

December 10, 2024

Gosling Czubak P/N: 2018100106

Mr. Garrett Powell
Michigan Department of Environment, Great Lakes and Energy
Oil, Gas, & Minerals Division – Gaylord District Office
2100 West M-32
Gaylord, Michigan 49735-9282

**SUBJECT: Semi-Annual Groundwater Monitoring and Remediation Report
Lambda Energy Resources, LLC - Hayes 22 CPF (Facility No.: 70)
Otsego County, Michigan**

Dear Mr. Powell:

This report summarizes recent groundwater monitoring and remediation activities for the Hayes 22 CPF.

Groundwater Remediation Activities

The groundwater treatment facility was initially activated on October 7, 2008 with the operation of off-site groundwater recovery wells RW-101 through RW-103. Additional source area and toe area recovery wells were added to the system and there have been as many as 10 recovery wells operating at a given time. Routine system maintenance activities include recovery well pump removal and replacement, and flow line pigging to maintain the system design groundwater pumping flow rates.

During 2012, groundwater remediation efforts were expanded with the installation of additional monitor and recovery wells in the toe area of the plume and the installation of an air sparge/soil vapor extraction (AS/SVE) system in the source area. The curtain area air sparge system was activated during the second quarter of 2012 and the source area AS/SVE system was activated during the third quarter of 2013. The SVE system operated until contaminant concentrations of the influent vapors were low enough to shut it off. Subsequently, after effectively treating the upgradient area of the groundwater plume, both air sparge systems were shut down in July 2019. In April 2020, the groundwater pumping wells that are currently pumping into the treatment plant began operating on a week on/week off schedule, while the pumping wells at the toe of the plume continue to operate continuously.

The recent BTEX detections and MW-1 and MW-2 prompted the reactivation of the curtain area air sparge system and the SVE system in March 2021. The air sparge system operated during the first three quarters of 2024, with minor operational interruptions for repairs.

Groundwater Monitoring Activities

The most recent semi-annual groundwater monitoring event was performed during September 2024. Semi-annual monitoring includes collecting depth to groundwater measurements and groundwater samples for laboratory (BTEX and chloride) analyses from select locations.

Beginning with the third quarter-2017 sample event, the “Plus Four” constituents (1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, Naphthalene and 2-Methylnaphthalene) were added to the list of analytes at sample points that previously included only the standard BTEX analyses. After four quarters of “Plus Four” analyses, no exceedances of Part 201 generic residential cleanup criteria (GRCC) had been observed. Therefore, analysis for “Plus Four” constituents has been discontinued pending final site closure sampling.

Measurements of groundwater depths at select locations are used to compute the groundwater elevation contours shown on the attached site map. The groundwater contours continue to indicate a consistent southwest flow direction. Measured and estimated water level elevations of operating recovery wells are also used as input to indicate the influence the pumping wells have on groundwater elevation contours and flow vectors.

The laboratory results have been tabulated and are included in the attached “Groundwater Analytical Results” table. The total BTEX concentration contours shown on the site map are based on the groundwater samples collected during the most recent sample event as presented in the “Groundwater Analytical Results” table.

Select down-gradient monitor wells and recovery wells are sampled for BTEX and chloride on a monthly basis to monitor the toe area of the plume. Results of these monthly sample events are tabulated separately and are presented on attached sheets.

Residential water well samples were also collected at nearby landowners that wish to have their wells sampled. Residential sample results received to date have been in compliance with Part 201 health-based drinking water criteria. The laboratory reports of the residential water wells are mailed and/or e-mailed to the individual homeowners and copies of those results are forwarded to the OGMD under a separate transmittal.

Summary and Conclusions

Results of the groundwater monitoring activities to date indicate that the operating treatment systems are effectively reducing the width and concentration of dissolved hydrocarbon impacts from the Hayes 22 CPF. The operation of the air sparge remediation systems were effective in treating the source area impact. Results of monitoring activities are used to optimize the groundwater pumping efforts.

Future Activities

The next semi-annual monitoring event is scheduled for March 2025. Select “toe-area” wells will continue to be sampled monthly.

Respectfully Submitted,

GOSLING CZUBAK ENGINEERING SCIENCES, INC.

Prepared by:


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Jeffrey V. Simsa, C.P.G., P.G., C.P.
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Attachments:

Air Sparge System Summary
Groundwater Elevation Summary Tables/Hydrograph
Monitor Well Groundwater Analytical Results
Monthly Groundwater Analytical Results of Downgradient Area Wells
Site Map with Groundwater Elevation and Total BTEX Concentration Contours

CC:

Mr. Nick Summerland, Lambda Energy Resources, LLC

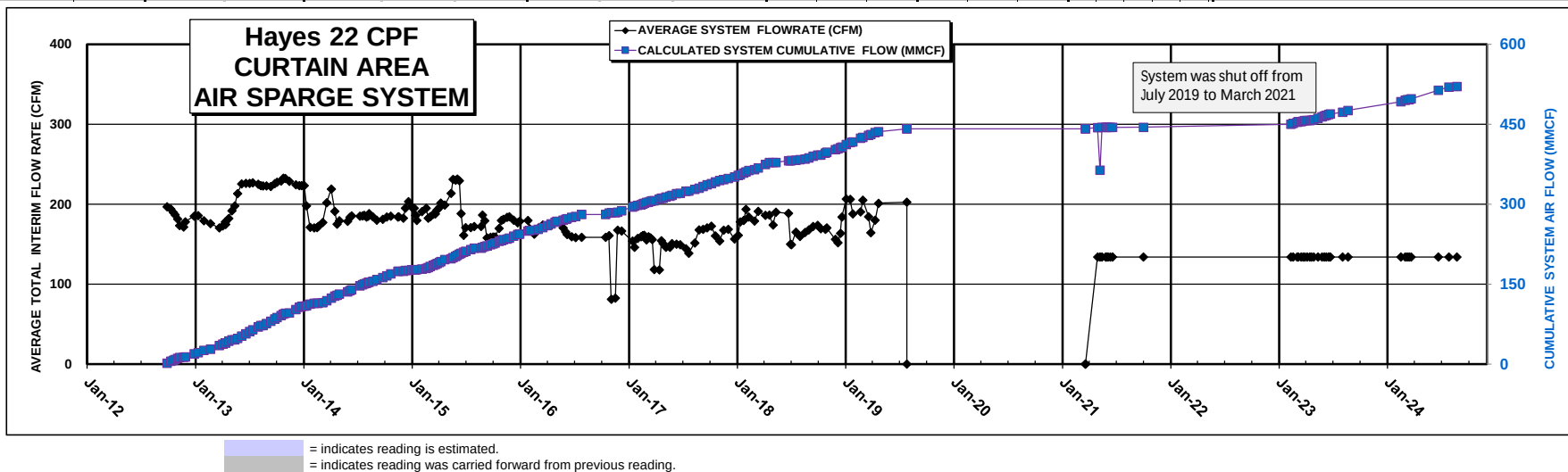
CC (VIA MAIL):

WVPOA Attention: Oil and Gas Committee PO Box 871 Gaylord, MI 49734	Mr. & Mrs. Leonard Uller 11799 Deer Creek Run Plymouth, MI 48170
Ms. Cathy Postlewait PO Box 1032 Gaylord, MI 49734	Mr. & Mrs. Donald Wolschleger 925 N. Paris Ville Road Harbor Beach, MI 48441
Mr. & Mrs. John LaGrow 7775 McClements. Brighton, MI 48114	

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job No.: **2018100106.02**

CURTAIN AREA AIR SPARGE SYSTEM SUMMARY

DATE	TIME	HOUR METER READING (HOURS)	CUMULATIVE HOURS (HOURS)	TOTAL FLOW READING (CFM)	BLOWER PRESSURE (PSI)	MANIFOLD PRESSURE (PSI)	AVERAGE SYSTEM FLOWRATE (CFM)	CALCULATED SYSTEM INTERIM FLOW (MMCF)	CALCULATED SYSTEM CUMULATIVE FLOW (MMCF)	TEMPERATURES °F			MOTOR AMPS			SYSTEM MAINTENANCE					REMARKS
							Blower	Xchgr	Bldg	L	M	R	Oil Level	Oil Change	Oil Bearings	Grease Compress	Grease Intake	Air Filter			
Data history began on 9/20/2012							(Green indicates calculated values)														
03/06/23	03:00 PM	69,801.0	42,244.6	155.0	20.0	20.0	134.0	3.29	454.78	290	60		--	--	--	OK	--	--	--	OK	JG - System Check - Shut down for sampling event
03/16/23	10:00 AM	69,801.0	42,244.6	155.0	20.0	20.0	134.0	0.78	454.78	290	60		--	--	--	OK	--	--	--	OK	BPR System Check - System restarted following sampling
03/23/23	11:05 AM	69,966.5	42,410.1	180.0	18.5	17.5	134.0	2.11	456.11	275	140		--	--	--	OK	--	--	--	OK	BPR System Check
03/28/23	02:45 PM	70,089.6	42,533.2	111.0	18.0	17.5	134.0	2.32	457.10	275	200	83	--	--	--	OK	--	--	--	OK	BPR System Check - System shut down for maintenance
04/05/23	12:30 PM	70,090.0	42,533.6	163.5	21.0	21.5	134.0	2.32	457.10	260	60	60	--	--	--	OK	--	--	--	OK	BPR System Check - System turned back on - AS-8 and AS-11 were turned off and the heat exchanger was turned on.
04/14/23	12:00 PM	70,094.4	42,538.0	106.0	22.0	22.0	134.0	1.03	457.14	280	80	79	--	--	--	OK	--	--	--	OK	BPR System Check - System turned back after power failure - system diluted following loss of AS-8 and AS-11.
04/20/23	11:00 AM	70,140.0	42,583.6	118.0	20.0	17.5	134.0	0.41	457.51	150	52	59	--	--	--	OK	--	--	--	OK	BPR System Check - System down upon arrival - system diluted
04/27/23	09:50 AM	70,307.0	42,750.6	80.0	17.0	17.0	134.0	1.74	458.85	265	55	65	--	--	--	OK	--	--	--	OK	BPR System Check
05/12/23	01:17 PM	70,616.0	43,059.6	67.0	17.0	17.0	134.0	4.19	461.33	270	82	80	--	--	--	OK	--	--	--	OK	BPR System Check - Increased pressure 1/4 turn
05/25/23	02:17 PM	70,927.0	43,370.6	95.0	19.0	20.0	134.0	6.33	463.83	285	70	72	--	--	--	OK	YES	YES	--	NEW	BPR System Check - oil change - motor bearings greased - air filter changed
06/02/23	12:10 PM	71,118.0	43,561.6	98.0	20.5	20.0	134.0	6.52	465.37	300	95	82	--	--	--	OK	--	--	--	OK	BPR System Check
06/09/23	01:30 AM	71,288.0	43,731.6	96.0	20.0	20.0	134.0	5.40	466.74	280	89	79	--	--	--	OK	--	--	--	OK	BPR System Check
06/16/23	11:00 AM	71,453.0	43,896.6	91.0	21.0	20.5	134.0	6.73	468.06	290	75	68	--	--	--	OK	--	--	--	OK	BPR System Check
06/22/23	11:00 AM	71,597.0	44,040.6	85.0	20.5	20.5	134.0	5.39	469.22	285	95	82	--	--	--	OK	--	--	--	OK	BPR System Check
08/03/23	02:00 PM	72,005.0	44,448.6	110.0	20.0	20.5	134.0	7.13	472.50	240	90	--	--	--	--	OK	--	--	--	OK	BPR System Check
08/21/23	12:30 PM	72,437.3	44,880.9	81.0	20.5	19.5	134.0	7.91	475.98	280	83	--	--	--	--	OK	--	--	--	OK	BPR System Check
02/15/24	09:30 AM	74,468.0	46,911.6	63.0	18.0	19.5	134.0	23.08	492.30	270	42	63	--	--	--	OK	--	--	--	OK	BH System Check
02/29/24	01:00 PM	74,808.0	47,251.6	75.0	20.0	19.0	134.0	22.54	495.04	260	53	61	--	--	--	OK	--	--	--	OK	BH System Check
03/07/24	11:50 AM	74,975.0	47,418.6	77.0	20.0	19.0	134.0	20.40	496.38	275	62	65	--	--	--	OK	--	--	--	OK	BH System Check
03/14/24	02:00 PM	74,975.0	47,418.6	0.0	0.0	0.0	134.0	4.08	496.38	0	0	0	--	--	--	OK	--	--	--	OK	BH System Check - System down for GW sampling event
03/21/24	11:00 AM	75,118.0	47,561.6	78.0	19.0	19.0	134.0	2.49	497.53	270	59	62	--	--	--	OK	--	--	--	OK	BH System Check
06/20/24	08:40 AM	77,119.9	49,563.5	65.5	20.0	20.0	134.0	17.24	513.62	256	89	63	--	--	--	OK	--	--	--	OK	MM System Check
07/26/24	01:00 PM	77,904.3	50,347.9	73.0	19.0	19.0	134.0	23.55	519.93	272	98	77	--	--	--	OK	--	--	--	OK	KB System Check
08/22/24	09:35 AM	77,983.8	50,427.4	107.0	20.0	20.0	134.0	23.04	520.57	280	89	79	--	--	--	OK	--	--	--	OK	NS System Check



Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job No.: **2018100106.01**

Groundwater Elevation Data Depth to Water Measurements

Location	TOC Elev	11/05/18	03/11/19	09/10/19	03/02/20	09/15/20	03/01/21	09/21/21	03/23/22	09/19/22	03/13/23	09/18/23	3/15/2024	9/5/2024
MW-1	1450.47	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-2	1448.76	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-3	1454.01	NM	NM	NM	NM	197.25	197.95	199.00	199.47	198.97	199.93	199.65	200.49	200.23
MW-4	1452.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-9	1452.51	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-10	1454.05	NM	NM	NM	NM	196.53	197.23	198.36	198.67	198.33	199.20	199.02	199.77	199.52
MW-11	1455.59	NM	NM	197.79	198.35	197.61	198.30	199.35	199.84	199.40	200.27	200.03	200.83	200.54
MW-12	1452.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-2	1449.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-3	1450.52	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-4	1450.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-5	1450.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-6	1450.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-100s	1445.71	191.56	192.04	190.77	191.23	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-101	1444.13	189.60	190.14	Obstructed	189.33	188.57	189.27	190.43	190.73	190.23	191.20	190.97	191.79	191.59
MW-102s	1396.27	147.04	147.53	146.48	146.69	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-103s	1391.67	142.21	142.80	141.62	141.99	141.19	141.80	142.81	143.28	142.58	143.64	143.33	144.19	144.17
MW-104s	1413.28	NM	NM	NM	NM	161.82	162.37	163.50	164.01	163.28	NM	164.02	164.92	164.85
MW-106s	1449.76	194.70	195.30	193.93	194.52	193.73	194.45	195.52	195.93	195.44	196.40	196.15	196.98	196.79
MW-107s	1398.20	149.21	149.69	148.66	148.90	148.09	148.68	Damaged	149.76	149.07	150.10	149.80	150.67	150.63
MW-108s	1461.58	209.12	209.56	208.39	208.68	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-109s	1459.33	NM	207.29	205.99	206.38	205.64	206.33	207.41	207.77	207.14	208.23	207.92	208.81	208.61
MW-110s	1438.28	183.90	184.37	183.13	183.56	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-110d	1438.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-111s	1404.15	155.79	156.43	155.38	155.68	154.93	155.52	156.44	157.05	156.34	157.36	157.09	157.90	157.93
MW-112s	1462.69	218.51	219.18	218.29	218.43	217.67	218.16	219.12	219.82	219.03	219.96	219.76	220.58	220.63
MW-112d	1462.60	NM	NM	NM	NM	217.60	218.12	219.09	219.78	219.00	219.94	219.72	220.53	220.57
MW-112d2	1462.69	NM	NM	NM	NM	217.64	218.18	219.14	219.83	219.05	219.99	219.74	220.58	220.62
MW-112d3	1462.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-114s	1453.03	200.97	201.33	200.21	200.42	199.62	200.30	201.49	201.58	201.15	202.17	201.92	202.74	202.63
MW-115s	1406.20	NM	NM	NM	NM	157.45	158.03	158.99	159.61	158.85	159.90	159.59	160.44	160.46
MW-116s	1420.60	168.60	Buried	167.98	168.27	167.53	168.19	169.26	169.66	169.08	170.05	169.73	170.53	170.53
MW-117s	1446.75	191.39	192.96	190.70	191.21	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-118d	1445.15	198.97	199.72	198.85	199.06	198.17	198.74	199.64	200.35	199.57	200.59	200.35	201.16	201.21
MW-118d2	1445.48	NM	NM	NM	NM	NM	198.73	199.65	200.34	199.56	200.59	200.34	201.12	201.28
MW-118d3	1445.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-119s	1439.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-119d	1439.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-120s	1443.57	197.25	198.03	196.89	197.07	196.42	196.97	197.90	198.60	197.80	198.83	198.59	199.40	199.42
MW-120d	1443.27	NM	NM	NM	NM	196.19	196.78	197.70	198.39	197.61	198.63	199.38	199.18	199.22
MW-121d	1459.51	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-121d2	1459.51	NM	NM	NM	NM	215.81	216.33	217.29	217.91	217.22	218.09	217.89	218.64	219.46
MW-121d3	1459.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-122d	1438.76	193.68	194.39	193.46	193.71	192.95	193.45	194.37	195.06	194.32	195.28	195.07	195.84	195.93
MW-122d2	1438.45	193.97	194.69	193.77	194.00	193.23	193.74	194.68	195.34	194.64	195.59	195.38	196.14	196.23
MW-123s	1442.20	204.78	Buried	187.43	Buried	187.11	No Access	188.85	No access	188.78	NM	NM	NM	190.13
MW-124s	1449.09	192.27	192.89	191.68	192.22	191.49	192.20	193.53	193.67	193.32	NM	193.95	194.71	194.41
MW-125d2	1462.87	NM	NM	NM	NM	218.23	218.78	219.70	220.39	219.60	220.61	220.35	221.13	221.15
MW-126d	1452.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-126d2	1453.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-126d3	1452.54	210.37	Buried	210.18	210.09	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-127d2	1455.93	NM	NM	NM	NM	212.95	213.45	214.38	215.00	214.37	215.22	215.01	245.66	215.79
MW-128d2	1464.90	220.84	221.54	220.63	220.78	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-129d2	1453.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-130d2	1452.47	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-131d2	1461.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-132d2	1462.19	NM	NM	NM	NM	219.70	220.19	221.10	221.75	221.14	221.90	221.69	222.39	222.52
MW-132d3	1462.16	220.82	221.31	220.45	220.44	219.68	220.15	221.05	221.71	221.72	221.90	221.71	222.34	222.49
MW-132d4	1462.79	NM	NM	NM	NM	220.27	220.72	221.64	222.28	221.72	222.47	222.26	222.94	223.05
MW-133d3	1461.15	218.91	Obstructed	Obstructed	Obstructed	218.00	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
MW-134d3	1460.10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-135d3	1458.75	NM	NM	NM	NM	216.37	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
MW-136d3	1450.55	210.28	Obstructed	NM	210.14	209.38	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
MW-201	1422.97	163.67	NM	163.11	163.58	162.93	163.61	164.48	165.17	164.85	165.46	165.31	165.96	165.53
MW-202	1439.10	177.72	NM	177.54	177.81	177.41	178.13	178.55	175.67	179.42	180.07	179.87	178.53	179.50
MW-203	1439.02	179.20	179.86	178.72	179.23	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-204	1436.20	174.25	NM	173.88	174.19	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-205	1438.65	178.80	NM	178.29	178.83	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-206	1433.51	174.33	NM	173.80	174.32	173.51	174.27	175.33	175.88	175.61	176.32	176.12	176.80	176.48
MW-207s	1437.16	178.32	178.96	177.78	178.31	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-207d	1437.35	178.33	NM	177.79	178.32	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-101	1463.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-101a	1459.18	224.95	226.99	225.60	216.23	215.45	215.95	216.91	217.65	216.84	217.71	217.50	218.15	218.35
RW-101b	1450.59	215.6	218.0	217.4	207.5	206.8	207.3	208.2	208.9	208.1	209.0	208.7	208.40	209.45
RW-102	1397.54	157.2	155.6	154.9	148.5	147.8	148.4	149.4	148.8	149.2	150.1	149.0	149.75	149.77
RW-103	1443.29	208.0	Obstructed	Inaccessible	Obstructed	Obstructed	NM	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
RW-104	1459.25	225.2	225.8	225.6	206.9	206.2	206.4	208.1	208.3	207.2	208.2	208.0	208.83	208.77
RW-105	1441.72	199.5	199.0	198.7	188.1	187.4	187.9	189.1	189.4	188.8	189.8	189.6	190.35	190.22
RW-106 (MW-8)	1448.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-201	1453.27	NM	Obstructed	Obstructed	Obstructed	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-202	1454.98	NM	Obstructed	Obstructed	Obstructed	NM	NM	NM	NM	NM	NM	NM	NM	NM

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job No.: **2018100106.01**

Groundwater Elevation Data

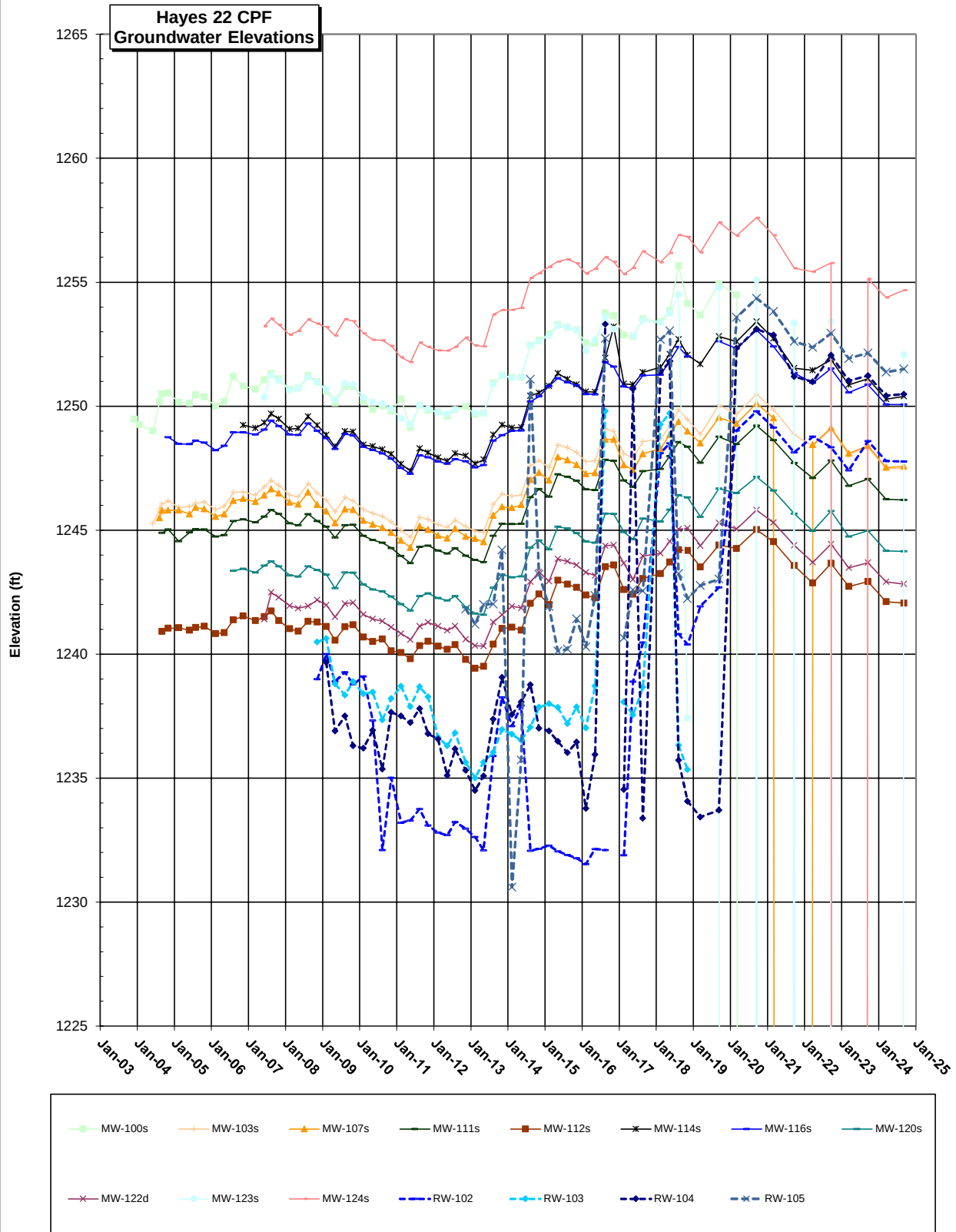
Groundwater Elevation Summary

(ft. NAVD88)

Location	TOC Elev	11/05/18	03/11/19	09/10/19	03/02/20	09/15/20	03/01/21	09/21/21	03/23/22	09/19/22	03/13/23	09/18/23	03/15/24	09/05/24
MW-1	1450.47	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-2	1448.76	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-3	1454.01	NM	NM	NM	NM	1256.76	1256.06	1255.01	1254.54	1255.04	1254.08	1254.36	1253.52	1253.78
MW-4	1452.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-9	1452.51	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-10	1454.05	NM	NM	NM	NM	1257.52	1256.82	1255.69	1255.38	1255.72	1254.85	1255.03	1254.28	1254.53
MW-11	1455.59	NM	NM	1257.80	1257.24	1257.98	1257.29	1256.24	1255.75	1256.19	1255.32	1255.56	1254.76	1255.05
MW-12	1452.82	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-2	1449.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-3	1450.52	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-4	1450.26	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-5	1450.88	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-6	1450.25	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-100s	1445.71	1254.15	1253.67	1254.94	1254.48	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-101	1444.13	1254.53	1253.99	Obstructed	1254.80	1255.56	1254.86	1253.70	1253.40	1253.90	1252.93	1253.16	1252.34	1252.54
MW-102s	1396.27	1249.23	1248.74	1249.79	1249.58	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-103s	1391.67	1249.46	1248.87	1250.05	1249.68	1250.48	1249.87	1248.86	1248.39	1249.09	1248.03	1248.34	1247.48	1247.50
MW-104s	1413.28	NM	NM	NM	NM	1251.46	1250.91	1249.78	1249.27	1250.00	NM	1249.26	1248.36	1248.43
MW-106s	1449.76	1255.06	1254.46	1255.83	1255.24	1256.03	1255.31	1254.24	1253.83	1254.32	1253.36	1253.61	1252.78	1252.97
MW-107s	1398.20	1248.99	1248.51	1249.54	1249.30	1250.11	1249.52	Damaged	1248.44	1249.13	1248.10	1248.40	1247.53	1247.57
MW-108s	1461.58	1252.46	1252.02	1253.19	1252.90	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-109s	1459.33	NM	1252.04	1253.34	1252.95	1253.69	1253.00	1251.92	1251.56	1252.19	1251.10	1251.41	1250.52	1250.72
MW-110s	1438.28	1254.38	1253.91	1255.15	1254.72	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-110d	1438.53	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-111s	1404.15	1248.36	1247.72	1248.77	1248.47	1249.22	1248.63	1247.71	1247.10	1247.81	1246.79	1247.06	1246.25	1246.22
MW-112s	1462.69	1244.18	1243.51	1244.40	1244.26	1245.02	1244.53	1243.57	1242.87	1243.66	1242.73	1242.93	1242.11	1242.06
MW-112d	1462.60	NM	NM	NM	NM	1245.00	1244.48	1243.51	1242.82	1243.60	1242.66	1242.88	1242.07	1242.03
MW-112d2	1462.69	NM	NM	NM	NM	1245.05	1244.51	1243.55	1242.86	1243.64	1242.70	1242.95	1242.11	1242.07
MW-112d3	1462.05	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-114s	1453.03	1252.06	1251.70	1252.82	1252.61	1253.41	1252.73	1251.54	1251.45	1251.88	1250.86	1251.11	1250.29	1250.40
MW-115s	1406.20	NM	NM	NM	NM	1248.75	1248.17	1247.21	1246.59	1247.35	1246.30	1246.61	1245.76	1245.74
MW-116s	1420.60	1252.00	Buried	1252.62	1252.33	1253.07	1252.41	1251.34	1250.94	1251.52	1250.55	1250.87	1250.07	1250.07
MW-117s	1446.75	1255.36	1253.79	1256.05	1255.54	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-118d	1445.15	1246.18	1245.43	1246.30	1246.09	1246.98	1246.41	1245.51	1244.80	1245.58	1244.56	1244.80	1243.99	1243.94
MW-118d2	1445.48	NM	NM	NM	NM	NM	1246.75	1245.83	1245.14	1245.92	1244.89	1245.14	1244.36	1244.20
MW-118d3	1445.55	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-119s	1439.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-119d	1439.40	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-120s	1443.57	1246.32	1245.54	1246.68	1246.50	1247.15	1246.60	1245.67	1244.97	1245.77	1244.74	1244.98	1244.17	1244.15
MW-120d	1443.27	NM	NM	NM	NM	1247.08	1246.49	1245.57	1244.88	1245.66	1244.64	1243.89	1244.09	1244.05
MW-121d	1459.51	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-121d2	1459.51	NM	NM	NM	NM	1243.70	1243.18	1242.22	1241.60	1242.29	1241.42	1241.62	1240.87	1240.05
MW-121d3	1459.86	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-122d	1438.76	1245.08	1244.37	1245.30	1245.05	1245.81	1245.31	1244.39	1243.70	1244.44	1243.48	1243.69	1242.92	1242.83
MW-122d2	1438.45	1244.48	1243.76	1244.68	1244.45	1245.22	1244.71	1243.77	1243.11	1243.81	1242.86	1243.07	1242.31	1242.22
MW-123s	1442.20	1237.42	Buried	1254.77	Buried	1255.09	No Access	1253.35	No access	1253.42	NM	NM	NM	1252.07
MW-124s	1449.09	1256.82	1256.20	1257.41	1256.87	1257.60	1256.89	1255.56	1255.42	1255.77	NM	1255.14	1254.38	1254.68
MW-125d2	1462.87	NM	NM	NM	NM	1244.64	1244.09	1243.17	1242.48	1243.27	1242.26	1242.52	1241.74	1241.72
MW-126d	1452.97	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-126d2	1453.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-126d3	1452.54	1242.17	Buried	1242.36	1242.45	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-127d2	1455.93	NM	NM	NM	NM	1242.98	1242.48	1241.55	1240.93	1241.56	1240.71	1240.92	1210.27	1240.14
MW-128d2	1464.90	1244.06	1243.36	1244.27	1244.12	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-129d2	1453.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-130d2	1452.47	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-131d2	1461.02	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-132d2	1462.19	NM	NM	NM	NM	1242.49	1242.00	1241.09	1240.44	1241.05	1240.29	1240.50	1239.80	1239.67
MW-132d3	1462.16	1241.34	1240.85	1241.71	1241.72	1242.48	1242.01	1241.11	1240.45	1240.44	1240.26	1240.45	1239.82	1239.67
MW-132d4	1462.79	NM	NM	NM	NM	1242.52	1242.07	1241.15	1240.51	1241.07	1240.32	1240.53	1239.85	1239.74
MW-133d3	1461.15	1242.24	Obstructed	Obstructed	Obstructed	1243.15	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
MW-134d3	1460.10	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-135d3	1458.75	NM	NM	NM	NM	1242.38	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
MW-136d3	1450.55	1240.27	Obstructed	NM	1240.41	1241.17	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
MW-201	1422.97	1259.30	NM	1259.86	1259.39	1260.04	1259.36	1258.49	1257.80	1258.12	1257.51	1257.66	1257.01	1257.44
MW-202	1439.10	1261.38	NM	1261.56	1261.29	1261.69	1260.97	1260.55	1263.43	1259.68	1259.03	1259.23	1260.57	1259.60
MW-203	1439.02	1259.82	1259.16	1260.30	1259.79	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-204	1436.20	1261.95	NM	1262.32	1262.01	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-205	1438.65	1259.85	NM	1260.36	1259.82	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-206	1433.51	1259.18	NM	1259.71	1259.19	1260.00	1259.24	1258.18	1257.63	1257.90	1257.19	1257.39	1256.71	1257.03
MW-207s	1437.16	1258.84	1258.20	1259.38	1258.85	NM	NM	NM	NM	NM	NM	NM	NM	NM
MW-207d	1437.35	1259.02	NM	1259.56	1259.03	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-101	1463.41	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-101a	1459.18	1234.2	1232.2	1233.6	1243.0	1243.7	1243.2	1242.3	1241.5	1242.3	1241.5	1241.7	1241.03	1240.83
RW-101b	1450.59	1235.0	1232.6	1233.2	1243.1	1243.8	1243.3	1242.4	1241.7	1242.5	1241.6	1241.9	1242.19	1241.14
RW-102	1397.54	1240.4	1241.9	1242.7	1249.0	1249.8	1249.1	1248.1	1248.8	1248.3	1247.4	1248.6	1247.79	1247.77
RW-103	1443.29	1235.3	Obstructed	Inaccessible	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed	Obstructed
RW-104	1459.25	1234.1	1233.4	1233.7	1252.3	1253.1	1252.9	1251.2	1251.0	1252.1	1251.0	1251.2	1250.42	1250.48
RW-105	1441.72	1242.2	1242.8	1243.0	1253.6	1254.3	1253.8	1252.6	1252.4	1252.9	1251.9	1252.1	1251.37	1251.50
RW-106 (MW-8)	1448.48	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-201	1453.27	NM	Obstructed	Obstructed	Obstructed	NM	NM	NM	NM	NM	NM	NM	NM	NM
RW-202	1454.98	NM	Obstructed	Obstructed	Obstructed	NM	NM	NM	NM	NM	NM	NM	NM	NM

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job No.: **2018100106.01**

Groundwater Elevation Data



Client: **Lambda Energy Resources, LLC**Project: **Hayes 22 CPF**Job #: **2018100106.01****Groundwater Analytical Results**

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-1	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	8.7	2	1.4	5.6	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	1.2	1.6	6.7	4.2	ND<1	1.9	1.5
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	1.5	6.7	53	51	220	120	50	84	52
	XYLENE (µg/L)	280	ND<3	3.2	5.6	22	160	55	430	170	110	260	74
	TOTAL BTEX (µg/L)		0	3.2	7.1	37.4	216.2	109.0	662.3	294.2	160	345.9	127.5
	CHLORIDES (mg/L)	250	ND<10	ND<10	22	17	ND<10	ND<10	ND<10	ND<10	14	14	17
MW-2	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	7.6	ND<1	2.3	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	1.2	68	2.4	3.9	6.5	ND<1	2.3	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	8.1	74	11	110	580	ND<1	140	100	150
	XYLENE (µg/L)	280	ND<3	ND<3	5	110	18	80	1000	ND<3	160	130	110
	TOTAL BTEX (µg/L)		0	0	14.3	252	31.4	193.9	1594.1	0	304.6	230	260
	CHLORIDES (mg/L)	250	53	ND<10	33	49	27	26	15	27	27	19	20
MW-3	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	12	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	12	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	15	19	12	13	ND<10	ND<10	ND<10	17	16	ND<10	ND<10
MW-8	BENZENE (µg/L)	5	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	34	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	NS	NS	ND<3	ND<3	ND<3	ND<3	ND<3	79	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		NS	NS	0	0	0	0	0	113	0	0	0
	CHLORIDES (mg/L)	250	NS	NS	14	30	20	23	33	14	25	ND<10	ND<10
MW-9	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	34	76	52	27	ND<10	12	11	ND<10	14	16	ND<10
MW-10	BENZENE (µg/L)	5	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-11	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	ND<10	ND<10	ND<10	14	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
MW-12	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	18	20	16	15	13	ND<10	13	16	17	ND<10	ND<10
MW-13	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Client: **Lambda Energy Resources, LLC**Project: **Hayes 22 CPF**Job #: **2018100106.01****Groundwater Analytical Results**

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-14	BENZENE (µg/L)	5	MW was	MW was	MW was	MW was	MW was	MW was	MW was	MW was	MW was	MW was	MW was
	TOLUENE (µg/L)	790	abandoned	abandoned	abandoned	abandoned	abandoned	abandoned	abandoned	abandoned	abandoned	abandoned	abandoned
	ETHYLBENZENE (µg/L)	74	in September	in September	in September	in September	in September	in September	in September	in September	in September	in September	in September
	XYLENE (µg/L)	280	of 2014	of 2014	of 2014	of 2014	of 2014	of 2014	of 2014	of 2014	of 2014	of 2014	of 2014
	TOTAL BTEX (µg/L)		--	--	--	--	--	--	--	--	--	--	--
	CHLORIDES (mg/L)	250	--	--	--	--	--	--	--	--	--	--	--
MW-15	BENZENE (µg/L)	5	ND<1	1.5	1.2	1.8	1.8	ND<1	13	ND<1	3.7	3.4	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	1.5	1.2	1.8	1.8	0	13	0	3.7	3.4	0
	CHLORIDES (mg/L)	250	12	ND<10	ND<10	13	ND<10	ND<10	13	ND<10	18	ND<10	ND<10
MW-100s	BENZENE (µg/L)	5	ND<1	1.2	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2.5	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	1.2	0	0	0	0	0	0	0	2.5	0
	CHLORIDES (mg/L)	250	29	29	33	38	41	42	43	46	59	51	58
MW-100d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-101	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	1.2	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	1.2	0	0	0
	CHLORIDES (mg/L)	250	11	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	14	23	16	17
MW-102s	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	7.9	3.7	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	7.9	3.7	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	11	ND<10	ND<10	ND<10	ND<10	ND<10	15	22	25	23	17
MW-102d	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	30	16	15	18	24	ND<10	ND<10	13	17	16	82
MW-103s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-103d	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	ND<10	ND<10	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-104s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

Groundwater Analytical Results

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-104d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-106s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-106d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-107s	BENZENE (µg/L)	5	ND<1	2	ND<1	ND<1	NS	3	4.9	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	8.1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	3.4	3.8	ND<3	NS	ND<3	11	11	ND<3	ND<3	5.5
	TOTAL BTEX (µg/L)		0	5.4	3.8	0	NS	3	15.9	19.1	0	0	5.5
	CHLORIDES (mg/L)	250	ND<10	15	16	ND<10	NS	ND<10	ND<10	18	18	19	14
MW-107d	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	21	25	23	22	19	19	18	24	28	30	21
MW-108s	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	27	29	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-108d	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	19	30	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-109s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-109d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-110s	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	1.9	ND<1	1.4	ND<1	ND<1
	TOLUENE (µg/L)	790	3.7	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	130	55	42	39	10	12	15	2.2	3.6	4.2	ND<1
	XYLENE (µg/L)	280	430	168	120	77	36	13	33	5.7	8.3	8.8	5.9
	TOTAL BTEX (µg/L)		563.7	223	162	116	46	25	49.9	7.9	13.3	13	5.9
	CHLORIDES (mg/L)	250	22	23	18	23	20	17	19	16	37	23	14

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

Groundwater Analytical Results

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-110d	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	1.1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		1.1	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	20	20	17	17	13	13	15	14	20	14	ND<10
MW-111s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-111d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-112s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-112d	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	ND<10	ND<10	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-112d2	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	11	ND<10	ND<10	ND<10	ND<10	ND<10	17	ND<10	25	22	ND<10
MW-112d3 (Monthly results are presented separately)	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	16	21	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-113	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-114s	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	14	18	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-114d	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	53	100	40	19	19	22	6.1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	9.2	12	13	12	ND<3	ND<3	4.3
	TOTAL BTEX (µg/L)		0	0	0	0	62.2	112	53	31	19	22	10.4
	CHLORIDES (mg/L)	250	16	21	22	23	22	21	22	22	30	22	13

Client: **Lambda Energy Resources, LLC**Project: **Hayes 22 CPF**Job #: **2018100106.01****Groundwater Analytical Results**

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-115s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-115d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-116s	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	14	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
MW-116d	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	53	43	34	23	ND<10	14	33	20	18	20	15
MW-117s	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	ND<10	ND<10	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-117d	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	12	36	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-118d	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	12	ND<10	ND<10	ND<10	ND<10	ND<10	18	18	34	26	18
MW-118d2	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	1.1	ND<1	ND<1	ND<1	22	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	30	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	1.1	0	0	0	52	0	0	0
	CHLORIDES (mg/L)	250	ND<10	ND<10	ND<10	15	ND<10	24	26	24	33	26	17
MW-118d3	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	24	39	38	14	29
MW-119s	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

Groundwater Analytical Results

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-119d	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	11	19	12	16	16	16	17	18	22	17	14
MW-120s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-120d	BENZENE (µg/L)	5	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	NS	NS	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		NS	NS	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	NS	NS	ND<10	ND<10	13	ND<10	14	23	28	21	13
MW-121d (Monthly results are presented separately)	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-121d2 (Monthly results are presented separately)	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	1.7	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	NS	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	NS	0	0	0	1.7	0	0	0
	CHLORIDES (mg/L)	250	19	17	14	NS	ND<10	ND<10	ND<10	14	19	17	14
MW-121d3 (Monthly results are presented separately)	BENZENE (µg/L)	5	ND<1	ND<1	1.4	NS	8.9	ND<1	2	ND<1	ND<1	1.6	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	NS	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	1.4	NS	8.9	0	2	0	0	1.6	0
	CHLORIDES (mg/L)	250	ND<10	ND<10	ND<10	NS	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	14
MW-122d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-122d2	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-123s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-123d	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

Groundwater Analytical Results

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-124s	BENZENE (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-125d2 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	NS	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		0	0	0	NS	0	0	0	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	ND<10	NS	ND<10	18	15	20	23	22	17
MW-126d (Monthly results are presented separately)	Benzene (µg/L)	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Toluene (µg/L)	790	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Ethylbenzene (µg/L)	74	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Xylene (µg/L)	280	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Total BTEX (µg/L)		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Chloride (mg/L)	250	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-126d2 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	16	22	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
MW-126d3 (Monthly results are presented separately)	Benzene (µg/L)	5	5.8	ND<1	ND<1	ND<1	ND<1	ND<1	1.2	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		5.8	0	0	0	0	0	1.2	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	14	14	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
MW-127d2 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	23	18	22
MW-128d2 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	NS	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		0	0	0	NS	0	0	0	0	0	0	0
	Chloride (mg/L)	250	12	20	ND<10	NS	ND<10	12	16	18	27	22	ND<10
MW-129d2 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	13	13
MW-130d2 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Toluene (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Ethylbenzene (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Xylene (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Total BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	NS	NS	NS	NS
	Chloride (mg/L)	250	ND<10	ND<10	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-131d2 (Monthly results are presented separately)	Benzene (µg/L)	5	1.9	3.5	1.2	NS	15	1.7	4	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	NS	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		1.9	3.5	1.2	NS	15	1.7	4	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	ND<10	NS	11	ND<10	ND<10	12	21	16	20

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

Groundwater Analytical Results

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
MW-132d2 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	ND<1	4.8	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		0	0	0	0	4.8	0	0	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
MW-132d3 (Monthly results are presented separately)	Benzene (µg/L)	5	2.7	2	ND<1	5.3	17	1.2	2.8	ND<1	1.8	2.2	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		2.7	2	0	5.3	17	1.2	2.8	0	1.8	2.2	0
	Chloride (mg/L)	250	ND<10	ND<10	ND<10	13	13	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
MW-132d4 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	Total BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	Chloride (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10
MW-133d3 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	NS	NS
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	NS	NS
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	NS	NS
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	ND<3	NS	NS	NS	NS
	Total BTEX (µg/L)		0	0	0	0	0	NS	0	NS	NS	NS	NS
	Chloride (mg/L)	250	12	13	ND<10	11	ND<10	NS	ND<10	NS	NS	NS	NS
MW-134d3 (Monthly results are presented separately)	Benzene (µg/L)	5	1.1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	NS	NS
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	NS	NS
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	NS	NS
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	ND<3	NS	NS	NS	NS
	Total BTEX (µg/L)		1.1	0	0	0	0	NS	0	NS	NS	NS	NS
	Chloride (mg/L)	250	14	ND<10	ND<10	ND<10	ND<10	NS	ND<10	NS	NS	NS	NS
MW-135d3 (Monthly results are presented separately)	Benzene (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	NS
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	NS
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	NS
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	ND<3	NS	NS	ND<3	NS
	Total BTEX (µg/L)		0	0	0	0	0	NS	0	NS	NS	0	NS
	Chloride (mg/L)	250	23	ND<10	ND<10	ND<10	ND<10	NS	ND<10	NS	NS	14	NS
MW-136d3 (Monthly results are presented separately)	Benzene (µg/L)	5	5.2	4.9	1.6	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	NS
	Toluene (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	NS
	Ethylbenzene (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	NS
	Xylene (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	ND<3	NS	NS	ND<3	NS
	Total BTEX (µg/L)		5.2	4.9	1.6	0	0	NS	0	NS	NS	0	NS
	Chloride (mg/L)	250	24	17	24	19	36	NS	32	NS	NS	22	NS
RW-2	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	16	22	13	13	29	25	32	29	19	34	ND<10
RW-3	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	2	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	2	0
	CHLORIDES (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	ND<10	18	ND<10	12
RW-4	BENZENE (µg/L)	5	ND<1	ND<1	NS	NS	NS	NS	NS	ND<1	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	NS	NS	NS	NS	NS	ND<1	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	NS	NS	NS	NS	NS	ND<1	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	NS	NS	NS	NS	NS	ND<3	NS	NS	NS
	TOTAL BTEX (µg/L)		0	0	NS	NS	NS	NS	NS	0	NS	NS	NS
	CHLORIDES (mg/L)	250	12	ND<10	NS	NS	NS	NS	NS	20	NS	NS	NS

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

Groundwater Analytical Results

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
RW-5	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	16	ND<10	22	22	15	ND<10	ND<10	23	42	21	16
RW-6	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	0	0	0	0	0	0
	CHLORIDES (mg/L)	250	ND<10	ND<10	11	ND<10	ND<10	ND<10	ND<10	ND<10	19	ND<10	16
RW-101 (Combined Flow (In Building))	BENZENE (µg/L)	5	ND<1	NS	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	NS	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	NS	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	NS	ND<3	ND<3	ND<3	ND<3	NS	NS	NS	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	NS	0	0	0	0	NS	NS	NS	0	0
	CHLORIDES (mg/L)	250	10	NS	ND<10	ND<10	ND<10	ND<10	NS	NS	NS	13	ND<10
RW-101a (Pumping Well) (At Wellhead)	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	ND<3	ND<3	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	NS	0	0	0	0	0
	CHLORIDES (mg/L)	250	14	ND<10	11	ND<10	ND<10	NS	ND<10	ND<10	20	18	16
RW-101b (Pumping Well) (At Wellhead)	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	ND<1	ND<1	ND<1	NS
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	ND<3	ND<3	ND<3	ND<3	NS
	TOTAL BTEX (µg/L)		0	0	0	0	0	NS	0	0	0	0	NS
	CHLORIDES (mg/L)	250	ND<10	ND<10	ND<10	ND<10	ND<10	NS	ND<10	ND<10	29	17	NS
RW-102 (Pumping Well) (In Building)	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	ND<1	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	ND<1	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	ND<1	ND<1	ND<1
	XYLENE (µg/L)	280	3.8	ND<3	ND<3	ND<3	ND<3	NS	NS	NS	ND<3	ND<3	ND<3
	TOTAL BTEX (µg/L)		3.8	0	0	0	0	NS	NS	NS	0	0	0
	CHLORIDES (mg/L)	250	24	26	20	20	19	NS	NS	NS	20	20	16
RW-103 (Pumping Well) (In Building)	BENZENE (µg/L)	5	19	22	23	19	20	16	NS	NS	NS	20	12
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	15	23	24	22	18	15	NS	NS	NS	22	18
	XYLENE (µg/L)	280	15	20	17	16	17	14	NS	NS	NS	28	13
	TOTAL BTEX (µg/L)		49	65	64	57	55	45	NS	NS	NS	70	43
	CHLORIDES (mg/L)	250	20	21	17	17	18	20	NS	NS	NS	18	17
RW-104 (Pumping Well) (In Building)	BENZENE (µg/L)	5	7.7	5	5.9	6.5	5	5.9	NS	NS	NS	NS	2.5
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	NS	ND<1
	ETHYLBENZENE (µg/L)	74	43	31	37	30	19	21	NS	NS	NS	NS	45
	XYLENE (µg/L)	280	46	35	44	33	36	34	NS	NS	NS	NS	32
	TOTAL BTEX (µg/L)		96.7	71	86.9	69.5	60	60.9	NS	NS	NS	NS	79.5
	CHLORIDES (mg/L)	250	30	32	34	31	31	33	NS	NS	NS	NS	18
RW-105 (Pumping Well) (In Building)	BENZENE (µg/L)	5	12	2.2	22	28	26	16	NS	NS	NS	13	10
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	5.4	101	6.8	NS	NS	NS	4.4	7.9
	ETHYLBENZENE (µg/L)	74	26	17	21	24	46	36	NS	NS	NS	52	48
	XYLENE (µg/L)	280	62	25	42	39	73	76	NS	NS	NS	86	51
	TOTAL BTEX (µg/L)		100	44.2	85	96.4	246	134.8	NS	NS	NS	155.4	116.9
	CHLORIDES (mg/L)	250	21	24	19	17	17	19	NS	NS	NS	13	ND<10
RW-106 (Formerly MW-8) (In Building)	BENZENE (µg/L)	5	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	NS
	TOLUENE (µg/L)	790	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	ND<1	NS
	ETHYLBENZENE (µg/L)	74	NS	NS	ND<1	ND<1	ND<1	ND<1	ND<1	34	ND<1	ND<1	NS
	XYLENE (µg/L)	280	NS	NS	ND<3	ND<3	ND<3	ND<3	ND<3	79	ND<3	ND<3	NS
	TOTAL BTEX (µg/L)		NS	NS	0	0	0	0	0	113	0	0	NS
	CHLORIDES (mg/L)	250	NS	NS	14	30	20	23	33	14	25	ND<10	NS

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

Groundwater Analytical Results

(BTEX in µg/L, Cl in mg/L)

Location	CONSTITUENTS	201Criteria	SA-2 2019	SA-1 2020	SA-2 2020	SA-1 2021	SA-2 2021	SA-1 2022	SA-2 2022	SA-1 2023	SA-2 2023	SA-1 2024	SA-2 2024
RW-107 (Pumping Well) (In Building)	BENZENE (µg/L)	5	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown
	TOLUENE (µg/L)	790	due to	due to	due to	due to	due to	due to	due to	due to	due to	due to	due to
	ETHYLBENZENE (µg/L)	74	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE
	XYLENE (µg/L)	280	System	System	System	System	System	System	System	System	System	System	System
	TOTAL BTEX (µg/L)		Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation
	CHLORIDES (mg/L)	250					--	--	--	--	--	--	--
RW-108 (Pumping Well) (In Building)	BENZENE (µg/L)	5	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown
	TOLUENE (µg/L)	790	due to	due to	due to	due to	due to	due to	due to	due to	due to	due to	due to
	ETHYLBENZENE (µg/L)	74	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE
	XYLENE (µg/L)	280	System	System	System	System	System	System	System	System	System	System	System
	TOTAL BTEX (µg/L)		Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation
	CHLORIDES (mg/L)	250					--	--	--	--	--	--	--
RW-109 (Pumping Well) (In Building)	BENZENE (µg/L)	5	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown	Shutdown
	TOLUENE (µg/L)	790	due to	due to	due to	due to	due to	due to	due to	due to	due to	due to	due to
	ETHYLBENZENE (µg/L)	74	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE	AS/SVE
	XYLENE (µg/L)	280	System	System	System	System	System	System	System	System	System	System	System
	TOTAL BTEX (µg/L)		Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation	Operation
	CHLORIDES (mg/L)	250					--	--	--	--	--	--	--
RW-201 (Pumping Well) (At Wellhead)	BENZENE (µg/L)	5	1.8	1.9	ND<1	ND<1	1.6	NS	NS	NS	NS	NS	NS
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	NS	NS	NS
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	NS	NS	NS	NS	NS
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	NS	NS	NS	NS	NS
	TOTAL BTEX (µg/L)		1.8	1.9	0	0	1.6	NS	NS	NS	NS	NS	NS
	CHLORIDES (mg/L)	250	21	15	17	17	15	NS	NS	NS	NS	NS	NS
RW-202 (Pumping Well) (At Wellhead)	BENZENE (µg/L)	5	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	ND<1
	TOLUENE (µg/L)	790	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	ND<1
	ETHYLBENZENE (µg/L)	74	ND<1	ND<1	ND<1	ND<1	ND<1	NS	ND<1	NS	NS	ND<1	ND<1
	XYLENE (µg/L)	280	ND<3	ND<3	ND<3	ND<3	ND<3	NS	ND<3	NS	NS	ND<3	ND<3
	TOTAL BTEX (µg/L)		0	0	0	0	0	NS	0	NS	NS	0	0
	CHLORIDES (mg/L)	250	13	ND<10	16	10	ND<10	NS	ND<10	NS	NS	ND<10	ND<10

Note: The Q-4 2017 result for MW-134d3 was collected in October 2017.

Note: The Q-2 2017 result for MW-134d3 was collected in April 2017.

Client: Lambda Energy Resources, LLC
 Project: Hayes 22 CPF
 Job #: 2018100106.01

MW-133d3
GROUNDWATER ANALYTICAL RESULTS
 (BTEX results in µg/L, Chloride results in mg/L)

CONSTITUENT	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL- BENZENE (µg/L)	XYLENE (µg/L)	TOTAL BTEX (µg/L)	CHLORIDES (mg/L)	COMMENTS
PART 201 CRITERIA	5	790	74	280	---	250	
07/26/17	ND<1	ND<1	ND<1	ND<3	0	19.4	
08/28/17	ND<1	ND<1	ND<1	ND<3	0	19.1	Plus-Four Results = All ND
09/25/17	ND<1	ND<1	ND<1	ND<3	0	22.4	Plus-Four Results = All ND
10/26/17	ND<1	ND<1	ND<1	ND<3	0	25.1	Plus-Four Results = All ND
11/28/17	ND<1	ND<1	ND<1	ND<3	0	18.4	Plus-Four Results = All ND
04/20/18	ND<1	ND<1	ND<1	ND<3	0	27.6	Plus-Four Results = All ND
05/25/18	ND<1	ND<1	ND<1	ND<3	0	19	Plus-Four Results = All ND
06/22/18	ND<1	ND<1	ND<1	ND<3	0	22.6	Plus-Four Results = All ND
07/31/18	ND<1	ND<1	ND<1	ND<3	0	17	
08/27/18	ND<1	ND<1	ND<1	ND<3	0	18.5	
09/28/18	ND<1	ND<1	ND<1	ND<3	0	16.7	
10/29/18	ND<1	ND<1	ND<1	ND<3	0	13.2	Plus-Four Results = All ND
11/30/18	ND<1	ND<1	ND<1	ND<3	0	13.1	
12/17/18	ND<1	ND<1	ND<1	ND<3	0	13	
01/25/19	ND<1	ND<1	ND<1	ND<3	0	12	
02/15/19	ND<1	ND<1	ND<1	ND<3	0	12	
03/12/19	ND<1	ND<1	ND<1	ND<3	0	12	
04/19/19	ND<1	ND<1	ND<1	ND<3	0	12	
05/17/19	ND<1	ND<1	ND<1	ND<3	0	14	
06/21/19	ND<1	ND<1	ND<1	ND<3	0	20	
07/26/19	ND<1	ND<1	ND<1	ND<3	0	16	
08/14/19	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/30/19	ND<1	ND<1	ND<1	ND<3	0	12	
10/30/19	ND<1	ND<1	ND<1	ND<3	0	20	
12/06/19	ND<1	ND<1	ND<1	ND<3	0	15	
12/23/19	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/20/20	ND<1	ND<1	ND<1	ND<3	0	30	
02/20/20	ND<1	ND<1	ND<1	ND<3	0	24	
03/13/20	ND<1	ND<1	ND<1	ND<3	0	13	
04/27/20	ND<1	ND<1	ND<1	ND<3	0	13	
05/18/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/23/20	1.1	ND<1	ND<1	ND<3	1.1	ND<10	
07/30/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/20/20	1.1	ND<1	ND<1	ND<3	1.1	ND<10	
09/24/20	ND<1	ND<1	ND<1	ND<3	0	10	
10/19/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/24/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	Plus-Four Results = All ND
12/21/20	ND<1	ND<1	ND<1	ND<3	0	13	
01/25/21	ND<1	ND<1	ND<1	ND<3	0	12	
02/23/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/22/21	ND<1	ND<1	ND<1	ND<3	0	11	
04/28/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/16/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/27/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/30/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/23/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/16/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/26/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/25/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/25/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/24/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/26/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/22/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/22	ND<1	ND<1	ND<1	ND<3	0	16	
11/22/22	ND<1	ND<1	ND<1	ND<3	0	12	
12/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/27/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/23/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/28/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/19/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/25/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/23/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/27/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/23/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/22/23	ND<1	ND<1	ND<1	ND<3	0	12	

Client: Lambda Energy Resources, LLC
 Project: Hayes 22 CPF
 Job #: 2018100106.01

MW-134d3
GROUNDWATER ANALYTICAL RESULTS
 (BTEX results in µg/L, Chloride results in mg/L)

CONSTITUENT	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL- BENZENE (µg/L)	XYLENE (µg/L)	TOTAL BTEX (µg/L)	CHLORIDES (mg/L)	COMMENTS
PART 201 CRITERIA	5	790	74	280	---	250	
09/25/17	4	ND<1	ND<1	ND<3	4	23.4	Plus-Four Results = All ND
10/26/17	3	ND<1	ND<1	ND<3	3	24	Plus-Four Results = All ND
02/23/18	17	ND<1	ND<1	ND<3	17	10.7	Plus-Four Results = All ND
03/12/18	6	ND<1	ND<1	ND<3	6	17.3	Plus-Four Results = All ND
04/20/18	2	ND<1	ND<1	ND<3	2	16.6	Plus-Four Results = All ND
05/25/18	3	ND<1	ND<1	ND<3	3	14.6	Plus-Four Results = All ND
10/29/18	4.9	ND<1	ND<1	ND<3	4.9	14.9	Plus-Four Results = All ND
11/30/18	1.3	ND<1	ND<1	ND<3	1.3	13.4	
12/17/18	2.1	1.1	ND<1	ND<3	3.2	14.1	
01/25/19	1	ND<1	ND<1	ND<3	1	14	
02/15/19	1.3	ND<1	ND<1	ND<3	1.3	14	
03/12/19	ND<1	ND<1	ND<1	ND<1	0	15	
04/19/19	1.5	ND<1	ND<1	ND<1	1.5	16	
05/17/19	2	ND<1	ND<1	ND<1	2	12	
06/21/19	ND<1	ND<1	ND<1	ND<1	0	16	
07/26/19	1.6	ND<1	ND<1	ND<1	1.6	12	
08/14/19	1.9	ND<1	ND<1	ND<1	1.9	19	
09/30/19	1.1	ND<1	ND<1	ND<1	1.1	14	
10/30/19	ND<1	ND<1	ND<1	ND<1	0	13	
12/06/19	1.7	ND<1	ND<1	ND<1	1.7	ND<10	
12/23/19	ND<1	ND<1	ND<1	ND<1	0	ND<10	
01/20/20	ND<1	ND<1	ND<1	ND<1	0	ND<10	
02/20/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/13/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/27/20	2.6	ND<1	ND<1	ND<3	2.6	ND<10	
05/18/20	1.1	ND<1	ND<1	ND<3	1.1	ND<10	
06/23/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/30/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/20/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/24/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/19/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/24/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	Plus-Four Results = All ND
12/21/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/25/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/23/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/22/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/28/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/16/21	2.1	ND<1	ND<1	ND<3	2.1	ND<10	
07/27/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/30/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/21	ND<1	ND<1	ND<1	ND<3	0	19	
11/23/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/16/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/26/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/28/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/25/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/25/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/24/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/26/22	ND<1	ND<1	ND<1	ND<3	0	12	
09/22/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/22	ND<1	ND<1	ND<1	ND<3	0	16	
11/22/22	ND<1	ND<1	ND<1	ND<3	0	14	
12/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/27/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/24/23	ND<1	ND<1	ND<1	ND<3	0	13	
03/28/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/19/23	ND<1	ND<1	ND<1	ND<3	0	17	
05/25/23	ND<1	ND<1	ND<1	ND<3	0	14	
06/23/23	ND<1	ND<1	ND<1	ND<3	0	14	
07/27/23	ND<1	ND<1	ND<1	ND<3	0	13	
09/22/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/24/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/16/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/22/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/29/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/26/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/22/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/24/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	

Client: Lambda Energy Resources, LLC
 Project: Hayes 22 CPF
 Job #: 2018100106.01

MW-135d3
GROUNDWATER ANALYTICAL RESULTS
 (BTEX results in µg/L, Chloride results in mg/L)

CONSTITUENT	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL- BENZENE (µg/L)	XYLENE (µg/L)	TOTAL BTEX (µg/L)	CHLORIDES (mg/L)	COMMENTS
PART 201 CRITERIA	5	790	74	280	---	250	
12/19/17	ND<1	ND<1	ND<1	ND<3	0	5.3	Plus-Four Results = All ND
01/30/18	ND<1	ND<1	ND<1	ND<3	0	4.9	Plus-Four Results = All ND
02/23/18	ND<1	ND<1	ND<1	ND<3	0	4.4	Plus-Four Results = All ND
03/12/18	ND<1	ND<1	ND<1	ND<3	0	4.1	Plus-Four Results = All ND
04/20/18	ND<1	ND<1	ND<1	ND<3	0	4.8	Plus-Four Results = All ND
05/25/18	ND<1	ND<1	ND<1	ND<3	0	5.2	Plus-Four Results = All ND
06/22/18	ND<1	ND<1	ND<1	ND<3	0	7	Plus-Four Results = All ND
07/31/18	ND<1	ND<1	ND<1	ND<3	0	5.7	
08/27/18	ND<1	ND<1	ND<1	ND<3	0	6.5	
09/28/18	ND<1	ND<1	ND<1	ND<3	0	7.1	
10/25/18	ND<1	ND<1	ND<1	ND<3	0	7.4	Plus-Four Results = All ND
11/30/18	ND<1	ND<1	ND<1	ND<3	0	6.3	
12/17/18	ND<1	ND<1	ND<1	ND<3	0	6.8	
01/25/19	ND<1	ND<1	ND<1	ND<3	0	6.2	
02/15/19	ND<1	ND<1	ND<1	ND<3	0	5.6	
03/12/19	ND<1	ND<1	ND<1	ND<3	0	6.1	
04/19/19	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/17/19	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/21/19	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/26/19	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/14/19	ND<1	ND<1	ND<1	ND<3	0	16	
10/11/19	ND<1	ND<1	ND<1	ND<3	0	23	
10/30/19	ND<1	ND<1	ND<1	ND<3	0	15	
12/06/19	ND<1	ND<1	ND<1	ND<3	0	23	
12/23/19	ND<1	18	ND<1	ND<3	18	ND<10	
01/20/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/20/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/13/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/27/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/18/20	ND<1	1.8	ND<1	ND<3	1.8	ND<10	
06/23/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/30/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/20/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/24/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/19/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/24/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	Plus-Four Results = All ND
12/21/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/25/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/23/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/22/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/28/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/16/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/27/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/30/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/21	ND<1	ND<1	ND<1	ND<3	0	13	
11/23/21	ND<1	ND<1	ND<1	ND<3	0	16	
12/16/21	ND<1	ND<1	ND<1	ND<3	0	15	
01/26/22	ND<1	ND<1	ND<1	ND<3	0	13	
02/28/22	ND<1	ND<1	ND<1	ND<3	0	14	
03/25/22	ND<1	ND<1	ND<1	ND<3	0	16	
04/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/25/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/24/22	ND<1	ND<1	ND<1	ND<3	0	14	
07/29/22	ND<1	ND<1	ND<1	ND<3	0	15	
08/26/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/22/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/22/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/27/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/24/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/28/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/19/23	ND<1	ND<1	ND<1	ND<3	0	17	
05/25/23	ND<1	ND<1	ND<1	ND<3	0	15	
06/23/23	ND<1	ND<1	ND<1	ND<3	0	13	
07/27/23	ND<1	ND<1	ND<1	ND<3	0	14	
08/23/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/22/23	ND<1	ND<1	ND<1	ND<3	0	14	
10/24/23	ND<1	ND<1	ND<1	ND<3	0	14	
11/16/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/22/23	ND<1	ND<1	ND<1	ND<3	0	24	
01/29/24	ND<1	ND<1	ND<1	ND<3	0	14	
02/28/24	ND<1	ND<1	ND<1	ND<3	0	14	
03/21/24	ND<1	ND<1	ND<1	ND<3	0	14	
04/26/24	ND<1	ND<1	ND<1	ND<3	0	15	
05/22/24	ND<1	ND<1	ND<1	ND<3	0	16	
06/20/24	ND<1	ND<1	ND<1	ND<3	0	13	
08/30/24	ND<1	ND<1	ND<1	ND<3	0	15	
09/24/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	

Client: Lambda Energy Resources, LLC
 Project: Hayes 22 CPF
 Job #: 2018100106.01

MW-136d3
GROUNDWATER ANALYTICAL RESULTS
 (BTEX results in µg/L, Chloride results in mg/L)

CONSTITUENT	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL- BENZENE (µg/L)	XYLENE (µg/L)	TOTAL BTEX (µg/L)	CHLORIDES (mg/L)	COMMENTS
PART 201 CRITERIA	5	790	74	280	---	250	
07/26/17	ND<1	ND<1	ND<1	ND<3	0	9.4	
08/29/17	ND<1	ND<1	ND<1	ND<3	0	11.6	Plus-Four Results = All ND
09/25/17	ND<1	ND<1	ND<1	ND<3	0	16.6	Plus-Four Results = All ND
02/23/18	ND<1	ND<1	ND<1	ND<3	0	13	Plus-Four Results = All ND
03/12/18	ND<1	ND<1	ND<1	ND<3	0	13.5	Plus-Four Results = All ND
04/20/18	ND<1	ND<1	ND<1	ND<3	0	11.5	Plus-Four Results = All ND
05/25/18	ND<1	ND<1	ND<1	ND<3	0	10.7	Plus-Four Results = All ND
06/22/18	ND<1	ND<1	ND<1	ND<3	0	15.1	Plus-Four Results = All ND
07/31/18	ND<1	ND<1	ND<1	ND<3	0	14.4	
08/27/18	ND<1	ND<1	ND<1	ND<3	0	16	
09/28/18	ND<1	ND<1	ND<1	ND<3	0	17.8	
10/29/18	ND<1	ND<1	ND<1	ND<3	0	12.4	Plus-Four Results = All ND
11/30/18	ND<1	ND<1	ND<1	ND<3	0	17.3	
12/17/18	ND<1	ND<1	ND<1	ND<3	0	12.3	
01/25/19	ND<1	ND<1	ND<1	ND<3	0	10	
02/15/19	ND<1	ND<1	ND<1	ND<3	0	10	
03/12/19	ND<1	ND<1	ND<1	ND<3	0	10	
04/19/19	3	ND<1	ND<1	ND<3	3	13	
05/10/19	6.6	ND<1	ND<1	ND<3	6.6	NS	Re-sample (BTEX only)
05/17/19	5.8	ND<1	ND<1	ND<3	5.8	17	
06/21/19	6.9	ND<1	ND<1	ND<3	6.9	24	
07/26/19	6	ND<1	ND<1	ND<3	6	21	
09/30/19	5.2	ND<1	ND<1	ND<3	5.2	24	
12/06/19	6.7	ND<1	ND<1	ND<3	6.7	ND<10	
12/23/19	5.3	ND<1	ND<1	ND<3	5.3	13	
01/20/20	5.8	ND<1	ND<1	ND<3	5.8	33	
02/20/20	3.8	ND<1	ND<1	ND<3	3.8	28	
03/13/20	4.9	ND<1	ND<1	ND<3	4.9	17	
04/27/20	21	ND<1	ND<1	ND<3	21	16	
05/06/20	9.2	ND<1	ND<1	ND<3	9.2	NS	Re-sampled BTEX+4 only, Plus-Four Results = All ND
05/18/20	3.6	ND<1	ND<1	ND<3	3.6	20	
06/23/20	4	ND<1	ND<1	ND<3	4	18	
07/30/20	2.5	ND<1	ND<1	ND<3	2.5	18	
08/20/20	2.7	ND<1	ND<1	ND<3	2.7	22	
09/24/20	2.2	ND<1	ND<1	ND<3	2.2	20	
10/19/20	1.6	ND<1	ND<1	ND<3	1.6	24	
11/24/20	ND<1	ND<1	ND<1	ND<3	0	21	Plus-Four Results = All ND
12/21/20	ND<1	ND<1	ND<1	ND<3	0	15	
01/25/21	ND<1	ND<1	ND<1	ND<3	0	20	
02/23/21	ND<1	ND<1	ND<1	ND<3	0	20	
03/22/21	ND<1	ND<1	ND<1	ND<3	0	19	
04/28/21	ND<1	ND<1	ND<1	ND<3	0	21	
05/26/21	ND<1	ND<1	ND<1	ND<3	0	29	
06/16/21	ND<1	ND<1	ND<1	5.4	5.4	29	
07/27/21	ND<1	ND<1	ND<1	ND<3	0	36	
08/26/21	ND<1	ND<1	ND<1	ND<3	0	31	
09/30/21	ND<1	ND<1	ND<1	ND<3	0	36	
10/28/21	ND<1	ND<1	ND<1	ND<3	0	39	
11/23/21	ND<1	ND<1	ND<1	ND<3	0	41	
12/16/21	ND<1	ND<1	ND<1	ND<3	0	39	
01/26/22	ND<1	ND<1	ND<1	ND<3	0	31	
02/28/22	ND<1	ND<1	ND<1	ND<3	0	28	
03/25/22	ND<1	ND<1	ND<1	ND<3	0	33	
04/29/22	ND<1	ND<1	ND<1	ND<3	0	28	
05/25/22	ND<1	ND<1	ND<1	ND<3	0	34	
06/24/22	ND<1	ND<1	ND<1	ND<3	0	43	
07/29/22	ND<1	ND<1	ND<1	ND<3	0	41	
08/26/22	ND<1	ND<1	ND<1	ND<3	0	34	
09/23/22	ND<1	ND<1	ND<1	ND<3	0	32	
10/28/22	ND<1	ND<1	ND<1	ND<3	0	36	
11/22/22	ND<1	ND<1	ND<1	ND<3	0	26	
01/27/23	ND<1	ND<1	ND<1	ND<3	0	12	
02/24/23	ND<1	ND<1	ND<1	ND<3	0	16	
03/28/23	ND<1	ND<1	ND<1	ND<3	0	22	
04/19/23	ND<1	ND<1	ND<1	ND<3	0	25	
05/25/23	ND<1	ND<1	ND<1	ND<3	0	18	
06/23/23	ND<1	ND<1	ND<1	ND<3	0	19	
07/27/23	ND<1	ND<1	ND<1	ND<3	0	15	
08/23/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/22/23	ND<1	ND<1	ND<1	ND<3	0	13	
10/24/23	ND<1	ND<1	ND<1	ND<3	0	19	
11/16/23	ND<1	ND<1	ND<1	ND<3	0	18	
12/22/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/29/24	ND<1	ND<1	ND<1	ND<3	0	24	
02/28/24	ND<1	ND<1	ND<1	ND<3	0	24	
03/21/24	ND<1	ND<1	ND<1	ND<3	0	22	
04/26/24	ND<1	ND<1	ND<1	ND<3	0	20	
05/22/24	ND<1	ND<1	ND<1	ND<3	0	16	
06/20/24	ND<1	ND<1	ND<1	ND<3	0	15	
08/30/24	ND<1	ND<1	ND<1	ND<3	0	14	
09/24/24	ND<1	ND<1	ND<1	ND<3	0	16	

Client: **Lambda Energy Resources, LLC**
 Project: **Hayes 22 CPF**
 Job #: **2018100106.01**

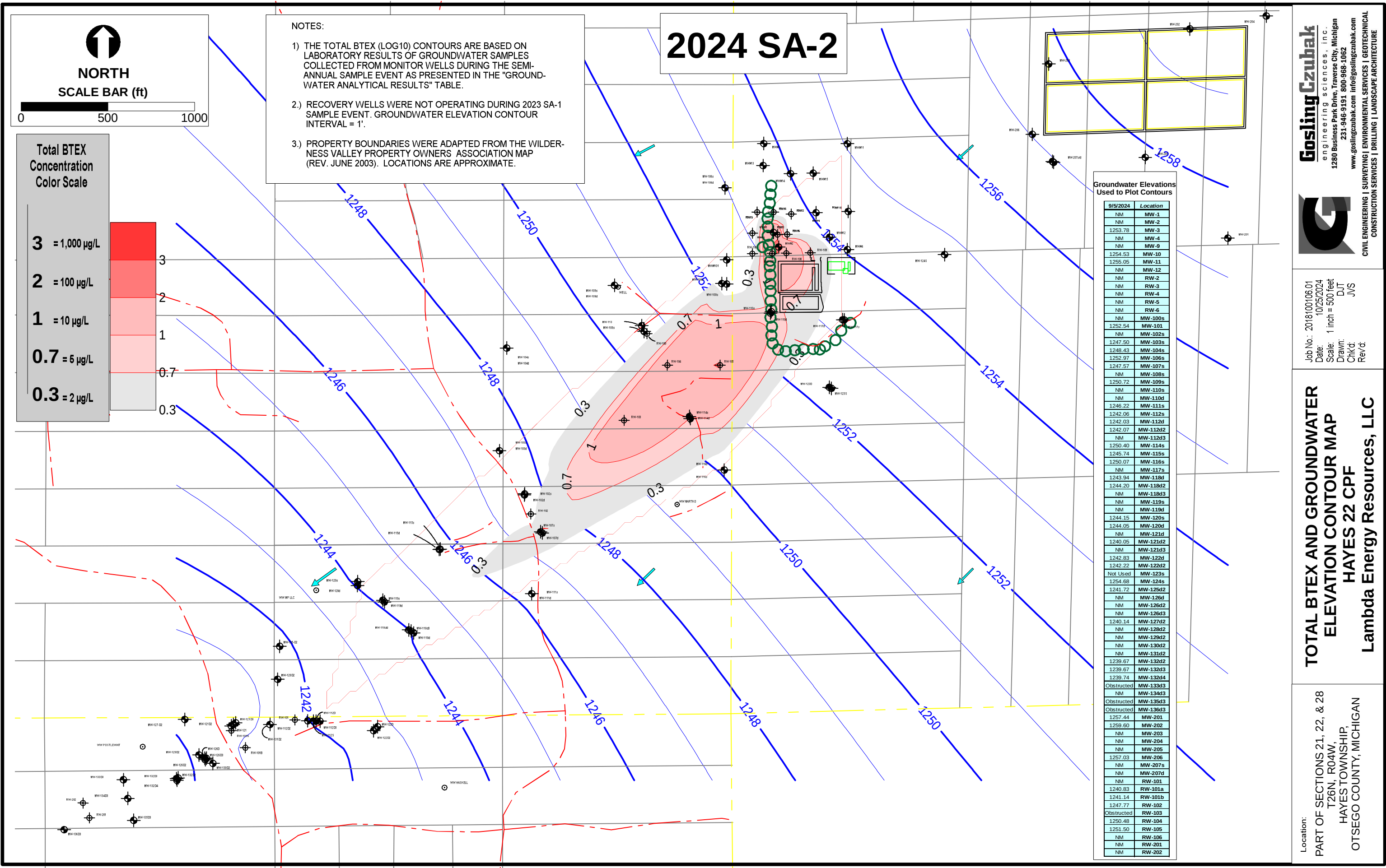
RW-201
GROUNDWATER ANALYTICAL RESULTS
 (BTEX results in µg/L, Chloride results in mg/L)

CONSTITUENT	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL- BENZENE (µg/L)	XYLENE (µg/L)	TOTAL BTEX (µg/L)	CHLORIDES (mg/L)	COMMENTS
PART 201 CRITERIA	5	790	74	280	---	250	
04/20/17	2	ND<1	ND<1	ND<3	2	19.4	
05/22/17	2	ND<1	ND<1	ND<3	2	16.4	
06/23/17	4	ND<1	ND<1	ND<3	4	15.7	
11/28/17	3	ND<1	ND<1	ND<3	3	19.8	Plus-Four Results = All ND
12/19/17	2	ND<1	ND<1	ND<3	2	20.7	Plus-Four Results = All ND
01/30/18	3	ND<1	ND<1	ND<3	3	22	Plus-Four Results = All ND
02/23/18	1	ND<1	ND<1	ND<3	1	21.7	Plus-Four Results = All ND
03/12/18	2	ND<1	ND<1	ND<3	2	21.8	Plus-Four Results = All ND
04/20/18	ND<1	ND<1	ND<1	ND<3	0	21.7	Plus-Four Results = All ND
05/25/18	2	ND<1	ND<1	ND<3	2	20.2	Plus-Four Results = All ND
06/22/18	1.8	ND<1	ND<1	ND<3	1.8	25.3	Plus-Four Results = All ND
07/31/18	1.7	ND<1	ND<1	ND<3	1.7	23.1	
08/27/18	1.4	ND<1	ND<1	ND<3	1.4	27.3	
09/28/18	ND<1	ND<1	ND<1	ND<3	0	27.4	
10/29/18	3.5	ND<1	ND<1	ND<3	3.5	21.5	Plus-Four Results = All ND
11/30/18	ND<1	ND<1	ND<1	ND<3	0	21.4	
12/17/18	1.4	ND<1	ND<1	ND<3	1.4	21.1	
01/25/19	ND<1	ND<1	ND<1	ND<3	0	19	
02/15/19	1.3	ND<1	ND<1	ND<3	1.3	21	
03/12/19	1	ND<1	ND<1	ND<3	1	19	
04/19/19	2	ND<1	ND<1	ND<3	2	20	
05/17/19	1.8	ND<1	ND<1	ND<3	1.8	19	
06/21/19	1.8	ND<1	ND<1	ND<3	1.8	24	
07/26/19	1.1	ND<1	ND<1	ND<3	1.1	21	
08/14/19	1.7	ND<1	ND<1	ND<3	1.7	23	
09/30/19	1.8	ND<1	ND<1	ND<3	1.8	21	
10/30/19	3.2	ND<1	ND<1	ND<3	3.2	25	
12/06/19	3.3	ND<1	ND<1	ND<3	3.3	22	
12/23/19	2.9	ND<1	ND<1	ND<3	2.9	ND<10	
01/20/20	3.4	ND<1	ND<1	ND<3	3.4	26	
02/20/20	1.7	ND<1	ND<1	ND<3	1.7	22	
03/13/20	1.7	ND<1	ND<1	ND<3	1.7	15	
04/27/20	1.3	ND<1	ND<1	ND<3	1.3	16	
05/18/20	ND<1	ND<1	ND<1	ND<3	0	17	
06/23/20	ND<1	ND<1	ND<1	ND<3	0	17	
07/30/20	ND<1	ND<1	ND<1	ND<3	0	16	
08/20/20	ND<1	ND<1	ND<1	ND<3	0	16	
09/24/20	ND<1	ND<1	ND<1	ND<3	0	17	
10/19/20	ND<1	ND<1	ND<1	ND<3	0	17	
11/24/20	ND<1	ND<1	ND<1	ND<3	0	17	Plus-Four Results = All ND
12/21/20	ND<1	ND<1	ND<1	ND<3	0	16	
01/25/21	ND<1	ND<1	ND<1	ND<3	0	15	
02/23/21	ND<1	ND<1	ND<1	ND<3	0	16	
03/22/21	ND<1	ND<1	ND<1	ND<3	0	17	
04/28/21	ND<1	ND<1	ND<1	ND<3	0	23	
05/26/21	ND<1	ND<1	ND<1	ND<3	0	26	
06/16/21	2.6	ND<1	ND<1	ND<3	2.6	17	
07/27/21	ND<1	ND<1	ND<1	ND<3	0	16	
08/26/21	ND<1	ND<1	ND<1	ND<3	0	12	
09/30/21	1.6	ND<1	ND<1	ND<3	1.6	15	
10/28/21	ND<1	ND<1	ND<1	ND<3	0	23	
11/23/21	ND<1	ND<1	ND<1	ND<3	0	18	
12/16/21	ND<1	ND<1	ND<1	ND<3	0	18	
01/26/22	ND<1	ND<1	ND<1	ND<3	0	16	
02/28/22	ND<1	ND<1	ND<1	ND<3	0	15	
03/25/22	ND<1	ND<1	ND<1	ND<3	0	14	
05/25/22	ND<1	ND<1	ND<1	ND<3	0	14	
06/24/22	ND<1	ND<1	ND<1	ND<3	0	20	
07/29/22	ND<1	ND<1	ND<1	ND<3	0	19	

Client: Lambda Energy Resources, LLC
 Project: Hayes 22 CPF
 Job #: 2018100106.01

RW-202
GROUNDWATER ANALYTICAL RESULTS
 (BTEX results in µg/L, Chloride results in mg/L)

CONSTITUENT	BENZENE (µg/L)	TOLUENE (µg/L)	ETHYL- BENZENE (µg/L)	XYLENE (µg/L)	TOTAL BTEX (µg/L)	CHLORIDES (mg/L)	COMMENTS
PART 201 CRITERIA	5	790	74	280	---	250	
05/22/17	ND<1	ND<1	ND<1	ND<3	0	7.2	
06/23/17	10	ND<1	ND<1	ND<3	10	12.7	
07/26/17	7	ND<1	ND<1	ND<3	7	11.6	
12/19/17	7	ND<1	ND<1	ND<3	7	19.7	Plus-Four Results = All ND
01/30/18	13	ND<1	ND<1	ND<3	13	21.1	Plus-Four Results = All ND
02/23/18	6	ND<1	ND<1	ND<3	6	21.6	Plus-Four Results = All ND
03/12/18	7	ND<1	ND<1	ND<3	7	23	Plus-Four Results = All ND
04/20/18	4	ND<1	ND<1	ND<3	4	24.4	Plus-Four Results = All ND
05/25/18	3	ND<1	ND<1	ND<3	3	23.1	Plus-Four Results = All ND
06/22/18	7.5	ND<1	ND<1	ND<3	7.5	26.9	Plus-Four Results = All ND
07/30/18	6.6	ND<1	ND<1	ND<3	6.6	24.4	
08/27/18	11	ND<1	ND<1	ND<3	11	26.2	
09/28/18	13	ND<1	ND<1	ND<3	13	25.6	
10/29/18	27	ND<1	ND<1	ND<3	27	21.5	Plus-Four Results = All ND
11/30/18	14	ND<1	ND<1	ND<3	14	16.2	
12/17/18	7.9	ND<1	ND<1	ND<3	7.9	17.5	
01/25/19	2.9	ND<1	ND<1	ND<3	2.9	16	
02/15/19	2.9	ND<1	ND<1	ND<3	2.9	17	
03/12/19	3.4	ND<1	ND<1	ND<3	3.4	17	
04/19/19	2.5	ND<1	ND<1	ND<3	2.5	16	
05/17/19	1.7	ND<1	ND<1	ND<3	1.7	13	
06/21/19	3.9	ND<1	ND<1	ND<3	3.9	16	
07/26/19	3.7	ND<1	ND<1	ND<3	3.7	ND<10	
08/14/19	2.1	ND<1	ND<1	ND<3	2.1	13	
09/30/19	ND<1	ND<1	ND<1	ND<3	0	13	
10/30/19	ND<1	ND<1	ND<1	ND<3	0	20	
12/06/19	ND<1	ND<1	ND<1	ND<3	0	15	
12/23/19	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/20/20	ND<1	ND<1	ND<1	ND<3	0	22	
02/20/20	ND<1	ND<1	ND<1	ND<3	0	15	
03/13/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/27/20	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/18/20	ND<1	ND<1	ND<1	ND<3	0	12	
06/23/20	ND<1	ND<1	ND<1	ND<3	0	12	
07/30/20	ND<1	ND<1	ND<1	ND<3	0	13	
08/20/20	ND<1	ND<1	ND<1	ND<3	0	13	
09/24/20	ND<1	ND<1	ND<1	ND<3	0	13	
10/19/20	ND<1	ND<1	ND<1	ND<3	0	16	
11/24/20	ND<1	ND<1	ND<1	ND<3	0	15	Plus-Four Results = All ND
12/21/20	ND<1	ND<1	ND<1	ND<3	0	14	
01/25/21	ND<1	ND<1	ND<1	ND<3	0	14	
02/23/21	ND<1	ND<1	ND<1	ND<3	0	11	
03/22/21	ND<1	ND<1	ND<1	ND<3	0	10	
04/28/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/16/21	ND<1	ND<1	ND<1	ND<3	0	11	
07/27/21	ND<1	ND<1	ND<1	ND<3	0	11	
08/26/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/30/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/23/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/16/21	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/26/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/28/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/25/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/25/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/24/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/29/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/26/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/22/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/28/22	ND<1	ND<1	ND<1	ND<3	0	15	
11/22/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/27/22	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/27/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/24/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/28/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/25/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/23/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
07/27/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/22/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
10/24/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
11/16/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
12/22/23	ND<1	ND<1	ND<1	ND<3	0	ND<10	
01/29/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
02/28/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
03/21/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
04/26/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
05/22/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
06/20/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
08/30/24	ND<1	ND<1	ND<1	ND<3	0	ND<10	
09/24/24	ND<1	ND<1	ND<1	ND<3	0	16	



NOTES:

- 1) THE TOTAL BTEX (LOG10) CONTOURS ARE BASED ON LABORATORY RESULTS OF GROUNDWATER SAMPLES COLLECTED FROM MONITOR WELLS DURING THE SEMI-ANNUAL SAMPLE EVENT AS PRESENTED IN THE "GROUND-WATER ANALYTICAL RESULTS" TABLE.
- 2) RECOVERY WELLS WERE NOT OPERATING DURING 2023 SA-1 SAMPLE EVENT. GROUNDWATER ELEVATION CONTOUR INTERVAL = 1'.
- 3) PROPERTY BOUNDARIES WERE ADAPTED FROM THE WILDERNESS VALLEY PROPERTY OWNERS ASSOCIATION MAP (REV. JUNE 2003). LOCATIONS ARE APPROXIMATE.

2024 SA-2

Groundwater Elevations Used to Plot Contours

9/5/2024	Location
NM	MW-1
NM	MW-2
1253.78	MW-3
NM	MW-4
NM	MW-9
1254.53	MW-10
1255.05	MW-11
NM	MW-12
NM	RW-2
NM	RW-3
NM	RW-4
NM	RW-5
NM	RW-6
NM	MW-100s
1252.54	MW-101
NM	MW-102s
1247.50	MW-103s
1248.43	MW-104s
1252.97	MW-106s
1247.57	MW-107s
NM	MW-108s
1250.72	MW-109s
NM	MW-110s
NM	MW-110d
1246.22	MW-111s
1242.06	MW-112s
1242.03	MW-112d
1242.07	MW-112d2
NM	MW-112d3
1250.40	MW-114s
1245.74	MW-115s
1250.07	MW-116s
NM	MW-117s
1243.94	MW-118d
1244.20	MW-118d2
NM	MW-118d3
NM	MW-119s
NM	MW-119d
1244.15	MW-120s
1244.05	MW-120d
NM	MW-121d
1240.05	MW-121d2
NM	MW-121d3
1242.83	MW-122d
1242.22	MW-122d2
Not Used	MW-123s
1254.68	MW-124s
1241.72	MW-125d2
NM	MW-126d
NM	MW-126d2
NM	MW-126d3
1240.14	MW-127d2
NM	MW-128d2
NM	MW-129d2
NM	MW-130d2
NM	MW-131d2
1239.67	MW-132d2
1239.67	MW-132d3
1239.74	MW-132d4
Obstructed	MW-133d3
NM	MW-134d3
Obstructed	MW-135d3
Obstructed	MW-136d3
1257.44	MW-201
1259.60	MW-202
NM	MW-203
NM	MW-204
NM	MW-205
1257.03	MW-206
NM	MW-207s
NM	MW-207d
NM	RW-101
1240.83	RW-101a
1241.14	RW-101b
1247.77	RW-102
Obstructed	RW-103
1250.48	RW-104
1251.50	RW-105
NM	RW-106
NM	RW-201
NM	RW-202

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Job No: 2018100106.01
Date: 10/25/2024
Scale: 1 inch = 500 feet
Drawn: DJT
Chkd: JVS
Rev'd:

**TOTAL BTEX AND GROUNDWATER
ELEVATION CONTOUR MAP
HAYES 22 CPF**
Lambda Energy Resources, LLC

Location:
PART OF SECTIONS 21, 22, & 28
T26N, R04W,
HAYES TOWNSHIP,
OTSEGO COUNTY, MICHIGAN