SampType: MBLK	TestCode: EPA Method 8260B: Volatiles Short List								
Client ID: PBW	Batch ID: R97702	RunNo: 97702								
Prep Date:	Analysis Date: 6/23/2023	SeqNo: 3553307 Units: µg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	11		10.00		110	70	130			
Surr: 4-Bromofluorobenzene	8.8		10.00		87.6	70	130			
Surr: Dibromofluoromethane	11		10.00		115	70	130			
Surr: Toluene-d8	9.1		10.00		91.3	70	130			

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Harvest

Work Order Number: 2306818

RcptNo: 1

Received By: Cheyenne Cason

6/15/2023 7:00:00 AM

Chad

Completed By: Tracy Casarrubias

6/15/2023 10:28:13 AM

Reviewed By:

ju 6/15/23

Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☒ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☒ No ☐ NA ☐
4. Were all samples received at a temperature of $>0^{\circ}\text{C}$ to 6.0°C ? Yes ☒ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☒ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☒ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☒ No ☐
8. Was preservative added to bottles? Yes ☐ No ☒ NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☒ No ☐
13. Is it clear what analyses were requested? Yes ☒ No ☐
14. Were all holding times able to be met?
(If no, notify customer for authorization.) Yes ☒ No ☐

of preserved
bottles checked
for pH:

(<2 or >12 unless noted)

Adjusted?

Checked by:

SCM 06/15/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☒

Person Notified:

Date:

By Whom:

Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions: Mailing address, phone number, and Email are missing on COC- tMC 6/15/23

16. Additional remarks:

17. Cooler Information

Cooler No	Temp $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good	Yes	Yogi		

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 327915

CONDITIONS

Operator: Harvest Four Corners, LLC 1755 Arroyo Dr Bloomfield, NM 87413	OGRID: 373888
	Action Number: 327915
	Action Type: [UF-GWA] Ground Water Abatement (GROUND WATER ABATEMENT)

CONDITIONS

Created By	Condition	Condition Date
michael.buchanan	Review of the 2023 Annual Groundwater Monitoring Report for Jicarilla Contract 147-6: Accepted for the record.	5/13/2024