# BW – 035

# PERMIT APPLICATIONS, RENEWALS, & MODS (1 of 5)

2016

# Cash Remittance Report (CRR)

## Energy, Minerals & Natural Resources Department
## CASH REMITTANCE REPORT (CRR)

Location Name (1): OCD - Environment - WQCC

Location Code (2): 0740

Today's Date: 09 (MONTH) 28 (DAY) (3) 20 16 (YEAR)

Collection Period: ___/___/___ (MM/DD/YYYY) through ___/___/___ (MM/DD/YYYY) (4)

| Cost Center (5) | Revenue Code (5) | Receipt Amount (7) | Collected Amount (8) |
|---|---|---|---|
| 0740 | | 1,700.00 | |
| | | | |
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| | | | |
| | | | |
| **Total** ==========→ | | $ 1,700.00 (9) | $ (10) |

**Over/Short Amount** $ (11)

**CRR Deposit Amount** $ (12)

Print Name: Lorraine DeVargas (13) Signature: Lorraine DeVargas (13)

Print Name: (13) Signature: (13)

Distribution: White and Yellow copy to Accounts Receivable-ASD,
Pink copy retained at CRR submitting location.

Official Use Only
Completed by the Accounts Receivable

Date Received: (1)

Notes: (2)

Amount Received: (3)

State Treasurer Deposit Number: (4)

Verified by: (6)

Deposit Date: (5)

**ACKNOWLEDGEMENT OF RECEIPT**
**OF CHECK/CASH**

I hereby acknowledge receipt of Check No. 1027 dated 09/23/2016

or cash received on 09/28/2016 in the amount of $ 1,700.00

from Llano Disposal, LLC

for permit - WQCC Management Fund

Submitted by: Carl Chavez Date: 09/28/2016

Submitted to ASD by: Lorraine DeVargas Date: 09/28/2016

Received in ASD by: _____ Date: _____

Filing Fee _____ New Facility: _____ Renewal: _____

Modification _____ Other ✓ permit

Organization Code 521.07 Applicable FY 17

To be deposited in the Water Quality Management Fund.

Full Payment _____ or Annual Increment _____

# NEW MEXICO ENVIRONMENT DEPARTMENT - ALBUQUERQUE FIELD OFFICE DAILY CHECK RECEIPT LOG

| DATE RECEIVED | WALK-IN | MAIL | NAME ON CHECK | DATE OF CHECK | CHECK/MONEY ORDER# | PROGRAM ACCOUNT CODE | AMOUNT OF CHECK | DATE DEPOSITED | DEPOSITED |
|---|---|---|---|---|---|---|---|---|---|
| 9/28/16 | | ✓ | Llano Disposal, LLC | 9/23/16 | 1027 | | 1,700.00 | | |
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| TOTAL | | | | | | | 1,700.00 | | |

## REVENUE TRANSMITTAL SHEET

| Description | Fund | Dept. | Share Acct | Sub Acct | Amount |
|---|---|---|---|---|---|
| Liquid Waste | 34000 | Z3200 | 496402 | | |
| Water Recreation Facilities | 40000 | Z8501 | 496402 | | |
| Food Permit Fees | 99100 | Z2600 | 496402 | | |
| OTHER | 34100 | 232900 | | 232902900 | |

1027

**Llano Disposal, LLC**
PO Box 190
Lovington, NM 88260
575-396-1742

VALLEY BANK OF COMMERCE
623-2265
217 West Second · Roswell, New Mexico 88201
95-312/1122

9/23/2016

PAY TO THE ORDER OF Water Quality Management Fund $ **1,700.00

One Thousand Seven Hundred and 00/100********** DOLLARS

Water Quality Management Fund
1220 South St. Francis Drive
Santa Fe NM 87505

MEMO

AUTHORIZED SIGNATURE

Security features. Details on back.

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**Llano Disposal, LLC** 1027

Water Quality Management Fund 9/23/2016

| Date | Type | Reference | Original Amt. | Balance Due | Discount | Payment |
|---|---|---|---|---|---|---|
| 9/23/2016 | Bill | | 1,700.00 | 1,700.00 | | 1,700.00 |
| | | | | | Check Amount | 1,700.00 |

Checking Account 1,700.00

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CERTIFIED MAIL®

NO MOISTURE REQUIRED TO SEAL
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UNITED STATES POSTAL SERVICE

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## Chavez, Carl J, EMNRD

**From:** Marvin Burrows <burrowsmarvin@gmail.com>
**Sent:** Sunday, September 25, 2016 5:07 PM
**To:** Estes, Bob, DCA
**Cc:** Chavez, Carl J, EMNRD; Darr Angell
**Subject:** BW 035, Llano Disposal, LLC

Dear Mr. Estes :

This is Marvin Burrows, consultant to Llano Disposal, LLC. This communication is pursuant to your office's response to public notice concerning our brine water generation project, located approximately 8 miles south of Lovington. The well we are using for the project was originally drilled by Yates Petroleum as a oil and gas well. A archeological survey was done at the time of drilling, and evidently nothing of interest was noted. Because the well was fairly deep, the original well pad was correspondingly large. The well was found to be non-commercial, and was therefore plugged and abandoned. We were able to re-enter the well using an ordinary well servicing rig, so used only a very small part of the original well pad.

Because the tank battery facility will not be at the well, we won't be needing additional space at the well site. After brine is generated, it will be carried via pipeline to a storage/sales facility, which will be located approximately one mile to the southwest. Because the ground is extremely hard and rocky and because of brine water's resistance to freezing, we plan only a shallow ditch to hold the pipeline. The entire project is located on fee land (the UBar Ranch).

We want to assure you that we will be keeping our eyes open for anything of historic value. The area we will be working on consists of very flat terrain, with no sinks or natural depressions that might have attracted settlement because of a water source. However, after spending many, many decades in the Lea County area, we know that artifacts and human remains are often uncovered at the most unlikely of locations, and when least expected. We would be very interested in the preservation of anything that might be found.

Finally, we have read, and do understand the following statement concerning antiquities in the state of New Mexico :

*"If human remains are found, work must cease immediately in the vicinity of the remains pursuant to state law. Secure the area to protect the remains from further disturbance and contact the local law enforcement agency (sheriff's office or city police) with jurisdiction over the area. Law enforcement will contact the Office of the Medical Investigator (OMI) and the SHPO. If the OMI determines that the remains are without medicolegal significance, the OMI will terminate jurisdiction to the SHPO. The SHPO will, with the assistance of a professional archaeologist, determine if the remains can be left in place and protected or if they need to be excavated by an archaeologist holding permit to excavate unmarked human burials."*

Sincerely,
Marvin Burrows (575-631-8067)
for : Llano Disposal, LLC
Lovington, NM

## Chavez, Carl J, EMNRD

**From:** Chavez, Carl J, EMNRD
**Sent:** Thursday, September 15, 2016 5:09 PM
**To:** 'Marvin'
**Cc:** Whitaker, Mark A, EMNRD; Brown, Maxey G, EMNRD; Griswold, Jim, EMNRD; Darr Angell
**Subject:** RE: BW-35 Siringo Brine Permit

Marvin:

Good afternoon. The New Mexico Oil Conservation Division (OCD) Santa Fe and Hobbs District Office Staff held a meeting this afternoon to discuss Llano Disposal LLC's conceptual brine well construction proposal(s) of September 12, & 15, 2016, which was initiated based on well corrosion and environmental issues raised during the application review process.

OCD has determined that the more detailed conceptualized well construction proposal of September 15, 2016 below is feasible.

Therefore, OCD- SF and OCD- Hobbs request a new C-103 Sundry with attachments outlining the details of the proposed well construction for OCD approval. A well diagram shall be attached to display the new proposed well construction. Note that the packer shall be set within at least 50 feet of the 8-5/8 inch Casing Shoe. Another attachment shall include well MIT procedures that will ensure the well complies with the EPA- 5 Year MIT requirements.

OCD recommends that Llano Disposal LLC provide drafts to OCD for approval before attaching the final MIT(s) to the C-103 Sundry submitted to OCD for well construction approval. OCD appreciates Llano Disposal, LLC's efforts toward addressing well corrosion and protecting New Mexico's scarce fresh water resources.

Please contact me if you have questions. Thank you.

-----Original Message-----
From: Marvin [mailto:burrowsmarvin@rocketmail.com]
Sent: Thursday, September 15, 2016 10:10 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Whitaker, Mark A, EMNRD <MarkA.Whitaker@state.nm.us>; Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Darr Angell <darrangell@gmail.com>
Subject: Re: Siringo Brine Project.

Carl : My understanding from the teleconference I had with you and Jim was that the test is a pressure test of the entire system. Under my design, you would only need to close the tubing valve, then bring the pressure up on the annulus to the desired level. If this was done during a time that the well was producing brine normally, a complete system test would be guaranteed. Also, one more note concerning the design : Another benefit of having 3 1/2 EUE Upset IPC pipe above the packer, besides enormous tensile strength (we're only working 2100' deep), would be its ability to handle particles, and up to chunk size debris. This will help mitigate the need for backflushing.
Thanks,
M

Sent from my iPhone

> On Sep 15, 2016, at 8:58 AM, Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> wrote:
>
> Marvin:
>
> Good morning and thanks for further clarification on the Llano Disposal Brine Well Construction Proposal(s).
>
> Does the preferred design mentioned below (or in any of your proposals) inhibit or cause problems for OCD Standard MITing of the well? OCD must meet EPA MIT requirements on the well.
>
> Thx.
>
>
> -----Original Message-----
> From: Marvin [mailto:burrowsmarvin@rocketmail.com]
> Sent: Thursday, September 15, 2016 8:34 AM
> To: Whitaker, Mark A, EMNRD <MarkA.Whitaker@state.nm.us>; Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>
> Cc: Darr Angell <darrangell@gmail.com>
> Subject: Siringo Brine Project.
>
> Maxey/Mark : Marvin here. The preferred plan would be to run good heavy 3 1/2 EUE 8rd tubing above a dual packer. This would be the only string from surface to the packer. The packer, with tail pipe, would be ran and set with the 3 1/2 tubing. Below the packer would be tail pipe consisting of 2 7/8 fiberglass tubing. Fresh water would be injected from surface into the annulus of the 3 1/2 tubing and 8 5/8 casing. That fresh water would pass from the annulus, down through the packer, into the fiberglass tubing, then be so conducted deeper down into the salt. Fresh will exit the fg tubing, then circulate back to surface as it picks up brine. When the brine reaches the packer, it will pass through the packer (dual port packer) then enter the 3 1/2 IPC tubing string to be carried to surface.
> As stated, it's an absolute certainty that the tail pipe will eventually be lost in the open hole section, either because of cave in/sluffing, or because of the accumulation of insoluble debri (sand/clays). The big problem I've seen in the past is getting the tail pipe out of the way so that new pipe can be ran. That's why I chose fg tubing. FG tubing could easily and quickly be removed with a mill or bit. Most especially so as compared to steel pipe. Fg tubing is very strong, and is impervious to salt corrosion.
> This design accomplishes these things :
> It keeps corrosive brine away from the well casing and as far as possible away from the fresh water zone.
> It keeps fresh water away from the cavern roof, thereby protecting anhydrites and redbed.
> It provides for very strong IPC steel pipe above the packer (and only uses one string).
> It provides tail pipe that is corrosion proof, strong, and yet easily drilled up or milled past during well servicing.
> I pointed out that any downhole failure would be immediately known with this design. If there was a breech in the casing, injected fresh water would be lost resulting in limited, or no circulation. If there was a hole in the tubing, fresh water would short circuit back to surface, resulting in no brine. If the packer failed or released, that condition would also result in fresh back to surface. If the tail pipe was lost, the result would again be fresh circulated back to surface. These are the perfect tattle tales, as any downhole problem would be immediately known. I think this design addresses all concerns, and provides the best solutions to well longevity, fresh water and environment protection, and safety.
> Thanks
> Marvin
>
> Sent from my iPhone

-----Original Message-----
From: Chavez, Carl J, EMNRD
Sent: Thursday, September 15, 2016 7:41 AM

To: 'Marvin' <burrowsmarvin@rocketmail.com>
Subject: FW: Modification.

Marvin:

FYI: OCD- SF is discussing your proposals with OCD- Hobbs, and we will contact you soon.

If you have any further comments based on OCD- Hobbs comment below, please provide more insight or drawings.

Thank you.

-----Original Message-----
From: Chavez, Carl J, EMNRD
Sent: Thursday, September 15, 2016 7:36 AM
To: Whitaker, Mark A, EMNRD <MarkA.Whitaker@state.nm.us>
Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>
Subject: RE: Modification.

Gentlemen:

We should discuss today or early tomorrow morning to resolve this issue if possible. See description of well provided below. Also, it is not uncommon for pipe to be discarded into the cavern. There has been safety and well construction issues when pulling spaghetti pipe up through the casing and is dangerous when it release its energy at surface, and if it can be pulled without damaging the well.

Description:
A new Underground Injection Control (UIC) Class III Solution Mining Injection Well (BW-035) or "Siringo ACS State Well No. 1" (API# 30-025-30701) located at latitude N 32.8115005° and longitude W 103.3317795° has been proposed on an existing oil and gas well. The well is to be re-drilled to a total depth of 3,253 ft. below ground level (bgl) into the Salado Salt Formation in order to produce high density "Brine Fluids" used in the drilling of oil and gas wells in New Mexico. An assemblage of existing cemented casing strings and plugs are set as follows: 1) 20 inch conductor casing is set at 40 ft. bgl; and 2) 8-5/8 inch casing and shoe is set at 2,043 ft. bgl. With a well TD of 5450 ft. bgl., and a series of 100 ft. thick cement plugs in open borehole set as follows: 1) Surface to 63 ft. bgl.; 2) 1933 – 2093' bgl.; 3) 3253 – 3353 ft. bgl.; 4) 4514 – 4614 ft. bgl.; and 5) 5350 – 5450 ft. bgl. The Permittee proposes to drill to a TD of 3253 ft. bgl. And set 3-1/2 inch tubing to a depth of 3,100 ft. bgl into the Salado Salt Formation through the 8-5/8 inch well casing.

Fresh groundwater will be injected into the tubing at an average injection rate of 1,550 bbl/day (~ 45 gpm) and maximum injection rate of 1,900 bbl/day (~55 gpm) below a permitted maximum surface injection pressure (MSIP) of ~ 408 psig. Brine fluids will be produced through the annulus between the injection tubing and cemented well casing

Thank you.

-----Original Message-----
From: Whitaker, Mark A, EMNRD
Sent: Tuesday, September 13, 2016 8:07 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>
Subject: RE: Modification.

Carl,

Maxey and I want to discuss this matter some more before we comment. One concern is the tailpipe which at some point will end up stuck in the open hole. If you have a packer in the tubing string, how do you unset it to free point and cut off? We will get back with you in a couple of days.
Mark

-----Original Message-----
From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 13, 2016 7:38 AM
To: Brown, Maxey G, EMNRD <MaxeyG.Brown@state.nm.us>; Whitaker, Mark A, EMNRD <MarkA.Whitaker@state.nm.us>
Cc: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>
Subject: FW: Modification.

FYI: Any input would be appreciated. The suggested brine production is to minimize corrosion to piping and casing during brine production.....

Thank you.

-----Original Message-----
From: Maxi [mailto:burrowsmarvin@gmail.com]
Sent: Monday, September 12, 2016 9:04 AM
To: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>; Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Cc: Angell Darr <darrangell@gmail.com>
Subject: Modification.

Jim/Carl :
First, I want to thank the two of you for all of your assistance in getting us through the brine project permitting process. Achieving permit would have been impossible without your willingness to guide and advise.
Expanding on a comment made by Carl during the first days of the permitting process, we do see ways to prolong the longevity of the well casing, as well as to make the project even more protective of the environment, and of fresh water. We see a couple of ways to keep pressurized brine water from contacting the well casing. One method would be to run two strings of tubing above a dual packer. Injected fresh water down one string would exit the packer into tail pipe, which would then carry fresh water deeper into the salt. Generated brine would rise to the bottom of the packer, then be brought to surface by a second tubing string. Another, and more preferred method, would be to run the same dual packer, but with only one string of tubing above the packer. Fresh water would be injected into the casing/tubing annulus. It would exit the packer into tail pipe that would then carry the fresh water deeper into the salt. Resulting brine water would rise to the packer, then be carried to surface via a large tubing string.
Either method would prevent pressurized brine from contacting the well casing and escaping to other strata. As you can see, any failure above the packer, or even at the packer, with either method would result in a short circuit of fresh water back to surface, resulting in a unmarketable product. It's the perfect tattle tale.
We are again seeking your advice and guidance before making any kind of formal request.
Please advise.
Thanks,
Marvin Burrows
(Consultant to Llano Disposal, LLC).

Sent from my iPad

# AFFIDAVIT OF PUBLICATION

**STATE OF NEW MEXICO**
**County of Bernalillo** SS

Sharon Friedes, being duly sworn, declares and says that she is Advertising Director of **The Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 1 times on the following dates:

August 4, 2016

Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 4 day of August of 2016.

OFFICIAL SEAL
Sandra B. Gutierrez
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 2-18-17

PRICE $ 114.93

Statement to come at end of month.

ACCOUNT NUMBER 1009556

New Mexico Energy, Minerals and Natural Resources Department

**NOTICE OF PUBLICATION**

**STATE OF NEW MEXICO**
**ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**
**OIL CONSERVATION DIVISION**

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3108 NMAC), the following discharge permit application has been submitted to the Director of the New Mexico Oil Conservation Division ("OCD"), 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(BW-35) *Llano Disposal, L.L.C., Darr Angell, Owner, P.O. Box 190, Lovington, New Mexico 88260,* has submitted an application for a new [illegible] Control (UIC) Class III Brine Well Discharge Permit for the Siringo ACS Brine Well No. 1 (API# 30-025-30701), located 660 FNL and 660 FWL (NW/4, NW/4) in Section 26, *Township 17 South, Range 36 East (Lat.: N 32.8115005° Long.:* W 103.3317[illegible]° NMPM, Lea County, New Mexico. The injection well is located approximately 8 .3 miles south of Lovington, NM or 1.1 miles east of the intersection of Hwy-483 (Arkansas Jct.) and Hwy-50 (Buckeye Rd.). Produced brine fluid will be metered at surface and transported approximately 6,600 feet southwest by a buried poly-*ethylene pipeline to four 500 barrel fiberglass storage tanks at the proposed* Siringo Brine Station located in Unit Letter M of Section 27, Township 17 South, Range 36 East (Lat. 32.798816°, Long. 103.347123°), NMPM, Lea County, New Mexico. This brine station is located approximately 9.3 miles South of Lovington or 1 mile South-Southeast of the intersection of Hwy-483 (Arkansas Jct.) and County Road 50 (Buckeye Rd.) and ¼ mile east of Hwy-483. Fresh water, produced water, and/or recycled water will be routed via pressure allowed is [illegible] solution brine water (~ 320,000 ppm Total Dissolved Solids- TDS) is produced up the well annulus between the injection tubing and well casing. Brine is then pumped through a meter via subsurface polyethylene pipeline to the brine station for sale. The injection fluid is estimated to contain less than 1,000 ppm total dissolved solids (TDS). Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 50 ft. below ground level with a TDS concentration of approximately 400 ppm. The discharge permit addresses well construction, operation, monitoring, ground subsidence, associated surface facilities, financial assurance, and provides a contingency plan in the event of accidental discharges.

The OCD has determined the application is administratively complete and has prepared a draft permit. The OCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list may contact the Environmental Bureau Chief of the OCD at the

# AFFIDAVIT OF PUBLICATION

**STATE OF NEW MEXICO**
**County of Bernalillo** SS

Sharon Friedes, being duly sworn, declares and says that she is Advertising Director of **The Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that payment therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached, was published in said paper in the regular daily edition, for 1 times on the following dates:

August 4, 2016

Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 4 day of August of 2016.

OFFICIAL SEAL
Sandra B. Gutierrez
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 2-18-17

PRICE $ 114.93

Statement to come at end of month.

ACCOUNT NUMBER 1009556

New Mexico Energy, Minerals and Natural Resources Department

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(BW-35) Llano Disposal, L.L.C., Darr Angell, Owner, P.O. Box 190, Lovington, New Mexico 88260, has submitted an application for a new Underground Injection Control (UIC) Class III Brine Well Discharge Permit for the Siringo ACS Brine Well No. 1 (API# 30-025-30701), located 660 FNL and 660 FWL (NW/4, NW/4) in Section 26, Township 17 South, Range 36 East (Lat.: N 32.8115005° Long.: W 103.3317795°), NMPM, Lea County, New Mexico. The injection well is located approximately 8 .3 miles south of Lovington, NM or 1.1 miles east of the intersection of Hwy-483 (Arkansas Jct.) and Hwy-50 (Buckeye Rd.). Produced brine fluid will be metered at surface and transported approximately 6,600 feet southwest by a buried polyethylene pipeline to four 500 barrel fiberglass storage tanks at the proposed Siringo Brine Station located in Unit Letter M of Section 27, Township 17 South, Range 36 East (Lat. 32.798816°, Long. 103.347123°), NMPM, Lea County, New Mexico. This brine station is located approximately 9.3 miles South of Lovington or 1 mile South-Southeast of the intersection of Hwy-483 (Arkansas Jct.) and County Road 50 (Buckeye Rd.) and ¼ mile east of Hwy-483. Fresh water, produced water, and/or recycled water will be routed via polyethylene pipelines to the brine well for injection into the Salado Salt Formation in the injection interval from 2,043 to 3,253 ft. below ground surface (bgs) through tubing at a rate of approximately 45 - 55 gpm and at a normal operating pressure from 200 to 250 psig. The maximum surface injection pressure allowed is 408 psig. Dissolution brine water (~ 320,000 ppm Total Dissolved Solids- TDS) is produced up the well annulus between the injection tubing and well casing. Brine is then pumped through a meter via subsurface polyethylene pipeline to the brine station for sale. The injection fluid is estimated to contain less than 1,000 ppm total dissolved solids (TDS). Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 50 ft. below ground level with a TDS concentration of approximately 400 ppm. The discharge permit addresses well construction, operation, monitoring, ground subsidence, associated surface facilities, financial assurance, and provides a contingency plan in the event of accidental discharges.

The OCD has determined the application is administratively complete and has prepared a draft permit. The OCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list

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**County of Bernalillo** SS

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August 4, 2016

Sharon Friedes

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OFFICIAL SEAL
Sandra B. Gutierrez
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 2-18-17

Sandra B. Gutierrez

PRICE $ 114.93

Statement to come at end of month.

ACCOUNT NUMBER 1009556

New Mexico Energy, Minerals and Natural Resources Department

**NOTICE OF PUBLICATION**

**STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION**

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3108 NMAC), the following discharge permit application has been submitted to the Director of the New Mexico Oil Conservation Division ("OCD"), 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(BW-35) Llano Disposal, L.L.C., Darr Angell, Owner, P.O. Box 190, Lovington, New Mexico 88260, has submitted an application for a [redacted]erground Injection Control [redacted]lass III Brine Well Discharge Permit for the Siringo ACS Brine Well No. 1 (API# 30-025-30701), located 660 FNL and 660 FWL (NW/4, NW/4) in Section 26, Township 17 South, Range 36 East (Lat.: N 32.8115005° Long.: W 103.3317795°), NMPM, Lea County, New Mexico. The injection well is located approximately 8 .3 miles south of Lovington, NM or 1.1 miles east of the intersection of Hwy-483 (Arkansas Jct.) and Hwy-90 (Buckeye Rd.). Produced brine fluid will be metered at surface and transported approximately 6,600 feet southwest by a buried polyethylene pipeline to four 500 barrel fiberglass storage tanks at the proposed Siringo Brine Station located in Unit Letter M of Section 27, Township 17 South, Range 36 East (Lat. 32.798816°, Long. 103.347123°), NMPM, Lea County, New Mexico. This brine station is located approximately 9.3 miles South of Lovington or 1 mile South-Southeast of the intersection of Hwy-483 (Arkansas Jct.) and County Road 50 (Buckeye Rd.) and ¼ mile east of Hwy-483. Fresh water, produced water, and/or recycled water will be routed via polyethylene pipelines to the brine well for injection into the Salado Salt Formation in the injection interval from 2,043 to 3,253 ft. below ground surface (bgs) through tubing at a rate of approximately 45 - 56 gpm and at a normal operating pressure from 200 to 250 psig. The maximum surface injection pressure allowed is 408 psig. Dissolution brine water (~ 320,000 ppm Total Dissolved Solids- TDS) is produced up the well annulus between the injection tubing and well casing. Brine is then pumped through a meter via subsurface polyethylene pipeline to the brine station for sale. The injection fluid is estimated to contain less than 1,000 ppm total dissolved solids (TDS). Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 50 ft. below ground level with a TDS concentration of approximately 400 ppm. The discharge permit addresses well construction, operation, monitoring, ground subsidence, associated surface facilities, financial assurance, and provides a contingency plan in the event of accidental discharges.

The OCD has determined the application is administratively complete and has prepared a draft permit. The OCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list

# AFFIDAVIT OF PUBLICATION

**STATE OF NEW MEXICO**
**County of Bernalillo** SS

Sharon Friedes, being duly sworn, declares and says that she is Advertising Director o**The Albuquerque Journal**, and that this newspaper is duly qualified to publish legal notices o advertisements within the meaning of Section 3, Chapter 167, Session Laws of 1937, and that paymen therefore has been made of assessed as court cost; that the notice, copy of which is hereto attached was published in said paper in the regular daily edition, for 1 times on the following dates

August 4, 2016

Sworn and subscribed before me, a Notary Public, in and for the County of Bernalillo and State of New Mexico this 4 day of August of 2016.

OFFICIAL SEA
Sandra B. Gutierr
NOTARY PUBLIC
STATE OF NEW MEXIC
My Commission Expires: 2-18-17

PRICE $ 114.93

Statement to come at end of month.

ACCOUNT NUMBER 1009556

New Mexico Energy, Minerals and Natural Resources Department

**NOTICE OF PUBLICATION**

**STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION**

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(BW-35) Llano Disposal, L.L.C., Darr Angell, Owner, P.O. Box 190, Lovington, New Mexico 88260, has submitted an application for a new Underground Injection Control (UIC) Class III Brine Well Discharge Permit for the Siringo ACS Brine Well No. 1 (API# 30-025-30701), located 660 FNL and 660 FWL (NW/4, NW/4) in Section 26, Township 17 South, Range 36 East (Lat.: N 32.8115005° Long.: W 103.3317795°), NMPM, Lea County, New Mexico. The injection well is located approximately 8 .3 miles south of Lovington, NM or 1.1 miles east of the intersection of Hwy-483 (Arkansas Jct.) and Hwy-50 (Buckeye Rd.). Produced brine fluid will be metered at surface and transported approximately 6,600 feet southwest by a buried polyethylene pipeline to four 500 barrel fiberglass storage tanks at the proposed Siringo Brine Station located in Unit Letter M of Section 27, Township 17 South, Range 36 East (Lat. 32.798816°, Long. 103.347123°), NMPM, Lea County, New Mexico. This brine station is located approximately 9.3 miles South of Lovington or 1 mile South-Southeast of the intersection of Hwy-483 (Arkansas Jct.) and County Road 50 (Buckeye Rd.) and ¼ mile east of Hwy-483. Fresh water, produced water, and/or recycled water will be routed via polyethylene pipelines to the brine well for injection into the Salado Salt Formation in the injection interval from 2,043 to 3,253 ft. below ground surface (bgs) through tubing at a rate of approximately 45 - 55 gpm and at a normal operating pressure from 200 to 250 psig. The maximum surface injection pressure allowed is 408 psig. Dissolution brine water (~ 320,000 ppm Total Dissolved Solids- TDS) is produced up the well annulus between the injection tubing and well casing. Brine is then pumped through a meter via subsurface polyethylene pipeline to the brine station for sale. The injection fluid is estimated to contain less than 1,000 ppm total dissolved solids (TDS). Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 50 ft. below ground level with a TDS concentration of approximately 400 ppm. The discharge permit addresses well construction, operation, monitoring, ground subsidence, associated surface facilities, financial assurance, and provides a contingency plan in the event of accidental discharges.

The OCD has determined the application is administratively complete and has prepared a draft permit. The OCD will accept comments and statements of interest regarding this application and will

solution brine (Total Dissolved Solids- TDS) is produced up the well annulus between the injection tubing and well casing. Brine is then pumped through a meter via subsurface polyethylene pipeline to the brine station for sale. The injection fluid is estimated to contain less than 1,000 ppm total dissolved solids (TDS). Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 50 ft. below ground level with a TDS concentration of approximately 400 ppm. The discharge permit addresses well construction, operation, monitoring, ground subsidence, associated surface facilities, financial assurance, and provides a contingency plan in the event of accidental discharges.

The OCD has determined the application is administratively complete and has prepared a draft permit. The OCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list may contact the Environmental Bureau Chief of the OCD at the address given above. The permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, or at the OCD web site http://www.emnrd.state.nm.us/ocd/. Persons interested in obtaining a copy of the application and draft permit may contact the OCD at the address given above. Prior to ruling on any proposed permit, the Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit comments or request that OCD hold a public hearing. Requests for a hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no hearing is held, the Director will approve the proposed permit based on information available, including all comments received. If a public hearing is held, the director will approve or disapprove the proposed permit based on information in the permit application and information submitted at the hearing.

Para obtener más información sobre esta solicitud en español, sirvase comunicarse por favor: New Mexico Energy, Minerals and Natural Resources Department (Depto. Del Energia, Minerals y Recursos Naturales de Nuevo México), Oil Conservation Division (Depto. Conservación Del Petróleo), 1220 South St. Francis Drive, Santa Fe, New México (Contacto: Laura Tulk, 575-748-1283).

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 7th day of August 2016.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

David R. Catanach,
Director

Journal: August 4, 2016

## Chavez, Carl J, EMNRD

**From:** Chavez, Carl J, EMNRD
**Sent:** Thursday, September 8, 2016 3:37 PM
**To:** 'darrangell@gmail.com'
**Cc:** 'danny@pwllc.net'; 'Marvin'; Griswold, Jim, EMNRD; Whitaker, Mark A, EMNRD
**Subject:** Llano Disposal, L.L.C. BW-36 Siringo ACS State Brine Well No. 1
**Attachments:** BW-36 DP Approval 9-8-16.pdf

Mr. Angell:

Please find attached the New Mexico Oil Conservation Division (OCD) Discharge Permit for the above subject brine well. A hard copy was placed in the U.S. Mail today.

Please contact me if you have questions. Thank you.

Mr. Carl J. Chavez
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Department
1220 South St Francis Drive
Santa Fe, New Mexico 87505
Ph. (505) 476-3490
E-mail: CarlJ.Chavez@state.nm.us
**"Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?" (To see how, go to: http://www.emnrd.state.nm.us/OCD/envbureau.html and see "Pollution Prevention")**

**Susana Martinez**
Governor

**Tony Delfin**
Acting Cabinet Secretary

**David R. Catanach, Division Director**
Oil Conservation Division

**SEPTEMBER 8, 2016**

**CERTIFIED MAIL**
**RETURN RECEIPT NO: 3771 5978**

Mr. Darr Angell
Llano Disposal, L.L.C.
P.O. Box 190 (783 Highway 483)
Lovington, New Mexico 88260

**Re: Discharge Plan Permit (BW-035) Llano Disposal, LLC, UIC Class III Brine Well Siringo ACS State Brine Well No. 1, API No. 30-025-30701 UL: D Section 26 Township 17 South, Range 36 East, 660 FNL, 660 FWL, Lat. 32.8115005°, Long. 103.3317795°, NMPM, Lea County, New Mexico**

Mr. Angell,

The discharge permit (BW-035) for the Llano Disposal, LLC (Llano) Class III Brine Well "Siringo ACS State Brine Well No. 1" located 660 FNL and 660 FWL Unit Letter "D", Section 26, Township 17 South Range 36 East, Lea County, New Mexico, is hereby approved under the terms and conditions specified in the enclosed discharge permit.

OCD approves this discharge permit renewal pursuant to 20.6.2.3109A NMAC. Please note 20.6.2.31090 NMAC, which provides for possible future amendment of the permit. Please be advised that approval of this discharge permit does not relieve Llano of liability if operations result in pollution of surface water, groundwater, or the environment.

Please note that 20.6.2.3104 NMAC specifies "When a permit has been issued, discharges must be consistent with the terms and conditions of the permit." Pursuant to 20.6.2.3107C NMAC, Llano is required to notify the Director of any increase in the injection volume or injection pressure, or process modification that would result in any change in the water quality or volume of the discharge.

This discharge permit will expire on September 8, 2021, and Llano should submit a discharge permit renewal application in ample time before this date. Note that under 20.6.2.3106F NMAC, if a discharger submits a discharge permit renewal application at least 120 days before the discharge permit expires and is in compliance with the approved discharge permit, then the existing discharge permit will not expire until the application for renewal has been approved or disapproved.

The discharge permit renewal application for the Llano Class III Brine Well is subject to 20.6.2.3114 NMAC. Every billable facility submitting a discharge permit renewal application is assessed a non-refundable filing fee of $100.00. OCD has already received the required $100.00 filing fee and the $1,700.00 permit fee for a Class III Brine Well is now required by check made payable by Llano to the "Water Quality Management Fund."

If you have any questions, please contact Carl Chavez of my staff at (505-476-3490) or email: Car1J.Chavez@state.nm.us. On behalf of the staff of the OCD, I wish to thank you and your staff for your cooperation during this discharge permit review.

If you have any questions, feel free to call me at 505-476-3493.

Sincerely,

David R. Catanach
OCD Director

JG/cc

Enclosure

cc: Hobbs District Office

## DISCHARGE PERMIT APPROVAL CONDITIONS

All discharge permits are subject to Water Quality Control Commission regulations.

### 1. GENERAL PROVISIONS:

**1.A. PERMITTEE AND PERMITTED FACILITY :** The Director of the Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department issues a new Discharge Permit BW-35 (Discharge Permit) to Llano Disposal, L.L.C. (Permittee) to operate a Underground Injection Control (UIC) Class III Well for the solution mining of salt (Siringo State Brine Well No. 1 API No. 30-025-30701) located 660 FNL and 660 FWL, Unit Letter D (NW/4 NW/4) of Section 26, Township 17 South, Range 36 East, Lat. 32.81150°, Long. 103.33177°, NMPM, Lea County, New Mexico. The brine well is located approximately 8.3 miles South of Lovington, NM or 1.1 miles east of the intersection of Hwy- 483 (Arkansas Jct.) and Hwy- 50 (Buckeye Rd.). Produced brine is metered at surface and transported approximately 6,600 feet southwest by a buried polyethylene pipeline to four 500 barrel fiberglass storage tanks at the proposed Siringo Brine Station located in Unit Letter M of Section 27, Township 17 South, Range 36 East (Lat. 32.79881°, Long. -103.34712°), Lea County, New Mexico. This brine station is located approximately 9.3 miles South of Lovington, New Mexico or 1 mile South-Southeast of the intersection of Hwy 483 (Arkansas Jct.) and County Road 50 (Buckeye Rd.) and ¼ mile east of Hwy 483.

The Permittee is permitted to inject water into the subsurface salt layers and produce brine for use in the oil and gas industry. Ground water that may be affected by a spill, leak, or accidental discharge of brine occurs at a depth of approximately 50 feet below ground surface and has a total dissolved solids (TDS) concentration of approximately 400 mg/L.

**1.B. SCOPE OF PERMIT:** OCD has been granted the authority by statute and by delegation from the Water Quality Control Commission (WQCC) to administer the Water Quality Act (Chapter 74, Article 6 NMSA 1978) as it applies to Class III wells associated with the oil and gas industry (See Section 74-6-4, 74-6-5 NMSA 1978).

The Water Quality Act and the rules promulgated pursuant to the Act protect ground water and surface water of the State of New Mexico by providing that, unless otherwise allowed by 20.6.2 NMAC, no person shall cause or allow effluent or leachate to discharge so that it may move directly or indirectly into ground water unless such discharge is pursuant to an approved discharge plan (See 20.6.2.3104 NMAC, 20.6.2.3106 NMAC, and 20.6.2.5000 through 20.6.2.5299 NMAC).

This Discharge Permit for a Class III Brine Well is issued pursuant to the Water Quality Act and WQCC rules, 20.6.2 NMAC. This Discharge Permit does not authorize any treatment of, or on-site disposal of, any materials, product, by-product, or oil-field waste.

Pursuant to 20.6.2.5004A NMAC, the following underground injection activities are prohibited:

1. The injection of fluids into a motor vehicle waste disposal well is prohibited.
2. The injection of fluids into a large capacity cesspool is prohibited.
3. The injection of any hazardous or radioactive waste into a well is prohibited except as provided by 20.6.2.5004A(3) NMAC.
4. Class IV wells are prohibited, except for wells re-injecting treated ground water into the same formation from which it was drawn as part of a removal or remedial action.
5. Barrier wells, drainage wells, recharge wells, return flow wells, and motor vehicle waste disposal wells are prohibited.

This Discharge Permit does not convey any property rights of any sort nor any exclusive privilege, and does not authorize any injury to persons or property, any invasion of other private rights, or any infringement of state, federal, or local laws, rules or regulations.

The Permittee shall operate in accordance with the terms and conditions specified in this Discharge Permit to comply with the Water Quality Act and the rules issued pursuant to that Act, so that neither a hazard to public health nor undue risk to property will result (see 20.6.2.3109C NMAC); so that no discharge will cause or may cause any stream

standard to be violated (see 20.6.2.3109H(2) NMAC); so that no discharge of any water contaminant will result in a hazard to public health, (see 20.6.2.3109H(3) NMAC); so that the numerical standards specified of 20.6.2.3103 NMAC are not exceeded; and, so that the technical criteria and performance standards (see 20.6.2.5000 through 20.6.2.5299 NMAC) for Class III wells are met. Pursuant to 20.6.2.5003B NMAC, the Permittee shall comply with 20.6.2.1 through 20.6.2.5299 NMAC.

The Permittee shall not allow or cause water pollution, discharge, or release of any water contaminant that exceeds the Water Quality Control Commission (WQCC) standards specified at 20.6.2.3101 NMAC and 20.6.2.3103 NMAC or 20.6.4 NMAC (Water Quality Standards for Interstate and Intrastate Streams). Pursuant to 20.6.2.5101A NMAC, the Permittee shall not inject non-hazardous fluids into ground water having 10,000 mg/l or less total dissolved solids (TDS).

The issuance of this permit does not relieve the Permittee from the responsibility of complying with the provisions of the Water Quality Act, any applicable regulations or water quality standards of the WQCC, or any applicable federal laws, regulations or standards (See Section 74-6-5 NMSA 1978).

**1.C. DISCHARGE PERMIT:** This Discharge Permit is a new permit application. Future replacement of a prior permit does not relieve the Permittee of its responsibility to comply with the terms of that prior permit while that permit was in effect.

**1.D. DEFINITIONS:** Terms not specifically defined in this Discharge Permit shall have the same meanings as those in the Water Quality Act or the rules adopted pursuant to the Act, as the context requires.

**1.E. FILING FEES AND PERMIT FEES:** Pursuant to 20.6.2.3114 NMAC, every facility that submits a Discharge Permit application for initial approval or renewal shall pay the permit fees specified in Table 1 and the filing fee specified in Table 2 of 20.6.2.3114 NMAC. OCD has already received the required $100.00 filing fee. The Permittee is now required to submit the $1,700.00 permit fee for a Class III well. Please remit payment made payable to the "Water Quality Management Fund" in care of OCD at 1220 South St. Francis Drive in Santa Fe, New Mexico 87505.

**1.F. EFFECTIVE DATE, EXPIRATION, RENEWAL CONDITIONS, AND PENALTIES FOR OPERATING WITHOUT A DISCHARGE PERMIT:** This Discharge Permit becomes effective immediately from the date that the Permittee receives this discharge permit or until the permit is terminated or expires. This Discharge Permit will expire on **September 8, 2021**. The Permittee shall submit an application for renewal no later than 120 days before that expiration date, pursuant to 20.6.2.5101F NMAC. If a Permittee submits a renewal application at least 120 days before the Discharge Permit expires and is in compliance with the approved Discharge Permit, then the existing Discharge Permit will not expire until OCD has approved or disapproved the renewal application. A discharge permit continued under this provision remains fully effective and enforceable. Operating with an expired Discharge Permit may subject the Permittee to civil and/or criminal penalties (See Section 74-6-10.1 NMSA 1978 and Section 74-6-10.2 NMSA 1978).

**1.G. MODIFICATIONS AND TERMINATIONS:** The Permittee shall notify the OCD Director and OCD's Environmental Bureau of any Facility expansion or process modification (See 20.6.2.3107C NMAC). The OCD Director may require the Permittee to submit a Discharge Permit modification application pursuant to 20.6.2.3109E NMAC and may modify or terminate a Discharge Permit pursuant to Sections 74-6-5(M) through (N) NMSA 1978.

1. If data submitted pursuant to any monitoring requirements specified in this Discharge Permit or other information available to the OCD Director indicate that 20.6.2 NMAC is being or may be violated, then the OCD Director may require modification or, if it is determined by the OCD Director that the modification may not be adequate, may terminate this Discharge Permit for a Class III well that was approved pursuant to the requirements of 20.6.2.5000 through 20.6.2.5299 NMAC for the following causes:

    a. Noncompliance by Permittee with any condition of this Discharge Permit; or,
    b. The Permittee's failure in the discharge permit application or during the discharge permit review process to disclose fully all relevant facts, or Permittee's misrepresentation of any relevant facts at any time; or,

c. A determination that the permitted activity may cause a hazard to public health or undue risk to property and can only be regulated to acceptable levels by discharge permit modification or termination (See Section 75-6-6 NMSA 1978; 20.6.2.5101I NMAC; and, 20.6.2.3109E NMAC).

2. This Discharge Permit may also be modified or terminated for any of the following causes:

a. Violation of any provisions of the Water Quality Act or any applicable regulations, standard of performance or water quality standards;
b. Violation of any applicable state or federal effluent regulations or limitations; or
c. Change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge (See Section 75-6-5M NMSA 1978).

**1.H. TRANSFER OF CLASS III WELL DISCHARGE PERMIT:**

**1.** The transfer provisions of 20.6.2.3111 NMAC do not apply to a discharge permit for a Class III well.

**2.** Pursuant to 20.6.2.5101H NMAC, the Permittee may request to transfer its Class III well discharge permit if:

a. The OCD Director receives written notice 30 days prior to the transfer date; and
b. The OCD Director does not object prior to the proposed transfer date. OCD may require modifications to the discharge permit as a condition of transfer, and may require demonstration of adequate financial responsibility.

**3.** The written notice required in accordance with Permit Condition 1.H.2.a shall:

a. Have been signed by the Permittee and the succeeding Permittee, and shall include an acknowledgement that the succeeding Permittee shall be responsible for compliance with the Class III well discharge permit upon taking possession of the facility; and
b. Set a specific date for transfer of the discharge permit responsibility, coverage and liability; and
c. Include information relating to the succeeding Permittee's financial responsibility required by 20.6.2.5210B(17) NMAC.

**1.I. COMPLIANCE AND ENFORCEMENT:** If the Permittee violates or is violating a condition of this Discharge Permit, OCD may issue a compliance order that requires compliance immediately or within a specified time period, or assess a civil penalty, or both (See Section 74-6-10 NMSA 1978). The compliance order may also include a suspension or termination of this Discharge Permit. OCD may also commence a civil action in district court for appropriate relief, including injunctive relief (See Section 74-6-10(A)(2) NMSA 1978). The Permittee may be subject to criminal penalties for discharging a water contaminant without a discharge permit or in violation of a condition of a discharge permit; making any false material statement, representation, certification or omission of material fact in a renewal application, record, report, plan or other document filed, submitted or required to be maintained under the Water Quality Act; falsifying, tampering with or rendering inaccurate any monitoring device, method or record required to be maintained under the Water Quality Act; or failing to monitor, sample or report as required by a Discharge Permit issued pursuant to a state or federal law or regulation (See Section 74-6-10.2 NMSA 1978).

**2. GENERAL FACILITY OPERATIONS:**

**2.A. QUARTERLY MONITORING REQUIREMENTS FOR CLASS III WELLS:** The Permittee may use either or both fresh water or water from otherwise non-potable sources. Pursuant to 20.6.2.5207C, the Permittee shall provide analysis of the injected fluids and brine at least quarterly to yield data representative of their characteristics. The Permittee shall analyze both the injected fluids and brine for the following characteristics: pH; density, concentration of total dissolved solids (TDS); chloride concentration; and sodium concentration (for brine only).

**1. Monitor Well:** In **advance of start-up** of brine well operations, the Permittee shall install a downgradient monitor well into the water table aquifer and collect a background groundwater sample for general chemistry and WQCC 20.6.2.3103 NMAC groundwater constituents and Methanol (EPA Method 8015B).

Groundwater quality data shall comply with EPA Quality Assurance/Quality Control (QA/QC) and Data Quality Objectives (DQOs) and be **submitted to OCD for approval before start-up** of brine production. The monitor well construction shall comply with EPA Standards and be required to be sampled and monitored **annually** thereafter for the following characteristics:

- Methanol (Method 8015B);
- pH (Method 9040);
- Eh;
- Specific conductance;
- Specific gravity;
- Temperature; and
- General ground water quality parameters (general chemistry/cations and anions, including: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, total dissolved solids, cation/anion balance, pH, and bromide using the methods specified in 40 CFR 136.3).

The environmental data results shall be reported in the Annual Report (Section 2.J).

**2.B. SOLUTION CAVERN MONITORING PROGRAM:**

1. **Surface Subsidence Monitoring Plan:** The Permittee shall submit a Surface Subsidence Monitoring Plan to OCD within 180 days of the effective date of this permit. The Surface Subsidence Monitoring Plan shall specify that the Permittee will install at least three survey monuments and shall include a proposal to monitor the elevation of the monuments and top of well casing at least semiannually.

   The Permittee shall survey each survey monument and top of well casing at least semiannually to monitor for possible surface subsidence and shall tie each survey to the nearest USGS geodetic benchmark. The Permittee shall employ a licensed professional surveyor to conduct the subsidence monitoring program with proper instrument accuracy assessment at the conclusion of each survey. The Permittee shall submit the results of all subsidence surveys with summary of results and any recommendations to OCD within 15 days of survey completion. If the monitored surface subsidence survey at any measuring point reaches 0.10 ft. compared to its baseline elevation, then the Permittee shall notify OCD within 30 days of survey completion for further instructions. If survey results continue to demonstrate subsidence over time, and the Permittee cannot demonstrate the integrity of the cavern and well to the satisfaction of OCD, then it shall cease all brine production and submit a corrective action plan to mitigate the subsidence.

   The Permittee shall include the above information in the Annual Report (Section 2.J).

2. **Solution Cavern Characterization Program:** The Permittee shall submit a Solution Cavern Characterization Plan to characterize the size and shape of the solution cavern using geophysical methods within 180 days of the effective date of this permit. The Permittee shall characterize the size and shape of the solution cavern using a geophysical methods approved by OCD at least once before the expiration date of the permit. The Permittee shall demonstrate that at least 90% of the calculated volume of salt removed based upon injection and production volumes has been accounted for by the approved geophysical method(s) for such testing to be considered truly representative.

   a. The Permittee shall provide an estimate of the size and shape of the solution cavern at least annually in the Annual Report (Section 2.J), based on fluid injection and brine production data.
   b. The Permit shall compare the ratio of the volume of injected fluids to the volume of produced brine monthly. If the average ratio of injected fluid to produced brine varies is less than 90% or greater than 110%, the Permittee shall report this to OCD and cease injection and production operations of its Class III well within 24 hours. The Permittee shall begin an investigation to determine the cause of this abnormal ratio within 72 hours. The Permittee shall submit to OCD a report of its investigation within 15 days of cessation of injection and production operations of its Class III well for further instructions.

3. **Annual Certification:** The Permittee shall certify annually in the Annual Report (Section 2.J) 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.

   If the solution cavern is determined by either OCD or the Permittee to be potentially unstable by either direct or indirect means, then the Permittee shall cease all fluid injection and brine production within 24 hours. If the Permittee ceases operations because it or OCD has determined that the solution cavern is unstable, then it shall submit a plan to stabilize the solution cavern within 30 days. OCD may require the Permittee to implement additional subsidence monitoring and to conduct additional corrective action.

**2.C. CONTINGENCY PLANS:** The Permittee shall implement its proposed contingency plan(s) included in its Permit Application to cope with failure of a system(s) in the Discharge Permit.

**2.D. CLOSURE:** Prior to closure of the facility, the Permittee shall submit for OCD's approval, a closure plan including a completed form C-103 for plugging and abandonment of the Class III well. The Permittee shall plug and abandon its well pursuant to 20.6.2.5209 NMAC and as specified in Permit Conditions 2.I and 5.B to address: well plug and abandonment, land surface restoration; environmental groundwater monitoring (if applicable); pipeline abandonment; and five years of surface subsidence monitoring.

1. **Pre-Closure Notification:** Pursuant to 20.6.2.5005A NMAC, the Permittee shall submit a pre-closure notification to OCD's Environmental Bureau at least 30 days prior to the date that it proposes to close or to discontinue operation of its Class III well. Pursuant to 20.6.2.5005B NMAC, OCD's Environmental Bureau must approve all proposed well closure activities before Permittee may implement its proposed closure plan.

2. **Required Information:** The Permittee shall provide OCD's Environmental Bureau with the following information:

- Name of facility;
- Address of facility;
- Name of Permittee (and owner or operator, if appropriate);
- Address of Permittee (and owner or operator, if appropriate);
- Contact person;
- Phone number;
- Number and type of well(s);
- Year of well construction;
- Well construction details;
- Type of discharge;
- Average flow (gallons per day);
- Proposed well closure activities (e.g., sample fluids/sediment, appropriate disposal of remaining fluids/sediments, remove well and any contaminated soil, clean out well, install permanent plug, conversion to other type of well, ground water and vadose zone investigation, other);
- Proposed date of well closure;
- Proposed method and date of surface restoration;
- Proposed method and date of pipeline abandonment;
- Name of preparer; and
- Date.

**2.E. PLUGGING AND ABANDONMENT PLAN:** Pursuant to 20.6.2.5209A NMAC, when the Permittee proposes to plug and abandon its Class III well, it shall submit to OCD a plugging and abandonment plan that meets the requirements of 20.6.2.3109C NMAC, 20.6.2.5101C NMAC, and 20.6.2.5005 NMAC for protection of ground water. If requested by OCD, Permittee shall submit for approval prior to closure, a revised or updated plugging and abandonment plan. The obligation to implement the plugging and abandonment plan as well as the requirements of the plan survives the termination or expiration of this Discharge Permit. The Permittee shall comply with 20.6.2.5209 NMAC.

**2.F RECORD KEEPING:** The Permittee shall maintain records of all inspections, surveys, investigations, etc., required by this Discharge Permit at its Facility office for a minimum of five years and shall make those records available for inspection at the request of an OCD Representative.

**2.G. RELEASE REPORTING:** The Permittee shall comply with the following permit conditions, pursuant to 20.6.2.1203 NMAC, if it determines that a release of oil or other water contaminant, in such quantity as may with reasonable probability injure or be detrimental to human health, animal or plant life, or property, or unreasonably interfere with the public welfare or the use of property, has occurred. The Permittee shall report unauthorized releases of water contaminants in accordance with any additional commitments made in its approved Contingency Plan. If the Permittee determines that any constituent exceeds the standards specified at 20.6.2.3103 NMAC, then it shall report a release to OCD's Environmental Bureau.

1. **Oral Notification:** As soon as possible after learning of such a discharge, but in no event more than twenty-four (24) hours thereafter, the Permittee shall notify OCD's Environmental Bureau. The Permittee shall provide the following:

   - The name, address, and telephone number of the person or persons in charge of the facility, as well as of the owner and/or operator of the facility;
   - The name and location of the facility;
   - The date, time, location, and duration of the discharge;
   - The source and cause of discharge;
   - A description of the discharge, including its chemical composition;
   - The estimated volume of the discharge; and,
   - Any corrective or abatement actions taken to mitigate immediate damage from the discharge.

2. **Written Notification:** Within one week after the Permittee has discovered a discharge, the Permittee shall send written notification (may use form C-141 with attachments) to OCD's Environmental Bureau verifying the prior oral notification as to each of the foregoing items and providing any appropriate additions or corrections to the information contained in the prior oral notification.

   The Permittee shall provide subsequent corrective actions and written reports as required by OCD's Environmental Bureau.

**2.H. OTHER REQUIREMENTS:**

1. **Inspection and Entry:** Pursuant to Section 74-6-9 NMSA 1978 and 20.6.2.3107A NMAC, the Permittee shall allow any authorized representative of the OCD Director, to:

   - Upon the presentation of proper credentials, enter the premises at reasonable times;
   - Inspect and copy records required by this Discharge Permit;
   - Inspect any treatment works, monitoring, and analytical equipment;
   - Sample any injection fluid or produced brine;
   - Conduct various types environmental media sampling, and
   - Use the Permittee's monitoring systems and wells in order to collect groundwater samples.

2. **Advance Notice:** The Permittee shall provide OCD's Environmental Bureau and Hobbs District Office with at least five (5) working days advance notice of any environmental sampling to be performed pursuant to this Discharge Permit, or any well plugging, abandonment or decommissioning of any equipment associated with its Class III well.

3. **Environmental Monitoring:** The Permittee shall ensure that any environmental sampling and analytical laboratory data collected meets the standards specified in 20.6.2.3107B NMAC or EPA QA/QC Standards. The Permittee shall ensure that all environmental samples are analyzed by an accredited "National Environmental Laboratory Accreditation Conference" (NELAC) Laboratory. The Permittee shall submit environmental sampling data summary tables, all raw analytical data, and laboratory QA/QC.

a. A monitor well shall be installed hydrogeologically downgradient from the Brine Well and sampled in accordance with Section 2.A.1.

**2.I. BONDING OR FINANCIAL ASSURANCE:** Pursuant to 20.6.2.5210B(17) NMAC, the Permittee shall maintain at a minimum, a single well plugging bond in the amount that it shall determine, in accordance with Permit Conditions 2.D and 5.B, to cover potential costs associated with plugging and abandonment of the Class III well, surface restoration, environmental ground water monitoring (if applicable), pipeline abandonment, along with five years of surface subsidence monitoring thereafter. OCD may require additional financial assurance to ensure adequate funding is available to plug and abandon the well and/or for any required environmental related corrective actions.

Methods by which the Permittee shall demonstrate the ability to undertake these measures shall include submission of a surety bond or other adequate assurances, such as financial statements or other materials acceptable to the OCD Director, such as: (1) a surety bond; (2) a trust fund with a New Mexico bank in the name of the State of New Mexico, with the State as Beneficiary; (3) a non-renewable letter of credit made out to the State of New Mexico; (4) liability insurance specifically covering the contingencies listed in this paragraph; or (5) a performance bond, generally in conjunction with another type of financial assurance. If an adequate bond is posted by the Permittee to a federal or another state agency, and this bond covers all of the measures specified above, the OCD Director shall consider this bond as satisfying the bonding requirements of Sections 20.6.2.5000 through 20.6.2.5299 NMAC wholly or in part, depending upon the extent to which such bond is adequate to ensure that the Permittee will fully perform the measures required hereinabove.

**2.J. ANNUAL REPORT:** The Permittee shall submit its annual report pursuant to 20.6.2.3107 NMAC to OCD's Environmental Bureau by June 1st of the following year. The annual report shall include the following:

- Cover sheet marked as "Annual Class III Well Report, Name of Permittee, Discharge Permit Number, API number of well(s), date of report, and person submitting report;
- Summary of Class III well operations for the year including a description and reason for any remedial or major work on the well with a copy of form C-103;
- Monthly fluid injection and brine production volume, including the cumulative total carried over each year;
- Annual monitor well analytical data results;
- Injection pressure data;
- Pipeline hydrostatic test results;
- Pipeline visual leak inspection monitoring results at joints;
- A copy of the quarterly chemical analyses shall be included with data summary and all QA/QC information;
- Copy of any mechanical integrity test chart, including the type of test, i.e., duration, gauge pressure, etc.;
- Brief explanation describing deviations from the normal operations;
- Results of any leaks and spill corrective action reports;
- An Area of Review (AOR) update summary;
- A summary with interpretation of MITs, surface subsidence surveys, estimated cavern size and shape, cavern volume and geometry measurements with conclusion(s) and recommendation(s);
- A summary of the ratio of the monthly volume of injected fluids to the volume of produced brine;
- A summary of all major Facility activities or events, which occurred during the year with any conclusions and recommendations;
- Annual Surface Subsidence Monitoring Plan data results in accordance with Permit Condition 2.B.1;
- Annual Solution Cavern Characterization data results in accordance with Permit Condition 2.B.2; and
- The Permittee shall file its Annual Report in an electronic format with a hard copy submittal to OCD's Environmental Bureau.

**3. CLASS III WELL OPERATIONS:**

3. **Owner/Operator Commitments.** Once a permit is issued, the owner/operator must ensure all operations are consistent with the terms and conditions of the permit and in conformance with all pertinent rules and regulations under both the Water Quality Act. The owner/operator shall abide by all commitments submitted in its discharge permit application including any attachments and/or amendments along with these approval conditions.

Applications which reference previously approved plans on file with the OCD shall be incorporated into this permit and the owner/operator shall abide by all commitments of such plans.

**3.A. OPERATING REQUIREMENTS:** The Permittee shall comply with the operating requirements specified in 20.6.2.5206A NMAC and 20.6.2.5206A NMAC to ensure that:

1. **Brine Production Method:** During the cavern development process and daily brine production, a normal flow configuration consisting of fresh water injection shall occur through the innermost tubing string with brine production through the casing string backed by cement to surface to promote proper cavern development with depth; and to prevent cavern ceiling collapse. Injection and production flow may temporarily be reversed as required periodically to clean the tubing and annulus. However, a normal flow regime is required during daily injection and production must only occur in the intended solution mining interval.

2. **Injection Out of Zone:** Injection between the outermost casing and the well bore is prohibited in a zone other than the authorized injection zone. If the Permittee determines that its Class III well is discharging or suspects that it is discharging fluids into a zone or zones other than the permitted injection zone specified in Permit Condition 3.B.1., then the Permittee shall within 24 hours notify OCD's Environmental Bureau and Hobbs District Office of the circumstances and action(s) taken. The Permittee shall cease operations until proper repairs are made and it has received approval from OCD to re-start injection operations.

3. **Pipeline:** Initial hydrostatic testing of pipeline is required for any pressure loss, leakage, etc. at joints. The hydrostatic test report with "as-built" pipeline transect and associated construction information shall be submitted to OCD for approval before pipeline activation. Mandatory Hydrostatic Testing of the pipeline is required after leakage and/or before the expiration date of the Permit. The pipeline shall be constructed with an Emergency Shut-Down Device with block off locations for pipeline isolation, access, cleaning, testing, etc. Daily pipeline inspection and monitoring is required at a minimum for the first week and each time the pipeline is brought back into service after shut-down, service work, etc. The pipeline shall be inspected within 8-hours of pipeline pressure loss, upset, etc. Weekly inspection and monitoring at a minimum is required thereafter. Inspection record keeping is required and shall include the date and time of each inspection, inspectors name and contact information, weather conditions with inspection summary, any conclusion on pipeline condition with any recommendations. Spills or release locations shall include GPS Coordinates and be handled in accordance with Condition 2.G Release Reporting herein.

**3.B. INJECTION OPERATIONS:**

1. **Well Injection Pressure Limit:** The Permittee shall ensure that the maximum wellhead or surface injection pressure on its Class III well shall not exceed the fracture pressure of the injection salt formation and will not cause new fractures or propagate any existing fractures of cause damage to the system and underground source of drinking water.

2. **Pressure Limiting Device:** The Permittee shall equip and operate its Class III well or system with a pressure limiting device which shall, at all times, limit surface injection pressure to the maximum allowable pressure for its Class III well. The Permittee shall monitor the pressure-limiting device daily and shall report all pressure exceedances within 24 hours of detecting an exceedance to OCD's Environmental Bureau.

   The Permittee shall take all steps necessary to ensure that the injected fluids enter only the proposed injection interval and is not permitted to escape to other formations, fresh water zones, or onto the ground surface. The Permittee shall report to OCD's Environmental Bureau within 24 hours of discovery any indication that new fractures or existing fractures have been propagated, or that damage to the well, the injection zone, or formation has occurred.

**3.C. CONTINUOUS MONITORING DEVICES:** The Permittee shall use continuous monitoring devices to provide a record of injection pressure, flow rate, flow volume, and pressure on the annulus between the tubing and the long string of casing.

**3.D. MECHANICAL INTEGRITY FOR CLASS III WELLS:**

1. Pursuant to 20.6.2.5204 NMAC, the Permittee shall demonstrate mechanical integrity for its Class III well at least once every five years or more frequently as the OCD Director may require for good cause during the life of the well. The Permittee shall demonstrate mechanical integrity for its Class III well every time it performs a well workover, including when it pulls the tubing. A Class III well has mechanical integrity if there is no detectable leak in the casing or tubing which OCD considers to be significant at maximum operating temperature and pressure; and no detectable conduit for fluid movement out of the injection zone through the well bore or vertical channels adjacent to the well bore which the OCD Director considers to be significant. The Permittee shall conduct a casing Mechanical Integrity Test (MIT) from the surface to the approved injection depth to assess casing integrity. The MIT shall consist of a 30-minute test at a minimum pressure of 300 psig measured at the surface.

   The Permittee shall notify OCD's Environmental Bureau and Hobbs District Office at least 5 days prior to conducting any MIT to allow OCD Hobbs the opportunity to witness the MIT.

2. The following criteria will determine if the Class III well has passed the MIT:

   a. Passes MIT if zero bleed-off during the test;
   b. Passes MIT if final test pressure is within +/- 10% of starting pressure, if approved by OCD;
   c. When the MIT is not witnessed by OCD and fails, the Permittee shall notify OCD within 24 hours of the failure of the MIT.

3. Pursuant to 20.6.2.5204C NMAC, the OCD Director may consider the use by the Permittee of equivalent alternative test methods to determine mechanical integrity. The Permittee shall submit information on the proposed test and all technical data supporting its use. The OCD Director may approve the Permittee's request if it will reliably demonstrate the mechanical integrity of the well for which its use is proposed.

4. Pursuant to 20.6.2.5204D NMAC, when conducting and evaluating the MIT(s), the Permittee shall apply methods and standards generally accepted in the oil and gas industry. When the Permittee reports the results of all MIT(s) to the OCD Director, it shall include a description of the test(s), the method(s) used, and the test results.

**3.E. WELL WORKOVER OPERATIONS:** Pursuant to 20.6.2.5205A(5) NMAC, the Permittee shall provide notice to and shall obtain approval from OCD's District Office in Hobbs and the Environmental Bureau in Santa Fe prior to commencement of any remedial work or any other workover operations to allow OCD the opportunity to witness the operation. The Permittee shall request approval using form C-103 (Sundry Notices and Reports on Wells) with copies sent to OCD's Environmental Bureau and Hobbs District Office. Properly completed Forms C-103 and/or C-105 must be filed with OCD upon completion of workover activities and copies included in that year's Annual Report.

**3.F. FLUIDS INJECTION AND BRINE PRODUCTION VOLUMES AND PRESSURES:** The Permittee shall continuously monitor the volumes of water injected and brine production. The Permittee shall submit monthly reports of its injection and production volumes on or before the 10th day of the following month. The Permittee shall suspend injection if the monthly injection volume is less than 110% or greater than 120% of associated brine production. If such an event occurs, the Permittee shall notify OCD within 24 hours.

**3.G. AREA OF REVIEW (AOR):** The Permittee shall report within 72 hours of discovery any new wells, conduits, or any other device that penetrates or may penetrate the injection zone within a 1-mile radius from its Class III well. OCD shall be notified within 24 hours of having knowledge of any wells lacking cement within the cavern interval within a ½-mile radius from the Class III well.

**4. CLASS V WELLS:** Pursuant to 20.6.2.5002B NMAC, leach fields and other waste fluids disposal systems that inject non-hazardous fluid into or above an underground source of drinking water are UIC Class V injection wells. This Discharge Permit does not authorize the use of a Class V injection well for the disposal of industrial waste. Pursuant to 20.6.2.5005 NMAC, the Permittee shall close any Class V industrial waste injection well that injects non-

hazardous industrial wastes or a mixture of industrial wastes and domestic wastes (e.g., septic systems, leach fields, dry wells, etc.) within 90 calendar days of the issuance of this Discharge Permit. The Permittee shall document the closure of any Class V wells used for the disposal of non-hazardous industrial wastes or a mixture of industrial wastes and domestic wastes other than contaminated ground water in its Annual Report. Other Class V wells, including wells used only for the injection of domestic wastes, shall be permitted by the New Mexico Environment Department.

**5. SCHEDULE OF COMPLIANCE:**

**5.A. ANNUAL REPORT:** The Permittee shall submit its annual report to OCD by June 1st of each year.

**5.B. BONDING OR FINANCIAL ASSURANCE:** The Permittee shall submit an estimate of the minimum cost to properly close, plug and abandon its UIC Class III well, conduct ground water restoration if applicable, and any post-operational monitoring as may be needed (see 20.6.2.5210B(17) NMAC) within 90 days of permit issuance (See 20.6.2.5210B(17) NMAC), and/or the Closure Plan addresses this requirement and is approved by OCD. The Permittee's cost estimate shall be based on third person estimates and included in the Closure Plan with the application. OCD will require the Permittee to submit a single well plugging bond based on the approved third person cost estimate for OCD approval before OCD may issue approval to drill and construct the well (also see Permit Conditions 2.D and 2.I).

**5.C. SURFACE SUBSIDENCE MONITORING PLAN:** The Permittee shall submit the Surface Subsidence Monitoring Plan required in accordance with Permit Condition 2.B.1 within 180 days of permit issuance for OCD approval.

**5.D. SOLUTION CAVERN CHARACTERIZATION PLAN:** The Permittee shall submit the Solution Cavern Characterization Plan required in accordance with Permit Condition 2.B.2 within 180 days of permit issuance for OCD approval.

## Chavez, Carl J, EMNRD

**From:** Estes, Bob, DCA
**Sent:** Wednesday, September 7, 2016 8:29 AM
**To:** Chavez, Carl J, EMNRD; Marvin; danny@pwllc.net
**Subject:** RE: BW-035

Thanks,

For the info.

Bob

-----Original Message-----
From: Chavez, Carl J, EMNRD
Sent: Wednesday, September 07, 2016 8:26 AM
To: Marvin; danny@pwllc.net
Cc: Estes, Bob, DCA
Subject: FW: BW-035

Marvin and Danny:

Please see Jim Griswold's response below. OCD encourages brine well operators to communicate with public commenters.

Thank you.

-----Original Message-----
From: Griswold, Jim, EMNRD
Sent: Wednesday, September 7, 2016 8:22 AM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Subject: RE: BW-035

Based upon the letter from the Department of Cultural Affairs, there is no requirement on private surface and thus OCD should not hold up issuance of the permit.

Jim Griswold
Environmental Bureau Chief
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
505.476.3465
email: jim.griswold@state.nm.us

-----Original Message-----
From: Chavez, Carl J, EMNRD
Sent: Tuesday, September 6, 2016 4:47 PM
To: Griswold, Jim, EMNRD <Jim.Griswold@state.nm.us>
Subject: FW: BW-035

Jim:

What do you think?

-----Original Message-----
From: Marvin [mailto:burrowsmarvin@gmail.com]
Sent: Tuesday, September 6, 2016 4:24 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>; danny@pwllc.net
Subject: Re: BW-035

Carl / Danny :
As you know, this is a Llano re-entry of a well originally drilled by Yates. Arc surveys were SOP at that time Yates drilled. Thus far, Llano has used only enough space to stand up a workover rig at the well head. The original drill pad was much, much larger. Since the brine facility will not be at the well, we have no plans to expand use to include the original well pad. It would probably make sense to survey the pipeline route and the tank battery site.
Since the survey is a suggestion, not a requirement, will this hold up the issuance of the permit?

Sent from my iPhone

> On Sep 6, 2016, at 1:19 PM, Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us> wrote:
>
> Gentlemen:
>
> Please find attached the comments from the Department of Cultural Affairs Historic Preservation Division.
>
> Please contact Mr. Bob Estes at (505) 827-4225 or E-mail: bob.estes@state.nm.us for more information.
>
> Thank you.
>
>
> -----Original Message-----
> From: Estes, Bob, DCA
> Sent: Tuesday, September 6, 2016 12:35 PM
> To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
> Subject: BW-035
>
> Dear MR. Chavez,
>
> Please find attached to this email SHPO comments for the proposed Llano Disposal's Siringo discharge permit in Lea County.
>
> If you have any questions or comments, please feel free to call me directly at 505-827-4225 or email me.
>
> Sincerely,
>
> Bob Estes Ph.D.
> HPD Staff Archaeologist
>
> -----Original Message-----
> From: HPDXerox@state.nm.us [mailto:HPDXerox@state.nm.us]

> Sent: Monday, September 05, 2016 10:53 AM
> To: Estes, Bob, DCA
> Subject: Scanned from a Xerox Multifunction Device
>
>
>
> Please open the attached document.  It was scanned and sent to you using a Xerox Multifunction Device.
>
> Attachment File Type: pdf, Multi-Page
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> Multifunction Device Location: machine location not set
> Device Name: HPD_Xerox_WorkCentre_5945
>
>
> For more information on Xerox products and solutions, please visit
> http://www.xerox.com <Scanned from a Xerox Multifunction Device.pdf>

## Chavez, Carl J, EMNRD

**From:** Chavez, Carl J, EMNRD
**Sent:** Tuesday, September 6, 2016 1:19 PM
**To:** 'Marvin'; 'danny@pwllc.net'
**Cc:** Estes, Bob, DCA; Griswold, Jim, EMNRD
**Subject:** FW: BW-035
**Attachments:** Scanned from a Xerox Multifunction Device.pdf

Gentlemen:

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Please contact Mr. Bob Estes at (505) 827-4225 or E-mail: bob.estes@state.nm.us for more information.

Thank you.

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Sent: Tuesday, September 6, 2016 12:35 PM
To: Chavez, Carl J, EMNRD <CarlJ.Chavez@state.nm.us>
Subject: BW-035

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Sincerely,

Bob Estes Ph.D.
HPD Staff Archaeologist

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Sent: Monday, September 05, 2016 10:53 AM
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Please open the attached document. It was scanned and sent to you using a Xerox Multifunction Device.

Attachment File Type: pdf, Multi-Page

Multifunction Device Location: machine location not set
Device Name: HPD_Xerox_WorkCentre_5945

Susana Martinez
Governor

STATE OF NEW MEXICO
**DEPARTMENT OF CULTURAL AFFAIRS**
**HISTORIC PRESERVATION DIVISION**

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

September 6, 2016

Carl Chavez
Environmental Engineer
Oil Conservation Bureau-Environmental Bureau Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Discharge permit (BW-035) Llano Disposal, Siringo ACS State Well No. 1. (HPD Log: 104095)

Dear Mr. Chavez:

This letter is in response to the above referenced discharge permit application received at the Historic Preservation Division (HPD) on August , 2016. According to the application, the proposed project is within Township 17 South, Range 36 East, and portions of Sections 26 and 27.

I reviewed our records to determine if cemeteries, burial grounds or cultural resources listed on the State Register of Cultural Properties or the National Register of Historic Places exist within or near the permit area. Our records show that there are no cultural resources listed on the National Register or State Register within or near the proposed permit area and no known cemeteries or burial grounds.

Although there are no cultural resources listed on the State or National Register, our records show that the area has not been surveyed for cultural resources and there is not enough information to know if unidentified cultural resources exist in the project area.

The application states that the surface and mineral estate is privately owned. Although a cultural resources survey is not required for permits on private land, HPD recommends that a survey be conducted to ensure that archaeological sites are not inadvertently damaged by drilling or overland travel. A list of archaeological consultants can be obtained from our website at www.nmhistoricpreservation.org.

Please do not hesitate to contact me if you have any questions regarding these comments. I can be reached by telephone at (505) 827-4225 or by email at bob.estes@state.nm.us .

Sincerely,

Bob Estes

Bob Estes Ph.D.
Archaeologist

## Chavez, Carl J, EMNRD

**From:** Chavez, Carl J, EMNRD
**Sent:** Tuesday, September 6, 2016 1:19 PM
**To:** 'Marvin'; 'danny@pwllc.net'
**Cc:** Estes, Bob, DCA; Griswold, Jim, EMNRD
**Subject:** FW: BW-035
**Attachments:** Scanned from a Xerox Multifunction Device.pdf

Gentlemen:

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Bob Estes Ph.D.
HPD Staff Archaeologist

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For more information on Xerox products and solutions, please visit http://www.xerox.com

Susana Martinez
Governor

STATE OF NEW MEXICO
**DEPARTMENT OF CULTURAL AFFAIRS**
**HISTORIC PRESERVATION DIVISION**

BATAAN MEMORIAL BUILDING
407 GALISTEO STREET, SUITE 236
SANTA FE, NEW MEXICO 87501
PHONE (505) 827-6320 FAX (505) 827-6338

September 6, 2016

Carl Chavez
Environmental Engineer
Oil Conservation Bureau-Environmental Bureau Mining and Minerals Division
1220 South St. Francis Drive
Santa Fe, NM 87505

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Please do not hesitate to contact me if you have any questions regarding these comments. I can be reached by telephone at (505) 827-4225 or by email at bob.estes@state.nm.us .

Sincerely,

Bob Estes

Bob Estes Ph.D.
Archaeologist

# Affidavit of Publication

STATE OF NEW MEXICO
COUNTY OF LEA

I, Daniel Russell, Publisher of the Hobbs News-Sun, a newspaper published at Hobbs, New Mexico, solemnly swear that the clipping attached hereto was published in the regular and entire issue of said newspaper, and not a supplement thereof for a period of 1 issue(s).

Beginning with the issue dated
August 07, 2016
and ending with the issue dated
August 07, 2016.

Daniel Russell
Publisher

Sworn and subscribed to before me this
7th day of August 2016.

Gussie Black
Business Manager

My commission expires
January 29, 2019
(Seal)

OFFICIAL SEAL
GUSSIE BLACK
Notary Public
State of New Mexico
My Commission Expires 1-29-19

This newspaper is duly qualified to publish legal notices or advertisements within the meaning of Section 3, Chapter 167, Laws of 1937 and payment of fees for said

LEGAL LEGAL LEGAL

**LEGAL NOTICE**
**August 7, 2016**

**NOTICE OF PUBLICATION**

**STATE OF NEW MEXICO**
**ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**
**OIL CONSERVATION DIVISION**

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3108 NMAC), the following discharge permit application has been submitted to the Director of the New Mexico Oil Conservation Division ("OCD"), 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

**(BW-35) Llano Disposal, L.L.C., Darr Angell, Owner, P.O. Box 190, Lovington, New Mexico 88260, has submitted an application for a new Underground Injection Control (UIC) Class III Brine Well Discharge Permit for the Siringo ACS Brine Well No. 1 (API# 30-025-30701), located 660 FNL and 660 FWL (NW/4, NW/4) in Section 26, Township 17 South, Range 36 East (Lat.: N 32.81150º Long.: W 103.33178º), NMPM, Lea County, New Mexico. The injection well is located approximately 8.3 miles south of Lovington, NM or 1.1 miles east of the intersection of Hwy-483 (Arkansas Jct.) and Hwy-50 (Buckeye Rd.). Produced brine fluid will be metered at surface and transported approximately 6,600 feet southwest by a buried polyethylene pipeline to four 500 barrel fiberglass storage tanks at the proposed Siringo Brine Station located in Unit Letter M of Section 27, Township 17 South, Range 36 East (Lat. 32.79882°, Long. 103.34712°), NMPM, Lea County, New Mexico. This brine station is located approximately 9.3 miles South of Lovington or 1 mile South-Southeast of the intersection of Hwy-483 (Arkansas Jct.) and County Road 50 (Buckeye Rd.) and ¼ mile east of Hwy-483. Fresh water, produced water, and/or recycled water will be routed via polyethylene pipelines to the brine well for injection into the Salado Salt Formation in the injection interval from 2,043 to 3,253 ft. below ground surface (bgs) through tubing at a rate of approximately 45 - 55 gpm and at a normal operating pressure from 200 to 250 psig. The maximum surface injection pressure allowed is 408 psig. Dissolution brine water (320,000 ppm Total Dissolved Solids- TDS) is produced up the well annulus between the injection tubing and well casing. Brine is then pumped through a meter via subsurface polyethylene pipeline to the brine station for sale. The injection fluid is estimated to contain less than 1,000 ppm total dissolved solids (TDS). Groundwater most likely to be affected by a spill, leak or accidental discharge is at a depth of approximately 50 ft. below ground level with a TDS concentration of approximately 400 ppm. The discharge permit addresses well construction, operation, monitoring, ground subsidence, associated surface facilities, financial assurance, and provides a contingency plan in the event of accidental discharges.**

The OCD has determined the application is administratively complete and has prepared a draft permit. The OCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list may contact the Environmental Bureau Chief of the OCD at the address given above. The permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m., Monday through Friday, or at the OCD web site http://www.emnrd.state.nm.us/ocd/. Persons interested in obtaining a copy of the application and draft permit may contact the OCD at the address given above. Prior to ruling on any proposed permit, the Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit comments or request that OCD hold a public hearing. Requests for a hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines there is significant public interest.

If no hearing is held, the Director will approve the proposed permit based on information available, including all comments received. If a public hearing is held, the director will approve or disapprove the proposed permit based on information in the permit application and information submitted at the hearing.

Para obtener más información sobre esta solicitud en español, sirvase comunicarse por favor: New Mexico Energy, Minerals and Natural Resources Department (Depto. Del Energia, Minerals y Recursos Naturales de Nuevo México), Oil Conservation Division (Depto. Conservación Del Petróleo), 1220 South St. Francis Drive, Santa Fe, New México (Contacto: Laura Tulk, 575-748-1283).

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 7th day of August 2016.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

David R. Catanach, Director

**#31139**

01101546 00179220

LEONARD LOWE
NEW MEXICO OIL CONSERVATION DIVISION, EMNRD
1220 S. SAINT FRANCIS DR.
SANTA FE, NM 87505

## Chavez, Carl J, EMNRD

**From:** Chavez, Carl J, EMNRD
**Sent:** Friday, March 18, 2016 3:24 PM
**To:** 'Lane, James, DGF'; Wunder, Matthew, DGF; 'Allison, Arthur, DIA'; 'ddapr@nmda.nmsu.edu'; 'jjuen@blm.gov'; 'psisneros@nmag.gov'; 'r@rthicksconsult.com'; 'sric.chris@earthlink.net'; 'nmparks@state.nm.us'; Verhines, Scott, OSE; 'peggy@nmbg.nmt.edu'; 'marieg@nmoga.org'; Fetner, William, NMENV; 'lazarus@glorietageo.com'; 'cnewman02@fs.fed.us'; Kieling, John, NMENV; 'bsg@garbhall.com'; 'Schoeppner, Jerry, NMENV'; 'claudette.horn@pnm.com'; 'ekendrick@montand.com'; 'staff@ipanm.org'; Dade, Randy, EMNRD; Bratcher, Mike, EMNRD; Perrin, Charlie, EMNRD; Jones, William V, EMNRD; Kelly, Jonathan, EMNRD; Powell, Brandon, EMNRD; Wojahn, Beth, EMNRD; Griswold, Jim, EMNRD; Goetze, Phillip, EMNRD
**Cc:** Schmaltz, Randy (Randy.Schmaltz@wnr.com); Robinson, Kelly (Kelly.Robinson@wnr.com); Allen.Hains@wnr.com
**Subject:** Western Refining Southwest, Inc. Bloomfield UIC Class I (Non-hazardous) Disposal Well Discharge Permit Application (UICI-011) San Juan County

Ladies and Gentlemen:

Please find below the New Mexico Oil Conservation Division (OCD) **initial** Public Notice for the above subject Underground Injection Control (UIC) Class I (Non-hazardous) Disposal Well Facility.

**Discharge Permit (UICI-011) Western Refining Southwest, Inc. Waste Disposal Well No. 2- "WDW-2"**
(3/18/16): The Underground Injection Control (UIC) Class I (Non-hazardous) Disposal Well (API#: *Currently Pending*) is located approximately 415 ft. N of the intersection of Sullivan Rd. and Wooten Rd. in Bloomfield, NM (San Juan County) or approximately 1 mile E-NE of the intersection of Hwy 550 and Sullivan Rd.

Administrative Completeness
Description
Application(s)

The OCD Website for public notices is at http://www.emnrd.state.nm.us/OCD/env-draftpublicetc.html (see "Draft Permits and Public Notices" section).

Please contact me if you have questions. Thank you.

Carl J. Chavez, CHMM
Environmental Engineer
Oil Conservation Division- Environmental Bureau
1220 South St. Francis Drive
Santa Fe, New Mexico 87505
Phone: (505) 476-3490
Main Phone: (505) 476-3440
Fax: (505) 476-3462
E-mail: CarlJ.Chavez@state.nm.us
Website: www.emnrd.state.nm.us/ocd
Why not prevent pollution, minimize waste, reduce operation costs, and move forward with the rest of the Nation? To see how, go to "Publications" and "Pollution Prevention" on the OCD Website.

# Cash Remittance Report (CRR)

## Energy, Minerals & Natural Resources Department
## CASH REMITTANCE REPORT (CRR)

Location Name (1): Oil Conservation/Environment

Location Code (2): 0740

Today's Date: 05 (MONTH) 03 (DAY) (3) 2016 (YEAR)

Collection Period: __/__/__ (MM/DD/YYYY) through __/__/__ (MM/DD/YYYY) (4)

| Cost Center (5) | Revenue Code (5) | Receipt Amount (7) | Collected Amount (8) |
|---|---|---|---|
| 0740 | | 100.00 | |
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| Total | ==========→ | $ 100.00 (9) | $ (10) |
|---|---|---|---|

| Over/Short Amount | $ (11) |
|---|---|

| CRR Deposit Amount | $ (12) |
|---|---|

Print Name: Lorraine DeVargas (13) Signature: Lorraine DeVargas (13)

Print Name: _____ (13) Signature: _____ (13)

Distribution: White and Yellow copy to Accounts Receivable-ASD, Pink copy retained at CRR submitting location.

Official Use Only
Completed by the Accounts Receivable

Date Received: _____ 1

Notes: _____ 2

Amount Received: _____ 3

State Treasurer Deposit Number: _____ 4

Verified by: _____ 6

Deposit Date: _____ 5

Pueblo West Resources, LLC
125 Greathouse Village
Decatur, Texas 76234

April 28, 2016

Jim Griswold – Environmental Bureau Chief
Carl Chavez – Environmental Engineer
1220 South St. Francis
Santa Fe, New Mexico 87505

Re: NOTICE OF INTENT TO DISCHARGE
WQCC 20.6.2.1201 NMAC

Dear Mr. Griswold and Chavez:

Pueblo West Resources, as agent for Llano Disposal, LLC, is formally notifying the New Mexico Oil Conservation Division of Llano's intent to permit a Class III brine well located in Lea County, New Mexico. Pursuant to the Water Quality Control Commission Regulations (WQCC) 20.6.2.1201.B and C. NMAC, the following information is provided:

1) The name of the person making the discharge:
Llano Disposal, LCC, Mr. Darr Angell owner

2) The address of the person making the discharge:
P. O. Box 190 (783 Highway 483)
Lovington, New Mexico 88260

3) The location of the discharge:
Brine Well Location: NW/4 NW/4, UL 'D', Section 26, T17S, R36E
Proposed Brine Station Location: SW/4 SW/4, UL 'M', Section 27, T17S, R36E

4) An estimate of the concentration of water contaminants in the discharge:
Injection Water: fresh water from nearby fresh water well with approximately 400 mg/l TDS
Produced Brine Water: approximately 320,000 mg/l TDS

5) The quantity of the discharge:
Estimated Instantaneous Flow Rate: 1 – 3 barrels per minute
Estimated Monthly Total: 0 – 58,000 barrels per month

1016

**Llano Disposal, LLC**
PO Box 190
Lovington, NM 88260
575-396-1742

VALLEY BANK OF COMMERCE
623-2265
217 West Second · Roswell, New Mexico 88201
95-312/1122

EZShield® Check Fraud Protection for Business

4/22/16

PAY TO THE ORDER OF Water Quality Management Fund $ 100.00

One hundred 00/100 DOLLARS

Security features. Details on back.

MEMO

AUTHORIZED SIGNATURE

# NEW MEXICO ENVIRONMENT DEPARTMENT - ALBUQUERQUE FIELD OFFICE DAILY CHECK RECEIPT LOG

| DATE RECEIVED | WALK-IN | MAIL | NAME ON CHECK | DATE OF CHECK | CHECK/MONEY ORDER# | PROGRAM ACCOUNT CODE | AMOUNT OF CHECK | DATE DEPOSITED | DEPOSITED |
|---|---|---|---|---|---|---|---|---|---|
| 05/03/2016 | | ✓ | Llano Disposal, LLC | 04/22/16 | 1016 | | 100.00 | | |
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| TOTAL | | | | | | | $100.00 | | |

## REVENUE TRANSMITTAL SHEET

| Description | Fund | Dept. | Share Acct | Sub Acct | Amount |
|---|---|---|---|---|---|
| Liquid Waste | 34000 | Z3200 | 496402 | | |
| Water Recreation Facilities | 40000 | Z8501 | 496402 | | |
| Food Permit Fees | 99100 | Z2600 | 496402 | | |
| OTHER | 34100 | 232900 | | 232902900 | |

**ACKNOWLEDGEMENT OF RECEIPT**
**OF CHECK/CASH**

I hereby acknowledge receipt of Check No. 1016 dated 04/22/2016

or cash received on 05/03/2016 in the amount of $ 100.00

from Hano Disposal, LLC

for BW35 permit WQ

Submitted by: Carl Chavez Date: 05/03/2016

Submitted to ASD by: Lorraine DeVargas Date: 05/03/2016

Received in ASD by: _____ Date: _____

Filing Fee _____ New Facility: _____ Renewal: _____

Modification _____ Other permit

Organization Code 521.07 Applicable FY 16

To be deposited in the Water Quality Management Fund.

Full Payment _____ or Annual Increment _____

State of New Mexico
Energy, Minerals and Natural Resources Department

**Susana Martinez**
Governor

**David Martin**
Cabinet Secretary

**Tony Delfin**
Deputy Cabinet Secretary

**David R. Catanach, Division Director**
Oil Conservation Division

**MAY 6, 2016**

**CERTIFIED MAIL**
**RETURN RECEIPT NO: 3771 5923**

Mr. Darr Angell
Llano Disposal, L.L.C.
P.O. Box 190 (783 Highway 483)
Lovington, New Mexico 88260

**Re: Discharge Plan Permit (BW-035)**
**Llano Disposal, LLC**
**UIC Class III Brine Well**
**Siringo ACS State Brine Well No. 1, API No. 30-025-30701**
**UL: D Section 26 Township 17 South, Range 36 East, 660 FNL, 660 FWL, Lat. 32.8115005°, Long. 103.3317795°, NMPM, Lea County, New Mexico**

Dear Mr. Angell,

The New Mexico Oil Conservation Division (OCD) is in receipt of Llano Disposal, LLC's application dated April 28, 2016, received on May 3rd, regarding the conversion of the existing Siringo ACS State Well No. 1 Oil Well into a Brine Well at the above referenced location. After review of the application, the OCD has determined Llano Disposal, LLC's application is *"administratively complete"* per New Mexico Water Quality Control Commission regulations (20.6.2.3108 NMAC).

Llano Disposal, LLC's obligations to provide public notice should commence and be demonstrated to the OCD in a timely manner. The OCD will also provide notice to various governmental groups. Depending upon the level of public interest, a hearing may be scheduled on this matter. Regardless, the OCD will continue our review of the application and may request additional information.

If you have any questions, please do not hesitate to contact me by phone at (505) 476-3490, U.S. Mail at the address below, or e-mail at carlj.chavez@state.nm.us. On behalf of the OCD, I wish to thank you and your staff for your continued cooperation in this process.

Sincerely,

Carl J. Chavez
Environmental Engineer

xc: OCD District I Office, Hobbs

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised August 1, 2011

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

# DISCHARGE PLAN APPLICATION FOR BRINE EXTRACTION FACILITES

(Refer to the OCD Guidelines for assistance in completing the application)

X New Renewal

I. Facility Name: Siringo ACS State #1

II. Operator: Llano Disposal, LLC

Address: P. O. Box 190 (783 Highway 483), Lovington, NM 88260

Contact Person: Marvin Burrows Phone: 575-631-8067

III. Location: NW /4 NW /4 Section 26 Township 17S Range 36E

Submit large scale topographic map showing exact location.

IV. Attach the name and address of the landowner of the facility site. See section IV of attached discharge plan.

V. Attach a description of the types and quantities of fluids at the facility. See section V of attached discharge plan.

VI. Attach a description of all fluid transfer and storage and fluid and solid disposal facilities. See section VI of attached discharge plan.

VII. Attach a description of underground facilities (i.e. brine extraction well). See section VII of attached discharge plan.

VIII. Attach a contingency plan for reporting and clean-up of spills or releases. See section VIII of attached discharge plan.

IX. Attach geological/hydrological evidence demonstrating that brine extraction operations will not adversely impact fresh water. See section IX of attached discharge plan.

X. Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. See section X of attached discharge plan.

XI. CERTIFICATION:

*I hereby certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.*

Name: Darr Angell

Title: Owner ✓

Signature:

Date: 4/22/16

E-mail Address: darrangell@gmail.com

# Siringo ACS State #1 and Siringo Brine Station
# Discharge Plan

**I. Name of Facility**
Provide complete name. Indicate whether this is a new or renewal application.

Answer – This is a new application for a new facility. The proposed brine well name is Siringo ACS State #1 and the proposed surface facility name is Siringo Brine Station.

**II. Name of Operator or Legally Responsible Party and Local Representative**
Include address and telephone number.

The operator/legally responsible party name is Llano Disposal, LLC, P. O. Box 190 (783 Highway 483), Lovington, NM 88260. The operator's OGRID number is 370661. The owner of Llano Disposal, LLC is also the owner of all the surface lands that the brine well and brine station will be situated upon. Additionally, the owner's personal residence is within a mile of the proposed brine well and brine station. Llano Disposal's office will be at 783 Highway 483, Lovington, NM 88260. The local representative is Marvin Burrows at 575-631-8067.

**III. Location of Facility**
Give a legal description of the location (i.e. 1/4. 1/4, Section, Township, Range) and county. Use state coordinates or latitude/longitude on unsurveyed land. Submit a large scale topographic map, facility site plan, or detailed aerial photograph for use in conjunction with the written material. It should depict the location of the injection well, storage tanks, process equipment, relevant objects, facility property boundaries, and other site information required in Sections V through IX below.

Answer – The proposed brine well was originally drilled and abandoned in 1989. It is named the Siringo ACS State #1 (API # 30-025-30701) located at 660 FNL X 660 FWL, Unit Letter 'D', Section 26, T17S, R36E, Lea County, New Mexico. It is currently in P&A-site released status. We propose to recomplete it as a brine well in the Salado (Salt) Formation between 2063' – 3253'. The proposed brine station would be located in the SE corner of UL 'M', Section 27, T17S, R36E, Lea County, New Mexico at latitude 32.798816°, longitude -103.347123°. The proposed water source well is located approximately 0.62 miles SW of the proposed brine well. The water source well is located in UL 'J', Section 27, T17S, R36E, Lea County, New Mexico at latitude 32.804305°, longitude -103.338230°. See maps, facility site plan and aerial photographs in Attachments "A" – "F" and Attachment "O".

**IV. Landowners**
Attach the name and address of the landowner(s) of record of the facility site.

Answer – The landowner of record for the proposed brine well, water source well and brine station location is the Angell #2 Family LP, P. O. Box 190 (783 Highway 483), Lovington, NM 88260. Mr. Darr Angell of the Angell #2 Family LP is also the principal owner of Llano Disposal, LLC, the proposed brine well owner and operator.

**V. Type and Quantities of Fluids Stored or Used at the Facility**
List all fluids stored or used at the facility (e.g. High TDS salt water, fresh water, chemicals, etc.). Include source, average daily volume produced, estimated volume stored, location, and type of containers.

Answer – At the brine well location, there will be one 500 bbl steel tank for fresh water storage, an electric driven triplex pump to inject fresh water, a small polyethylene chemical tank and chemical pump. At the brine station, there will be one 500 bbl steel tank catch/slop tank, and four 500 bbl fiberglass tanks for brine storage. Pipelines include a buried 3" SDR-11 polyethylene pipeline approximately 6600 foot long from the brine well to the brine station and a buried 3" SDR-11 polyethylene pipeline approximately 3250 foot long from the fresh water well to the brine well location. Both of these pipelines will be buried a minimum of 36" deep (below frost line).

Anticipated daily average volumes produced are 1500 BWPD of brine water and 1550 BWPD of fresh water. Anticipated volumes stored are 1500 bbls of brine water, 300 bbls of fresh water and 100 gallons of Baker Techni-Hib 606 corrosion chemical. An MSDS for the corrosion chemical is included in Attachment "H".

**VI. Transfer, Storage and Disposal of Fluids and Solids**
**A.** Provide sufficient information to determine what water contaminants may be discharged to the surface and subsurface within the facility. Information desired includes whether tanks, piping, and pipelines are pressurized, above ground or buried. Provide fluid flow schematics with sufficient detail to show individual units (pumps, tanks, pipelines, etc.).

**1.** Tankage and Chemical Storage Areas – Storage tanks for fluids other than fresh water must be bermed to contain a volume one-third more than the largest tank. If tanks are interconnected, the berm must be designed to contain a volume one-third more than the total volume of the interconnected tanks. Chemical and drum storage areas must be paved, curbed and drained such that spills or leaks from drums are contained on the pads or in lined sumps.

Answer – At the proposed brine station, there will be four interconnected 500 bbl fiberglass brine water storage tanks and one 500 bbl steel catch tank. All five tanks will be located within a secondary containment. Each tank will have an isolation valve and will remain unpressured. The secondary containment consists of an earthen berm with a 20 mil string reinforced LLDPE liner capable of holding a minimum of 2667 bbls. There will be a 32' X 60' concrete loading pad with a concrete sump that is situated on top of the concrete loading pad. Any fluids entering the sump will be pumped to the 500 bbl catch tank inside the lined secondary containment. At the proposed well location, there will be a poly chemical storage tank with a poly secondary containment below it capable of holding a minimum of one-third more than the size of the chemical tank. The chemical tank

will remain unpressured. There will be a triplex pump and one 500 bbl fresh water tank located at the well location. See schematics in Attachment "L". There will be a buried 3" SDR-11 polyethylene fresh water pipeline between a water supply well and the brine well location. There will also be a buried 3" SDR-11 polyethylene pipeline between the brine well and the brine station. Both pipelines will remain unpressured while pumps are not running. See section E below for detailed pipeline specifications.

**2.** Surface impoundments - Date built, use, type and volume of materials stored, area, volume, depth, slope of containments, sub-grade description, liner type and thickness, compatibility of liner and stored materials, installation methods, leak detection methods, freeboard, run-off/run-on protection.

Answer – There are no existing surface impoundments at this facility. If permit application is approved, a new secondary containment around storage tanks discussed in section VI.A.1 above will be built. A berm using caliche hauled in from an offsite pit will be used. This bermed area will then be lined with a 20 mil LLDPE liner with UV protection. Although, storm water run-on/run-off is expected to be minimal due to the level nature of the surrounding terrain, an earthen berm of topsoil dirt will be installed along the western, northern and eastern boundaries of the brine station. This storm water berm will contain or divert any storm water run-on from entering the brine station area.

**3.** Leach fields - Type and volume of effluents, leach field area and design layout. If non-sewage or mixed flow from any process units or internal drains is, or has been, sent to the leach fields, include dates of use and disposition of septic tank sludges.

Answer – Not applicable, no leach fields are planned.

**4.** Solids disposal - Describe types, volumes, frequency, and location of on-site solids dried disposal. Typical solids include sands, sludges, filters, containers, cans and drums.

Answer – Routine domestic household type trash or other similar non-domestic waste pursuant to 19.15.35.8 NMAC will be stored in common trash dumpsters that are supplied and picked up routinely by the local waste management trucking company. This waste will be disposed of at a New Mexico Environmental Department permitted solid waste disposal facility.

**B.** For each of the transfer/storage/disposal methods listed above:

**1.** Describe the existing and proposed measures to prevent or retard seepage such that ground water at any place of present or future use will meet the WQCC Standards of Section 3-103, and not contain any toxic pollutant as defined in Section 1-101.UU.

Answer – All storage tanks at the proposed brine station will be protected by a secondary containment area lined with a 20 mil LLDPE liner. This liner is a smooth, high quality, linear low density polyethylene (LLDPE) geomembrane with excellent chemical resistance, outstanding stress crack resistance, low permeability and excellent UV radiation resistance. This secondary containment area will be capable of holding one-third more than the combination of interconnected tanks within. The 32 foot by 60 foot concrete loading pad will be curbed on the edges and sloped to a grating covered 20" wide by 55' long by 20" deep sump which is constructed in a single pour with the concrete loading pad. This sump will catch any spills/leaks occurring on the loading pad. The sump level will be automated and excess fluids will be pumped through above-ground piping to a 500 bbl steel catch/slop tank located within the secondary containment area. All process piping at the brine station will be installed above-ground.

**2.** Provide the location and design of site(s) and method(s) to be available for sampling, and for measurement or calculation of flow.

Answer - Samples can be taken either at each individual tank valve, on the load lines or at the wellhead manifold. Fresh water measurement will occur at the brine well near the injection pump and at the brine station sales load line. Brine water measurement will occur at the brine wellhead and at the brine station sales load line. Electronic accumulating flow meters with an accuracy of ±1% will be utilized.

**3.** Describe the monitoring system existing or proposed in the plan to detect leakage or failure of any discharge system. If ground water monitoring exists or is proposed, provide information on the number, location, design, and installation of monitoring wells.

Answer –The brine station will be controlled by a SCADA system to monitor and manage pressures, flows and upset conditions. Automated alarms and shutdowns are included in this system including communication to responding personnel during unattended operations.

Upon permit approval, a ground water quality monitoring program will be initiated on three existing fresh water wells near the proposed brine well and brine station. These wells are located southeast of the brine well and brine station. These water wells were selected due to their proximity to the facilities and the southeasterly flow of the aquifer. See Attachment "C" for location of the three proposed ground water wells. Water samples from these three wells would be tested quarterly for general chemistry parameters, BTEX and TPH. This would establish the ground water quality over time.

**C. Off-Site Disposal**
If wastewaters, sludges, solids etc. are pumped or shipped off-site, indicate general composition (e.g. waste oils), method of shipment (e.g. pipeline, trucked), and final disposition (e.g. recycling plant, OCD-permitted or domestic landfill, Class II disposal well). Include name, address, and location of receiving facility. If receiving facility is a sanitary or modified domestic landfill show operator approval for disposal of the shipped wastes.

Answer - Routine domestic household type trash or other similar non-domestic waste pursuant to 19.15.35.8 NMAC will be stored in common trash dumpsters that are supplied and picked up routinely by the local waste management trucking company. This waste will be disposed of at a New Mexico Environmental Department permitted solid waste disposal facility. Liquid waste generated onsite, primarily from the sump catch tank, will be transported by third party trucking companies to an approved Class II SWD well permitted by the NMOCD. Any contaminated soil waste will be transported by third party trucking companies to an approved NMOCD surface waste management facility (i.e. Sundance, et al).

**D. Proposed Modifications**

**1.** If protection of ground water cannot be demonstrated pursuant to Section B.1. above, describe what modification (including closure) is proposed to meet the requirements of the Regulations. Describe in detail the proposed changes. Provide the information requested in A. and B. above for the proposed modified facility and a proposed time schedule for construction and completion. (Note: OCD has developed specific guidelines for lined surface impoundments that are available on request.)

Answer – This facility will be built after approval of this discharge plan and brine well application. No existing facility now exists that would require current modifications.

**2.** For ponds, pits, leach fields, etc. where protection of ground water cannot be demonstrated, describe the proposed closure of such units so that existing fluids are removed, and emplacement of additional fluids and run-off/run-on of precipitation are prevented. Provide a proposed time schedule for closure.

Answer - This would be a newly built facility with no ponds, pits, or leach fields in the design.

**E. Underground Piping**
If the facility contains underground piping, the age and specification (i.e., wall thickness, fabrication material, etc.) of said piping should be submitted. Upon evaluation of such information, mechanical integrity testing of piping may be necessary as a condition for discharge plan approval. If such testing (e.g. hydrostatic tests) has already been conducted, details of the program should be submitted.

Answer – This plan would include approximately 6600 feet of new 3" SDR-11 HDPE pipeline for transportation of brine water to be installed underground between the brine well and the brine station. This SDR-11 HDPE pipe has a 160 psi rating, 0.318" minimum wall thickness, 2.825" ID and 3.500" OD. It ships in 500' or 1000' coils and is seamless pipe that would be thermally fused at the ends. This pipeline would be buried at a minimum of 36" to top of pipe (below frost line depth). This newly installed pipeline will be hydrostatically pressure tested per the NMOCD's HST Guidelines. Testing frequency would include an initial test at 100% of manufacturer's MAOP during installation and subsequent tests on an annual basis or sooner if leakage is ever suspected. An NMOCD representative can be notified to witness all tests.

This plan also includes approximately 3250 feet of new 3" SDR-11 HDPE pipeline for transportation of fresh water to be installed a minimum of 36" underground between the fresh water source well and the brine well. No fluids other than fresh water are planned to be used in this pipeline.

These two HDPE pipelines would be designed to minimize the use of 90 degree fittings by making turns via long radius sweeps where possible.

**F. Inspection, Maintenance and Reporting**

**1.** Describe proposed routine inspection procedures for surface impoundments and other transfer, storage, or disposal units including leak detection systems. Include frequency of inspection, how records are to be maintained and OCD notification in the event of leaks.

Answer – Routine inspections of surface equipment and automation systems would occur daily by an onsite facility supervisor. Inspection logs would be documented and maintained onsite for subsequent review.

**2.** If ground water monitoring is used to detect leakage or failure of the surface impoundments, leach fields, or other approved transfer/storage/disposal systems provide:

**a.** The frequency of sampling, and constituents to be analyzed.

Answer – Per WQCC and NMOCD requirements, the brine water would be tested for general chemistry parameters, BTEX and TPH on a quarterly basis. Three nearby ground water wells located southeast of the brine well and brine station would also be tested for the same parameters on a quarterly basis. This would establish the baseline ground water conditions over time. These wells were selected due to their proximity to the facilities and the southeasterly flow of the aquifer. See Attachment "C" for location of the three proposed ground water wells.

**b.** The proposed periodic reporting of the results of the monitoring and sampling.

Answer – We propose that the periodic reporting of both the brine water quality and ground water quality occur annually in the January 31 annual report.

**c.** The proposed actions and procedures (including OCD notification) to be undertaken by the discharger in the event of detecting leaks or failure of the discharge system.

Answer – The NMOCD would be notified via Form C-141 upon discovery of a leak detection or failure of the discharge system. The brine well would be shut in pending evaluation and correction of the failure or leak.

**3.** Discuss general procedures for containment of precipitation and runoff such that water in contact with process areas does not leave the facility, or is released only after testing for hazardous constituents. Include information on curbings, drainage, disposition, notification, etc.

Answer – As discussed in section VI.A.2 above, a storm water run-on berm will be installed around the western, northern and eastern side of the brine station to protect from storm water run-on at the brine station. As for run-off, the facility will contain all precipitation that occurs inside the tankage secondary containment. Any rain water collected in this containment area will be vacuumed up and either recycled within the facility or disposed of in an NMOCD approved manner. Heavy rain on the concrete loading pad will be collected into the sump by curbing and pump transferred to the 500 bbl catch tank. Any water collected in this catch tank will be hauled to a Class II SWD well approved by the NMOCD. The well location at the brine well will be contoured so that standing water is not allowed to pond near or around the wellhead. See Attachment "O" for USGS 7.5 minute quadrangle drainage map of the impacted area.

**4.** Describe methods used to detect leaks and ensure integrity of above and below ground tanks, and piping. Discuss frequency of inspection and procedures to be undertaken if significant leaks are detected.

Answer – Routine visual inspections of surface equipment and automation systems would occur daily by an onsite facility supervisor. Inspection logs will be documented and maintained onsite to insure any necessary repairs are completed and for subsequent review. The buried 6600 foot SDR-11 polyethylene brine pipeline will initially be hydrostatically pressure tested upon installation to insure mechanical integrity. It will be hydrostatically retested annually as long as no leakage is suspected. If leakage is ever suspected, the pipeline would be removed from service and tested. All pipeline tests will be logged into the inspection logs onsite. Storage tanks will be visually inspected internally when emptied for maintenance. Tanks will be visually inspected externally during daily routine inspections.

**5.** Submit a general closure plan describing what actions are to be taken when the facility discontinues operations. These actions must include:

**a.** Removal of all fluids, contaminants and equipment.

Answer – When the facility permanently discontinues operations, all stored fluids in equipment will be removed and either sold, reused or disposed. All ground contaminants will be recovered and disposed of per State, Federal and local regulations in effect at the time of closure. All surface equipment and infrastructure will be properly removed from the site. Underground pipelines will be flushed with fresh water, capped on both ends and abandoned in place.

**b.** Grading of facility to as close to the original contour as is practical.

Answer – After all surface equipment and concrete is removed, the brine station surface area and the brine well location will be re-contoured to original slope and reseeded with native grasses.

**c.** Proper disposal of fluids, sludges and solids pursuant to rules and regulations in effect at the time of closure.

Answer – All disposal of fluids, sludges and solids will be performed per State, Federal and local regulations in effect at the time of closure.

See section X.B for additional closure plan details.

**VII. Brine Extraction Well(s)**

Insitu brine extraction wells must meet the requirements of Part 5 of the Water Quality Control Commission Regulations in addition to other applicable requirements of WQCC and Oil Conservation Division Rules and Regulations.

**A.** Drilling, Deepening, or Plug Back Operations

Before drilling, deepening, or plug back operations, the operator of the well must file the following plans, specifications, and pertinent documents with the Oil Conservation Division 90 days prior to start-up of the planned operation.

**1.** Form C-101 "Application for Permit to Drill, Deepen, or Plug Back" (OCD Rule 1101).

Answer – Forms C-101, C-102 and C-103 for the Siringo ACS State #1 (API #30-025-30701) were submitted to the NMOCD District 1 Office on July 9, 2015. They were approved January 19, 2016.

**2.** A "Notice of Intent to Discharge" in accordance with WQCC regulation 1-201 (New facilities only).

Answer – Llano submitted a formal "Notice of Intent to Discharge" attached to this discharge permit application. When the application is determined by the NMOCD to be administratively complete, the review process starts toward a final discharge permit by the NMOCD.

**3.** A map showing the number, name, and location of all producing oil and gas wells, injection wells, abandoned holes, surface bodies of water, watercourses, springs, mines, quarries, water wells, and other pertinent surface features within one mile from the wellbore(s).

Answer – See Attachment "D" for a map of the oil/gas wells and fresh water wells within the one mile area of review. This map also indicates the general topography of the area. The area elevation is relatively flat with a slight slope from northwest to southeast. There are no identifiable surface bodies of water, watercourses, springs, mines or quarries within the area of review.

**4.** Maps and cross-sections indicating the general vertical and lateral limits of all ground water having 10,000 mg/l or less TDS within one mile of the site. Show the position of such ground water within this area relative to the injection formation. Indicate the direction of water movement, where known, for each zone of ground water.

Answer – Underground aquifers in this area are the Ogallala and Quaternary Alluvium formations. The ground water in these formations is unconfined where the underlying red beds are relatively impermeable. This underlying layer prevents further vertical movement within the aquifer. Based on information reviewed, the ground water flow within the Ogallala is generally to the southeast. According to OSE records in the subject section and contiguous 8 sections, water depths range in a band at approximately 50 – 70 feet below ground level with average depth of water wells in this area being 107'. With the base of the reported red beds being at 1547' in the proposed brine well, the nearest ground water would be a minimum vertical distance of 496' above the proposed injection zone. The primary water bearing depth of 50 – 70 feet would be a minimum vertical distance of 1973' above the proposed injection zone. No additional ground water zones are evident in the area.

**5.** List all abandoned wells/shafts or other conduits in the area of review which penetrate the injection zone. Identify those which may provide a pathway for migration of contaminant through being improperly sealed, completed or abandoned. Detail what corrective action will be taken prior to start-up of operations to prevent any movement of contaminants into ground water of less than/equal to 10,000 mg/l TDS through such conduits due to the proposed

injection activity (e.g. plugging open holes). Include completion and plugging records.

If information becomes available after operations have begun, which indicates the presence of a conduit that will require plugging then the injection pressure will be limited to avoid movement of contaminants through such a conduit into protected ground water.

Answer – See Attachment "D" for a map of all oil and gas wells within the area of review that penetrate the injection zone (2043' – 3253' MD). There are six plugged and abandoned wells and one permitted, but yet undrilled well in the area of review. They are listed below:

| API Well Number | Well Status | Location | TD | Plugs Near Salt |
|---|---|---|---|---|
| 30-025-31473 | P&A | G-26-17S-36E | 11,150 | @ 1504', 3100' |
| 30-025-03950 | P&A | B-26-17S-36E | 8,298 | @ 774', 4873' |
| 30-025-20616 | P&A | I-22-17S-36E | 5,525 | @ 2100', 3300' |
| 30-025-27108 | P&A | P-23-17S-36E | 5,140 | @ 1900', 3180' |
| 30-025-20775 | P&A | D-25-17S-36E | 11,305 | @ 950', 4655' |
| 30-025-30110 | P&A | B-27-17S-36E | 12,355 | @ 2945', 4530' |
| 30-025-42319 | Permitted, Not Drilled | L-26-17S-36E | Proposed 8,833 TVD | N/A |

All of these plugged wells have cement plugs above and below the salt formation which should eliminate any pathway for migration. The nearest of these offset wells is located ½ mile away from the subject well. Plugging records for these offset wells within the 1 mile area of review are provided in Attachment "G".

**6.** Maps and cross-sections detailing the geology and geologic structure of the local area.

Answer – See North-South and East-West cross-sections in Attachment "N".

**7.** A proposed formation testing program to obtain an analysis or description of fluids in the receiving formation.

Answer – Llano Disposal proposes to obtain brine well fluid samples at the wellhead manifold quarterly. These samples will be laboratory tested for general chemistry parameters, BTEX and THP. Test results would be reported to the NMOCD during the January 31 annual report.

**8.** Schematic drawings of the surface and subsurface construction details.

Answer – See Attachment "L" for surface facility and subsurface schematics.

**9.** The proposed drilling, evaluation, and testing, programs. Include logging procedures, coring program, and deviation checks.

Answer – Since the subject well has already been drilled and is currently in plugged status, this information exists in NMOCD files. See Attachment "I" for copies. Llano Disposal will report all well completion information via Form C-105 and provide any new logs run. In early February, 2016, at the NMOCD's request, Llano obtained approval and drilled out the top two cement plugs in this well. This allowed a cement bond log to be obtained which indicated the well has good cement behind casing. The lower cement plugs remain in place pending approval of this discharge permit application.

**10.** The proposed stimulation, injection, and operation procedures (Note WQCC 5-206 limitations).

Answer – No initial stimulation is proposed. Fresh water will be injected down the tubing and circulate brine water up the tubing/casing annulus. The brine water will be transported by pipeline to a nearby brine station and stored in surface tanks for subsequent sale.

**11.** A plan for plugging and abandonment of the well that meets the requirements of WQCC regulations section 5-209. A plugging bond pursuant to OCD Rule 101 is required prior to commencement of any new well drilling operations.

Answer – The plugging plan includes swabbing approximately one foot of water out of the cavern, removing the tubing string, then setting a cast iron bridge plug at 10 feet above the casing shoe and filling the casing with a Class C high strength salt resistant cement. The wellhead will be cut off and a dry hole marker installed. Llano Disposal currently has single well plugging bond number RLB0016073 issued by RLI Insurance Company accepted and approved by the NMOCD. However, as discussed in section X.C below, additional bonding will be required for adequate well plugging, surface restoration and surface subsidence monitoring. Llano will obtain additional bonding as outlined in section X.C.

**B. Workover Operations**

Before performing remedial work, altering or pulling casing, plugging or abandonment, or any other workover, approval of OCD must be obtained. Approval should be requested on OCD Form C-103 "Sundry Notices and Reports on Wells" (OCD Rule 1103-A).

Answer – Llano will file Notice of Intent C-103 prior to future workover operations.

**C. Additional Information Required with Discharge Plan**

In addition to all of the information required above in Part VII.A. (Drilling, Deepening, or Plug Back Operations), include the following with your discharge plan application.

# Siringo ACS State #1 and Siringo Brine Station
# Discharge Plan

**1.** Provide evaluation, completion and well workover information. Include all logs, test results, completion reports and workover descriptions.

Answer – Please see Attachment "I" for the drilling, completion and testing reports to-date by the previous operator. Llano Disposal will file C-103 NOI's prior to and Subsequent Notice C-103s following any downhole work. Llano will also file form C-105 reports after completion operations have been performed.

**2.** Provide the proposed maximum and average injection pressures and injection volume. If one well is to be used for injection and extraction, fresh water must be injected down the annulus and brine must be recovered up the tubing. Reverse flow will be allowed for up to once a month for 24 hours for clean out. If an alternative operating method is desired then a written request must be submitted to the OCD which describes the proposed operating procedures and how the mechanical integrity of the casing will be guaranteed.

Answer – Llano proposes to inject fresh water down the tubing and circulate brine water up the tubing-casing annulus. Below are our proposed injection pressures and volumes which are well below the fracture gradient of 0.75 psi/ft:

Maximum injection pressure – 408 psi
Average injection pressure – 250 psi
Maximum injection volume – 1900 BWPD
Average injection volume – 1550 BWPD

**3.** Submit a proposed mechanical integrity testing program. OCD requires a casing pressure test isolating the casing from the formation using either a bridge plug or packer prior to start of operation, and repeated at least once every five years or during well work over. In addition, OCD requires an open hole pressure test to 500 PSI for 4 hours on an annual basis.

Answer – Llano proposes to test the casing to 300 psi using a packer or bridge plug during completion operations. Additionally, Llano proposes to pull production tubing and run a packer or bridge plug to test the casing to 300 psi at intervals of five years or less. NMOCD personnel will be notified in advance for witnessing. Concerning the open hole pressure test, Llano believes 500 psi surface pressure is too much pressure to put on the well/cavern. We propose to perform this annual test at 300 psi surface pressure for 4 hours. This would minimize the intensity of sudden pressure surges and releases which may cause damage to the formation.

**4.** Provide an analysis of the injection fluid and brine. Include location and design of site(s) and method(s) of sampling. Analysis will be for concentrations of Total Dissolved Solids, Sodium, Calcium, Potassium, Magnesium, Bromide, Carbonate/Bicarbonate, Chloride and Sulfate.

Answer – When the brine well is in operation, fresh water and brine samples can be taken from sample ports at the wellhead or at the brine station load line. Brine samples can also be taken from these same locations. Recently Llano sampled two fresh water wells within the area of review. These tests represent the aquifer quality in the area of review. These test results are included in Attachment "J".

**5.** Compare volumes of fresh water injected to volume of brine to detect underground losses and specify method by which volumes are determined. After approval, submittal of a quarterly report listing, by month, the volume of fluids injected and produced will be required.

Answer – Llano proposes to measure both fresh water injected and brine water produced by installing individual electronic flow meters with totalizers on the brine well manifold. The totalizer volumes will be recorded monthly and provide the records for evaluating underground losses. If the volumes exceed a 10% tolerance, the NMOCD would be notified and the discrepancy would be investigated.

**6.** For renewal application for facilities in operation in excess of 15 years, provide information on the size and extent of the solution cavern and geologic / engineering data demonstrating that continued brine extraction will not cause surface subsidence of catastrophic collapse.

Answer – Llano would address this section during future renewal application processes as operational experience with the formation in this well is gathered.

## VIII. Spill/Leak Prevention and Reporting Procedures (Contingency Plans)

It is necessary to include in the discharge plan submittal a contingency plan that anticipates where any leaks or spills might occur. It must describe how the discharger proposes to guard against such accidents and detect them when they have occurred. The contingency plan also must describe the steps proposed to contain and remove the spilled substance or mitigate the damage caused by the discharge such that ground water is protected, or movement into surface waters is prevented. The discharger will be required to notify the OCD Director in the event of significant leaks and spills. This commitment and proposed notification threshold levels must be included in the contingency plan.

### A. Prevention

Describe how spills and leaks will be prevented at the facility. Include specifically how spillage/leakage will be prevented during truck loading and at major transfer points within the facility. Discuss general "housekeeping" procedures for areas not directly associated with the above major processes.

Answer – See the Emergency Contingency and Response Plan in Attachment "K" for proposed actions to spill/leak prevention and general housekeeping actions.

**B. Containment and Cleanup**
Describe procedures for containment and cleanup of major and minor spills at the facility. Include information as to whether areas are curbed, paved, and drained to sumps; final disposition of spill materials; etc.

Answer – Spills will be contained by secondary containments around the brine station tanks. Spills at the loading pad will be contained in the concrete sump then pumped to a catch tank located inside the lined secondary containment. The concrete loading pad will be curbed to direct flow of spills to the sump. The liquid spills recovered in the catch tank will be trucked to a Class II disposal well permitted by the NMOCD.

**C. Notification**
Propose a schedule for OCD notification of spills. The OCD requires the discharger to notify the director within 48 hours of the detection or suspected detection of a spill, and provide subsequent reports as required.

Answer – See Attachment "K" for the NMOCD notification plan listed within the proposed facility contingency plan.

## IX. Site Characteristics

**A.** The following hydrologic/geologic information is required to be submitted with all discharge plan applications. Some information already may be included in this application or may be on file with OCD and can be provided to the applicant on request.

**1.** Provide the name, description, and location of any bodies of water, streams (indicate perennial or intermittent), or other watercourses (arroyos, canals, drains, etc.); and ground water discharges sites (seeps, springs, marshes, swamps) within one mile of the outside perimeter of the facility. For water wells, locate wells within one mile and specify use of water (e.g. public supply, domestic, stock, etc.).

Answer – Due to the flat nature of the terrain within the 1 mile area of review, there are no bodies of water, streams, arroyos, canals, drains, seeps, springs, marshes or swamps evident. Six fresh water wells have been identified on the ground and via the OSE data base. Three of them are utilized for cattle production and three are used for domestic household supply by the landowner who is also the principal owner of Llano Disposal, LLC. See Attachment "D" for location of these water wells.

**2.** Provide the depth to and total dissolved solids (TDS) concentration (in mg/l) of the ground water most likely to be affected by any discharge (planned or unplanned). Include the source of the information and how it was determined. Provide a recent water quality analysis of the ground water, if available, including name of analyzing laboratory and sample date.

Answer – New water samples were obtained from two water wells within the 1 mile area of review. See Attachment "J" for test results. The results for the well titled "House", is located west of the subject brine well and used for domestic household supply by the principal owner of Llano Disposal, LLC. The results for the well titled "Windmill" is located east of the subject brine well and used for cattle production. OSE data base indicates the average depth to water in the area of review is 50 – 70 feet.

**3.** Provide the following information and attach or reference source information as available (e.g. driller's logs):

**a.** Soil type(s) (sand, clay, loam, caliche);

Answer – Soil types are alluvium sand, red beds and anhydrite per C-105 Formation data on wells within the 1 mile area of review.

**b.** Name of aquifer(s);

Answer – Ogallala and Quaternary Alluvium formations

**c.** Composition of aquifer material (e.g. alluvium, sandstone, basalt, etc.); and

Answer – Alluvium medium sand.

**d**. Depth to rock at base of alluvium (if available).

Answer - The aquifer is generally located at a depth of 50 – 70 feet in this area. There is an underlying impermeable red bed layer that prevents further vertical movement within the aquifer. Red beds are evident immediately below the aquifer and extend for a depth of about 1550' across the area of review.

**4.** Provide information on:

**a.** The flooding potential at the discharge site with respect to major precipitation and/or run-off events; and

Answer – The area of review is not listed as a Flood Plain by FEMA. Average annual rainfall for this site is 10-12" per year. There is a very slight slope northwest to southeast across the area of review. The area could be

occasionally inundated with locally heavy rainfall, but it is very unlikely that storm water runoff events from other areas would impact the proposed site. New Mexico Highway 483 runs north/south on the western edge of the proposed site. This highway with developed barrow ditches helps control runoff events coming from the west and northwest.

**b.** Flood protection measures (berms, channels, etc.), if applicable.

Answer – The brine station will have a storm water runoff berm installed on the uphill western and northern edges plus the eastern edge of the site. This berm should direct any approaching runoff events away from the station. The brine well location will be graded so that rain water will not pond around the well head.

**B. Additional Information**

Provide any additional information necessary to demonstrate that approval of the discharge plan will not result in concentrations in excess of the standards of WQCC Section 3-103 or the presence of any toxic pollutant (Section 1-101.UU.) at any place of withdrawal of water for present or reasonably foreseeable future use. Depending on the method and location of discharge, detailed technical information on site hydrologic and geologic conditions may be required to be submitted for discharge plan evaluation. Check with OCD before providing this information. However, if required it could include but not be limited to:

**1.** Stratigraphic information including formation and member names, thickness, lithologies, lateral extent, etc.

Answer – The location of the proposed brine well is near the geologic region known as the San Simon Channel of the Permian Basin. This channel separated the Central Basin Platform from the Northwestern Shelf during Leonardian and early Guadalupian times. The subsurface formations are transitional between the Northwestern Shelf, Central Basin Platform and the Midland Basin. The brine well target formation is the Salado formation of the Ochoa series. This series is part of the upper Permian Age and extends across the Delaware Basin and Central Basin Platform. It thins and finally pinches out on the eastern shelf. Layers in this series are predominately evaporates which contain strings of dolomite, shale, siltstone and sandstone. The thickness of the salt section averages around 1000'. The Triassic rock overlying the Permian formations is the Dockum group and is divisible into the Santa Rosa sandstone and Chinle formations. The Tertiary rocks are represented by the Ogallala formation and ranges in thickness from 0' to 300' within this general area. It is primarily made up of calcareous, unconsolidated sand, clay, silt and gravel. This formation is the primary ground water source within this area. See Attachment "M" for area geology and general lithology.

**2.** Generalized maps and cross-sections;

Answer – See a map and cross-section in Attachment "M".

**3.** Potentiometric maps for aquifers potentially affected;

Answer – No potentiometric maps were found for this water basin in Lea County.

**4.** Porosity, hydraulic conductivity, storactivity and other hydrologic parameters of the aquifer;

Answer – No pumping tests, slug tests or constant-head tests were performed. However, values for these parameters were calculated using standard variables for an unconfined aquifer with medium sand as the aquifer material. Results are:

Porosity – 29-49%
Hydraulic Conductivity – 305 gal/day/ft$^2$
Storactivity – 0.2
Specific Yield – 32%
Specific Retention – 3%

**5.** Specific information on the water quality of the receiving aquifer; and

Answer – The receiving formation is the Salado Formation (salt) which is not an aquifer. The Salado Formation is generally a solid formation with no in situ water evident. There are no records in the well file indicating that the Salado formation contained any water when this well was drilled.

**6.** Information on expected alteration of contaminants due to sorption, recipitation or chemical reaction in the unsaturated zone, and expected reactions and/or dilution in the aquifer.

Answer – The surface in the area of review is grassland utilized for cattle production. Other than animal waste, there are no contaminants or man-made agricultural chemicals utilized on this surface. The proposed brine well operation will include minimal man-made chemicals which will have secondary containment protection. Brine storage tanks will also have secondary containment protection. Infiltration of contaminants through the unsaturated or vadose zone to the aquifer is not expected during the proposed brine well operation. Additionally, no alteration of contaminants due to sorption, recipitation or chemical reaction in the unsaturated zone is expected. Finally, no reactions and/or dilution in the overlying aquifer are expected from brine operations.

**X. Other Compliance Information**

Attach such other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. Examples include previous Division orders or letters authorizing operation of the facility or any surface impoundments at the location.

Answer – A C-108 Application to Inject has been prepared and will be submitted to the NMOCD Engineering Bureau with this proposed Discharge Plan. Additionally, new forms C-101, C-102 and C-103 for the subject well have already been approved by the NMOCD District 1 Office.

**A. Surface Subsidence Monitoring**

To monitor potential changes in surface conditions at the proposed brine well, Llano proposes to establish three surface subsidence monuments suitable for three dimensional surface monitoring as well as establishing an X, Y, and Z position on the proposed brine well. The monuments will be Berntsen's 9/16" stainless steel floating sleeved rod monuments (see Attachment "P") which are well suited for monitoring positional changes in the ground surface. The monuments are designed so that frost heave and swelling and shrinking soil conditions have no effect on the stainless steel rod on which measurements will be made. A location point on the well will be established so that the well itself will be used as a fourth subsidence monument. Rod monuments will be installed in a triangular configuration around the brine well wellhead at a maximum distance of 150 feet from the well.

**1. Monument Installation Procedure**

A 12" diameter hole will be augered to a depth of about 3-1/2 feet. The stainless steel rod will be manually driven into the ground, a section at a time, to a depth of 8 feet. The top of the rod would be about 6" below ground level. A finned floating sleeve (filled with NO-TOX grease) is placed over the rod and the datum point added on the rod end. A 6" diameter x 42" long PVC pipe conduit with access cover glued to top end is then placed over the finned sleeve. The inside of the PVC conduit is then filled with fine sand to a level about 3" below the top of the rod. The outside of the PVC conduit will be filled with sand to about 1 foot below ground level, then concrete will be placed from 1 foot depth to ground level.

**2. Annual Subsidence Surveys**

The survey contractor will use modern survey equipment to establish X, Y, Z positions on the surface subsidence monuments on an annual basis. Survey grade GPS equipment will be utilized to establish the horizontal position of each subsidence monument relative to the New Mexico Coordinate System North American Datum 1983 (2007). Using Static and Fast Static observations the expected horizontal accuracy of the GPS equipment as established by the manufacturer for the subsidence monuments is ±0.01 ft. A digital level will be utilized to establish the vertical position of the surface subsidence monuments relative to the North American Vertical Datum of 1988 (NAVD88). Using differential leveling techniques the expected vertical accuracy of the equipment as established by the manufacturer for the subsidence monuments is ±0.01 ft.

The initial survey will be conducted prior to first injection into the proposed brine well. This survey will establish horizontal and vertical coordinate baseline values on the three monuments and the well. Additional surveys will be performed annually in order to compare coordinate values checking for movement in the monuments and well. After cease of operations of the proposed brine well, annual surface subsidence surveys will be conducted for a minimum of five additional years. Reports of these surveys will be submitted to the NMOCD in the annual (January 31) operating report.

**B. Closure Plan**

Upon cease of operations and after regulatory approval, Llano will plug and abandon the brine well, remove all surface equipment, restore the surface to original contour and reseed it with native grasses. In addition, Llano will continue surface subsidence monument surveys for a minimum of 5 years after well plugging.

**1. Well Plug and Abandonment**

The brine well will be plugged and abandoned per WQCC regulations section 5-209 and NMOCD rules in place at that time. As discussed in Section VII.A.11 above, the plugging plan includes swabbing approximately one foot of water out of the cavern, removing the tubing string, setting a cast iron bridge plug at 10 feet above the casing shoe and filling the casing with a Class C high strength salt resistant cement. The wellhead will be cut off and a dry hole marker installed. Over time, large portions of the resulting salt cavern will re-solidify.

**2. Surface Restoration**

All surface equipment at the brine well location and brine station will be emptied, decommissioned and removed either through recycle, scrapping, sale or used by the owner elsewhere. The disturbed surface at the well location and brine station will be reclaimed and re-contoured to near original condition. The disturbed area will be reseeded with a BLM grass seed mixture to establish 70% minimum regrowth coverage.

**3. Surface Subsidence Monitoring**

The annual surface subsidence monitoring program discussed in section X.A.2 above will be continued for a minimum of 5 years following plugging and abandonment of the brine well.

**C. Financial Assurance Plan**

Llano currently has a single well plugging bond for the proposed brine well approved by the NMOCD in the amount of $10,450. However, Llano proposes to provide financial assurance for the Siringo Brine Well and Station via a single surety bond in the amount of $102,836 covering well plugging and abandonment, surface restoration and surface subsidence monitoring for 5 years after ceasing operations as detailed below. Upon acceptance and approval by the NMOCD/WQCC of this

new $102,836 bond, Llano will request release of the existing $10,450 well plugging bond.

### 1. Well Plugging - $39,500

Based on recently obtained bids and experience in plugging wells, Llano proposes a well plugging bond amount of $39,500. See cost breakdown below.

| | |
|---|---|
| **$16,569** | **Well plugging contractor labor/equipment including cement** |
| **$8,500** | **Equipment rental (workstring, flowback tanks, BOPE, porta-john, etc)** |
| **$4,500** | **Transportation of equipment** |
| **$3,000** | **Supervision** |
| **$2,600** | **Purchase/transportation of brine and fresh water** |
| **$2,000** | **Disposal of tank fluids** |
| **$1,200** | **Excavate/cutoff wellhead and anchors; weld on flat plate and PxA marker** |
| **$1,131** | **Miscellaneous** |

### 2. Surface Restoration - $45,336

Based on recently obtained surface restoration cost quotes, these costs total $45,336 as detailed below:

| | |
|---|---|
| $8,000 | Equipment/Labor – washout tanks for disposal, haul fluids and solids to disposal |
| $2,100 | Backhoe/Labor - 2 days to crush fiberglass tanks and PVC components at brine station |
| $2,400 | 35 Yd Roll-off Dumpsters - delivery, rental and hauling to landfill |
| $536 | Lea County Landfill Charges – 3 ea 35 yd dumpsters = 105 cy x 300 lbs = 15.75 tons @ $34/ton |
| $1,600 | Onsite Supervision |
| $19,100 | Equipment/Labor – pull all fencing, remove all concrete, disassemble all metal components, re-contour land to original grade, rebuild barbed wire fence to original ranch configuration, remove underground piping, electrical conduit, wiring, high line poles, wiring and signage |
| $2,200 | Trucking/Disposal – of concrete to Lea County Landfill @ $34/ton |
| $3,500 | Trucking – haul metal components to Hobbs Iron & Metal for recycle |
| $4,500 | Decommission buried polyethylene brine pipeline - costs include fresh water, trucking and pumping to wash pipeline clean and disposal of brine and wash water, then leave pipeline in place for ranching, fresh water sales use |
| $1,400 | Reseeding BLM mix grass on estimated 2 acres at well location and brine station |

### 3. Surface Subsidence Monitoring - $18,000

Based on recently obtained surface subsidence survey cost quotes, these costs total $18,000 for 5 years of follow-on subsidence monument monitoring. Cost estimate is $1200 per year per monument surveyed. Annual cost to survey three monuments is $3600 per year or $18,000 for 5 years.

## D. Notification Plan

Pursuant to 20.6.2.3108 NMAC, Llano Disposal proposes the following public notice plan to be implemented within 30 days upon the department's determination that the discharge permit application is deemed administratively complete.

**1. Public Notice Onsite Signage (minimum 2' x 3' size) Pursuant to 20.6.2.3108.B.1 NMAC**

Llano will install one (1) sign meeting the above requirements in both English and Spanish to be located on private land adjacent to the eastern right-of-way of Hwy 483 (Arkansas Jct) at the southwest corner of Section 27, T17S, 36E. This site is approximately 900 feet west of the proposed brine station location. This notice will be posted for a minimum of 30 days. The proposed text on this sign is included in Attachment "Q".

**2. Public Notice Offsite Pursuant to 20.6.2.3108.B.1 NMAC**

Llano will post a notice of the discharge application in English and Spanish on a public bulletin board in the Lea County Courthouse. This notice will be posted for a minimum of 30 days. The proposed text of this notice is included in Attachment "R".

**3. Notice to Adjoining Property Owners Pursuant to 20.6.2.3108.B.2 NMAC**

Llano will provide written notice of the discharge application in English by certified mail, return receipt requested, to owners of record of all properties adjacent to the property owned by the discharger. There are seven adjacent property owners identified in property tax records. The proposed text of these notices, attachments and a listing of the owners are included in Attachment "S".

**4. Notice to the Property Owner of the Discharge Site Pursuant to 20.6.2.3108.B.3 NMAC**

Notice to the landowner is not required since the owner of Llano is also the owner of the discharge site surface property. Although the surface ownership is private land, the mineral ownership is State of New Mexico owned. Llano will provide written notice in English by certified mail, return receipt requested, to the New Mexico State Land Office, the mineral owner of the discharge site. In addition, Llano will notice the current mineral lessee of the State owned minerals since there are no offset wells within 1/3 mile of the proposed class III brine well. As of April 20, 2016, the State mineral lessee of record is Devon Energy Production Co, LP. Llano will provide written notice in English to Devon by certified mail, return receipt requested. Text of both of these letters is included in Attachment "S".

**5. Public Notice Newspaper Display Ad (minimum 3" x 4") Pursuant to 20.6.2.3108.B.4 NMAC**

Llano will publish one (1) newspaper advertisement meeting the above requirements in both English and Spanish in the "Lovington Leader", a

newspaper of general circulation nearest the location of the proposed discharge. The proposed text of these newspaper advertisement notices is included in Attachment "T".

**6. Proof of Notice Pursuant to 20.6.2.3108.D NMAC**

Within 15 days of completion of public notice requirements listed above, Llano will submit to the department proof of notice, including an affidavit of mailings and the list of property owners, proof of publication in the newspaper, and an affidavit of public posting onsite the discharge location and offsite in the Lea County Courthouse.