2023

Annual Class III
Well Report
Llano Disposal, LLC
BW-38

API - 30-25-20592

Submitted by: Laura Angell, 10/28/24

2023

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# **Summary of Class III Well Operations**

BW3 (State 27 # 1) was put into service in the last quarter 2018 after a successful re-entry and recompletion. After re-entry was accomplished, a production string was run into the Salado. Fresh water was then circulated to test brine quality. Brine quality from this well has been excellent at 10.00 and 10.00+ lbs. per gallon. The amount of fresh water injected to brine recovered has been within expected ratio and in agreement with known cavern development. Injection pressure required to raise brine to surface has been approximate to anticipated (calculated) value.

Initially, there was not a great demand for brine water in the Maljamar area. However, that market has evolved as horizontal shale drilling continues to migrate northward from southern Lea and Eddy counties. Brine demand has increased accordingly. This well is situated perfectly to service changing industry needs. Currently this well is the only brine producer in the Maljamar area.

No changes have been made to the well/surface connection. Also, no changes have been made to the physical plant since the well was first put into operation. Trucks load on a one-foot-thick concrete pad. The loading pad is curbed, and has a sump for catching any brine incidentally spilled in handling hoses, etc. A heavy gauge plastic liner has been maintained under the storage tank and dike areas.

MITs have been performed on this well when required and have all been Hobbs OCD witnessed. Test pressure charts are found in **APPENDIX A** at the end of this report.

A chronological list of C103 forms that Llano Disposal has filed on subject well can be found in **APPENDIX D** at the end of this report.

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# **Monthly Fluid Injection and Brine Production**

### **Federal Fiscal Year 2023**

	Brine	Communications	Fresh	Committee	
	Monthly	Cumulative	Monthly	Cumulative	
Month	BBLS	BBLS	BBLS	BBLS	PSI
* Oct	0	0	0	0	
* Nov	0	0	0	0	
* Dec	0	0	0	0	
Jan	21,140	21,140	23,410	23,410	210
Feb	18,743	39,883	20,773	44,183	170
Mar	22,640	62,523	25,302	69,485	210
Apr	21,685	84,208	23,945	93,430	170
May	23,250	107,458	25,643	119,073	150
June	19,910	127,368	22,022	141,095	210
July	16,111	143,479	17,788	158,883	210
Aug	16,347	159,826	18,097	176,980	170
Sep	6,891	166,717	7,713	184,693	220

# Fiscal Year Starting with 2023

		Brine	Brine	Fresh	Fresh
		Yearly	Cumulative	Yearly	Cumulative
	Year	BBLS	BBLS	BBLS	BBLS
	2019	85,810	85,810	94,485	94,485
	2020	72,836	158,646	82,076	176,561
	2021	159,876	318,522	179,267	355,828
	2022	213,762	532,284	243,876	599,704
Fiscal					
Year	2023	166,717	699,001	184,693	784,397

<sup>\*</sup> Note – 2023 is the first time using the Federal Fiscal Year calendar. The first three months of the fiscal year were included in the 2022 Annual Report. The 2024 Annual Report will include a full fiscal year.

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# **Annual Monitor Well Analytical Data Results**

An analysis was done on the monitor well each quarter in 2023. The reports can be viewed in **APPENDIX F** at the end of this report. However, the fourth quarter results are listed below:

Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Hummingbird Brine Station Project Number: 22117-0001 Project Manager: Elizabeth Pickerel			Reported: 1/8/2024 4:31:20PM		
	Me	onitor Well				
	E	401003-03				
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analys	st: RAS		Batch: 2401006
Total Dissolved Solids	1210	10.0	1	01/03/24	01/08/24	Batch: 2401006
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analys	st: WF		Batch: 2401031
ьн @25°С	8.02		1	01/04/24 09:23	01/04/24 14:40	H5
Wet Chemistry by SM2710F**	N/A	N/A	Analys	st: KH		Batch: 2401037
Specific Gravity	1.000		1	01/05/24	01/05/24	Date::: 2 10 103 /
Anions by EPA 300.0/9056A	mg/L	mg/L	Analys	t: DT		Batch: 2401016
Chloride	594	4.00	2	01/03/24	01/03/24	Datell. 2401010

# **Injection Pressure Data**

Injection pressure at the well (tubing) averages 265/PSI. The brine well casing pressure (brine to battery), averages about 22 PSI. The field operator checks the pressures daily and records them on the daily log.

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# **Pipeline Hydrostatic Test Results**

Service piping carrying fresh water to BW38, is a combination of 2" steel and 2" SDR11 HD poly piping. This line is tested accordingly to 160 psi. The feeder line (fresh water) runs due north from the freshwater pump The distance is approximately 145'. Testing is accomplished by closing a steel ball valve on the well head, then allowing the freshwater pump to bring pressure up to 160 psi. The line is then isolated by valving installed at each end of the line. Pressure is held static on the line for 1 hour, during which time the line is visually inspected. The 3" SDR11 HD poly line leading from BW38 due west approximately 2500' to the tankage facility, is tested in the same manner. A valve in the line is closed at the tankage facility. Then the freshwater line at the wellhead is allowed to pressure to 160 psi. A jumper line between the freshwater line and the brine line has been installed at BW38 well head to accomplish this. After brine line pressure has risen to 160 psi, the entire system is shut down, then the brine line is isolated by closing valving in place at each end of the line. Pressure is held for 1 hour, during which time the line is visually inspected.

The freshwater line and the brine line run across land that is under the same ownership as Llano Disposal, LLC. Therefore, observing these lines for inspection during testing, and during normal operations, is frequent, and at will. The lines between the storage tanks and the truck loading valves, are all SDR11 high density poly. These lines carry normal head pressure of 0 psi (emptied tanks) to 17 psi (full tankage) but are virtually always under positive pressure. These lines are under continual live camera observation and viewed in person daily, both by truckers and by Llano field personnel. All tanks are 30' fiberglass and are manifolded together with 6" SDR11 HD poly line. Valving is installed on the outlet of each tank so that any one, or all the tanks can be closed off if needed. All valving and connections are plastic coated steel, stainless steel, poly, or fiberglass.

**Pipeline Visual Inspections** for leaks are done at minimum every other day, monitoring lines, joints, tanks, and recording volumes and pressure.

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# **Quarterly Chemical Analysis**

A chemical analysis was done each quarter in 2023. The reports can be viewed in **APPENDIX F** at the end of this report.

# **Mechanical Integrity Test**

A MIT was performed on 9/26/19 and on 5/7/24: Llano scheduled, then ran a MIT on BW38 using a calibrated chart recorder and the well passed the pressure test requirement. See the chart in **APPENDIX A**.

### **Deviations from normal Operations**

There were no deviations from normal operations in 2023.

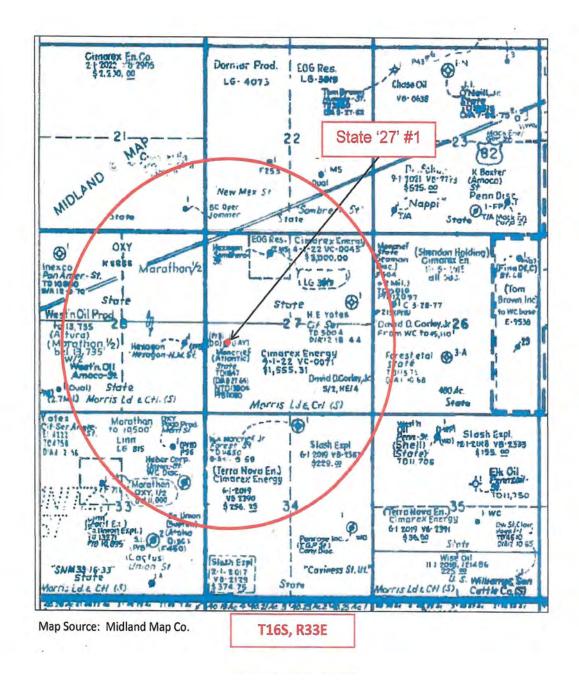
### **Leaks and Spills Corrective Action Reports**

There were no leaks, spills, or corrective action during this period.

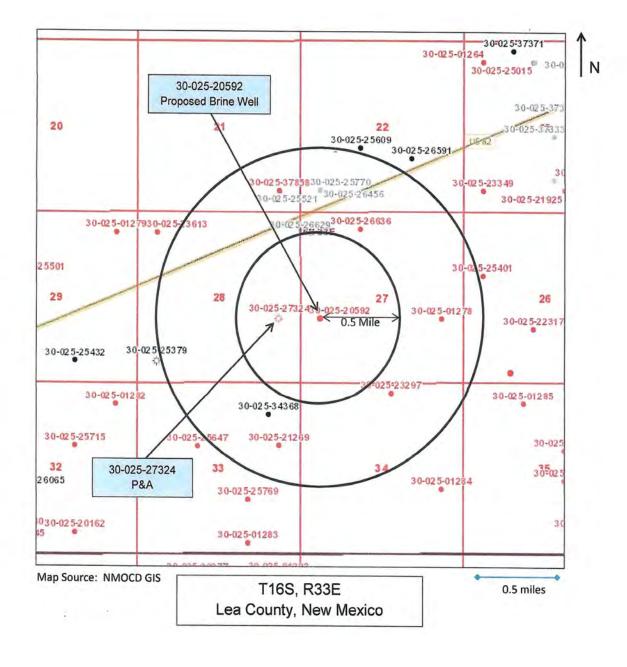
2023

# **Area of Review Update Summary**

Please see below, the original AOR document that was submitted as part of the original application for BW38. A current, location-by-location review of this brine permit has been completed, and it was found that there has been no oil or gas well development in the area since the original AOR document was created and submitted to NMOCD as part of the original brine permit.



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# Llano Disposal, LLC State 27 #1 API # 30-025-20592 Offset Wells Located within 0.5 and 1 Mile Areas of Review

There is only one offset well located within the 0.5 mile AOR.

UL, Sec, T, R	API Well No.	Well Name	TVD	Operator	Status	Salt Plugs or Covered with Casing/Cement
I-28-16S-33E	30-025-27324	Hexagon NM 28 State #1	13848'	Hexagon Oil & Gas Inc	Drilled 1981, P&A 1991	Cmt plug @ TOS and below salt, 8-5/8" csg/cmt cover salt

### There are six additional offset wells located outside the 0.5 mile AOR, but within the 1 mile AOR.

UL, Sec, T, R	API Well No.	Well Name	TVD	Operator	Status	Salt Plugs or Covered with Casing/Cement
P-21-16S-33E	30-025-37858	Jammer #1	10902'	Legacy Reserves Operating, LP	Drilled 2006, P&A 2010	Cmt plugs @ TOS and below salt, 8-5/8" csg/cmt cover salt
C-27-16S-33E	30-025-26636	Sombrero MS State #2	11730′	I&W Inc	Drilled 1980, P&A 1998	Cmt plugs @ TOS and below salt, 8-5/8" csg/cmt cover salt
I-27-16S-33E	30-025-01278	Cities Service State #1	5004'	Harvey E. Yates	Drilled 1944, P&A 1946	Bridge plugs at TOS and at BOS, no csg/cmt cover salt
A-33-16S-33E	30-025-34368	Merit 33 State #1	15094'	Oxy USA Inc	Drilled 1998, active WC producer	9-5/8" csg/cmt cover salt
H-33-16S-33E	30-025-21269	Union State #1	11650′	J. M. Huber Corp	Drilled 1965, P&A 1972	Cmt plugs above and below salt, 8-5/8" csg covers salt
B-34-16S-33E	30-025-23297	Apple State #1	11650′	Manzano Oil Corp	D&A 1969, Re-entered 1986, P&A 1987	Cmt plugs above and below salt, 8-5/8" csg covers salt

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Summary MITs, Surface Subsidence Surveys, Cavern Size & Shape, Cavern Volume and Geometry Measurements with Conclusion(s) and Recommendation(s)

A <u>MIT</u> was performed on 11/7/19 and 5/7/24 (BEFORE THIS 2023 REPORT WAS SUBMITTED). Llano scheduled, then ran the MITs on BW38 using a calibrated chart recorder. Subsequent pressure tests were successful. See the charts in **APPENDIX A**.

Please find the <u>Subsidence Report</u> in **APPENDIX C** at the end of this report, that was prepared for us by Asel Surveying of Hobbs, NM. The importance and purpose of the report is to closely monitor any geological shifting, either vertically or horizontally, in the earth surrounding the brine well.

A description of the <u>Cavern Size & Shape, Cavern Volume and Geometry Measurements</u>, is in **APPENDIX B** at the end of this report.

In <u>conclusion</u>, the operational history of BW38 could be described as "good", meaning that the well has performed very well in producing 10# brine. There are currently <u>no recommendations</u>.

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# **Injected Fluids to Brine Ratio**

Total Brine for the year 166,717

Total Fresh for the year 184,693

Ratio of Fresh to Brine 1.11

# **Summary of Major Facility Activities**

There were no major activities during this period.

# **Surface Subsidence Monitoring Plan Data Results**

The initial plan and survey were done and are included in **Appendix C** at the end of this report.

### **Solution Cavern Characterization Data Results**

Please see **APPENDIX B** at the end of this report for a full description.

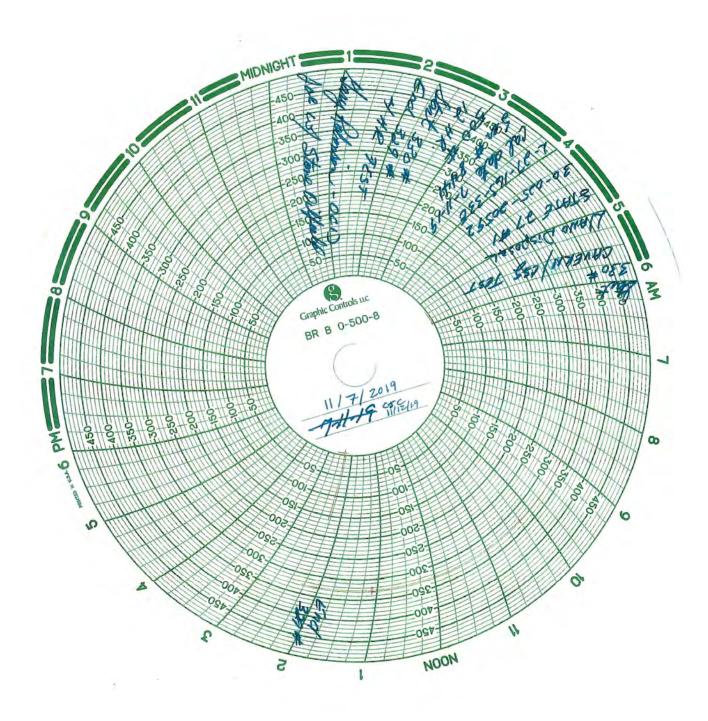
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# **APPENDIX A**

MITs

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## Llano Disposal, LLC BW-38 API 30-025-20592

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Submit 1 Copy To Appropriate District Office District 1 – (575) 393-6161	State of New Mexico Energy, Minerals and Natural Resources	Form C-103 Revised July 18, 2013		
1625 N. French Dr., Hobbs, NM 88240 District II – (575) 748-1283 811 S. First St., Artesia, NM 88210 District III – (505) 334-6178	OIL CONSERVATION DIVISION	WELL API NO. 30-025-20592		
1000 Rio Brazos Rd., Aztec, NM 87410 District LV – (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM	1220 South St. Francis Dr. Santa Fe, NM 87505	5. Indicate Type of Lease STATE x FEE		
87505		6. State Oil & Gas Lease No. Salt lease w/ SLO		
SUNDRY NOTIC (DO NOT USE THIS FORM FOR PROPOS. DIFFERENT RESERVOIR. USE "APPLICA" PROPOSALS.)	7. Lease Name or Unit Agreement Name State 27			
Type of Well: Oil Well Gas	Well Other BSW	8. Well Number 1		
2. Name of Operator Llano Disposal, LLC		9. OGRID Number 370661		
3. Address of Operator PO Box 250, Lovington NM 88260		Pool name or Wildcat     Salado brine generation lease.		
4. Well Location  Unit Letter		660feet from theWline 33E NMPM County Lea		
	11. Elevation (Show whether DR, RKB, RT, GR, etc.			

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF I	NTENTION TO:	SUBSEQUENT F	REPORT OF:
PERFORM REMEDIAL WORK TEMPORARILY ABANDON	PLUG AND ABANDON CHANGE PLANS	REMEDIAL WORK COMMENCE DRILLING OPNS	ALTERING CASING P AND A
PULL OR ALTER CASING	MULTIPLE COMPL	CASING/CEMENT JOB	PANDA
DOWNHOLE COMMINGLE		NOV	12 2019 PMG L:20
CLOSED-LOOP SYSTEM OTHER:		OTHER: Casing and brine cavit	y pressure test.

On 11/7/19, met on location w/ OCD Dist 1 rep Gary Hamilton to perform scheduled casing/brine cavity test on this well. Connected truck and chart pressure recorder (recorder w/ valid cal date) to perform 4 hour static pressure test. Ran test for 4+ hours. Well lost 1 psi according to chart. Per direction from Santa Fe OCD and Dist 1 rep, we returned the well to brine production immediately after conclusion of this test.

Spud Date:	Rig Release Date	t of my knowledge and being		
SIGNATURE Upanny Bu	TITLE	Agent for	DATE_	11/08/19
Type or prin name MIHHUM B,	in now E-mail address:	burrowsmarvin@gm	nail.com	PHONE 575-631-8067
APPROVED BY: Low Charles of Approval (if any):	TITLE Environ	mental Engineer _	DATE	11/12/2019

<sup>13.</sup> Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Llano Disposal, LLC BW-38 API 30-025-20592

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This instrument is cerified to be accurate within +/- 1% of Full Scale

Input T	Input Type/ Range: 500# Pen Number: 2	共	Color: RRED
cending		Descending	
Applied:	Reading:	Applied:	Reading:
0	0	499	200
66	100	398	400
248	250	249	250
398	400	100	100
499	200	0	0

2031 TRADE DR.
MIDLAND, TX 79706
(432) 697-7801 (482) 520-3564

Technician:

Llano Disposal, LLC BW-38 API 30-025-20592

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### PERFORMING BRADENHEAD TEST

General Procedure for Bradenhead Test

Identify:

All valves prior to testing

Gauges:

Install on each casing string to record pressure.

Assure

That all valves are in good working condition and closed at least 24 hours prior

to testing.

Open:

Each valve (Bradenhead, intermediate and casing valves) is to be opened

separately.

Check Gauges: Re

Record pressure on each gauge and casing string on BHT form. Open

valves to atmosphere and record results on BHT form.

Designate what applies to the result of opening the valves for each string:

Blow or Puff
Bled down to Nothing
Steady Flow
Oil or Gas
Water
Yes or No

Start: Injection or SWD pump so tubing pressure can be read.

Instructions below apply to the District 1 Hobbs office since this must be reported on a form.

In case of pressure:

1. Record pressure reading on gauge.

- Bleed and note time elapsed to bleed down.
- 3 Leave valve open for additional observation
- 4. Note any fluids expelled.

In absence of Pressure:

- 1. Leave valve open for additional observation
- 2 Note types of fluids expelled.
- 3. Note if fluids persist throughout test.

Note. Tubing pressure on injection or SWD wells.

Test will be signed by person performing test with a contact phone number.

# Llano Disposal, LLC BW-38 API 30-025-20592

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District I 1625 N French Dr., Hobbs, NM 88240 Phone: (575) 393-6161 Fax. (575) 393-0720

# State of New Mexico

	Energy, M Oil Con	inerals and Natura servation Division	l Resources D Hobbs Distric	epartme	ent		
		BRADENHEAD 7	TEST REPOR	Т			
1/200					2-	API Numb	
LIMIO	Disposal	operty Name			0-0	25 -0	20592
STATE	= 27					/	,
		3. Surface Lo	cation				
UL·Lot Section	Township Rauge	Feet from		Feet 1		E/AV Line	County
~   0 /	163 356	198	THE RESERVE THE PERSON NAMED IN COLUMN 2 IS NOT THE OWNER.	66	0	W	LEA
		Well Sta					
YES TA'D WELL NO	YES SHUT-IN	NO INJ	SWD OI	PRODUC	ER GAS		DATE 19
		BRINE O			Ono	1//	- )-//
		OBSERVED	DATA				
	(A)Surface	(B)Interm(I)	(C)Interm(2)		(D)Prod	Csng	(E)Tubing
ressure	Cemented		/	,	-		()
low Characteristics	Centerited	/		-/-	-	0	10
Puff	Y/N	YIN	Y /	N/	-	10	CO2
Steady Flow	Y/N	YIN	Y /			10	WTR_
Surges	Y/N	Y/N	V/	N		((N)	GAS
Down to nothing	Y/N	XIN	N/	N		N	Type of Fluid Injected for
Gas or Oil	Y/N	YIN	Y/	N		(N)	Waterflood # applies
Water	Y/N	Y/N	Y/	N		(I/N)	1
BRINE MIT	each string (A,B,C,D,E) perti	C-103 Chart CAL. papers 847			Carl Carl	2	
Signature:				_			
Printed name:			and a surface				N DIVISION
					L CONSI		
Printed name: Title E-mail Address:				Entered			DIVISION WE

INSTRUCTIONS ON BACK OF THIS FORM

Submit 1 Copy To Appropriate District Office	State of New M			Form C-103
District I - (575) 393-6161 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Na	tural Resources	WELL ADDING	Revised July 18, 2013
District II - (575) 748-1283	OIL CONSERVATIO	De Trabata e martin a tra	WELL API NO. 30-02	25-20592
811 S. First St., Artesia, NM 88210 <u>District III</u> – (505) 334-6178	1220 South St. Fr	1 - 1 1 - 2 - 2 - 3 - 3 - 3 - 3 - 3 - 3 - 3 - 3	5. Indicate Type of Lea	ise
1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> – (505) 476-3460	Santa Fe, NM		6. State Oil & Gas Leas	FEE
1220 S. St. Francis Dr., Santa Fe, NM 87505	7.44			se No.
SUNDRY NOT	ICES AND REPORTS ON WELL	S	Salado BSW  7. Lease Name or Unit	Agranment Name
(DO NOT USE THIS FORM FOR PROPODIFFERENT RESERVOIR. USE "APPLI PROPOSALS.)	SALS TO DRILL OR TO DEEDEN OR D	LUCDACKTOA	State 27	Agreement Name
1. Type of Well: Oil Well	Gas Well Other Brine W	ell	8. Well Number 1	
Name of Operator Llano Disposal, LLC			9. OGRID Number 37	0661
3. Address of Operator			10. Pool name or Wilde	cat
P.O. Box 250, Lovington, NM 4. Well Location	88260		BSW Salado	
	1980 feet from the S	line and 660	Foot Comment	W
Section 27			feet from the NMPM Cou	nty Lea
	11. Elevation (Show whether D.	R, RKB, RT, GR, etc.)	Cou	inty Dea
	4201			
12 Check	Annronriata Roy to Indicate 1	Johns -CM-4' D	o.l. D	
	Appropriate Box to Indicate 1	valure of Notice, R	eport or Other Data	
NOTICE OF IN		SUBS	<b>EQUENT REPOR</b>	T OF:
PERFORM REMEDIAL WORK  TEMPORARILY ABANDON	PLUG AND ABANDON	REMEDIAL WORK	☐ ALTE	RING CASING
DIII. 00	CHANGE PLANS	COMMENCE DRILL		DA 🗆
DOWNHOLE COMMINGLE	MULTIPLE COMPL	CASING/CEMENT.	JOB 🗆	
CLOSED-LOOP SYSTEM				
C-1:	Cavern MIT	OTHER:		_
13. Describe proposed or complete	ed operations. (Clearly state all per	tinent details and aire	pertinent dates includi	man authorists d. Joh
or starting any proposed work. SE	ERULE 19 15 / 14 NMAC FOR	Multiple Completions:	Attach wellbore diagra	m of
proposed completion of recompletic	on.	2774-01-4-1-5-1-4-1-4-1-4-1-4-1-4-1-4-1-4-1-4-	and an analysis	01
1) Shut well off 24 hours p	rior to testing.			
<ol><li>Have pump truck on loc</li></ol>	ation prior to scheduled test time, I	oaded with 120 bbls wa	ater.	
3) Have recently inspected	and calibrated pressure recorder or	location. Pressure rec	order will be equipped	with the proper 500
par range paper charts.				proper ovo
5) Tie pump truck onto wel	technician to arrive on location to	witness this 4-hour test.		
6) Connect chart recorder to	as directed.			
recorder (turn recorder on a	o wellhead to record pressure during and off to verify chart recorder pen	ig test period. Place 50	opsi paper chart into rec	corder. Activate char
7) Using pump truck, load	well, then bring pressure up to NM	OCD appointed took		10-120-110
o) Shar pullip truck down, t	iisconnect bumb truck Isolate wel	to preceure recorder		it least 300 psi.
9) with well so isolated to	pressure recorder, allow recorder to	chart pressure for due	ration of test	
10) At the end of the test pe	riod, remove pressure chart then t	recent to NIMOCD	C	further disentia.
<ol> <li>Write down date, type of</li> </ol>	of test, witnesses, witness signature	es, and the start and end	pressure on the chart.	turner direction.
Spud Date:	Rig Release D	ate:		
I hereby certify that the information				
yy use the information	above is true and complete to the f	est of my knowledge a	and belief.	
SIGNATURE Clizabeth P	Disharal			
SIGNATURE CONTROL P	TITLE BI	rine Manager	DATE	04/28/2024
Type or print name Elizabeth Pi	ckerel E-mail addres	s: service.llanobrine	@gmail.com	575-605-6490
For State Use Only	E-man addres	s	PHONE:	273-003-0490
APPROVED BY:				
Conditions of Approval (if any):	TITLE		DATE	

Submit 1 Copy To Appropriate District Office	State of New Mexico	Form C-103
<u>District I</u> – (575) 393-6161 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Natural Resources	WELL API NO.
District II - (575) 748-1283 811 S. First St., Artesia, NM 88210	OIL CONSERVATION DIVISION	30-025-20592
District III - (505) 334-6178	1220 South St. Francis Dr.	5. Indicate Type of Lease
1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> – (505) 476-3460	Santa Fe, NM 87505	STATE X FEE
1220 S. St. Francis Dr., Santa Fe, NM		6. State Oil & Gas Lease No.
SUNDRY NOTICE	ES AND REPORTS ON WELLS	Salado BSW
(DO NOT USE THIS FORM FOR PROPOS	ALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A ATION FOR PERMIT" (FORM C-101) FOR SUCH	7. Lease Name or Unit Agreement Name State 27
1 m 0 0 m =	Gas Well Other Brine Well	8. Well Number 1
Name of Operator     Llano Disposal, LLC		9. OGRID Number 370661
3. Address of Operator		10. Pool name or Wildcat
P.O. Box 250, Lovington, NM 4. Well Location	88260	BSW Salado
Unit Letter_L : 19	980 feet from the S line and	660 feet from the W line
Section 27	Township 16S Range 33F	NMPM County Lea
	11. Elevation (Show whether DR, RKB, RT, GR, e.	etc.)
	4201	
12. Check A	propriate Box to Indicate Nature of Notice	P. O.I. D.
		e, Report or Other Data
NOTICE OF INT		JBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK  TEMPORARILY ABANDON	PLUG AND ABANDON   REMEDIAL WO	ORK ☐ ALTERING CASING ☐
PULL OR ALTER CASING	CHANGE PLANS   COMMENCE D  CASING/CEME	ORILLING OPNS. □ PAND A □
DOWNHOLE COMMINGLE	MULTIPLE COMPL CASING/CEME	ENT JOB
CLOSED-LOOP SYSTEM		
OTHER:	OTHER: Cav	vern MIT
<ol><li>Describe proposed or completed</li></ol>	operations. (Clearly state all pertinent details, and	give pertinent dates, including estimated date
proposed completion or recompletion		ons: Attach wellbore diagram of
proposed completion of recompletion		
Llano Disposal, LLC is submitting	this follow up report ( and results) for the conclusion	on of a successful MIT
performed on 3/1/2024 with the ass	Islance of Ciary Robinson OCD Please see the atte	ached pages for the
Bradenhead Test Report and other p	ertinent data.	
10.0		
pud Date:	Rig Release Date:	
hereby certify that the information ab	ove is true and complete to the best of my knowled	dgg and halfaf
	and desired my knowled	ige and benef.
IGNATURE Clizabeth Pu	charal	
IGNATURE Carabient Pu	TITLE Brine Manager	DATE 05/8/2024
ype or print name Elizabeth Pick	erel Service llanch	rine@amail.com
or State Use Only	E-mail address: service.llanobi	PHONE: 575-605-6490
Contract A state		
PPROVED BY:	TITLE	DATE
Conditions of Approval (if any):		DATE

STATE 27  Surface Location  Feetimes   Nather   Feetimes   EW Line   Location    Well Status  TAID WELL   NO   YES   NO   INJ   SUSCIOR   SWD   OIL   GAS   SUDIAN    SURFACE WELL   OBSERVED DATA  Surface Location   Feetimes   EW Line   Location    Well Status  TAID WELL   NO   YES   NO   INJ   SUSCIOR   SWD   OIL    OBSERVED DATA  Surface Location    Feetimes   Feetimes   EW Line   Location    Well Status  TAID WELL   OO   TES   NO   INJ   SUBJECTION    OBSERVED DATA  Surface Location    Feetimes   Feetimes   EW Line   Location    OBSERVED DATA  TAID WELL   OO   TES   OO    OBSERVED DATA  Surface Location    Feetimes   Color   Color    OBSERVED DATA  TAID WELL   OO   TES   OO    OBSERVED DATA  TAID WELL   OO   TES   OO    OBSERVED DATA  TAID WELL   OO   TES   OO    OBSERVED DATA  TAID WELL   OO   TES   TES   TES    OBSERVED DATA  TAID WELL   OO   TES   TES   TES    OBSERVED DATA  TAID WELL   OO   TES   TES   TES   TES    OBSERVED DATA  TAID WELL   OO   TES   TES   TES   TES   TES    OBSERVED DATA  TAID WELL   OO   TES   TES   TES   TES   TES   TES    OBSERVED DATA  TAID WELL   OO   TES   TES   TES   TES   TES   TES   TES    OBSERVED DATA  TAID WELL   OO   TES   TE		Oil Conse	erals and Natural Reservation Division Hobb	s District O	ffice		
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Down to nothing  Y/N  Gas or Oil  Y/N  Water  Y/N  Y/N  Y/N  Y/N  Y/N  Y/N  Y/N  Y/		1					
Gas or Oil  Water  Water  YIN  YIN  YIN  YIN  Water  YIN  Water  YIN  Water  YIN  YIN  YIN  YIN  Water  Water  YIN  Water  YIN  YIN  YIN  YIN  Water  Water  YIN  Water  YIN  Water  YIN  YIN  YIN  YIN  Water  Water  Water  YIN  YIN  YIN  YIN  YIN  Water  Water  YIN  YIN  YIN  YIN  YIN  YIN  Water  Water  Water  YIN  YIN  YIN  YIN  YIN  YIN  YIN  Water  Water  Water  Water  Water  YIN  YIN  YIN  YIN  YIN  YIN  YIN  YI						YIOU	Des de Bail
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Brine Well Ant Casing/covern my/Bur  Signature:  OIL CONSERVATION DI							
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Printed come	Brine We						
	gnature:				OIL	CONSERVAT	ON DIVISIO
Title Re-test	gnature:						OISIVID MOIS
B-mail Address: Date: Phone: 0 1 1	gnature: inted name,				Entered int		TION DIVISIO

2023

General Procedure for Bradenhead Test

Identify: All valves prior to testing

Gauges: Install on each casing string to record pressure.

Assure: That all valves are in good working condition and closed at least 24 hours price

to testing.

Open: Each valve (Bradenhead, intermediate and casing valves) is to be opened

separately.

Check Gauges Record pressure on each gauge and casing string on BHT form Open

valves to atmosphere and record results on BHT form

Designate what applies to the result of opening the valves for each string

9	Blow or Puff	Yes or No
9	Blad down to Nothing	Yes or No
3	Steady Flow	Yes or No
٥	Oil or Gas	Yes or No
۵	Water	Yes or No

Start: Injection or SWD pump so tubing pressure can be read

Instructions below apply to the District 1 Hobbs office since this must be reported on a form

In case of pressure

1. Record pressure reading on gauge

2 Bleed and note time clapsed to bleed down

3. Leave valve open for additional observation

4 Note any fluids expelled

In absence of Pressure.

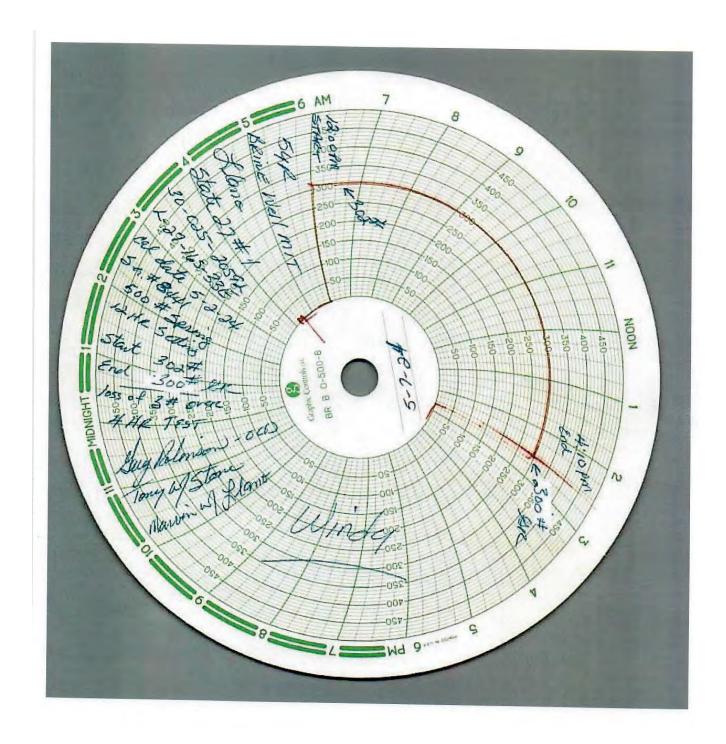
Leave valve open for additional observation.

2 Note types of fluids expelled

3 Note if fluids persist throughout test

Note Tubing pressure on injection or SWD wells

Test will be signed by person performing test with a contact phone number.



Llano Disposal, LLC BW-38 API 30-025-20592

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# American Valve & Meter, Inc.

1113 W. BROADWAY
P.O. BOX 166 HOBBS, NM 88240

T0: LLANO DISPOSAL

Date: 5/2/24

This is to certify that:

I, EBARISTO CRUZ, technician for American Valve & Meter Inc. Has checked the calibration of the following instrument.

8' Pressure recorder

Ser# 8441

at these points.

Pressure #			Temperature *or Pressure #				e #
Test	<b>Found</b>	Left	Test		Found	d	Left
- 0	-	-0	-0		-		- 0
- 250	- s	- 250	-	- c		4	
- 350	- a	- 350	-	- a		-	
- 500	- m	- 500	-	-1		_	
- 100	- e	- 100	-	-			
- 0	-	- 0	-		-		- 0

Remarks:\_\_\_\_

Signature: Ebosista Cauz

Llano Disposal, LLC BW-38 API 30-025-20592

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# **APPENDIX B**

**Cavern Characterization** 

Llano Disposal, LLC BW-38 API 30-025-20592

2023

### **Cavern Characterization**

By the end of Federal Fiscal Year 2023, 784,397 total bbls of fresh water had been injected into the salt strata for the purpose of brine generation (32,944,674 gallons). water had been injected into the salt strata for the purpose of brine generation (9,026,640 gallons). Since this is the first time using the Federal Fiscal Year, this report includes nine months. Oct, Nov and Dec 2022 were included in the 2022 Annual report. Well production history has shown that this well reliably produces 10.0 pound/gallon brine water. It therefore follows that each gallon of fresh water (testing 8.34 pounds per gallon) has been dissolving 1.66 pounds of halite. By simple calculation, 54,688,158 pounds of halite (and other water solubles) have gone into solution since operations began. Halite has a SG of 2.17 (compared to fresh water), so is calculated and known to weigh 137.47 pounds per cubic foot. It follows then, that 397,818 cubic feet of halite have gone into solution since operations began. The amount of fresh water injected (784,397 bbls) as compared to the amount of brine produced (699,001 bbls) shows that water is being used to fill the cavity as the cavity increases in volume.

Fresh water injected compared to brine water produced, is 112.21 %.

Since it is impossible to know the exact dimensions of the cavity, some assumptions are reasonably made. OCD regulations require that fresh water be injected down a tubing string so that brine may be produced up the tubing/casing anulus. Therefore, brine generation begins at total depth, and by the time water so circulated reaches the anulus, it has become marketable 10# brine. It is logical then, that dissolution will be rapid at first, then tapers off as saturation is achieved. Such action would imply a cone shaped (inverted cone) cavity.

The teaching to calculate the volume of a truncated cone is:

Volume = 
$$(1/3)$$
 x pi  $(Rsq + (Rxr) + rsq)$  H

### Where:

- 1) r equals the radius of the small (upper) end cone diameter in feet
- 2) R equals the radius of the large (lower) end cone diameter in feet
- 3) Rsq is "R squared". rsq is "r squared".
- 4) H is depth in feet from tubing depth to top of salt (casing shoe).

Justification for calculation of salt dissolved by the injection of fresh water into BW38 Salado:

Fresh water used at BW38 for the purpose of brine generation is known to weigh 8.34 lbs per gallon. Therefore 1.66 lbs of salt must be taken up by each gallon of fresh water so injected to result in 10 ppg brine water, which is the known marketable industry standard. It follows then that each barrel of brine water (one API barrel = 42 gallons) contains  $42 \times 1.66$  lbs of salt, or 67.2 lbs of salt. One cubic foot of salt weighs 137.47 lbs. Continuing, the cubic feet of salt

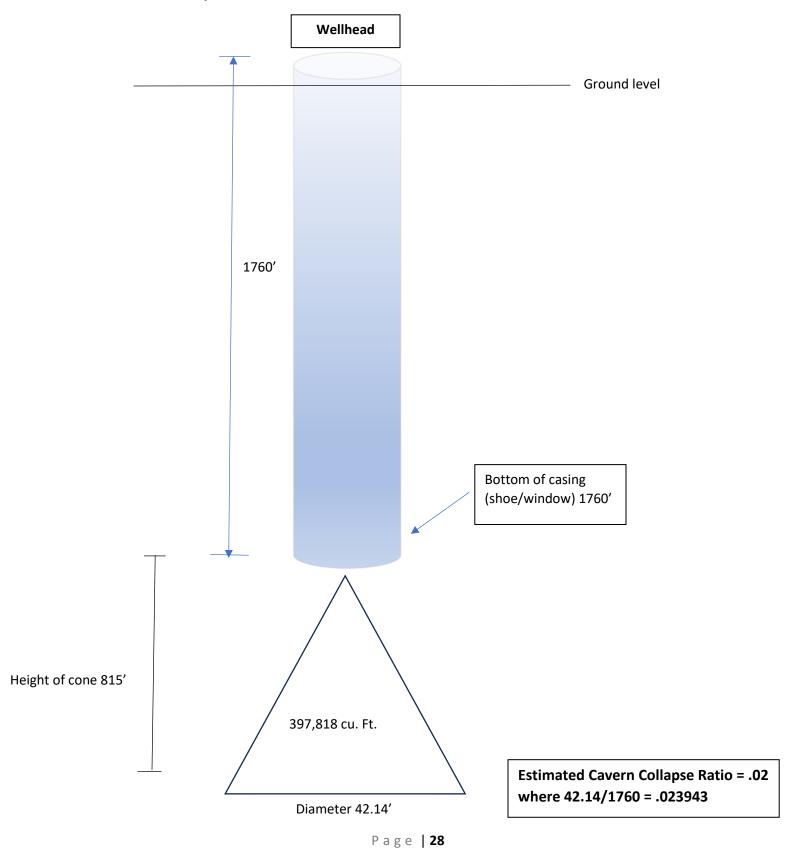
2023

consumed is equal to the total amount of salt that is calculated to have gone into solution divided by 137.47 lbs.

The attached illustration, with dimensions shown, satisfies the cubic foot volume of solubles (halite) that have been solution mined since operations first began.

2023

# Cavern Size, Shape, & Volume Estimate



Llano Disposal, LLC BW-38 API 30-025-20592

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# **APPENDIX C**

**Subsidence Survey Results** 

## Llano Disposal, LLC BW-38 API 30-025-20592

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# LLANO DISPOSAL LLC.

STATE 27 BSW #1 (BW-38) API #30-025-20592

On March 15, 2023 a field survey was conducted of the Llano Disposal LLC — State 27 BSW #1 (BW-38)(API #30-025-20592) and three subsidence monuments located in Unit letter L, Section 27, Township 16 South, Range 33 East, N.M.P.M., Lea County, New Mexico.

Located approximately 6.5 miles East of Maljamar NM.

### VERTICAL ELEVATION TABLE

Survey	Original Survey EL (Feet)	EL (Feet)	EL (Feet)	EL (Feet)	EL (Feet)	EL (Feet)
Monument ID	01/31/2022*	03/15/2023		,		
1	4198.73*	4198.77				
2	4205.18*	4205.18				
3	4201.40*	4201.42				
Well Flange	-	4202.09				
Bench Mark	4242.81*	4242.82				
Control Point	4203.96*	4203.98				

<sup>\* -</sup> Data from Pettigrew & Associates.

### HORIZONTAL LOCATIONS

Monument ID	Northing	Easting
1	688106.02	749446.29
2	688234.66	748492.54
3	688560.28	748845.62
Well Head	688513.20	748782.69
36	N32'53'27.29"	W103'39'27.07"



#### SURVEYORS CERTIFICATE

I, TERRY J. ASEL, NEW MEXICO PROFESSIONAL SURVEYOR NO. 15079, DO HEREBY CERTIFY THAT I CONDUCTED AND AM RESPONSIBLE FOR THIS SURVEY, THAT THIS SURVEY IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF, AND MEETS THE "MINIMIUM STANDARDS FOR SURVEYING IN NEW MEXICO" AS ADOPTED BY THE NEW MEXICO STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINGERS AND SURVEYORS.

rry J. Asel M.M. R.P.L.S. No. 15079

Asel Surveying, LLC

P.O. BOX 393 - 310 W. TAYLOR HOBBS, NEW MEXICO - 575-393-9146 Bearings and Coordinates conform to the New Mexico State Plane Coordinate System, New Mexico East Zone, NAD83, as derived from static GPS data sent to the National Geodetic Survey for OPUS solution processing. Basis of Elevations: U.S.C. & G.S. Bench Mark S34 1933 — CV0419 Published Elev. = 4242.79

### LLANO DISPOSAL LLC.

STATE 27 BSW WELL #1 (BW-38) LOCATED IN SECTION 27, TOWNSHIP 16 SOUTH, RANGE 33 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO

Survey Date: 03/15/23	Sheet 1 o	f 1 Sheets
W.O. Number: 230315MS	Drawn By: KA	Rev:
Date: 03/17/23	230315MS	Scale:1"=1000'

Annual Report	Llano Disposal, LLC BW-38 API 30-025-20592	
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# **Monument Survey Table - BW-38**

Monument ID-1, Horizontal Locations:	Northing - 68810	6.02, Eastling - 74	9446.29
Survey Date	Elevation	+/- ft.	
3/14/2019	4198.65		*
1/31/2022	4198.73	-0.08	*
3/15/2023	4198.77	-0.04	

ivionument ID-2, Horizontal Locations:	Northing - 68823	34.66, Eastling - 748492.5	4
Survey Date	Elevation	+/- ft.	
3/14/2019	4205.14	*	
1/31/2022	4205.18	-0.04 *	
3/15/2023	4205.18	0.00	

Monument ID-3, Horizontal Locations:	Northing - 6885	60.28, Eastling - 748	3845.62
Survey Date	Elevation	+/- ft.	
3/14/2019	4201.37		*
1/31/2022	4201.40	-0.03	*
3/15/2023	4201.42	-0.02	

Wellhead, Horizontal Locations:	Northing - 688513.20, Eastli	ng - 748782.69
Survey Date	Elevation	+/- ft.
3/15/2023	4202.09	

Benchmark, Horizontal Locations:	Northing - 684/06.85,	Eastling - /31653.40
Survey Date	Elevation	+/- ft.
1/31/2022	4242.81	*
3/15/2023	4242.82	-0.01

Control Point, Horizontal Locations:	Northing - 811570.11, Eastling - 851983.51	
Survey Date	Elevation	+/- ft.
1/31/2022	4203.96	*
3/15/2023	4203.98	-0.02

<sup>\*</sup> Elevations for the State 27 BSW #1 (BW-38) Wellhead and three subsidence monuments were determined by Asel Surveying LLC. using Geodetic Position System (Trimble R8 Base and Trimble 5800 Rover) RTK measurements off the United States Coastal and Geodetic Survey standard Benchmark S34 1933 NGS-CV0419 with a published elevation of 4242.79'.

Differences in elevations are attributed to the difference in GPS equipment and procedures used. Asel Surveying LLC. versus Pettigrew and Associates PA

Llano Disposal, LLC BW-38 API 30-025-20592

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# **APPENDIX D**

**Sundries** 

2023

There were no sundries in 2023.

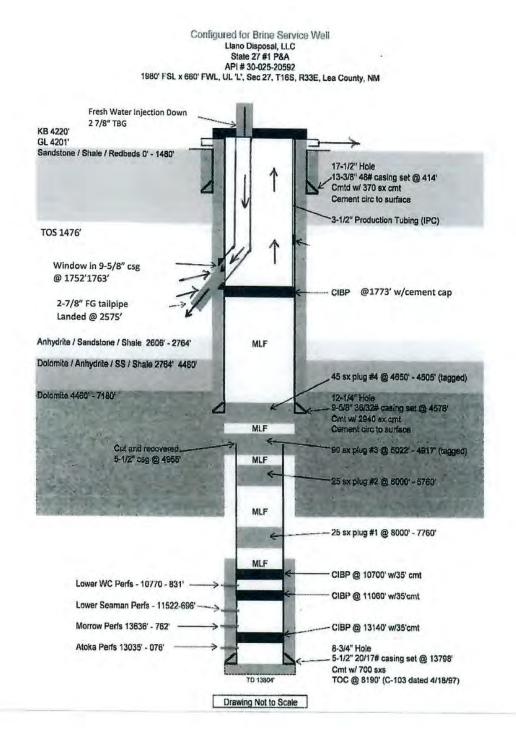
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# **APPENDIX E**

Well Diagrams

# Llano Disposal, LLC BW-38 API 30-025-20592



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# **APPENDIX F**

**Chemical Analysis** 

**Annual Report** 

Llano Disposal, LLC BW-38 API 30-025-20592

2023





# envirotech

Practical Solutions for a Better Tomorrow

# **Analytical Report**

Llano Disposal LLC

Project Name: Hummingbird Brine Station

Work Order: E303129

Job Number: 22117-0001

Received: 3/30/2023

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 4/7/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported.

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## **Annual Report**

### Llano Disposal, LLC BW-38 API 30-025-20592

2023

Date Reported: 4/7/23

Elizabeth Pickerel PO Box 250 Lovington, NM 88260

Project Name: Hummingbird Brine Station

Workorder: E303129

Date Received: 3/30/2023 7:00:00AM

Elizabeth Pickerel,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 3/30/2023 7:00:00AM, under the Project Name: Hummingbird Brine Station.

The analytical test results summarized in this report with the Project Name: Hummingbird Brine Station apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman Laboratory Director Office: 505-632-1881 Cell: 775-287-1762

whinchman@envirotech-inc.com

Raina Schwanz Laboratory Administrator Office: 505-632-1881

rainaschwanz@envirotech-inc.com

Alexa Michaels

Sample Custody Officer Office: 505-632-1881

labadmin@envirotech-inc.com

Field Offices:

Southern New Mexico Area Lynn Jarboe

Technical Representative/Client Services Office: 505-421-LABS(5227)

Cell: 505-320-4759 ljarboe@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

West Texas Midland/Odessa Area Rayny Hagan

Technical Representative Office: 505-421-LABS(5227)

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QC - Anions by EPA 300.0/9056A	11
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Chain of Custody etc.	13
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		Sample Sum	mary		
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	Hummingbird Brine 22117-0001 Elizabeth Pickerel	e Station	Reported: 04/07/23 11:23
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
Brine Well	E303129-01A	Aqueous	03/29/23	03/30/23	Poly 500mL
Fresh Well	E303129-02A	Aqueous	03/29/23	03/30/23	Poly 500mL
Monitor Well	E303129-03A	Aqueous	03/29/23	03/30/23	Poly 500mL
					envirotech Inc.

	San	nple Dat	a			
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Hummi 22117-0	ngbird Brine S	itation		Reported: 4/7/2023 11:23:18AM
	Bri	ine Well				
		03129-01				
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analys	: KF		Batch: 2313044
Total Dissolved Solids	288000	500	1	03/30/23	04/03/23	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analysi	: BA		Batch: 2313096
pH @25°C	6.76		1	03/31/23 11:37	03/31/23 11:51	Н5
Wet Chemistry by SM2710F**	N/A	N/A	Analyst	: KH		Batch: 2314002
Specific Gravity	1.191		1	04/03/23	04/03/23	
Total Metals by EPA 6010C	mg/L	mg/L	Analyst	: RKS		Batch: 2314015
Sodium	127000	2000	1000	04/04/23	04/06/23	
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst	: RAS		Batch: 2313097
Chloride						
Chloride	206000	2000	1000	03/31/23	04/03/23	
Chloride	206000	2000	1000	03/31/23	04/03/23	
Chloride	206000	2000	1000	0331/23	04/03/23	
Chloride	206000	2000	1000	0331/23	04/03/23	
Chloride	206000	2000	1000	03/31/23	04/03/23	
Chloride	206000	2000	1000	03/31/23	04/03/23	
Chloride	206000	2000	1000	03/31/23	04/03/23	
Chloride	206000	2000	1000	03/31/23	04/03/23	
Chloride	206000	2000	1000	03/31/23	04/03/23	
Chloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	
Thloride	206000	2000	1000	03/31/23	04/03/23	

## **Annual Report**

## Llano Disposal, LLC BW-38 API 30-025-20592

	San	nple Dat	а			
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Hummi 22117-0	ngbird Brine S	tation		Reported: 4/7/2023 11:23:18AM
	Fre	esh Well				
	E30	03129-02				
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C Total Dissolved Solids	mg/L 352	mg/L 10.0	Analyst 1	: KF 03/30/23	04/03/23	Batch: 2313044
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst	: BA		Batch: 2313096
pH @25°C	7.67		1	03/31/23 11:37	03/31/23 11:51	H5
Wet Chemistry by SM2710F**	N/A	N/A	Analyst	: KH		Batch: 2314002
Specific Gravity	0.992		1	04/03/23	04/03/23	
Anions by EPA 300.0/9056A Chloride	mg/L 47.4	mg/L 2.00	Analyst	: RAS		Batch: 2313097

	San	nple Dat	a			
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Hummi 22117-0	ngbird Brine S	Station		Reported: 4/7/2023 11:23:18AM
	Mon	nitor Well				
	E30	03129-03				
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analysi	:: KF		Batch: 2313044
Total Dissolved Solids	319	10.0	1	03/30/23	04/03/23	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst	: BA		Batch: 2313096
oH @25°C	7.70		1	03/31/23 11:37	03/31/23 11:51	Н5
Wet Chemistry by SM2710F**	N/A	N/A	Analyst			Batch: 2314002
Specific Gravity	0.991		1	04/03/23	04/03/23	
Anions by EPA 300.0/9056A Chloride	mg/L 45.0	mg/L 2.00	Analyst	: RAS 03/31/23		Batch: 2313097

Project Name			QC S	umma	ry Da	ta					
Reputing   Spring	PO Box 250		Project Name: Project Number:	Ht 22	ammingbird 117-0001	Brine Station					
Regults Reveal Recults Reveal Reporting Part of Lovel Reads Reads Research Reveal Report Repo			20, 27, 21, 22, 22, 23, 24, 24, 24, 24, 24, 24, 24, 24, 24, 24				-				
Result   Limit   Limit   Rect   Rect   Limits   RPD   Limit   mg/L   m	Analyte			100000		2340C			10.00		yst: KF
and Dismoved Saiduk  ND 10.0  Tel (2013)644-1501)  Tel (2013)644-1501  Tel (2013)644-1			Limit	Level	Result		Limits		Lin	nit	Notes
SS (2313044-BS) Prepared: 03/50/23 Analyzed: 04/03/23 and Dismotres Saids 97.0 ss-14 supplicate (2313044-BDP) Source: E303107-01 Prepared: 03/50/23 Analyzed: 04/03/23 analyzed: 04/03/2	Blank (2313044-BLK1)							Prepared: (	33/30/23	Analyzad	. 04/02/22
and Dissolved Selects 97.9 10.0 100 97.0 \$5.154  uplicate (2313044-DUP1) Source: E303107-01 Prepared: 03.2023 Analyzed: 04/03/23  uplicate (2313044-DUP1) 10.0 2840 0-341 5	Total Dissolved Solids	ND	10.0					riepared.	33130123	Allalyzeu	. 04/03/23
### Source: \$303104-DUP)    Source: \$303107-01   Prepared: 03/30/23 Analyzed: 04/03/23								Prepared: (	03/30/23	Analyzed	: 04/03/23
Sharker E-8/05/10/-01 Preparet: 93/90/23 Analyzed: 04/03/23 anal Dinasted Satids 2930 10.0 2941 5		97.0	10.0	100							
	Total Dissolved Solids	2930	10.0			: E303107-01				Analyzed	: 04/03/23
			10.0		2940			0.341	5		
Page 8 of 14 envirotech Inc.											

## Annual Report Lla

## Llano Disposal, LLC BW-38 API 30-025-20592

Llano Disposal LLC PO Box 250		Project Name:	Hu	ry Data	_	n			Reported:
Lovington NM, 88260		Project Number: Project Manager:		117-0001 zabeth Picker	el				4/7/2023 11:23:18AM
		Wet Chemis	try by 90	40C/45001	H+B				Analyst: BA
Analyte	Result pH Units	Reporting Limit pH Units	Spike Level pH Units	Source Result pH Units	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
LCS (2313096-BS1)							Prepared: 03	3/31/23	Analyzed: 03/31/23
pII Duplicate (2313096-DUP1)	7.97		8.00		99.8	98.75-101.25			
pH pH	6.79			Source: 1	E303129-0	1	Prepared: 03 0.443	20	Analyzed: 03/31/23
							0.115	20	

		QCS	Sumn	ary Dat	a				
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager		Hummingbird   22117-0001 Elizabeth Picke	Brine Statio	n			Reported: 4/7/2023 11:23:18AM
		Total N	letals b	y EPA 60100	С				Analyst: RKS
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result	Rec	Rec Limits	RPD	RPD Limit	7
		mg L	mg/L	mg/L	%	%	%	%	Notes
Blank (2314015-BLK1) Sodium	ND	2.00					Prepared: 04	4/04/23 Ar	nalyzed: 04/06/23
LCS (2314015-BS1)		2.00					Propagad: 0	1/04/22 4	nalyzed: 04/06/23
Sodium	20.7	2.00	20.0		103	80-120	Frepared: 02	1/04/23 Ar	naryzed: 04/06/23
Matrix Spike (2314015-MS1)	20.0	2020	40000		E303161-0		Prepared: 04	1/04/23 Ar	nalyzed: 04/06/23
Matrix Spike Dup (2314015-MSD1)	29.8	2.00	20.0	9.44	102	75-125			
Sodium	33.2	2.00	20.0	Source: 9.44	E303161-0	75-125	Prepared: 04	1/04/23 Ar 20	nalyzed: 04/06/23

Llano Disposal LLC				ary Dat					
PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager		Hummingbird I 22117-0001 Elizabeth Picke				4.	Reported: '7/2023 11:23:18AM
		Anions	by EPA	300.0/9056	4				Analyst: RAS
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits	RPD %	RPD Limit %	
Blank (2313097-BLK1)									Notes
Chloride	ND	2.00					Prepared: 0	3/31/23 Ana	lyzed: 04/03/23
LCS (2313097-BS1) Chloride	2/1	W-00					Prepared: 03	3/31/23 Ana	lyzed: 04/03/23
LCS Dup (2313097-BSD1)	26.1	2.00	25.0		105	90-110			
Chloride	25.6	2.00	25.0		102	90-110	Prepared: 03 2.25	20 Ana	lyzed: 04/03/23
OC Summary Report Comment: Calculations are based off of the raw (n Therefore, hand calculated values may o	on-rounded) da differ slightly.	ta. However, for	reporting	purposes all o	QC data is :	rounded	to three si	znificant fi	gures.

		Definition	s and Notes	
PO Bo	Disposal LLC x 250 x 000 NM, 88260	Project Name: Project Number: Project Manager:	Hummingbird Brine Station 22117-0001 Elizabeth Pickerel	Reported: 04/07/23 11:23
Н5	pH is specified to be performed in	the field within 15 minutes of sar	npling. The sample analysis was performed as q	niekly sa nascit-l
ND	Analyte NOT DETECTED at or above		-rg sample analysis was performed as q	uickly as possible.
NR	Not Reported	-		
RPD	Relative Percent Difference			
DNI	Did Not Ignite			
Note (1): N	Methods marked with ** are non-accredited	methods.		
	oil data is reported on an "as received" weig			

2023

# Annual Report Llano Disposal, LLC BW-38 API 30-025-20592

Projec	t Informa	ation																
Client:			1115			Chain	of Cust	ody									Page _	of
Project: Project	Hum Manager:	Eliza	d Brine	Station_ :kerel	Attention: Llano Disposal Address: PO Box 250	ЩС	Lab We	<b>3</b> 1.	ab U	Job I	Nun	ber I-00	n l	1D	2D	TA 3D	Standard CWA SDWA	
Address City, Sta	s: PO te, Zip Lo 575	Box 250 vington	NM 882		City, State, Zip Lovington Phone: 575-605-6490		-	_		Analys	is ar	nd Me	tho				RCRA	
Email:	service.lla due by:	nobrine	@gmail.	com	Email: service.llanobrine@	gmail.com_	PH GRO/DRO/ORO by	120	760	010	0.000		Sravity	NM	i, pH in	۲	State NM CO UT AZ TX	
Time Sampled 7:50	Date Sampled 3/29/23	Matrix	No. of Contamers	Sample ID	Dallas Wall	Lab Numbe	TPH GRO	8015 8TEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Sodium	TDS, Spec. Gravity	BGDOC NM	Chlorides	CDOC	Remarks	
7:52	3/29/23	A	1		Brine Well Fresh Well	1						x	x		×			
7:54	3/29/23	A	1		Monitor Well	2							x		×			
		.,	,			3		-					x		x			
					-											-		
							+	-				1		-		-		
														1				
Addition	nal Instruc	tions:																
, (field sam	pler), attest t	o the valid	ity and auth	enticity of this sample.	. I am aware that tampering with or intent	ionally mislabelling	the sample	locatio	n,	Sample	requi	ring the	rmale	reservi	ation n	nust be	received on are the day the	
N . W	* 1	. Is conside	red fraud at	no may be grounds for	Received by: (Signature)	beth Pickerel								_	_	Only	received on ice the day they are sampled or less than 6 oC on subsequent days.	
Relinquish	ed by: (Sign	ature)	LL 3	2923 175	Received by: (Signature)	Date 3- 29-	Z3 Time	20		Recei	ved	on id		A	11 1	١		
don	ene	Pe-	32	29-25 Z3/5	Received by: (Signature)	Date U3/30		200		T1					-	-	_ <u>T3</u>	
Sample Mat Note: Sam	ples are dis	d - Solid, S		- Aqueous, O - Other results are reported		Containe	r Type: g	- glas	s, p -	AVG	last	c. ap	- am	here	lass,	v - VI	DA .	
	- samples	- obburgi	one unity to	couse samples recei	ounless other arrangements are made ived by the laboratory with this COC. T	The liability of the	laboraton	y is lim	ited t	o the a	mou	nt pai	d for	on th	e rep	ort.	ensu. The report for the analysis	
						D	10 -11											
						rage 1	13 of 14	1										

la etc.		Envirotech Sample		tical Laborato Checklist (SRC)	ory	Printed: 3/30/2023 10:41:25AN
f we receive	: Please take note of any NO checkmarks. e no response concerning these items within 24 ho					
Client:	Llano Disposal LLC	Date Received:	03/30/23		TARRA AND	
Phone:	575-605-6490	Date Logged In:	03/29/23		Work Order ID:	E303129
Email:	service.llanobrine@gmail.com	Due Date:		17:00 (4 day TAT)	Logged In By:	Caitlin Christian
Chain of	Custody (COC)					
1. Does th	he sample ID match the COC?		Yes			
2. Does to	he number of samples per sampling site locati	on match the COC	Yes			
3. Were s	amples dropped off by client or carrier?		Yes	Carrier: Cour	rier	
4. Was th	e COC complete, i.e., signatures, dates/times,	requested analyses?	Yes			
3. were a	Ill samples received within holding time?  Note: Analysis, such as pH which should be cond	acted in the field	Yes			
	i.e, 15 minute hold time, are not included in this d	isuession.			Commen	ts/Resolution
Sample T	Turn Around Time (TAT)					
	e COC indicate standard TAT, or Expedited TA	T?	Yes			
Sample C						
	sample cooler received?		Yes			
o. II yes,	was cooler received in good condition?		Yes			
9. Was the	e sample(s) received intact, i.e., not broken?		Yes			
	custody/security seals present?		No			
	were custody/security seals intact?		NA			
	e sample received on ice? If yes, the recorded temp Note: Thermal preservation is not required, if sam minutes of sampling	oles are received w/i 15	Yes			
13. If no \	visible ice, record the temperature. Actual s	ample temperature: 4°0	2	1		
Sample C	Container	and the second of the				
14. Are ac	queous VOC samples present?		No			
15. Are V	OC samples collected in VOA Vials?		NA			
16. Is the	head space less than 6-8 mm (pea sized or less	3)?	NA			
17. Was a	trip blank (TB) included for VOC analyses?		NA			
18. Are no	on-VOC samples collected in the correct conta	iners?	Yes			
19. Is the a	appropriate volume/weight or number of sample of	ontainers collected?	Yes			
Field Lab						
Sa	field sample labels filled out with the minimum timple ID?	n information:				
Da	ate/Time Collected?		Yes			
	ollectors name?		No No			
Sample Pr	reservation		1.0			
21. Does th	he COC or field labels indicate the samples w	ere preserved?	No			
22. Are sai	mple(s) correctly preserved?		NA			
	ilteration required and/or requested for dissol	ved metals?	No			
26 Dogg 4	se Sample Matrix					
27 If was	he sample have more than one phase, i.e., mul	tiphase?	No			
	does the COC specify which phase(s) is to be	analyzed?	NA			
	ct Laboratory					
28. Are sar	mples required to get sent to a subcontract lab	oratory?	No			
	subcontract laboratory specified by the client a	and if so who?	NA	Subcontract Lab: NA		
Client Inc	struction					

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Blancabase			tical Laboratory Checklist (SRC)	1	Printed: 3/30/2023 10:41:25AN			
Please take note of any NO checkmarks. no response concerning these items within 24 h								
Llano Disposal LLC				200000000000000000000000000000000000000				
575-605-6490					E303129			
service.llanobrine@gmail.com	Due Date:			Logged In By:	Caitlin Christian			
Custody (COC)								
ne sample ID match the COC?		Yes						
ne number of samples per sampling site locat	on match the COC	Yes						
amples dropped off by client or carrier?		Yes	Carrier: Courier					
COC complete, i.e., signatures, dates/times	requested analyses?	Yes						
Note: Analysis, such as pH which should be cone	ucted in the field,	Yes						
urn Around Time (TAT)				Commen	ts/Resolution			
	AT?	Yes						
		Yes						
vas cooler received in good condition?		Yes						
		Yes						
		No						
		NA						
Note: Thermal preservation is not required, if san minutes of sampling	ples are received w/i 15	Yes						
isible ice, record the temperature. Actual s	ample temperature: 4°0	2						
			1					
ueous VOC samples present?		No						
samples collected in VOA Vials?	14	NA						
trin blank (TD) included 6 VOC	s)?	NA						
n-VOC samples collected in the annual ses?	0	NA						
propriate volume/weight or pumber of con-	uners?	Yes	1					
el	containers collected?	Yes						
	n information							
mpie ID?		Yes						
te/Time Collected?		No						
		No						
e COC or field labels indicate the second		40						
nple(s) correctly preserved?	ere preserved?	No						
Iteration required and/or requested for dissol	ved metals?							
e Sample Matrix		140						
e sample have more than one phase, i.e., mu	tinhase?	N						
loes the COC specify which phase(s) is to be	analyzed?							
ct Laboratory	,	NA						
ples required to get sent to a subcontract lab	oratory?	No						
= ouccontract lat	and if so who?	No NA	D. L					
ubcontract laboratory specified by the client		11/1	Subcontract Lab: NA					
	Llano Disposal LLC  575-605-6490 service.llanobrinc@gmail.com  Custody (COC) the number of samples per sampling site location and the core of samples and the core of samples dropped off by client or carrier? COC complete, i.e., signatures, dates/times, a samples received within holding time? Note: Analysis, such as pH which should be condition; site, 15 minute hold time, are not included in this of the core of	Llano Disposal LLC  Date Received: 575-605-6490  service.llanobrine@gmail.com  Due Date:  Custody (COC)  the number of samples per sampling site location match the COC amples dropped off by client or carrier?  the number of samples per sampling site location match the COC amples dropped off by client or carrier?  the coc complete, i.e., signatures, dates/times, requested analyses?  I samples received within holding time?  Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this disucssion.  The Around Time (TAT)  COC indicate standard TAT, or Expedited TAT?  The cooler object of the cooler received?  The sample cooler received in good condition?  The sample specified intact, i.e., not broken?  The sample specified intact is not required, if samples are received with 15 minutes of sampling isible ice, record the temperature. Actual sample temperature:  The sample specified intact is not required, if samples are received with 15 minutes of sample specified intact is not required. The sample specified intact is not required in sample temperature:  The sample specified intact is not required. The sample specified intact is not required into sample temperature:  The sample specified intact is not required and or less?  The collected?  The collected?  The collected?  The collected?  The collected and or requested for dissolved metals?  The collected and or requested for dissolved metals?  The complexity preserved?  The collected and or requested for dissolved metals?	Liano Disposal LLC  Date Received: 03/30/23  575-605-6490 Date Logged In: 03/29/23  Service.llanobrine@gmail.com  Due Date: 04/05/23  Custody (COC)  See sample ID match the COC?  See samples dropped off by client or carrier?  COC complete, i.e., signatures, dates/times, requested analyses?  I samples received within holding time?  Note: Analysis, such as pH which should be conducted in the field, i.e., 15 minute hold time, are not included in this dissucssion.  SEE COC indicate standard TAT, or Expedited TAT?  COC indicate standard TAT, or Expedited TAT?  COC indicate standard TAT, or Expedited TAT?  See sample cooler received?  See sample(s) received in good condition?  See sample(s) received intact, i.e., not broken?  See sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°±2°C  Note: Thermal preservation is not required, if samples are received w/i 15 minutes of sampling isible ice, record the temperature. Actual sample temperature: 4°C  Ontainer  See Sample scollected in VOA Vials?  Seed space less than 6-8 mm (pea sized or less)?  Trip blank (TB) included for VOC analyses?  NA  NA  NA  NA  NA  NA  NA  NOC COC or field labels indicate the samples were preserved?  No record or field labels indicate the samples were preserved?  No cocorrectly preserved?  No cococorrectly preserved?  No cococorrectly preserved?  No cococorrectly preserved?  No cocococorrectly preserved?  No cocococorrectly preserved?  No cococococococococococococococococococ	Llano Disposal LLC Date Received: 03/30/23 07:00 Date Logged In: 03/29/23 15:27 Due Date: 04/05/23 17:00 (4 day TAT)  Castody (COC)  e sample ID match the COC? et a number of samples presampling site location match the COC unples received within holding time? CCC Complete, i.e., signatures, dates/times, requested analyses? Ves Carrier: Courier Ves Carrier:	Liano Disposal LLC Liano Disposal LLC Liano Disposal LLC Date Cogged In: 03/29/23 15:27			

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I land Discount of		Sample Sum				
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	Hummingbird Brit 22117-0001 Elizabeth Pickerel			Reported: (07/23 14:09
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container	
Brine Well Fresh Well Monitor Well	E306218-01A E306218-02A E306218-03A	Aqueous Aqueous Aqueous	06/28/23 06/28/23 06/28/23	06/29/23 06/29/23 06/29/23	Poly 500mL Poly 500mL Poly 500mL	

	San	nple Dat	9				
Llano Disposal LLC	Project Name:		ingbird Brine S	Station			
PO Box 250	Project Number:	0001	station		Reported:		
Lovington NM, 88260	Project Manager:	Elizabe	th Pickerel			7/7/2023 2:09:53PM	
	Bri	ine Well					
	E30	06218-01					
Analyte		Reporting					
	Result	Limit	Dilution	Prepared	Analyzed	Notes	
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analysi	:: KF		Batch: 2326065	
Total Dissolved Solids	311000	200	1	06/29/23	06/29/23		
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst	:: BA		Batch: 2326067	
pH @25°C	6.87		1	06/29/23 10:39	06/29/23 14:00	H5	
Wet Chemistry by SM2710F**	N/A	N/A	Analyst	: KH		Batch: 2327022	
Specific Gravity	1.207		1	07/06/23	07/06/23		
Total Metals by EPA 6010C	mg/L	mg/L	Analyst	: RKS		Batch: 2327011	
Sodium	121000	2000	1000	07/05/23	07/06/23	Batch, 232/011	
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst	: BA		D-+-1-2224045	
Chloride	202000	4000	2000	06/29/23	06/29/23	Batch: 2326045	

	San	iple Dat	a			
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	22117-	ngbird Brine S 0001 th Pickerel	tation		Reported: 7/7/2023 2:09:53PM
		esh Well			18910	
	E30	06218-02				
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analyst	: KF		Batch: 2326065
Total Dissolved Solids	447	10.0	ı	06/29/23	06/29/23	B.M.C.II. 2.5.2.0005
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst	BA		D . I 222/0/7
pH @25°C	6.89	p-s a mile	1	06/29/23 10:39	06/29/23 14:00	Batch: 2326067
Wet Chemistry by SM2710F**	N/A	N/A			3.27.25 14.00	
Specific Gravity	1.002	N/A	Analyst	07/06/23	07/05/20	Batch: 2327022
Anions by EPA 300.0/9056A					07/06/23	
Chloride	mg/L 44.3	mg/L	Analyst			Batch: 2326045
	44.5	2.00	1	06/29/23	06/29/23	

	San	nple Dat	a				
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Project Number: 22117-0001					
	Mor	nitor Well				7/7/2023 2:09:53PM	
	E3	06218-03					
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes	
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analyst	: KF		Batch: 2326065	
Total Dissolved Solids	381	10.0	1	06/29/23	06/29/23		
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst	: BA		Batch: 2326067	
оН @25°С	7.62		1	06/29/23 10:39	06/29/23 14:00	Н5	
Wet Chemistry by SM2710F**	N/A	N/A	Analyst	: КН		Batch: 2327022	
Specific Gravity	0.999		1	07/06/23	07/06/23		
Anions by EPA 300.0/9056A Chloride	mg/L 43.9	mg/L 2.00	Analyst	BA 06/29/23		Batch: 2326045	

Project Information

Time Sampled Date Sampled

8:00 6/28/23

8:02 6/28/23

8:03

Client: Llano Disposal LLC
Hummingbird Brine Station
Proiect Manager: Elizabeth Pickerel
Address: PO Box 250
City. State. Zip Lovington NM 88260
Phone: 572-605-6490
Email: service llanobrine@gmail.com
Report due by:

i, (field sampler), attest to the validity and authenticity of this sample. I am aware that ta

#### **Annual Report** Llano Disposal, LLC BW-38

Bill To Attention: Llano Disnosal LLC
Address: PO Box 250
Citv. State, Zip Lovington NM 88260
Phone: 575-605-6490
Email: service.llanobrine@gmail.com

Brine Well

Fresh Well

Monitor Well

of C	usto	dy									Page of	
Lat	b WO	La	b Us	e Or	nly	ber		1D	lan.	TA	EPA Program	
Е.	300		83	211	7- sis ar	OOC nd Me	othor		20	30	Standard CWA SDWA X RCRA	
	TPH GRO/DRO/ORO by 8015	121	05	0	0.0		avity	NM	m Hd	J	State NM CO UT AZ TX	
	TPH GRO/I	BTEX by 8021	VOC by 8260	Metals 6010	Chloride 300.0	Sodium	TDS, Spec. Gravity	BGDOC 1	Chlorides, pH in Water	XT DOGS	Remarks	
						x	x		x			
							x		x			
							^		^	1		
			-				-					
-		-	-	-	-	-						
					1					+		
				1			1			1		
_	mple lo	tation		Sample: received	requir I packe	ring the d in ice	rmal p at an .				relved on ice the day they are sampled or less than 6 cC on subsequent days.	
e sar	/3	00	-	Recei	ived	on ic	e:	Lat	Use )/ N	Only		
3	17	30	2	r1_			_ 1		_		<u> 13 </u>	
3	Time	22	1.	N/C -	Temr	o oC_	4					
3	87	place	n - n	mhile	Inchi		7		1.		Anse. The report for the analysis	

Page 6 of 7

Instructions:	Please take note of any NO checkmarks. no response concerning these items within 24 hours			Checklist (SRC)		Printed: 6/29/2023 12:01:28PN
Client:	Llano Disposal LLC	Date Received:	06/29/2:			Supple Arek
Phone:	575-605-6490	Date Logged In:	06/29/2		Work Order ID:	E306218
Email:	service.llanobrine@gmail.com	Due Date:		3 17:00 (4 day TAT)	Logged In By:	Caitlin Mars
Chain of	Custody (COC)					
1. Does th	e sample ID match the COC?		Yes			
2. Does th	e number of samples per sampling site location	match the COC	Yes			
3. Were sa	amples dropped off by client or carrier?		Yes	Carrier: Courier		
4. Was the	COC complete, i.e., signatures, dates/times, re-	quested analyses?	Yes			
5. Were al	I samples received within holding time? Note: Analysis, such as pH which should be conduct	ed in the field,	Yes			
Comple T	i.e, 15 minute hold time, are not included in this disu	ession.			Commen	ts/Resolution
	urn Around Time (TAT) COC indicate standard TAT, or Expedited TAT					
Sample C			Yes			
W. W. W. W. W.	ample cooler received?		**			
	was cooler received in good condition?		Yes			
	sample(s) received intact, i.e., not broken?		Yes			
	custody/security seals present?		Yes			
	were custody/security seals intact?		No			
12. Was the	sample received on ice? If yes, the recorded temp is 4 Note: Thermal preservation is not required, if sample	1°C, i.e., 6°±2°C	NA Yes			
	minutes of sampling isible ice, record the temperature. Actual sam		2			
Sample Co	ontainer	-				
	ueous VOC samples present?		No			
15. Are VC	OC samples collected in VOA Vials?		NA			
16. Is the h	nead space less than 6-8 mm (pea sized or less)?		NA			
17. was a t	trip blank (TB) included for VOC analyses?		NA			
19. Is the ar	n-VOC samples collected in the correct contain propriate volume/weight or number of sample con	ers?	Yes			
Field Labe	el	tainers collected?	Yes			
	ield sample labels filled out with the minimum i	nformation				
Sar	mple ID?	mormation,	Yes			
	te/Time Collected?		Yes			
Sample Pr	llectors name?		Yes			
	ne COC or field labels indicate the samples were	10				
22. Are san	nplc(s) correctly preserved?	preserved?	No			
24. Is lab fi	ilteration required and/or requested for dissolved	d metals?	NA No			
Multiphase	e Sample Matrix		140			
26. Does th	e sample have more than one phase, i.e., multip	hase?	No			
27. If yes, d	loes the COC specify which phase(s) is to be an	alyzed?	NA			
Subcontrac	ct Laboratory					
20 4-	aples required to get sent to a subcontract labora	itory?	No			
20. Are san	ubcontract laboratory specified by the client and	I if so who?	NA	Subcontract Lab: na		
29. Was a si						

**Annual Report** 

Llano Disposal, LLC BW-38 API 30-025-20592

2023





# envirotech

Practical Solutions for a Better Tomorrow

# **Analytical Report**

Llano Disposal LLC

Project Name: Hummingbird Brine Station

Work Order: E310020

Job Number: 22117-0001

Received: 10/4/2023

Revision: 2

Report Reviewed By:

Walter Hinchman Laboratory Director 10/11/23

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported.

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## **Annual Report**

### Llano Disposal, LLC BW-38 API 30-025-20592

2023

Date Reported: 10/11/23

Elizabeth Pickerel PO Box 250 Lovington, NM 88260

Project Name: Hummingbird Brine Station

Workorder: E310020

Date Received: 10/4/2023 8:20:00AM

Elizabeth Pickerel,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 10/4/2023 8:20:00AM, under the Project Name: Hummingbird Brine Station.

The analytical test results summarized in this report with the Project Name: Hummingbird Brine Station apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

Walter Hinchman Laboratory Director Office: 505-632-1881 Cell: 775-287-1762

whinchman@envirotech-inc.com

Raina Schwanz

Laboratory Administrator Office: 505-632-1881

rainaschwanz@envirotech-inc.com

Alexa Michaels

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labadmin@envirotech-inc.com

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Michelle Golzales

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Cell: 505-947-8222

mgonzales@envirotech-inc.com

Envirotech Web Address: www.envirotech-inc.com

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QC - Total Metals by EPA 6010C	11
QC - Anions by EPA 300.0/9056A	12
Definitions and Notes	13
Chain of Custody etc.	14

	Harris Library	Sample Sum				
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	Hummingbird Brir 22117-0001 Elizabeth Pickerel	ne Station	Reported: 10/11/23 16:50	
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container	
Brine Well Fresh Well Monitor Well	E310020-01A E310020-02A E310020-03A	Aqueous Aqueous Aqueous	10/03/23 10/03/23 10/03/23	10/04/23 10/04/23 10/04/23	Poly 500mL Poly 500mL Poly 500mL	

	San	nple Dat	a			
Llano Disposal LLC PO Box 250	Project Name: Project Number:		ingbird Brine S	Station		Reported:
Lovington NM, 88260	Project Manager:	Elizabe	th Pickerel			10/11/2023 4:50:19PM
		ine Well				
	E3:	10020-01				
Analyte	Result	Reporting Limit	Dilution		T. 20 12	
Wet Chem/Gravimetric by SM2540C				Prepared	Analyzed	Notes
Total Dissolved Solids	mg/L 326000	mg/L 200	Analys	10/10/23	10/11/23	Batch: 2341013 T19
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analysi		1.0/11/23	
pH @25°C	6.80	r ome	1	10/05/23 09:47	10/05/23 16:54	Batch: 2340080 H5
Wet Chemistry by SM2710F**	N/A	N/A	Analyst			Batch: 2340077
Specific Gravity	1.202		1	10/05/23	10/05/23	Datell: 23400//
Total Metals by EPA 6010C	mg/L	mg/L	Analyst	: JL		Batch: 2341012
Sodium	96400	2000	1000	10/09/23	10/10/23	
Anions by EPA 300.0/9056A Chloride	mg/L 374000	mg/L 4000	Analyst	: IY		Batch: 2341045

	San	nple Dat	а				
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Hummi 22117-	ingbird Brine S	ation		Reported: 10/11/2023 4:50:19PM	
		esh Well					1
	E3	10020-02					_
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes	
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analyst:	KF		Batch: 2340083	
Total Dissolved Solids	1340	10.0	1	10/06/23	10/06/23		
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst:	BA		Batch: 2340080	
pH @25°C	7.80		-1	10/05/23 09:47	10/05/23 16:54	H5	
Wet Chemistry by SM2710F**	N/A	N/A	Analyst:	КН		Batch: 2340077	
Specific Gravity	0.993		1	10/05/23	10/05/23		
Anions by EPA 300.0/9056A	mg/L	mg/L	Analyst:	IY		Batch: 2341045	
Chloride	43.2	2.00	L	10/10/23	10/10/23		

	San	nple Dat	9			
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Hummi 22117-	ingbird Brine S	tation		Reported: 10/11/2023 4:50:19PM
	Mor	nitor Well				1.50.151 M
		10020-03				
		Reporting				
Analyte	Result	Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C Total Dissolved Solids	mg/L	mg/L	Analyst			Batch: 2340083
	320	10.0	1	10/06/23	10/06/23	
Wet Chemistry by 9040C/4500H+B pH @25°C	pH Units	pH Units	Analyst			Batch: 2340080
Wet Chemistry by SM2710F**			1	10/05/23 09:47	10/05/23 16:54	Н5
Specific Gravity	N/A 0.994	N/A	Analyst			Batch: 2340077
Anions by EPA 300.0/9056A		7 12		10/05/23	10/05/23	
Chloride	mg/L 43.2	mg/L 2.00	Analyst:	10/10/23	10/10/23	Batch: 2341045

		QC St	ımmaı	ry Data	a					
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	221	nmingbird E 17-0001 abeth Picker	Brine Station					ported:
									10/11/20:	23 4:50:19PM
Analyte		Wet Chem/G			540C				Analy	/st: KF
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits	RPD %	RPE Limi		Notes
Blank (2340083-BLK1)										
Total Dissolved Solids	ND	10.0					Prepared: 1	0/06/23	Analyzed:	10/06/23
LCS (2340083-BS1)							Prepared: 1	0/06/23	Analyzed:	10/06/23
Total Dissolved Solids	117	10.0	100		117	55-134			· mm.y zou.	10/00/23
Duplicate (2340083-DUP1)  Total Dissolved Solids					E310023-01		Prepared: 1	0/06/23	Analyzed:	10/06/23
July District Bollus	414	10.0		425			2.62	5		

Llano Disposal LLC		Project Name:		ry Dat		1			Reported:	
PO Box 250 Lovington NM, 88260		Project Number: Project Manager:		117-0001 zabeth Picke	erel				10/11/2023 4:50:19PM	M.
		Wet Chem/G	ravimetr	ric by SM2	2540C				Analyst: KF	
Analyte	Result	Reporting Limit	Spike Level	Source Result	Rec	Rec Limits	RPD	RPD		
	mg/L	mg/L	mg/L	mg/L	%	%	%	Limit %	Notes	
Blank (2341013-BLK1)							Prepared: 1	0/09/23 A	nalyzed: 10/11/23	
Total Dissolved Solids LCS (2341013-BS1)	ND	10.0								
Total Dissolved Solids	102	10.0	100		102	55-134	repared: 1	0/09/23 A	nalyzed: 10/11/23	
LCS Dup (2341013-BSD1)							Prepared: 10	0/09/23 A	nalyzed: 10/11/23	
Total Dissolved Solids	98.0	10.0	100		98.0	55-134	4.00	5		
							6			

Description	Llava Diagram LLV C				ry Dat					
Lovington NM, 88260   Project Manager:   Elizabeth Pickerel   10/11/2023 4:50:19PM	PO Box 250					Brine Station	1			Reported:
Analyte Result Result Limit Level Result Rec Limits RPD Limit PH Units will not phone with the phone with th	Lovington NM, 88260		Project Manager:	El	izabeth Picke					10/11/2023 4:50:19PM
Result   Limit   Level   Result   Rec   Limits   RPD   Limit   Limit   PH Units   Prepared: 10/05/23   Analyzed: 10/05/23			Wet Chemi	stry by 90	040C/4500	Н+В				Analyst: BA
PH Units	Analyte		Reporting Limit			Rec	Rec Limits	RPD	RPD Limit	
pti 7.99 8.00 99.9 98.75-101.25  Duplicate (2340080-DUP1) Source: E310020-01 Prepared: 10/05/23 Analyzed: 10/05/23		pH Units	pH Units	pH Units	pH Units					Notes
Duplicate (2340080-DUP1)  Source: E310020-01  Prepared: 10/05/23 Analyzed: 10/05/23								Prepared: 1	0/05/23 A	nalyzed: 10/05/23
pH 5001CC: E310020-01 Prepared: 10/05/23 Analyzed: 10/05/23		7,99		8.00	0		8.75-101.25			
		6.85				E310020-01				nalyzed: 10/05/23

11 D		QC S		-						
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	22	ammingbird I 117-0001 izabeth Picke						eported: 23 4:50:19PM
				EPA 60100		-				Ser Consultation and
Analyte		Reporting	Spike	Source				200		yst: JL
	Result mg/L	Limit mg/L	Level mg/L	Result mg/L	Rec %	Rec Limits %	RPD %	RPI Lim %	it	Notes
Blank (2341012-BLK1)							Prepared:	10/09/23	Anglemad	10/00/22
Sodium	ND	2.00					r repared.	10/09/23	Analyzed	10/09/23
LCS (2341012-BS1)							Prepared:	10/09/23	Analyzed	10/09/23
Sodium Matrix Spiles (2241012 MGs)	17.5	2.00	20.0		87.7	80-120				
Matrix Spike (2341012-MS1) Sodium	1580				E310013-04		Prepared:	0/09/23	Analyzed	10/09/23
Matrix Spike Dup (2341012-MSD1)	1300	2.00	20.0	1590	NR	75-125				M4
Sodium	1560	2.00	20.0	Source:	E310013-04 NR	75-125	Prepared: 1	0/09/23	Analyzed	
								20		M4

Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	22	ummingbird I 2117-0001 lizabeth Picke		1		10/	Reported: 11/2023 4:50:19PM
		Anions l	by EPA 3	00.0/9056	١				Analyst: IY
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits	RPD %	RPD Limit %	Notes
Blank (2341045-BLK1)									yzed: 10/10/23
Chloride	ND	2.00					riepaied. It	0/10/23 Ana	yzed: 10/10/23
LCS (2341045-BS1) Chloride	24.7	2.00	25.0				Prepared: 10	0/10/23 Anal	yzed: 10/10/23
LCS Dup (2341045-BSD1)	-117	2.00	25.0		98.7	90-110			
Chloride	24.7	2.00	25.0		98.8	90-110	0.0701	0/10/23 Anal	yzed: 10/10/23
OC Summary Report Comment: alculations are based off of the raw ( herefore, hand calculated values may	non-rounded) dat v differ slightly.	a. However, for r	reporting r	Durposes all	OC data is	rounde	d to three si	gnificant S	

		Definition	s and Notes	
РО Во	Disposal LLC x 250 gton NM, 88260	Project Name: Project Number: Project Manager:	Hummingbird Brine Station 22117-0001 Elizabeth Pickerel	Reported: 10/11/23 16:50
Н5	pH is specified to be performed in the	a field within 15 minutes of		
M4	Matrix spike recovery value is suspect associated LCS spike recovery was a	et since the analyte concentration	upling. The sample analysis was performed as quantum in the sample is disproportionate to the spike	uickly as possible.
T19	and a spine recovery was a	ссершоге.	ficant amount of time to evaporate. The Final w	
ND	Analyte NOT DETECTED at or above the	reporting limit		
NR	Not Reported			
RPD	Relative Percent Difference			
DNI	Did Not Ignite			
	fethods marked with ** are non-accredited me oil data is reported on an "as received" weight			

Client: Humm	ingbird Bri	Disposa ne Stati	on		-   <sub>A</sub>	Bill To ttention: Llano Disposal LLC	Chain		b WC	La	b U:	se Oi					Iso	TA				Progra	
Addres	Manager: s: PO ate, Zip Lo	Box 250			A C	ddress: PO Box 250 ty. State. Zip Lovington NM hone: 575-605-6490			310	200		22	2117	nber +OC nd M			2D	3D	Stand	dard	CWA	RCF	
Phone: Email:	575- service.lla due by:	605-64	90		E	mail: service.llanobrine@gm	ail.com_		PH GRO/DRO/ORO by	1			0		vity	5	n Hq C		N	Al CO	State UT A	7 TV	
Time Sampled	Date Sampled	Matrix	No. of Containers	Sample I	D		Lab Numbe		H GRO/DI	STEX by 8021	VOC by 8260	detals 6010	Chloride 300.0	moibo	DS, Spec. Gravity	SGDOC NM	Chlorides, p Water	SDOC TX			Remark		
10:42		A	1			Brine Well	1		=	18	×	ž	£	X	X	86	S X	9				-	
10:43	10/3/23	A	1			Fresh Well	2								x		x						
10:44	10/3/23	A	1			Monitor Well	3								x		x						
					_			-															
															4								
														-				-	+				
	nal Instruc							L									_	1	1		-		
			y and authered fraud an	enticity of the	is sample. I am o	aware that tampering with or intentionall ction. Sampled by: Elizabeth P	y mislabelling	the si	imple l	ocation	.	Sample	rs requi	iring the	rmal p	presen	ation n	oust be r	ceived o	ice the	lay they ar	re sampled o	or
The second	Chap 0	ture)	10/3/	2023	1:02	Received by: (Signature)	Date 10-3-	ונ	Time /	02	,		E.	on i		La	Use	Only			- Augusta	uays.	
linguish	ed by: (Signaled	lugh	_ /O	3-23	1700	Received by: (Signature)	Date 10.3	.73	Time			T1	ivea	on i			)/ 1		-				
Indi	a n	NEC	Date 10:	1.23	233c	Regived by (Stenature)	Date 10/4/6	23	8:	20		AVG	Tem	p oC	4	+			<u>T3</u> _		1		
ote: Sam	rix: \$ - Soil, \$d ples are disc	- Solid, Sg arded 30 a	- Sludge, A - days after r	Aqueous, C results are	- Other	s other arrangements are made. He the laboratory with this COC. The li	Containe	er Typ	P. F .	place	n - 1	achil.	olocti				glass.	v - VC	A				

land.				tical Laboratory Checklist (SRC)		Printed: 10/4/2023 9:58:31AN				
Instructions If we receive	s: Please take note of any NO checkmarks. e no response concerning these items within 24				and an annual of					
Client:	Llano Disposal LLC				quested.					
Phone:	575-605-6490	Date Received:	10/04/23		Work Order ID:	E310020				
Email:	service.llanobrine@gmail.com	Date Logged In: Due Date:	10/04/23	09:53 17:00 (4 day TAT)	Logged In By:	Caitlin Mars				
Chain of	f Custody (COC)									
	the sample ID match the COC?									
2. Does t	the number of samples per sampling site loc	ation match the COC	Yes							
3. Were s	samples dropped off by client or carrier?	and materials coc	Yes Yes	0						
4. Was th	ne COC complete, i.e., signatures, dates/time	es, requested analyses?	Yes	Carrier: Courier						
5. Were a	all samples received within holding time? Note: Analysis, such as pH which should be co	nducted in the field.	Yes							
Sample T	i.e, 15 minute hold time, are not included in thi  Turn Around Time (TAT)	s disuession.		-	Comment	ts/Resolution				
	e COC indicate standard TAT, or Expedited	TAT9	V							
Sample C		IAI I	Yes							
	sample cooler received?		Yes							
	was cooler received in good condition?		Yes							
9. Was the	e sample(s) received intact, i.e., not broken									
10. Were	custody/security seals present?		Yes No							
	, were custody/security seals intact?		NA							
12. Was th	ne sample received on ice? If yes, the recorded ten Note: Thermal preservation is not required, if so	np is 4°C, i.e., 6°±2°C amples are received w/i 15	Yes							
13. If no	visible ice, record the temperature. Actua									
	Container									
	queous VOC samples present? OC samples collected in VOA Vials?		No							
16. Is the	head space less than 6-8 mm (pea sized or l	\0	NA							
17. Was a	trip blank (TB) included for VOC analyses	ess)?	NA							
18. Are no	on-VOC samples collected in the correct co	r ntainers?	NA							
19. Is the a	appropriate volume/weight or number of sample	e containers collected?	Yes Yes							
Field Lab 20. Were t	oel field sample labels filled out with the minin		103							
Sa	ample ID?		Yes							
	ate/Time Collected? ollectors name?		No							
	reservation		No							
21. Does t	the COC or field labels indicate the samples	were preserved?	No							
22. Are sa	imple(s) correctly preserved?		NA							
	filteration required and/or requested for diss	olved metals?	No							
Multiphas	se Sample Matrix									
26. Does th	the sample have more than one phase, i.e., n	ultiphase?	No							
	does the COC specify which phase(s) is to	be analyzed?	NA							
Subcontra	act Laboratory									
28. Are sai	mples required to get sent to a subcontract l	aboratory?	No							
29. was a s	subcontract laboratory specified by the clien	nt and if so who?	NA	Subcontract Lab: na						
	struction									

Llano Disposal, LLC BW-38 API 30-025-20592

2023





# envirotech

Practical Solutions for a Better Tomorrow

# **Analytical Report**

Llano Disposal LLC

**Hummingbird Brine Station** 

Project Name: Hummingt

Work Order: E401003

Job Number: 22117-0001

Received: 1/2/2024

Revision: 1

Report Reviewed By:

Walter Hinchman Laboratory Director 1/8/24

Envirotech Inc. certifies the test results meet all requirements of TNI unless noted otherwise. Statement of Data Authenticity: Envirotech Inc, attests the data reported has not been altered in any way. Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech Inc. Envirotech Inc, holds the Utah TNI certification NM00979 for data reported. Envirotech Inc, holds the Texas TNI certification T104704557 for data reported.

Page 1 of 14

#### Llano Disposal, LLC BW-38 API 30-025-20592

2023

Date Reported: 1/8/24

Elizabeth Pickerel PO Box 250 Lovington, NM 88260

Project Name: Hummingbird Brine Station

Workorder: E401003

Date Received: 1/2/2024 8:00:00AM

Elizabeth Pickerel,

Thank you for choosing Envirotech, Inc. as your analytical testing laboratory for the sample(s) received on, 1/2/2024 8:00:00AM, under the Project Name: Hummingbird Brine Station.

The analytical test results summarized in this report with the Project Name: Hummingbird Brine Station apply to the individual samples collected, identified and submitted bearing the project name on the enclosed chain-of-custody. Subcontracted sample analyses not conducted by Envirotech, Inc., are attached in full as issued by the subcontract laboratory.

Please review the Chain-of-Custody (COC) and Sample Receipt Checklist (SRC) for any issues reguarding sample receipt temperature, containers, preservation etc. To best understand your test results, review the entire report summarizing your sample data and the associated quality control batch data.

All reported data in this analytical report were analyzed according to the referenced method(s) and are in compliance with the latest NELAC/TNI standards, unless otherwise noted. Samples or analytical quality control parameters not meeting specific QC criteria are qualified with a data flag. Data flag definitions are located in the Notes and Definitions section of this analytical report.

If you have any questions concerning this report, please feel free to contact Envirotech, Inc.

Respectfully,

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Llano Disposal LLC			mary			
PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	Hummingbird Brit 22117-0001 Elizabeth Pickerel		Reported: 01/08/24 16:31	
Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container	
Brine Well	E401003-01A	Aqueous	12/29/23	01/02/24	Poly 500mL	
Fresh Well	E401003-02A	Aqueous	12/29/23	01/02/24	Poly 500mL	
Monitor Well	E401003-03A	Aqueous	12/29/23	01/02/24	Poly 500mL	

Project Name: Project Number: Project Manager:	22117-0	ngbird Brine S	Prepared t: RAS 01/03/24 t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	Analyzed 01/08/24 01/04/24 14:40 01/05/24 01/08/24	Reported: 1/8/2024 4:31:20PM  Notes  Batch: 2401006  Batch: 2401031  H5  Batch: 2401037
Project Number: Project Manager:  B1 E4  Result  mg/L 329000 pH Units 6.86  N/A 1.203  mg/L 124000  mg/L	22117-4 Elizabe rine Well 01003-01 Reporting Limit mg/L 100 pH Units N/A mg/L 2000 mg/L	Dilution  Analys  I  Analys  I  Analys  Analys  Analys  Analys  Analys  Analys	Prepared  t: RAS 01/03/24  t: WF 01/04/24 09:23  t: KH 01/05/24  t: RKS 01/04/24	01/08/24 01/04/24 14:40 01/05/24	Notes  Batch: 2401006  Batch: 2401031  H5  Batch: 2401037  Batch: 2401003
Result mg/L 329000 pH Units 6.86 N/A 1.203 mg/L 124000 mg/L	rine Well 01003-01  Reporting Limit  mg/L 100 pH Units  N/A  mg/L 2000 mg/L	Dilution  Analys  1  Analys  1  Analys  1  Analys  1  Analys  1000  Analys	t: RAS 01/03/24 t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	01/08/24 01/04/24 14:40 01/05/24	Notes  Batch: 2401006  Batch: 2401031  H5  Batch: 2401037  Batch: 2401003
E4  Result  mg/L  329000  pH Units  6.86  N/A  1.203  mg/L  124000  mg/L	Reporting Limit mg/L 100 pH Units  N/A mg/L 2000 mg/L	Analys  I Analys  I Analys  I Analysi  Analysi  Analysi  Analysi	t: RAS 01/03/24 t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	01/08/24 01/04/24 14:40 01/05/24	Batch: 2401006  Batch: 2401031  H5  Batch: 2401037  Batch: 2401003
Result mg/L 329000 pH Units 6.86 N/A 1.203 mg/L 124000 mg/L	Reporting Limit mg/L 100 pH Units  N/A mg/L 2000 mg/L	Analys  I Analys  I Analys  I Analysi  Analysi  Analysi  Analysi	t: RAS 01/03/24 t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	01/08/24 01/04/24 14:40 01/05/24	Batch: 2401006  Batch: 2401031  H5  Batch: 2401037  Batch: 2401003
mg/L 329000 pH Units 6.86 N/A 1.203 mg/L 124000 mg/L	Limit  mg/L  100  pH Units  N/A  mg/L  2000  mg/L	Analys  I Analys  I Analys  I Analysi  Analysi  Analysi  Analysi	t: RAS 01/03/24 t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	01/08/24 01/04/24 14:40 01/05/24	Batch: 2401006  Batch: 2401031  H5  Batch: 2401037  Batch: 2401003
329000 pH Units 6.86 N/A 1.203 mg/L 124000 mg/L	n/A  mg/L  2000 mg/L	Analys  I Analys  I Analys  I Analysi  Analysi  Analysi  Analysi	t: RAS 01/03/24 t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	01/08/24 01/04/24 14:40 01/05/24	Batch: 2401006  Batch: 2401031  H5  Batch: 2401037  Batch: 2401003
329000 pH Units 6.86 N/A 1.203 mg/L 124000 mg/L	n/A  mg/L  2000 mg/L	l Analys l Analys l Analys l Analys Analys	01/03/24 t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	01/04/24 14:40	Batch: 2401031  H5  Batch: 2401037  Batch: 2401003
6.86 N/A 1.203 mg/L 124000 mg/L	N/A mg/L 2000 mg/L	l Analysi I Analysi 1000 Analysi	t: WF 01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24	01/04/24 14:40	H5 Batch: 2401037 Batch: 2401003
6.86 N/A 1.203 mg/L 124000 mg/L	N/A mg/L 2000 mg/L	l Analysi I Analysi 1000 Analysi	01/04/24 09:23 t: KH 01/05/24 t: RKS 01/04/24 t: DT	01/05/24	H5 Batch: 2401037 Batch: 2401003
1.203 mg/L 124000 mg/L	mg/L 2000 mg/L	l Analysi 1000 Analysi	01/05/24 :: RKS 01/04/24 :: DT	01/05/24	Batch: 2401037
1.203 mg/L 124000 mg/L	mg/L 2000 mg/L	l Analysi 1000 Analysi	01/05/24 :: RKS 01/04/24 :: DT		Batch: 2401003
124000 mg/L	2000 mg/L	1000 Analysi	01/04/24 :: DT		
124000 mg/L	2000 mg/L	1000 Analysi	01/04/24 :: DT	01/08/24	
	1000000				D
240000	2000	1000	01/03/24		Batch: 2401016
				01/03/24	Butch: 2-101010
					Page 5 of 14

	San	nple Dat	a			
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Hummi 22117-	ingbird Brine S	tation	100	Reported: 1/8/2024 4:31:20PM
		esh Well				
	E4	01003-02				
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Wet Chem/Gravimetric by SM2540C	mg/L	mg/L	Analyst:	RAS		Batch: 2401006
Total Dissolved Solids	1300	10.0	1	01/03/24	01/08/24	
Wet Chemistry by 9040C/4500H+B	pH Units	pH Units	Analyst:	WF		Batch: 2401031
pH @25°C	8.04		1	01/04/24 09:23	01/04/24 14:40	Н5
Wet Chemistry by SM2710F**  Specific Gravity	N/A	N/A	Analyst:			Batch: 2401037
	1.000		1	01/05/24	01/05/24	,
Anions by EPA 300.0/9056A Chloride	mg/L	mg/L	Analyst:			Batch: 2401016
	593	4.00	2	01/03/24	01/03/24	

	Sar	nple Dat	a			
Llano Disposal LLC PO Box 250 Lovington NM, 88260	Project Name: Project Number: Project Manager:	Hummi 22117-	ingbird Brine S	tation		Reported: 1/8/2024 4:31:20PM
	Mo	nitor Well				
	E4	01003-03				
Analyte	Result	Reporting Limit	Dilution	Prepared	Analyzed	Notes
Vet Chem/Gravimetric by SM2540C otal Dissolved Solids	mg/L 1210	mg/L 10.0	Analyst	RAS 01/03/24	01/08/24	Batch: 2401006
Vet Chemistry by 9040C/4500H+B	pH Units	pH Units			01/08/24	
H @25°C	8.02	pri Onits	Analyst	01/04/24 09:23	01/04/24 14:40	Batch: 2401031
Vet Chemistry by SM2710F**	N/A	N/A	Analyst	КН		Batch: 2401037
pecific Gravity	1.000		1	01/05/24	01/05/24	Editil. 240103/
nions by EPA 300.0/9056A	mg/L	mg/L	Analyst	DT		Batch: 2401016
hloride	594	4.00	2	01/03/24	01/03/24	

		QC St	ummai	ry Dat	a				
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:	Hur 221		Brine Station				Reported:
		Wet Chem/G							1/8/2024 4:31:20PM
Analyte					2540C				Analyst: RAS
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD %	RPD Limit %	Notes
Blank (2401006-BLK1)							D1-0	1 /02 /2 /	
Total Dissolved Solids	ND	10.0					Prepared: 0	1/03/24 A	nalyzed: 01/08/24
LCS (2401006-BS1)							Prepared: 0	1/03/24 Aı	nalyzed: 01/08/24
Fotal Dissolved Solids	82.0	10.0	100		82.0	55-134			y
Duplicate (2401006-DUP1)  Fotal Dissolved Solids					E401002-02		Prepared: 0	1/03/24 Aı	nalyzed: 01/08/24
otal Dissolved Solids	595	10.0		380			44.1	5	R3

Llano Disposal LLC				ry Dat					
PO Box 250		Project Name: Project Number:	22	ımmingbird I 117-0001	Brine Station	n			Reported:
Lovington NM, 88260		Project Manager:		zabeth Picke	216				1/8/2024 4:31:20PM
		Wet Chemis			H+B				Analyst: WF
Analyte	Result pH Units	Reporting Limit pH Units	Spike Level pH Units	Source Result pH Units	Rec %	Rec Limits	RPD %	RPD Limit %	Notes
LCS (2401031-BS1)							Prepared: 0	1/04/24 An	alyzed: 01/04/24
Duplicate (2401031-DUP1)	8.00		8.00			98.75-101.25			
pH pH	6.94			Source: 6.93	E401001-01	1 1	Prepared: 0 0.144	1/04/24 Ana	alyzed: 01/04/24
								<b>3</b> envi	

		QC S	umm	ary Dat	a				
Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number: Project Manager:		Hummingbird 22117-0001 Elizabeth Picke	Brine Station				Reported: 1/8/2024 4:31:20PM
		Total M	etals by	EPA 6010	C				Analyst: JL
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec %	Rec Limits %	RPD	RPD Limit	
Blank (2401003-BLK1)		3 200			70	70	%	%	Notes
Sodium	ND	2.00					Prepared: 0	1/04/24 An	alyzed: 01/04/24
LCS (2401003-BS1)							Prepared: 0	1/04/24 An	alyzed: 01/04/24
Sodium	20.2	2.00	20.0		101	80-120	- repaired, o	NO WEY PAIL	aryzod, 01/04/24
Matrix Spike (2401003-MS1) Sodium	1800	201			E312156-01		Prepared: 0	1/04/24 An	alyzed: 01/04/24
Matrix Spike Dup (2401003-MSD1)	1800	20.0	200	1550	129	75-125			M4
Sodium	1790	20.0	200	Source:	E312156-01	75-125	0.500 Prepared: 01	1/04/24 An 20	alyzed: 01/04/24

Llano Disposal LLC PO Box 250 Lovington NM, 88260		Project Name: Project Number Project Manage		Hummingbird I 22117-0001 Elizabeth Picke	Brine Statio	on		1/	Reported: 8/2024 4:31:20PM
		Anions	by EPA	300.0/9056	4				Analyst: DT
Analyte	Result mg/L	Reporting Limit mg/L	Spike Level mg/L	Source Result mg/L	Rec	Rec Limits	RPD %	RPD Limit	
Blank (2401016-BLK1)					/4	70		%	Notes
Chloride	ND	2.00					Prepared: 0	1/03/24 Anal	yzed: 01/03/24
LCS (2401016-BS1)							Prepared: 0	1/03/24 Appl	yzed: 01/03/24
Chloride	24.9	2.00	25.0		99.7	90-110	Trepared. 0	1703/24 Allal	yzed. 01/03/24
LCS Dup (2401016-BSD1) Chloride							Prepared: 0	1/03/24 Anal	yzed: 01/03/24
Cinoriue	25.0	2.00	25.0		100	90-110	0.329	20	
QC Summary Report Comment: Calculations are based off of the raw (nor Therefore, hand calculated values may di	n-rounded) data ffer slightly.	a. However, for	reporting	g purposes all	QC data i	s roundec	I to three si	gnificant fig	ures.

Llanc		Definition	s and Notes	
РО В	Disposal LLC ox 250 gton NM, 88260	Project Name: Project Number: Project Manager:	Hummingbird Brine Station 22117-0001 Elizabeth Pickerel	Reported:
				01/08/24 16:31
H5	pH is specified to be performed in	the field within 15 minutes of san	opling. The sample analysis was performed as	quickly as possible.
M4	Matrix spike recovery value is susp associated LCS spike recovery was	pect since the analyte concentration acceptable.	n in the sample is disproportionate to the spik	e level. The
R3	The RPD exceeded the acceptance	limit. LCS spike recovery met ac	ceptance criteria.	
ND	Analyte NOT DETECTED at or above	the reporting limit		
NR	Not Reported			
RPD	Relative Percent Difference			
DNI	Did Not Ignite			
DNR	Did not react with the addition of acid o	r base.		
Note (1):	Methods marked with ** are non-accredited t			
Note (2):	Soil data is reported on an "as received" weig	ht basis unless reported otherwise		

2023

#### Annual Report Llano Disposal, LLC BW-38 API 30-025-20592

Page \_\_\_\_ of \_\_\_ **Project Information** Chain of Custody Client: Llano Disposal LLC Bill To Hummingbird Brine Station
Project Manager: Elizabeth Pickerel Attention: Llano Disposal LLC Address: PO Box 250
City, State, Zip Lovington NM 88260
Phone: 575-605-6490
Email: service.llanobrine@gmail.com Address: PO Box 250 RCRA City, State, Zip Lovington NM 88260 Phone: 575-605-6490
Email: service.llanobrine@gmail.com BGDDC NM Chlorides, pH in Water GDOC TX NM CO UT AZ TX Report due by Time Date Sampled Sampled Lab Sample ID 12/29/23 A Brine Well 1 x 8:02 12/29/23 A Fresh Well 2 x x 12/29/23 A Monitor Well 3 Additional Instructions: (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, amples requiring thermal preservation must be received on ice the day they are samp eceived packed in ice at an avg temp above 0 but less than 6 oC on subsequent days. Lab Use Only 12.29.23 1/2/24 800 4 AVG Temp oC Sample Matrix: \$ - Soil, \$d - Soild, \$g - Sludge, A - Aqueous, O - Other

Container Type: g - glass, p - poly/plastic, ag - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysi

of the above samples is applicable only to those samples received by the laboratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

receive no response concerning these items within 24 hours of the date of this notice, all the samples will be analyzed as requested.  Lient: Liano Disposal LLC Date Received: 01/02/24 08:00 Work Order ID: E401003	Instructions				cal Laboratory hecklist (SRC)	Printed: 1/2/2024 10:13:55A		
Limino   Limino   Data   Date   Dat	If we receiv	<ul> <li>Please take note of any NO checkmarks.</li> <li>e no response concerning these items within 24 hor</li> </ul>						
tone: 575-605-6490 Date Legged to 01-002-24 09-30 Logged in By: Alexa Michaels natice service liand-brine@gmail.com Date Date: 01-002-24 09-30 Logged in By: Alexa Michaels natice service liand-brine@gmail.com Date Date: 01-002-24 09-30 Logged in By: Alexa Michaels natice service liand-brine@gmail.com	Client:					juested.		
halin of Custody (COC).  Does the sample ID match the COC?  Does the sample of samples per sampling site location match the COC  Were sample dropped off by client or carrier?  Was the COC complete, i.e., signatures, dates/times, requested analyses?  Was the COC complete, i.e., signatures, dates/times, requested analyses?  Were all samples received with inholding time?  Note: Analysis, such as pit which should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.  Imple Turn Around Time (TAT)  Did the COC indicate standard TAT, or Expedited TAT?  Imple Coaler  Was as sample cooler received?  Was the sample (or received in good condition?  Yes  Was as sample cooler received in good condition?  Yes  Was the sample received in significant standard transplant in the field.  Was the sample received in required, if samples are received with 15 minutes of sampling in the required of sampling in the province of sampling.  If no visible ice, record the temperature. Actual sample temperature: 4°C  mule Contailner  Are a aqueous VOC samples collected in VOA Valid?  NA  Are non-VOC samples collected in VOA Valid?  NA  Are non-VOC samples collected in the correct containers?  Na  Are non-VOC samples collected in the correct containers?  Sample ID?  Date Time Collected?  Collectors name?  Pate Turner Collected?  Collectors name?  Does the COC or field labels indicate the samples were preserved?  NA  Are sample Areservation  Does the COC or field labels indicate the samples were preserved?  No  Sample Porevation  Does the COC or field labels indicate the samples were preserved?  No  No  Sample Porevation  Does the COC or field labels indicate the samples were preserved?  No  No  Sample Porevation  Does the COC or field labels indicate the samples were preserved?  No  No  Sample Porevation  Does the COC or field labels indicate the samples were preserved?  No  No  Sample Porevation  Does the COC or field labels indicate the samples were preserved?  No  No  Sample Porevation  No  No  Sample P	Phone:					Work Order ID:	E401003	
hain of Custody (COC)  Does the sample ID match the COC?  Does the number of samples per sampling site location match the COC  Were samples dropped off by client or carrier?  Was the COC complete, i.e., signatures, datas/times, requested analyses?  Were all samples received within holding time?  Were all samples received within holding time?  Were all samples makes agt which should be conducted in the field,  Near Analysis, such so pit which should be conducted in the field,  Near Analysis, such so pit which should be conducted in the field.  Were included Thur (TAT)  Did the COC indicate standard TAT, or Expedited TAT?  Was a sample cooler received?  Yes  Was a sample cooler received?  Yes  Was a sample (color received in moch of the field that is a sample contained that, i.e., not broken?  Were custody/security seals intenc?  Were custody/security seals intenc?  No.  Are an equecous VOC samples present?  Are appleadous VOC samples present?  Are appleadous VOC samples present?  Are vOC samples collected in VOA Vials?  No.  Are not VOC samples collected in the COC analyses?  No.  Are not VOC samples collected in the COC analyses?  No.  Are not VOC samples collected in the correct containers?  No.  Are an optical sample and the correct containers?  No.  Are not vOC samples collected in the correct containers?  No.  Are not vOC samples collected in the correct containers?  No.  Are not vOC samples collected in the correct containers?  No.  Are sample (a) correctly preserved?  No.  Are sample (a) correctly preserved?  No.  Are sample (collected?  Collectors ranged and or requested for dissolved metals?  No.  It is the field sample labels filled out with the minimum information:  Sample ID?  Dato Time Collected?  Collectors ranged and requested for dissolved metals?  No.  It is the field sample labels filled out with the minimum information:  No.  No			The second secon	01/02/24 09	9:30	Logged In By:	Alexa Michaels	
Does the sample ID match the COC?  Does the number of samples per sampling site location match the COC  Were samples dropped off by client or carrier?  Was the COC complete, i.e., signatures, data-trimes, requested analyses?  Was the COC complete, i.e., signatures, data-trimes, requested analyses?  Were all samples received with including time?  Note: Analysis, such as pH which should be conducted in the field, i.e. 15 mituse hold time, are not included in this dissocsion.  In 1975 the COC indicate standard TAT, or Expedited TAT?  Was a sample cooler received?  Was a sample cooler received?  Was a sample cooler received in fact, i.e., not broken?  Was a sample cooler received in fact, i.e., not broken?  Was the sample (specified in the field, i.e., not broken?  Was the sample (specified in fact, i.e., not broken?  Was the sample (specified in fact, i.e., not broken?  Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°22°C  Note: Thermal preservation is not required, if samples are received win 15 minutes of sampling in the properties.  Was a trip blank (TB) included for VOC analyses?  Are acqueous VOC samples collected in VOA Vials?  Are non-VOC samples collected in the correct containers?  No A rea ron-VOC samples collected in the correct containers?  No A rea ron-VOC samples collected in the correct containers?  No A rea non-VOC samples collected in the correct containers?  No Date Time Collected?  Vere field sample labels filled out with the minimum information:  Sample ID?  Date Time Collected?  Vere a sample (correct) preserved?  No A rea samples (correct) preserved?  No A rea samples (correct) preserved?  No N		service.nanoonne@gman.com	Due Date:	01/08/24 1	7:00 (4 day TAT)			
Does the sample ID match the COC?  Does the number of samples per sampling site location match the COC  Were samples dropped off by client or carrier?  Was the COC complete, i.e., signatures, data-trimes, requested analyses?  Was the COC complete, i.e., signatures, data-trimes, requested analyses?  Were all samples received with including time?  Note: Analysis, such as pH which should be conducted in the field, i.e. 15 mituse hold time, are not included in this dissocsion.  In 1975 the COC indicate standard TAT, or Expedited TAT?  Was a sample cooler received?  Was a sample cooler received?  Was a sample cooler received in fact, i.e., not broken?  Was a sample cooler received in fact, i.e., not broken?  Was the sample (specified in the field, i.e., not broken?  Was the sample (specified in fact, i.e., not broken?  Was the sample (specified in fact, i.e., not broken?  Was the sample received on ice? If yes, the recorded temp is 4°C, i.e., 6°22°C  Note: Thermal preservation is not required, if samples are received win 15 minutes of sampling in the properties.  Was a trip blank (TB) included for VOC analyses?  Are acqueous VOC samples collected in VOA Vials?  Are non-VOC samples collected in the correct containers?  No A rea ron-VOC samples collected in the correct containers?  No A rea ron-VOC samples collected in the correct containers?  No A rea non-VOC samples collected in the correct containers?  No Date Time Collected?  Vere field sample labels filled out with the minimum information:  Sample ID?  Date Time Collected?  Vere a sample (correct) preserved?  No A rea samples (correct) preserved?  No A rea samples (correct) preserved?  No N	Chain o	f Custody (COC)						
Does the number of samples per sampling site location match the COC Weer samples dropped off by client or earrier? Was the COC complete, i.e., signatures, dates/times, requested analyses? Yes Note: Analysis, each asp thirds should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.  Was always, such asp the wides should be conducted in the field, i.e., 15 minute hold time, are not included in this discussion.  Was a sample Cooler received?  Was the sample of cooler condition?  Was the sample of cooler received?  Was the sample covered in good condition?  Was the sample received an one of live, the recorded temp is 4°C, i.e., 6°22°C Note: Thermal preservation is not required, if samples are received wit 15 minutes of sampling  If no visible ice, record the temperature. Actual sample temperature: 4°C Note: Thermal preservation is not required, if samples are received wit 15 minutes of sampling  If no visible ice, record the temperature. Actual sample temperature: 4°C Note: Thermal preservation is not required, if samples are received with 15 minutes of sampling  Are aqueous VOC samples collected in VOA Visils?  Are no-VOC samples collected in VOA Visils?  Are no-VOC samples collected in VOA visils?  Are no-VOC samples collected in VOA visils?  No				Van				
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Does the sample have more than one phase, i.e., multiphase?  If yes, does the COC specify which phase(s) is to be analyzed?  No  beontract Laboratory  Are samples required to get sent to a subcontract laboratory?  No  Was a subcontract laboratory specified by the client and if so who?  NA  Subcontract Lab: NA			ed metals?					
If yes, does the COC specify which phase(s) is to be analyzed?  NA  beontract Laboratory  Are samples required to get sent to a subcontract laboratory?  No  Was a subcontract laboratory specified by the client and if so who?  NA  Subcontract Lab: NA	Multipha	se Sample Matrix						
If yes, does the COC specify which phase(s) is to be analyzed?  NA  beontract Laboratory  Are samples required to get sent to a subcontract laboratory?  No  Was a subcontract laboratory specified by the client and if so who?  NA  Subcontract Lab: NA	26. Does 1	the sample have more than one phase, i.e., mult	iphase?	No				
Are samples required to get sent to a subcontract laboratory?  No Was a subcontract laboratory specified by the client and if so who?  NA Subcontract Lab: NA	27. If yes,	does the COC specify which phase(s) is to be	analyzed?					
Was a subcontract laboratory specified by the client and if so who?  NA  Subcontract Lab: NA	Subcontr	act Laboratory		1000				
Was a subcontract laboratory specified by the client and if so who?  NA  Subcontract Lab: NA	28. Are sa	imples required to get sent to a subcontract labo	ratory?	No				
	29. Was a	subcontract laboratory specified by the client a	nd if so who?		ibcontract Lab. MA			
					Table Lab. IVA			
	28. Are sa 29. Was a	mples required to get sent to a subcontract labo subcontract laboratory specified by the client a	ratory? nd if so who?		abcontract Lab: NA			
	Signatur	re of client authorizing changes to the COC or sample					1	

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Llano Disposal, LLC BW-38 API 30-025-20592

2023

# **APPENDIX G**

Certification

Llano Disposal, LLC BW-38 API 30-025-20592

2023

<u>Llano Disposal, LLC</u> certifies that continued salt solution mining will not cause cavern collapse, surface subsidence, property damage, or otherwise threaten public health and the environment, based on geologic and engineering data provided herein.

Jan Angen	<u>Owner/Permittee Holder</u>	
Name	Title	
Darr Angell	10/28/24	
Signature 0	Date	

Sante Fe Main Office Phone: (505) 476-3441

General Information Phone: (505) 629-6116

Online Phone Directory https://www.emnrd.nm.gov/ocd/contact-us

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

COMMENTS

Action 396116

#### **COMMENTS**

Operator:	OGRID:
LLANO DISPOSAL, L.L.C.	370661
P.O. Box 250	Action Number:
Lovington, NM 88260	396116
	Action Type:
	[UF-DP] Discharge Permit (DISCHARGE PERMIT)

#### COMMENTS

C	reated By		Comment Date	
	cchavez	Annual Report 2023	4/10/2025	

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

CONDITIONS

Action 396116

#### **CONDITIONS**

Operator:	OGRID:
LLANO DISPOSAL, L.L.C.	370661
P.O. Box 250	Action Number:
Lovington, NM 88260	396116
	Action Type:
	[UF-DP] Discharge Permit (DISCHARGE PERMIT)

#### CONDITIONS

Created B	/ Condition	Condition Date
cchavez	Conditions of Approval are: 1. Appendix E Well Diagram should be referenced in Appendix B D/H Calculation with accurate variables, i.e., casing depth is top of Whipstock Window at 1733 ft (KB calc.); 2. Calculated diameter of Salt Cavern in Appendix B was estimated to be 54.31 ft.; 3. Implementing the standard "Halbouty, Michel T., Salt Domes: Gulf Region, US & Mexico" Useful Conversion calculations OCD calculates a D/H of ~ 0.03134, 0.5 Safety Factor which is good; 4. Appendix C: Check Pg. 31 Survey of 3/15/2023 Monument ID-1 change in elevation of 0.12. 0.1 ft. This was supposed to be reported to the OCD. 5. Water Testing is semi-annual and not quarterly. Also, MW chemical data is missing Gen. Chem. parameters, Oxid. Reduction Potential, SC, T & Bromide (Except TDS/CI was tested). Must lab test. 6. Chain of Custody Form: absent COC seals, date/time of sample collection, sampler name. Address COC lab comments to ensure QA/QC & DQOs are met.	4/10/2025