EPWM - 009

GENERAL CORRESPONDENCE

2011 - 2015

Jones, Brad A., EMNRD

From: Cappelle, Malynda A <macappelle@utep.edu>
Sent: Friday, September 30, 2011 3:06 PM
To: Jones, Brad A., EMNRD
Subject: DRAFT Closeout report
Attachments: Closeout Report.pdf

Hi Brad,

I wanted to see if this closeout report will suffice for you. Is it OK for me to sign this or do I need to get Dr. Osegueda to sign it since the permit is in his name? Also, do you need an original copy for your records? I realize you may be gone for the week but I wanted to get this draft finished today. I will revise and send officially next week.

Thank you,

Malynda Cappelle
Associate Director
UTEP Center for Inland Desalination Systems
500 West University Avenue
Burges Hall, Room 216
El Paso TX, 79968
915.747.8953
macappelle@utep.edu
cids.utep.edu

Mr. Brad Jones
Environmental Engineer
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

30 September 2011

RE: Closeout Report, Temporary Permit EPWM-009

Dear Mr. Jones,

Pursuant to our temporary permit, I am providing a close-out report for the UTEP piloting activities at the Brackish Groundwater National Desalination Research Facility (BGNDRF). We evaluated Voltea's CapDI system for the desalination of diluted produced water during the month of August. Piloting activities started on August 1 and finished on August 27. The BGNDRF concrete pad and surrounding soil do not show signs of contamination from produced water.

Approximately 3,000 gallons (60 barrels) of produced water was transported to the BGNDRF by Three Rivers Trucking. This water was diluted for piloting activities using groundwater available at the BGNDRF. Approximately 9,000 gallons (215 barrels) of various mixtures of produced water were removed by Gandy Corp. and disposed of by Gandy Marley, Inc. All cartridge and granular activated carbon filters were also disposed of by Gandy Marley.

A berm was built by BGNDRF staff and a 6-mil membrane was placed for containment protection during the pilot. Pursuant to NMAC 19.15.35.8, this membrane was removed and disposed of at the local solid waste landfill.

Pictures were taken throughout the pilot and after the membrane was removed. These are included in the following pages.

Please let us know if you have any questions.

Sincerely,

Malynda Cappelle

Malynda Cappelle

500 West University Ave
El Paso, TX 79902

Figure 1. Produced Water Pilot Tanks, Containment, and Trailer

Figure 2. Produced Water Pilot - Tubing between trailer and containment basin

Figure 3. Bermed area before piloting

Figure 4. Voltea CapDI System & Containment Inside UTEP Trailer

Photos of bermed area after piloting and after membrane was removed

THE UNIVERSITY OF TEXAS AT EL PASO

RECEIVED OCD

2011 AUG 12 A 11:20

July 27, 2011

Vice President
for Research

Mr. Brad Jones, Environmental Engineer
N.M. Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

Re: Temporary water research permit

Dear Mr. Jones:

The University of Texas at El Paso (UTEP) supports the enclosed application for the temporary water research permit for treatment of produced water for beneficial use.

UTEP, founded in 1914, is the second oldest academic component of the University of Texas System. UTEP is a Doctoral/Research Intensive university offering Bachelor's, Master's and Doctoral programs to West Texas and Northern Mexico. It is fully accredited through the doctoral level by the Commission on Colleges of the Southern Association of Colleges and Schools. UTEP's academic programs are accredited by numerous organizations including the Accreditation Board for Engineering and Technology (ABET).

I am the administrative point of contact on this project and will be pleased to provide any other documentation that may be required. I can be reached at 915.747.5680 or email at tosteen@utep.edu.

Sincerely,

for

Roberto Osegueda, Vice President for Research
Office of Research and Sponsored Projects
The University of Texas at El Paso

xc: M. Cappelle
ORSP file

El Paso, Texas
79968-0587
(915) 747-5680
FAX: (915) 747-6474

Mr. Brad Jones
Environmental Engineer
New Mexico Energy, Minerals and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

28 July 2011

RE: Temporary Produced Water Research Permit for Treatment of Produced Water for Beneficial Use

Dear Mr. Jones,

UTEP requests permission to treat coal bed methane produced water from the San Juan Basin at the US Bureau of Reclamation's Brackish Groundwater National Desalination Research Facility (BGNDRF) in Alamogordo, NM. The piloting activities will last about a month. The planned dates of operation are include August 1-31, 2011, however the start date may move based on permitting and site availability. Energen Resources will provide produced water from its Tiffany SWD in the Four Corners area (API API 30-045-32208). Both liquid and solid wastes will be sent to the Gandy Marley disposal facility in Roswell, NM. This letter serves as a summary of planned activities and describes the produced water source, pilot location, and waste stream disposal plans.

Voltea is a start-up company backed by Unilever Ventures – the venture capital arm of Unilever PLC located in Sassenheim, The Netherlands. Voltea is developing and manufacturing a new water desalination technology capable of treating coal bed methane and other produced waters. The technology is based on capacitive deionization (CapDI) and it is a promising treatment candidate for desalinating produced water. The CapDI system features a charge reversal step, and does not require high pressure feeds. Thus the system is less prone to fouling than conventional membrane processes. Voltea was recently awarded a grant from the Dutch government to further develop the CapDI technology. Part of that effort is testing the system at the BGNDRF treating brackish and CBM Produced Water.

UTEP is performing research under a research agreement with Voltea and is providing day-to-day operation of Voltea's capacitive deionization pilot system at the BGNDRF. UTEP is responsible for operating the system and coordinating CBM water delivery, waste disposal, and reporting activities.

Produced Water Source: Energen Resources Corporation will provide a mixture of exempt CBM produced water from the Tiffany SWD for use in this pilot. 73 barrels (about 3,000 gallons) will be trucked to the pilot site. The water quality is estimated to be 10,000-15,000 mg/L in total dissolved solids. This SWD will be the sole source of produced water for this pilot.

500 West University Ave
El Paso, TX 79902

Produced Water Hauler: Three Rivers Trucking will haul CBM produced water from the Tiffany SWD to the BGNRF under contract to Voltea. Three Rivers has a current OCD hauling permit.

Gandy Corp. will haul liquid waste from the BGNDRF to the Gandy Marley disposal facility located in Roswell, NM. Gandy Corp. and Gandy Marley are an OCD-approved hauler and disposal facility, respectively.

Pilot Location: The piloting activities will take place at the US Bureau of Reclamation's BGNDRF at 500 LaVelle Rd, Alamogordo, NM, 88310. Reclamation will provide the use of their outdoor Test Bay #9, storage tanks and leak protection.

Pilot Operations: Voltea has contracted with The University of Texas at El Paso (UTEP) to perform capacitive deionization pilot studies and water analyses for the summer of 2011. UTEP personnel are responsible for the daily operations and data analysis of the CapDI system. UTEP will continuously sample and analyze the water for total organic carbon (TOC); major metals, anions and cations; conductivity, pH and TDS. UTEP has extensive analysis capabilities including ion chromatography, ICP-OES, GC, TOC, UV-vis spectrophotometry, and general analyses such as pH, conductivity, and alkalinity titrations. The CapDI system will only be operated when UTEP personnel are present. Occasional overnight experiments may be run after stable operations are reached.

Should a spill occur during pilot operations, all equipment will be shut down and the proper parties notified. NMAC 19.15.29 and 19.15.30 are included in Attachment E for documentation of the applicable rules.

Expected Waste Streams:

We expect to have liquid and solid waste streams produced during the pilot operations:

- The treated (called purify) and waste streams will be re-combined and stored at the BGNDRF until hauled away by Gandy Corp. This liquid waste stream will be disposed of by Gandy Marley, Inc. at its Gandy Marley disposal facility in accordance with 19.15.34.11.

Waste Hauler:
Larry Gandy
Gandy Corp.
PO Box 1658
Roswell, NM 88202

Disposal Facility:
Bill Marley
Gandy Marley, Inc
PO Box 1658
Roswell, NM 88202

- Chemicals used in the pilot include citric acid, sodium chloride, and sodium hydroxide, and are used to clean the CapDI membranes on a weekly basis. The chemicals will be mixed with water and all liquid wastes will be gathered and hauled to the Gandy Marley disposal facility. Electrical

probe cleaning will use small amounts of deionized water and potentially dilute hydrochloric acid. These wastes will be disposed of in accordance with BGNDRF rules and regulations.
- Cartridge filters and granular activated carbon (GAC) filters will be transported and disposed of at the Gandy Marley disposal facility.

H_2S: Although it is not anticipated to be a problem, the CBM produced water will be analyzed for H_2S and proper safety measures will be incorporated into daily operations. At a minimum, this will include signage on the tanks indicating the potential for H_2S. The produced water will be stored in sealed tanks.

Attachments:

Attachment A: Contact information for Voltea, UTEP, and BGNDRF personnel

Attachment B: Permission letters

- Energen Resources Corporation
- Brackish Groundwater National Desalination Research Facility
- Voltea letter

Attachment C: Process Description

- Process Flow Diagram
- Equipment and BGNDRF test bay pictures
- Sample Analyses from Tiffany SWD (June 2011)
- Sample Analyses performed by UTEP during pilot operation

Attachment D: Daily Log Sheets

Attachment E: NMAC Regulations and Forms

- C-138: Request for Approval to Accept Solid Waste
- C-141: Release Notification and Corrective Action
- NMAC 19.15.29
- NMAC 19.15.30
- NMAC 19.15.35

Attachment F: Closure Plan

Attachment A: Contact information for Voltea, UTEP, and BGNDRF personnel

Voltea:

Voltea B.V.
Wasbeekerlaan 24
2171 AE Sassenheim
The Netherlands
+31 (0)252 200100

Hank Reinhoudt, Product Development and Operations Director (Authorizing official)
+31 (0)252 2001 44
Hank.Reinhoudt@voltea.com

Emily Tenenbaum, New Applications Project Manager (Administrative/Technical Contact)
+31 (0)252 2001 54
Emily.Tenenbaum@voltea.com

The University of Texas at El Paso

500 W University Ave
El Paso, TX 79902

Dr. Roberto Osegueda
VP Research and Sponsored Projects (Authorizing Official)
915-747-5680
osegueda@utep.edu

Tom Osteen
Research Administrator (Administrative Contact)
915-747-7359
tosteen@utep.edu

Malynda Cappelle
Associate Director (Technical Contact)
915-747-8953
macappelle@utep.edu

Brackish Groundwater National Desalination Research Facility

Shaw, PE
BGNDRF Facility Manager (Authorizing Official/Technical & Administrative Contact)
500 LaVelle Rd
Alamogordo, NM 88310
(575) 443-6553
rshaw@usbr.gov

Attachment B: Permission letters

Voltea

26 July 2011

Mr. Brad Jones
Environmental Engineer
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Dear Mr. Jones:

Voltea B.V. grants permission to the University of Texas at El Paso to use Voltea's Capacitive Deionization system to conduct desalination pilot tests on coalbed methane produced water. The tests will be conducted at Brackish Groundwater National Desalination Research Facility, in the manner outlined in this permit application.

Voltea will be liable for direct damages relating to any water spill or release that is caused by failure of Voltea equipment.

Sincerely,

Hank Reinhoudt
Director Product Development and Applications
Voltea B.V.

Wasbeekerlaan 24
2171 AE Sassenheim
The Netherlands

Phone +31 (0)252 200 100
E-mail info@voltea.com
Rabobank 144630354
KvK 243.33.338

ENERGEN
RESOURCES

Sent via Email

July 21, 2011

UTEP Center for Inland Desalination Systems
500 West University Avenue
Burges Hall, Room 216
El Paso, Texas 79968
Attn: Ms. Malynda Cappelle

Re: **Voltea Project**

Dear Ms. Cappelle:

Please consider this our approval for you to contract Three Rivers Trucking to haul approximately 3000 gallons of produced water from our Tiffany SWD (API 30-045-32208) located in Section 10, Township 32N, Range 6 West. The water is to be hauled from Energen's SWD directly to the Brackish Groundwater National Desalination Research Facility in Alamogordo, New Mexico.

This approval is with the understanding and condition that you have the necessary permits from the NMOCD prior to the transport of any water.

If there are any questions or concerns with this submittal, please contact me at 505-324-4131.

Sincerely,

Ed Hasely
Sr. Environmental Engineer
Energen Resources

Cc: Facility File
Correspondence

United States Department of the Interior

BUREAU OF RECLAMATION
Brackish Groundwater National Desalination Research Facility
500 LaVelle Rd.
Alamogordo, New Mexico 88310

TAKE PRIDE IN AMERICA

IN REPLY REFER TO:

JUL 27 2011

Mr. Brad Jones
Environmental Engineer
Oil Conservation Division
New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

Subject: Voltea's Use of the Brackish Groundwater National Desalination Research Facility (BGNDRF) for Testing Produced Water Using Capacitive Deionization (CapDI) Technology

Dear Mr. Jones:

We recently mailed you a letter dated July 21, 2011, discussing our approval of the Voltea research work at the BGNDRF. The plans for testing have evolved and I wanted to send this letter as a follow-up to the first letter based on the most current information available.

Voltea is authorized to use the Brackish Groundwater National Desalination Research Facility under BGNDRF Use Permit No. 2011-001. The BGNDRF Use Permit specifically allows Voltea and its subcontractor, UTEP, to test its CapDI system to treat brackish groundwater and coal bed methane produced water (produced water) at our facility. The BGNDRF has a New Mexico Environment Department Discharge Permit, DP-1472, for discharging concentrate waste from brackish groundwater to our evaporation ponds. UTEP will have a research permit from the New Mexico Oil Conservation Division specifying how produced water will be tested at our facility and disposed.

The BGNDRF will provide secondary containment at Test Pad 9 for storage, and plumbing used in the testing of produced water. The volume of the containment basin will be at least 4,500 gallons, which is more than 133% of the volume of the largest tank. The largest tank will be 3,000 gallons. Total volume of storage tanks will be no more than 11,500 gallons depending on the amount of raw and waste produced water stored onsite. None of the large tanks will be interconnected.

The secondary containment will consist of a 1-foot high, earth berm around a portion of the 20 foot wide by 60 foot long concrete test pad (Test Pad 9). A 6 mil, black polyethylene, membrane will be placed over the berms and concrete pad and anchored outside the bermed area with sand. Interior anchoring of the membrane at the toe of the berm will be accomplished with 2-inch PVC pipe filled with water. The polyethylene membrane will be protected in foot traffic areas within

the containment by a ¼-inch thick, 3-foot wide, rubber mat. A diagram of the secondary containment with general locations of storage tanks and the rubber walkway is attached.

If you would like additional information, please contact me at (575) 443-6553.

Sincerely,

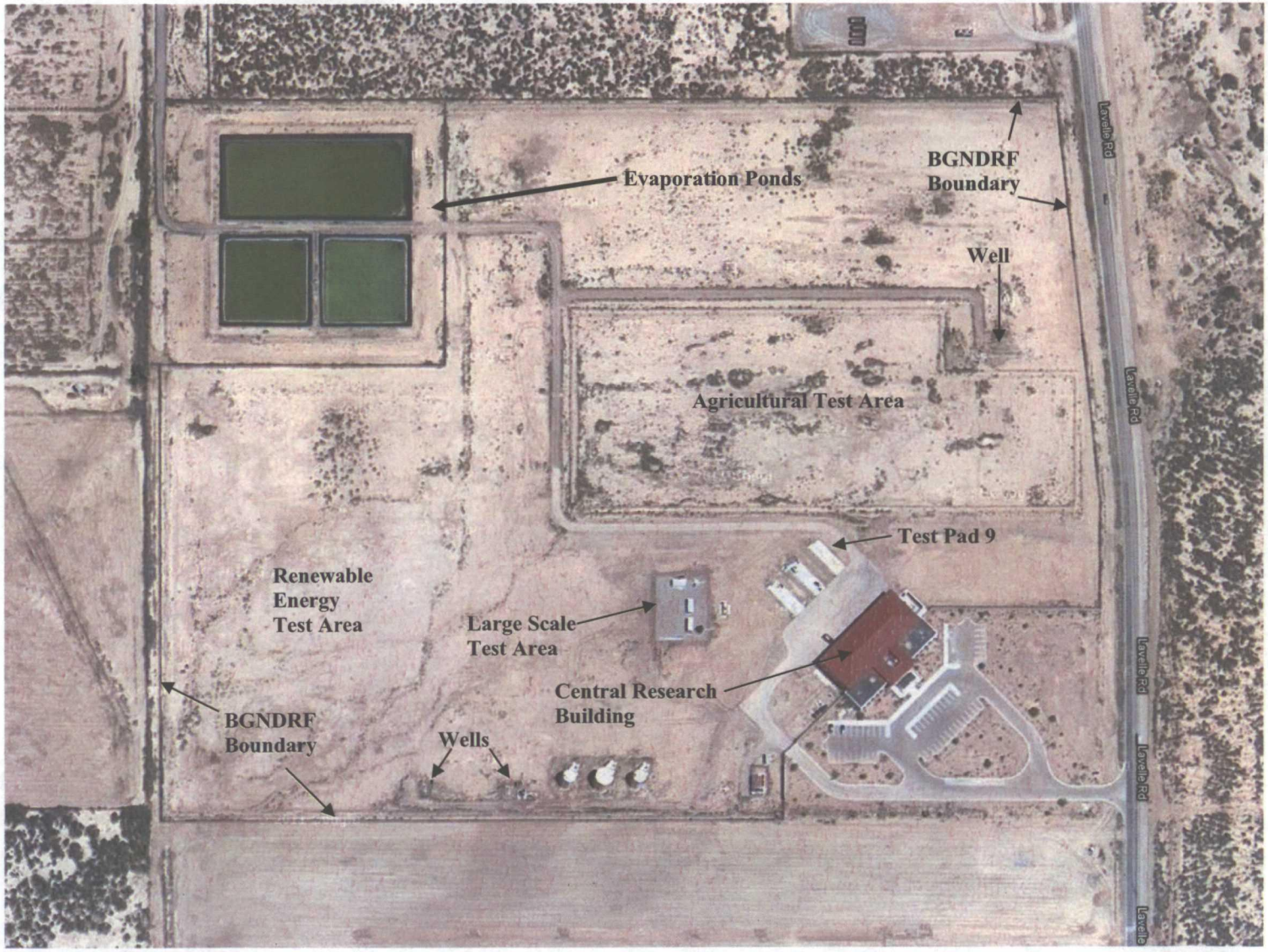
Randy Shaw

Randy Shaw, PE
BGNDRF Facility Manager

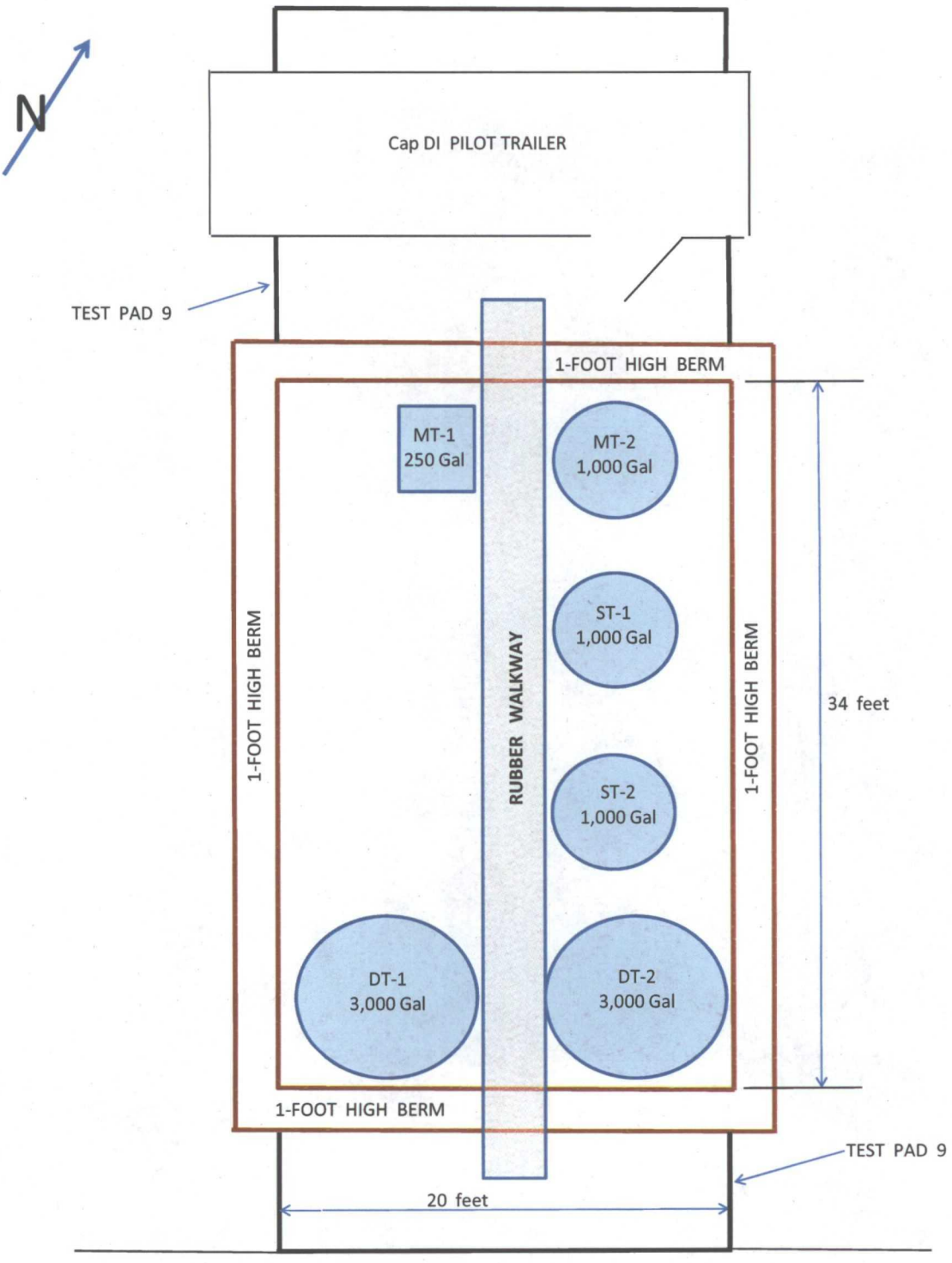
Cc: Hank Reinhoudt, Voltea
Malynda Cappelle, University of Texas at El Paso
Michelle Chapman, BGNDRF Project Manager
Kevin Price, Bureau of Reclamation, Desalination Research Coordinator

Attachments:

1. BGNDRF Site Diagram
2. Containment Diagram



Site Diagram—Brackish Groundwater National Desalination Research Facility



CONTAINMENT DIAGRAM

Attachment C: Process Description

Produced water will be stored in three 1000-gallon black plastic tanks with lids. Only one tank will be utilized at a time. Produced water will be diluted using either Alamogordo tap water or RO permeate to obtain a TDS of approximately 2000-5000 mg/L for the first test. It is possible that no or lesser dilutions will be used at the end of the piloting operations. Dilutions will be performed in a separate tank. This diluted CBM produced water will pass through a series of cartridge and granular activated carbon (GAC) filters to remove particulate matter and other offending dissolved species (e.g. well treatment chemicals). This filtered CBM produced water will then be sent to the CapDI system which produces either a treated (called purify) and waste stream. Both of these streams will be re-combined and stored in two 3,000-gallon plastic tanks. These tanks will be emptied by a water hauler and disposed of at the Gandy Marley disposal facility. Gandy Marley will lease two 3000-gallon plastic tanks to UTEP for use in this project. Used cartridge and GAC filters will also be disposed of at the Gandy Marley facility.

Figure 1 on the following page below summarizes the flows in the CapDI pilot at the BGNDRF. Figures 2-4 show pictures of the proposed storage tanks, CapDI system, and proposed outdoor test pad at the BGNDRF. The system has been in use evaluating its capacity for desalination of brackish groundwater.

The BGDRF will supply secondary containment for the produced water storage tanks and vacuum-bottomed tank(s).This is described in their letter in Attachment B. Voltea's CapDI system will be housed in a UTEP-owned trailer and will be placed inside a small containment basin with the approximate dimensions: 5ft x 8 ft x 4in (W x L x H).

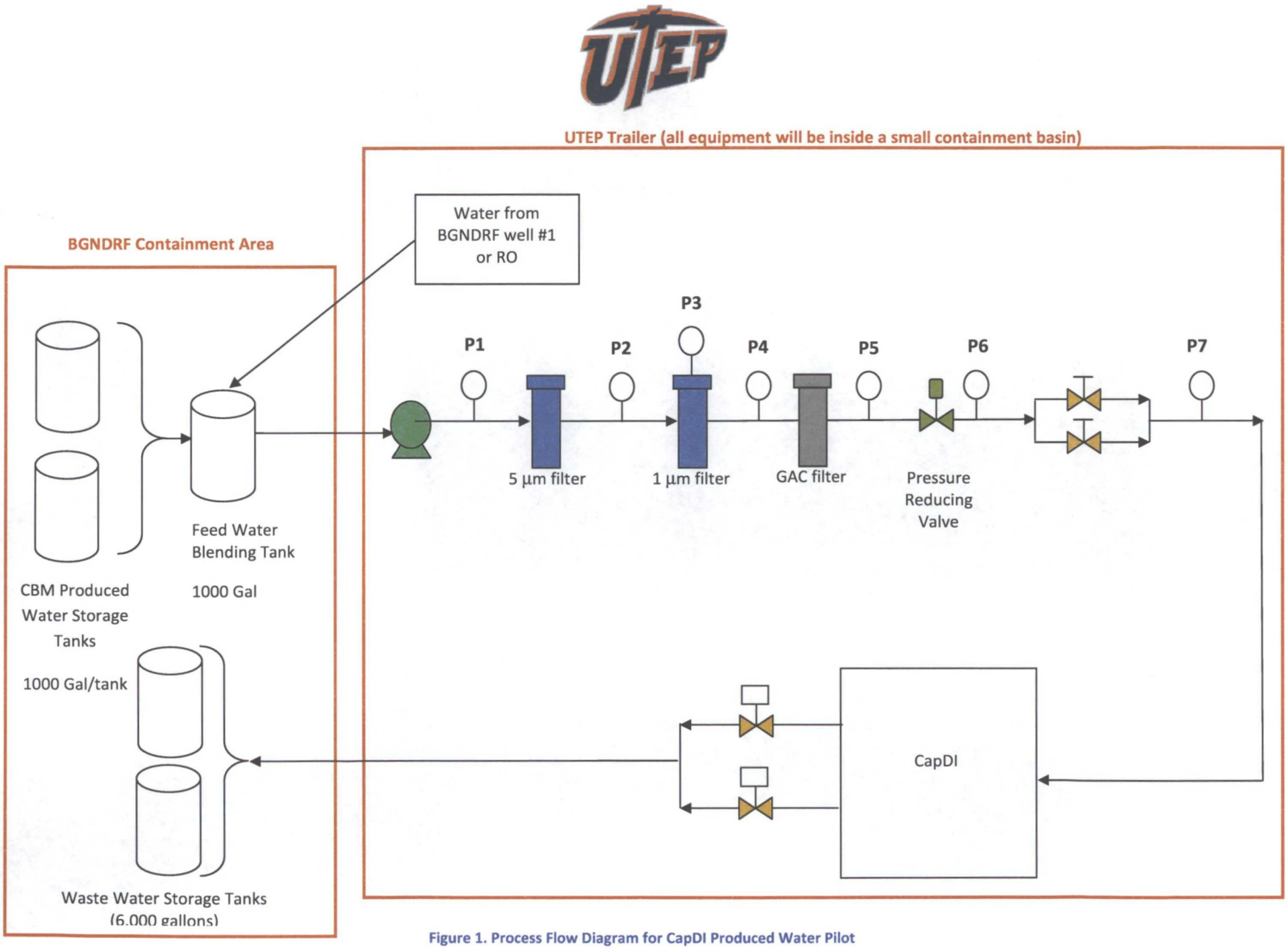


Figure 1. Process Flow Diagram for CapDI Produced Water Pilot

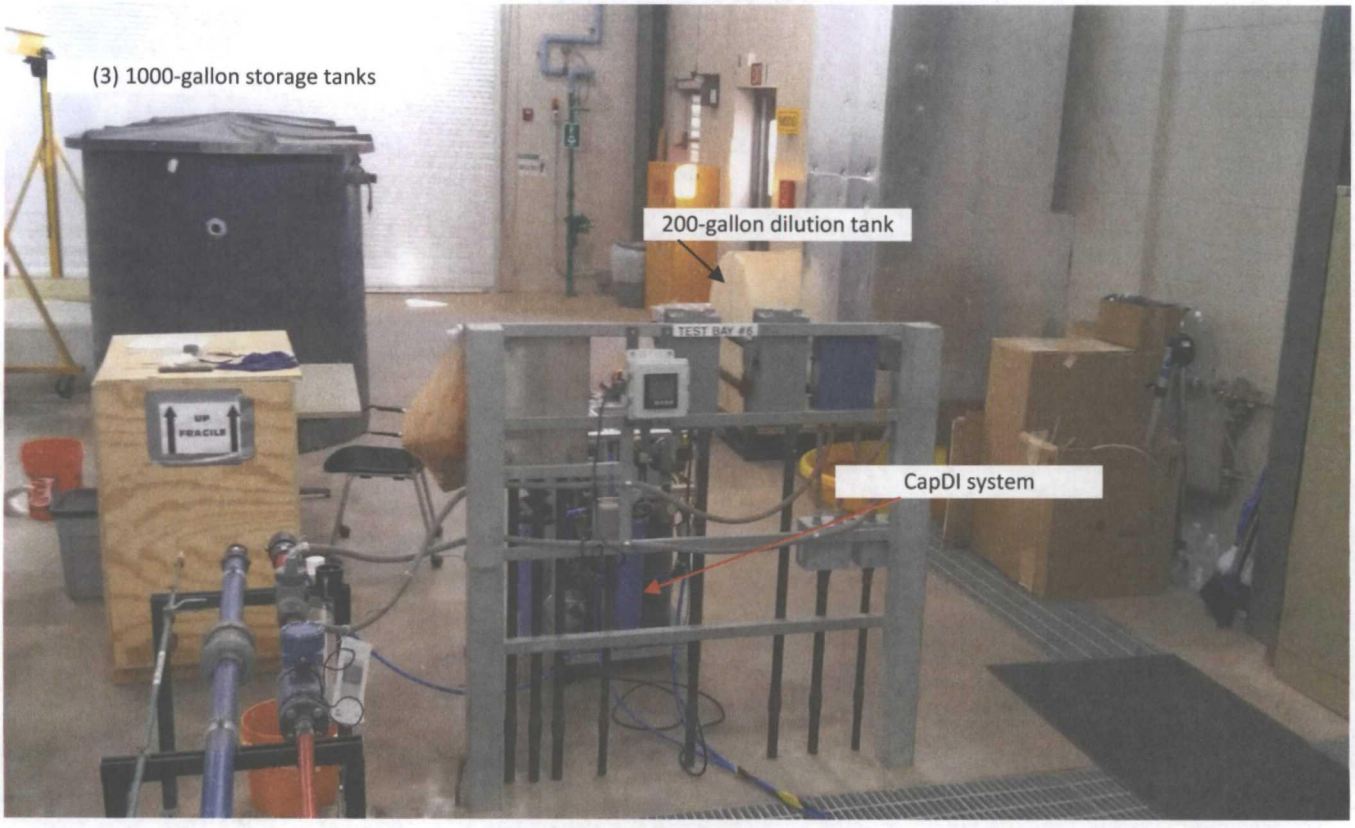


Figure 2. BGNDRF Test Bay 6 with Voltea CapDI system (as installed for brackish water desalination experiments)

Figure 3. Voltea CapDI system (as installed for brackish water desalination experiments)

Figure 4. BGNDRF Test Bay #9

June 2011 Tiffany SWD Produced Water Analysis (provided by Energen Resources)

Energen Resources

County: Archuleta
State: CO
Sampled at: Filters
Date: June 13, 2011
H & M Precision Water Analysis Report

Field: Tiffany
Location: Tiffany SWD #1
Formation:
Depth: 0

Sum +	mg/L	meq/L		Sum -	mg/L	meq/L
Potassium	0	0		Sulfate	15.4	0.32
Sodium	4521.8	196.69		Chloride	6000	169.24
Calcium	236	11.78		Carbonate	0	0
Magnesium	96.6	7.95		Bicarbonate	3182	52.15
Iron	1	0.05		Hydroxide	0	0
Barium	0	0	Analysis	-	0	0
Strontium	0	0	Balanced	-	0	0
CATIONS	4855.4	216.47		ANIONS	9197.4	221.71

System Parameters

Total Dissolved Solids @180C	14052.8	mg/L
Sample Temperature, 'F	70	F
Sample pH, standard units	7.24	Units
Dissolved Oxygen	0	ppm
Carbon Dioxide	0	mg/L
Total Sulfide, (TS)	0	mg/L
Sulfide Ion, (S)	0	mg/L
Dissolved Hydrogen Sulfide, (TS-S)	0	mg/L
Specific Gravity	1.0095	
Resistivity, measured	0	ohm/m^3
Ionic strength	0.229	
Sulfate Reducing Bacteria	nd	
Aerobic Bacteria	nd	
Manganese Level	1.5	mg/L

Scaling Tendency

	CACO3			CASO4				
	Stiff Davis		A		SOLUBILITY		S	A
Temp F	Index		index	Temp F	Actual	Calculated	Index	Index
32	0.44	|	124.6761	|				
50	0.6	|	150.2241	|	50	0.32063	41.68284	-41.3622	| -985.868
68	0.79	|	169.5264	|	68	0.32063	42.0861	-41.7655	| -995.48
77	0.89	|	177.0112	|	86	0.32063	42.48599	-42.1654	| -1005.01
86	1	|	183.2928	|	104	0.32063	42.7575	-42.4369	| -1011.48
104	1.22	|	192.6446	|	122	0.32063	42.90278	-42.5822	| -1014.95
122	1.47	|	198.5904	|	140	0.32063	42.01046	-41.6898	| -993.677
140	1.73		202.2026	|	158	0.32063	41.10114	-40.7805	| -972.003
158	2.01	|	204.284	|	176	0.32063	40.17381	-39.8532	| -949.9
176	2.31	|	205.4239	|				

BASO4 SCALE POSSIBLE NO

NOTE: Stiff Davis Index

- indicates undersaturation. Scale formation negative.

0 indicates the water is at saturation point. Scale unlikely.

+ indicates supersaturation. A positive scaling condition exists.

NOTE: Skillman Method Calcium Sulfate 'S Index'

- indicates undersaturation. Scale formation negative.

0 indicates the water is at saturation point. Scale unlikely.

+ indicates supersaturation. A positive scaling condition exists.

NOTE: A Index; worst possible case. Assumes 100% precipitation.

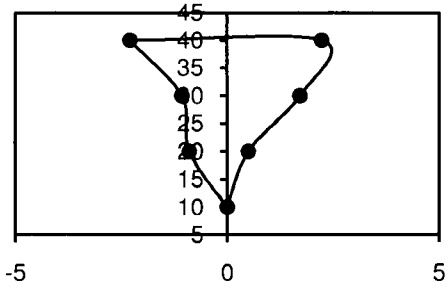
- Units = pounds of scale produced / 1000 bbls. of water.

Approved: Albert Rich

- A Index =< 0 Scale formation negative. 40745.66 v4.01
- A Index > 0 Scale formation positive.

Water Analysis Patern

40 30 20 10 10 20 30 40



Sample Analyses performed by UTEP during pilot operation

Samples will be taken on a regular basis by UTEP and analyzed either on site at the BGNDRF or transported and analyzed at UTEP's laboratory.

Table 1. Summary of HALL Analyses

Analysis	**Comments**
pH	Onsite
Turbidity	Onsite
Anions/Cations by Ion Chromatography	At UTEP laboratory NO_3, SO_4, Cl, F, Ca, Mg, Na, K
Other by spectrophotometry	Silica, Iron
Total Organic Carbon	At UTEP laboratory
Total Alkalinity, Hardness	Onsite
TDS, TSS (if available)	Onsite

Attachment D: Daily Log Sheets (Draft-Subject to Change)

Date

Operator

Experiment

	Beginning	End
Time		
kWh (CapDI)		
T. Gal (BGNDRF)		
Cond (BGNDRF)		
Cond (CapDI)		

Data

Time	
Power meter	kWh
Feed Conductivity	mS/cm
Feed Flow	gpm
Feed Totalizer	gallons
Feed Totalizer	m^3
P1	bar
P2	bar
ΔP(1-2)	bar
P3	bar
ΔP(2-3)	bar
P4	bar
P5	bar
ΔP(4-5)	bar
P6	bar
P7	bar
P. reducing valve	setting
Purify Conductivity	mS/cm
Water Recovery	

Observations & Set points

Set point	Units	Value	Valve 1	Valve 2
Flow-Purify	LPM			
Flow-Waste	LPM			
Waste 1	sec			
Concentrate	sec			
Waste 2	sec			
Shunt 1	sec			
Pre-Purify	sec			
Purify	sec			
Shunt 2	sec			
Flow Calibration				
total waste flow	sec			

		Power Board 1		Power Board 2	
Maximum setting		Current-purify	Current-waste	Current-purify	Current-waste
	Phase 1				
	Phase 2				
	Phase 3				
	Phase 4				
Total per phase					
Total (purify)					
Total (waste)					

NOTES

(note important observations, activities)

Attachment E: NMAC Forms & Regulations

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

Form C-138
Revised March 12, 2007

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:

2. Originating Site:

3. Location of Material (Street Address, City, State or ULSTR):

4. Source and Description of Waste:

Estimated Volume _____ yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, _____, representative or authorized agent for _____ do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☐ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☐ RCRA Hazardous Waste Analysis ☐ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, _____, representative for _____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #:

Address of Facility:

Method of Treatment and/or Disposal:

☐ Evaporation ☐ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____

SIGNATURE: _____ TELEPHONE NO.: _____

Surface Waste Management Facility Authorized Agent

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, 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

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

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☐ Final Report

Name of Company	Contact
Address	Telephone No.
Facility Name	Facility Type

Surface Owner	Mineral Owner	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County

Latitude_____ **Longitude**_____

NATURE OF RELEASE

Type of Release	Volume of Release	Volume Recovered
Source of Release	Date and Hour of Occurrence	Date and Hour of Discovery
Was Immediate Notice Given? ☐ Yes ☐ No ☐ Not Required	If YES, To Whom?	
By Whom?	Date and Hour	
Was a Watercourse Reached? ☐ Yes ☐ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Describe Area Affected and Cleanup Action Taken.*

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:	OIL CONSERVATION DIVISION	
Printed Name:	Approved by District Supervisor:	
Title:	Approval Date:	Expiration Date:
E-mail Address:	Conditions of Approval:	Attached ☐
Date: Phone:		

* Attach Additional Sheets If Necessary

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 29 RELEASE NOTIFICATION

19.15.29.1 ISSUING AGENCY: Energy, Minerals and Natural Resources Department, Oil Conservation Division.
[19.15.29.1 NMAC - N, 12/1/08]

19.15.29.2 SCOPE: 19.15.29 NMAC applies to persons engaged in oil and gas development and production within New Mexico.
[19.15.29.2 NMAC - N, 12/1/08]

19.15.29.3 STATUTORY AUTHORITY: 19.15.29 NMAC is adopted pursuant to the Oil and Gas Act, NMSA 1978, Section 70-2-6, Section 70-2-11 and Section 70-2-12.
[19.15.29.3 NMAC - N, 12/1/08]

19.15.29.4 DURATION: Permanent.
[19.15.29.4 NMAC - N, 12/1/08]

19.15.29.5 EFFECTIVE DATE: December 1, 2008, unless a later date is cited at the end of a section.
[19.15.29.5 NMAC - N, 12/1/08]

19.15.29.6 OBJECTIVE: To require persons who operate or control the release or the location of the release to report the unauthorized release of oil, gases, produced water, condensate or oil field waste including regulated NORM, or other oil field related chemicals, contaminants or mixtures of those chemicals or contaminants that occur during drilling, producing, storing, disposing, injecting, transporting, servicing or processing and to establish reporting procedures.
[19.15.29.6 NMAC - N, 12/1/08]

19.15.29.7 DEFINITIONS:

A. "Major release" means:

(1) an unauthorized release of a volume, excluding gases, in excess of 25 barrels;

(2) an unauthorized release of a volume that:

(a) results in a fire;

(b) will reach a watercourse;

(c) may with reasonable probability endanger public health; or

(d) results in substantial damage to property or the environment;

(3) an unauthorized release of gases in excess of 500 MCF; or

(4) a release of a volume that may with reasonable probability be detrimental to water or exceed the standards in Subsections A and B or C of 19.15.30.9 NMAC.

B. "Minor release" means an unauthorized release of a volume, greater than five barrels but not more than 25 barrels; or greater than 50 MCF but less than 500 MCF of gases.
[19.15.29.7 NMAC - Rp, 19.15.3.116 NMAC, 12/1/08]

19.15.29.8 RELEASE NOTIFICATION:

A. The person operating or controlling either the release or the location of the release shall notify the division of unauthorized release occurring during the drilling, producing, storing, disposing, injecting, transporting, servicing or processing of oil, gases, produced water, condensate or oil field waste including regulated NORM, or other oil field related chemicals, contaminants or mixture of the chemicals or contaminants, in accordance with the requirements of 19.15.29 NMAC.

B. The person operating or controlling either the release or the location of the release shall notify the division in accordance with 19.15.29 NMAC with respect to a release from a facility of oil or other water contaminant, in such quantity as may with reasonable probability be detrimental to water or exceed the standards in Subsections A and B or C of 19.15.30.9 NMAC.
[19.15.29.8 NMAC - Rp, 19.15.3.116 NMAC, 12/1/08]

19.15.29.9 REPORTING REQUIREMENTS: The person operating or controlling either the release or the location of the release shall provide notification of releases in 19.15.29.8 NMAC as follows.

A. The person shall report a major release by giving both immediate verbal notice and timely written notice pursuant to Subsections A and B of 19.15.29.10 NMAC.

B. The person shall report a minor release by giving timely written notice pursuant to Subsection B of 19.15.29.10 NMAC.
[19.15.29.9 NMAC - Rp, 19.15.3.116 NMAC, 12/1/08]

19.15.29.10 CONTENTS OF NOTIFICATION:

A. The person operating or controlling either the release or the location of the release shall provide immediate verbal notification within 24 hours of discovery to the division district office for the area within which the release takes place. In addition, the person shall provide immediate verbal notification of a release of a volume that may with reasonable probability be detrimental to water or exceed the standards in Subsections A and B or C of 19.15.30.9 NMAC to the division's environmental bureau chief. The notification shall provide the information required on form C-141.

B. The person operating or controlling either the release or the location of the release shall provide timely written notification within 15 days to the division district office for the area within which the release occurs by completing and filing form C-141. In addition, the person shall provide timely written notification of a release of a volume that may with reasonable probability be detrimental to water or exceed the standards in Subsections A and B or C of 19.15.30.9 NMAC to the division's environmental bureau chief within 15 days after the release is discovered. The written notification shall verify the prior verbal notification and provide appropriate additions or corrections to the information contained in the prior verbal notification.

[19.15.29.10 NMAC - Rp, 19.15.3.116 NMAC, 12/1/08]

19.15.29.11 CORRECTIVE ACTION: The responsible person shall complete division-approved corrective action for releases that endanger public health or the environment. The responsible person shall address releases in accordance with a remediation plan submitted to and approved by the division or with an abatement plan submitted in accordance with 19.15.30 NMAC.

[19.15.29.11 NMAC - Rp, 19.15.3.116 NMAC, 12/1/08]

HISTORY of 19.15.29 NMAC:

History of Repealed Material: 19.15.3 NMAC, Drilling (filed 10/29/2001) repealed 12/1/08.

NMAC History:

That applicable portion of 19.15.3 NMAC, Drilling (Section 116) (filed 10/29/2001) was replaced by 19.15.29 NMAC, Release Notification, effective 12/1/08.

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 30 REMEDIATION

19.15.30.1 ISSUING AGENCY: Energy, Minerals and Natural Resources Department, Oil Conservation Division.
[19.15.30.1 NMAC - N, 12/1/08]

19.15.30.2 SCOPE: 19.15.30 NMAC applies to persons engaged in oil and gas development and production within New Mexico.
[19.15.30.2 NMAC - N, 12/1/08]

19.15.30.3 STATUTORY AUTHORITY: 19.15.30 NMAC is adopted pursuant to the Oil and Gas Act, NMSA 1978, Sections 70-2-6, 70-2-11 and 70-2-12.
[19.15.30.3 NMAC - N, 12/1/08]

19.15.30.4 DURATION: Permanent.
[19.15.30.4 NMAC - N, 12/1/08]

19.15.30.5 EFFECTIVE DATE: December 1, 2008, unless a later date is cited at the end of a section.
[19.15.30.5 NMAC - N, 12/1/08]

19.15.30.6 OBJECTIVE: To abate pollution of subsurface water so that ground water of the state that has a background concentration of 10,000 mg/l or less TDS is either remediated or protected for use as domestic, industrial and agricultural water supply, and to remediate or protect those segments of surface waters that are gaining because of subsurface-water inflow for uses designated in the water quality standards for interstate and intrastate surface waters in New Mexico, 20.6.4 NMAC; and abate surface-water pollution so that surface waters of the state are remediated or protected for designated or attainable uses as defined in the water quality standards for interstate and intrastate surface waters in New Mexico, 20.6.4 NMAC.
[19.15.30.6 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.7 DEFINITIONS: [RESERVED]
[See 19.15.2.7 NMAC for definitions.]

19.15.30.8 PREVENTION AND ABATEMENT OF WATER POLLUTION:

A. If the background concentration of a water contaminant exceeds the standard or requirement of Subsections A, B or C of 19.15.30.9 NMAC, the responsible person shall abate the pollution to the background concentration.

B. The standards and requirements set forth in of Subsections A, B or C of 19.15.30.9 NMAC are not intended as maximum ranges and concentrations for use, and nothing contained in 19.15.30.9 NMAC limits the use of waters containing higher ranges and concentrations.
[19.15.30.8 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.9 ABATEMENT STANDARDS AND REQUIREMENTS:

A. The responsible person shall abate the vadose zone so that water contaminants in the vadose zone will not with reasonable probability contaminate ground water or surface water, in excess of the standards in Subsections B and C of 19.15.30.9 NMAC, through leaching, percolation or other transport mechanisms, or as the water table elevation fluctuates.

B. The responsible person shall abate ground-water pollution at a place of withdrawal for present or reasonably foreseeable future use, where the TDS concentration is 10,000 mg/l or less, to conform to the following standards:

(1) toxic pollutants as defined in 20.6.2.7 NMAC shall not be present; and

(2) the standards of 20.6.2.3103 NMAC shall be met.

C. The responsible person shall abate surface-water pollution to conform to the water quality standards for interstate and intrastate surface waters in New Mexico, 20.6.4 NMAC.

D. The division shall not consider subsurface-water and surface-water abatement complete until eight consecutive quarterly samples, or an alternate lesser number of samples the director approves, from the compliance sampling stations the director approved meet the abatement standards in Subsections A, B and C of 19.15.30.9 NMAC. The division shall consider abatement of water contaminants measured in solid-matrix samples of the vadose zone complete after one-time sampling from compliance stations the director approves.

E. Technical infeasibility.

(1) If a responsible person is unable to meet the abatement standards set forth in Subsections A and B of 19.15.30.9 NMAC using commercially accepted abatement technology pursuant to an approved abatement plan, the responsible person may propose that abatement standards compliance is technically infeasible.

(a) The director may consider technical infeasibility proposals involving the use of experimental abatement technology.

(b) The responsible person may demonstrate technical infeasibility by a statistically valid extrapolation of the decrease in concentrations of a water contaminant over the remainder of a 20 year period, such that projected future reductions during that time would be less than 20 percent of the concentration at the time the responsible person proposes technical infeasibility. A statistically valid decrease cannot be demonstrated by fewer than eight consecutive quarters.

(c) The technical infeasibility proposal shall include a substitute abatement standard for those contaminants that is technically feasible. The responsible person shall meet abatement standards for other water contaminants not demonstrated to be technically infeasible.

(2) The director shall not approve a proposed technical infeasibility demonstration for a water contaminant if its concentration is greater than 200 percent of the abatement standard for the contaminant.

(3) If the director cannot approve any or all portions of a proposed technical infeasibility demonstration because the water contaminant concentration is greater than 300 percent of the abatement standard for each contaminant, the responsible person may further pursue the issue of technical infeasibility by filing a petition with the division seeking approval of alternate abatement standards pursuant to Subsection F of 19.15.30.9 NMAC.

F. Alternative abatement standards.

(1) At any time during or after the stage 2 abatement plan's submission, the responsible person may file a petition seeking approval of alternative abatement standards for the standards set forth in Subsections A and B of 19.15.30.9 NMAC. The division may approve alternative abatement standards if the petitioner demonstrates that:

(a) either compliance with the abatement standards is not feasible, by the maximum use of technology within the responsible person's economic capability; or there is no reasonable relationship between the economic and social costs and benefits, including attainment of the standards set forth in 19.15.30.9 NMAC to be obtained;

(b) the proposed alternative abatement standards are technically achievable and cost-benefit justifiable; and

(c) compliance with the proposed alternative abatement standard will not create a present or future hazard to public health or undue damage to property.

(2) The responsible person shall file a written petition with the division's environmental bureau chief. The petition may include a transport, fate and risk assessment in accordance with accepted methods, and other information as the petitioner deems necessary to support the petition. The petition shall:

(a) state the petitioner's name and address;

(b) state the date of the petition;

(c) describe the facility or activity for which the petitioner seeks the alternate abatement standards;

(d) state the address or description of the property upon which the facility is located;

(e) describe the water body or watercourse the release affected;

(f) identify the abatement standard from which petitioner wishes to vary;

(g) state why the petitioner believes that compliance with 19.15.30 NMAC will impose an unreasonable burden upon the petitioner's activity;

(h) identify the water contaminant for which the petitioner proposes the alternative standard;

(i) state the alternative standard the petitioner proposes;

(j) identify the three-dimensional body of water pollution for which the petitioner seeks approval; and

(k) state the extent to which the abatement standards set forth in 19.15.30.9 NMAC are now, and will in the future be, violated.

(3) The division's environmental bureau chief shall review the petition and, within 60 days after receiving the petition, submit a written recommendation to the director to approve, approve subject to conditions or disapprove any or all of the proposed alternative abatement standards. The recommendation shall include the reasons for the division's environmental bureau chief's recommendation. The division's environmental bureau chief shall submit a copy of the recommendation to the petitioner by certified mail.

(4) If the division's environmental bureau chief recommends approval, or approval subject to conditions, of any or all of the proposed alternative abatement standards, the division shall hold a public hearing on those standards. If the division's environmental bureau chief recommends disapproval of any or all of the proposed alternative abatement standards, the petitioner may submit a request to the director, within 15 days after the recommendation's receipt, for a public hearing on those standards. If the petitioner does not submit a timely request for hearing, the recommended disapproval shall become a final decision of the director and shall not be subject to review.

(5) If the director grants a public hearing, the division shall conduct the hearing in accordance with division hearing procedures.

(6) Based on the record of the public hearing, the division shall approve, approve subject to condition or disapprove any or all of the proposed alternative abatement standards. The division shall notify the petitioner by certified mail of its decision and the reasons for the decision.

[19.15.30.9 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.10 MODIFICATION OF ABATEMENT STANDARDS: If applicable abatement standards are modified after the division approves the abatement measures, the abatement standards that are in effect at the time that the division approved the abatement measures shall be the abatement standards for the duration of the abatement action, unless the director determines that compliance with those standards may with reasonable probability create a present or future hazard to public health or the

environment. In an appeal of the director's determination that additional actions are necessary, the director shall have the burden of proof.
[19.15.30.10 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.11 ABATEMENT PLAN REQUIRED:

A. Unless otherwise provided by 19.15.30 NMAC responsible persons who are abating, or who are required to abate, water pollution in excess of the standards and requirements set forth in 19.15.30.9 NMAC shall do so pursuant to an abatement plan the director approves. When the director has approved an abatement plan, the responsible person's actions leading to and including abatement shall be consistent with the abatement plan's terms and conditions.

B. In the event of a transfer of the ownership, control or possession of a facility for which an abatement plan is required or approved, where the transferor is a responsible person, the transferee also shall be considered a responsible person for the abatement plan's duration, and may jointly share the responsibility to conduct the actions 19.15.30 NMAC requires with other responsible persons.

(1) The transferor shall notify the transferee in writing at least 30 days prior to the transfer that the division has required or approved an abatement plan for the facility, and shall deliver or send by certified mail to the director a copy of the notification together with a certificate or other proof that the transferee has received the notification.

(2) The transferor and transferee may agree to a designated responsible person who shall assume the responsibility to conduct the actions 19.15.30 NMAC requires. The responsible persons shall notify the director in writing if a designated responsible person is agreed upon.

(3) If the director determines that the designated responsible person has failed to conduct the actions 19.15.30 NMAC requires, the director shall notify all responsible persons of this failure in writing and allow them 30 days, or longer for good cause shown, to conduct the required actions before setting a show cause hearing requiring those responsible persons to appear and show cause why they should not be ordered to comply, a penalty should not be assessed, a civil action should not be commenced in district court or the division should not take other appropriate action.

C. If the source of the water pollution to be abated is a facility that operated under a discharge plan, the director may require the responsible person to submit a financial assurance plan that covers the estimated costs to conduct the actions the abatement plan requires. Such a financial assurance plan shall be consistent with financial assurance requirements the division adopts.
[19.15.30.11 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.12 EXEMPTIONS FROM ABATEMENT PLAN REQUIREMENT:

A. Except as provided in Subsection B of 19.15.30.12 NMAC, 19.15.30.11 NMAC and 19.15.30.13 NMAC do not apply to a person who is abating water pollution:

(1) from an underground storage tank, under the authority of the New Mexico environmental improvement board's underground storage tank rules, 20.5 NMAC, or in accordance with the Ground Water Protection Act, NMSA 1978, Section 74-6B-1 *et seq.*;

(2) under the EPA's authority pursuant to either the Federal Comprehensive Environmental Response, Compensation and Liability Act, and amendments, or RCRA;

(3) pursuant to the New Mexico environmental improvement board's hazardous waste management rule, 20.4.1 NMAC;

(4) under the authority of the United States nuclear regulatory commission or the United States department of energy pursuant to the Atomic Energy Act;

(5) under the authority of a ground-water discharge plan the director approved, provided that such abatement is consistent with the requirements and provisions of 19.15.30.8 NMAC, 19.15.30.9 NMAC, Subsections C and D of 19.15.30.13 NMAC, 19.15.30.14 NMAC and 19.15.30.19 NMAC;

(6) under the authority of a letter of understanding, settlement agreement or administrative order on consent or other agreement signed by the director or director's designee prior to March 15, 1997, provided that abatement is being performed in compliance with the terms of the letter of understanding, settlement agreement or administrative order or other agreement on consent; and

(7) on an emergency basis, or while abatement plan approval is pending, or in a manner that will likely result in compliance with the standards and requirements set forth in 19.15.30.9 NMAC within one year after notice is required to be given pursuant to 19.15.29.9 NMAC provided that the division does not object to the abatement action.

B. If the director determines that abatement of water pollution subject to Subsection A of 19.15.30.12 NMAC will not met the standards of Subsections B and C of 19.15.30.9 NMAC, or that additional action is necessary to protect health, welfare, environment or property, the director may notify a responsible person, by certified mail, to submit an abatement plan pursuant to 19.15.30.11 NMAC and Subsection A of 19.15.30.14 NMAC. The notification shall state the reasons for the director's determination. In an appeal of the director's determination under Subsection B of 19.15.30.12 NMAC, the director shall have the burden of proof.
[19.15.30.12 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.13 ABATEMENT PLAN PROPOSAL:

A. Except as provided for in 19.15.30.12 NMAC a responsible person shall, within 60 days of receipt of the director's written notice that the division requires an abatement plan, submit an abatement plan proposal to the director for approval. The responsible person may submit stage 1 and stage 2 abatement plan proposals together. For good cause shown, the director may allow for a total of 120 days to prepare and submit the abatement plan proposal.

B. Voluntary abatement.

(1) A person wishing to abate water pollution in excess of the standards and requirements set forth in 19.15.30.9 NMAC may submit a stage 1 abatement plan proposal to the director for approval. Following the director's approval of a final site investigation report prepared pursuant to stage 1 of an abatement plan, a person may submit a stage 2 abatement plan proposal to the director for approval.

(2) Following approval of a stage 1 or stage 2 abatement plan proposal under Paragraph (1) of Subsection B of 19.15.30.13 NMAC the person submitting the approved plan shall be a responsible person under 19.15.30 NMAC for the purpose of performing the approved stage 1 or stage 2 abatement plan. Nothing in 19.15.30 NMAC precludes the director from applying 19.15.29.11 NMAC to a responsible person if applicable.

C. Stage 1 abatement plan. The stage 1 of the abatement plan's purpose is to design and conduct a site investigation that adequately defines site conditions, and provide the data necessary to select and design an effective abatement option. Stage 1 of the abatement plan may include the following information depending on the media affected, and as needed to select and implement an expeditious abatement option:

(1) descriptions of the site, including a site map, and of site history including the nature of the release that caused the water pollution, and a summary of previous investigations;

(2) site investigation work plan that defines:

(a) site geology and hydrogeology; the vertical and horizontal extent and magnitude of vadose-zone and ground-water contamination; subsurface hydraulic conductivity; transmissivity, storativity and rate and direction of contaminant migration; inventory of water wells inside and within one mile from the perimeter of the three-dimensional body where the standards set forth in Subsection C of 19.15.30.9 NMAC are exceeded; and location and number of wells the pollution actually or potentially affects; and

(b) surface water hydrology, seasonal stream flow characteristics, ground water/surface water relationships, the vertical and horizontal extent and magnitude of contamination and impacts to surface water and stream sediments; the magnitude of contamination and impacts on surface water may be, in part, defined by conducting a biological assessment of fish, benthic macro invertebrates and other wildlife populations; seasonal variations should be accounted for when conducting these assessments;

(3) monitoring program, including sampling stations and frequencies, for the abatement plan's duration that may be modified, after the director's approval, as the responsible person creates additional sampling stations;

(4) quality assurance plan, consistent with the sampling and analytical techniques listed in Subsection B of 20.6.2.3107 NMAC and with 20.6.4.14 NMAC of the water quality standards for interstate and intrastate surface waters in New Mexico, for all work to be conducted pursuant to the abatement plan;

(5) a schedule for stage 1 abatement plan activities, including the submission of summary quarterly progress reports, and the submission, for the director's approval, of a detailed final site investigation report; and

(6) additional information that may be required to design and perform an adequate site investigation.

D. Stage 2 abatement plan.

(1) A responsible person shall submit a stage 2 abatement plan proposal to the director for approval within 60 days, or up to 120 days for good cause shown, after the director's approval of the final site investigation report prepared pursuant to stage 1 of the abatement plan. The responsible person may submit a stage 1 and 2 abatement plan proposal together. Stage 2 of the abatement plan's purpose is to select and design, if necessary, an abatement option that, when implemented, results in attainment of the abatement standards and requirements set forth in 19.15.30.9 NMAC, including post-closure maintenance activities.

(2) Stage 2 of the abatement plan should include, at a minimum, the following information:

(a) a brief description of the current situation at the site;

(b) development and assessment of abatement options;

(c) a description, justification and design, if necessary, of the preferred abatement option;

(d) modification, if necessary, of the monitoring program the director approved pursuant to stage 1 of the abatement plan, including the designation of pre- and post-abatement-completion sampling stations and sampling frequencies to be used to demonstrate compliance with the standards and requirements set forth in 19.15.30.9 NMAC;

(e) site maintenance activities, if needed, the responsible person proposes to perform after abatement activities terminate;

(f) a schedule for the duration of abatement activities, including the submission of summary quarterly progress reports;

(g) a public notification proposal designed to satisfy the requirements of Subsections B and C of 19.15.30.15 NMAC; and

(h) additional information that may be reasonably required to select, describe, justify and design an effective abatement option.

[19.15.30.13 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.14 OTHER REQUIREMENTS:

A. A responsible person shall allow the director's authorized representative upon presentation of proper credentials and with reasonable prior notice to:

(1) enter the facility at reasonable times;

(2) inspect and copy records an abatement plan requires;

(3) inspect treatment works, monitoring and analytical equipment;

(4) sample wastes, ground water, surface water, stream sediment, plants, animals or vadose-zone material including vadose-zone vapor;

(5) use monitoring systems and wells under the responsible person's control in order to collect samples of media listed in Paragraph (4) of Subsection A of 19.15.30.14 NMAC; and

(6) gain access to off-site property the responsible person does not own or control, but is accessible to the responsible person through a third-party access agreement, provided that the agreement allows it.

B. A responsible person shall provide the director, or director's representative, with at least four working days advance notice of sampling to be performed pursuant to an abatement plan, or a well plugging, abandonment or destruction at a facility where the division has required an abatement plan.

C. A responsible person wishing to plug, abandon or destroy a monitoring or water supply well within the perimeter of the three-dimensional body where the standards set forth in Subsection B of 19.15.30.9 NMAC are exceeded, at a facility where the division has required an abatement plan, shall propose such action by certified mail to the director for approval, unless the state engineer's approval is required. The responsible person shall design the proposed action to prevent water pollution that could result from water contaminants migrating through the well or bore hole. The proposed action shall not take place without the director's written approval, unless the responsible person does not receive written approval or disapproval within 30 days after the date the director receives the proposal.

[19.15.30.14 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.15 PUBLIC NOTICE AND PARTICIPATION:

A. Prior to public notice, the applicant shall give written notice, as approved by the division, of stage 1 and stage 2 abatement plans to the following persons:

(1) surface owners of record within one mile of the perimeter of the geographic area where the standards and requirements set forth in 19.15.30.9 NMAC are exceeded;

(2) the county commission where the geographic area where the standards and requirements set forth in 19.15.30.9 NMAC are exceeded is located;

(3) the appropriate city officials if the geographic area where the standards and requirements set forth in 19.15.30.9 NMAC are exceeded is located or is partially located within city limits or within one mile of the city limits;

(4) those persons, the director identifies, who have requested notification, who shall be notified by mail;

(5) the New Mexico trustee for natural resources, and other local, state or federal governmental agencies affected, as the director identifies, which shall be notified by certified mail;

(6) the governor or president of a tribe, pueblo or nation if the geographic area where the standards and requirements set forth in 19.15.30.9 NMAC are exceeded is located or is partially located within tribal boundaries or within one mile of the tribal boundaries, who shall be notified by certified mail;

(7) the director may extend the distance requirements for notice if the director determines the proposed abatement plan has the potential to adversely impact public health or the environment at a distance greater than one mile. The director may require additional notice as needed. The applicant shall furnish a copy and proof of the notice to the division.

B. Within 15 days after the division determines that a stage 1 abatement plan or a stage 2 abatement plan is administratively complete, the responsible person shall issue public notice in a division-approved form in a newspaper of general circulation in the county in which the release occurred, and in a newspaper of general circulation in the state. For the purposes of Subsection B of 19.15.30.15 NMAC, an administratively complete stage 1 abatement plan is a document that satisfies the requirements of Subsection C of 19.15.30.13 NMAC and an administratively complete stage 2 abatement plan is a document that satisfies the requirements of Paragraph (2) of Subsection D of 19.15.30.13 NMAC. The public notice shall include, as approved in advance by the director:

(1) the responsible person's name and address;

(2) the location of the proposed abatement;

(3) a brief description of the source, extent and estimated volume of release; whether the release occurred into the vadose zone, ground water or surface water; and a description of the proposed stage 1 or stage 2 abatement plan;

(4) a brief description of the procedures the director followed in making a final determination;

(5) a statement that the public may view a copy of the abatement plan at the division's Santa Fe office or at the division's district office for the area in which the release occurred, and a statement describing how the public can access the abatement plan electronically from a division-maintained site if such access is available;

(6) a statement that the division will accept the following comments and requests for consideration if the director receives them within 30 days after the date of publication of the public notice:

(a) written comments on the abatement plan; and

(b) for a stage 2 abatement plan, written requests for a public hearing that include reasons why a hearing should be held; and

(7) an address and phone number at which interested persons may obtain further information.

C. A person seeking to comment on a stage 1 abatement plan, or to comment or request a public hearing on a stage 2 abatement plan, shall file written comments or hearing requests with the division within 30 days after the date of public notice, or within 30 days after the director receives a proposed significant modification of a stage 2 abatement plan. Requests for a public hearing shall set forth the reasons why a hearing should be held. The division shall hold a public hearing if the director determines that there is significant public interest or that the request has technical merit.

D. The division shall distribute notice of an abatement plan's filing with the next division and commission hearing docket following the plan's receipt.

[19.15.30.15 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.16 DIRECTOR APPROVAL OR NOTICE OF DEFICIENCY OF SUBMITTALS:

A. The director shall, within 60 days after receiving an administratively complete stage 1 abatement plan, a site investigation report, a technical infeasibility demonstration or an abatement completion report approve the document, or notify the responsible person of the document's deficiency, based upon the information available.

B. If the division does not hold a public hearing pursuant to Subsection C of 19.15.30.15 NMAC then the director shall, within 90 days after receiving a stage 2 abatement plan proposal, approve the plan, or notify the responsible person of the plan's deficiency, based upon the information available.

C. If the division holds a public hearing pursuant to Subsection C of 19.15.30.15 NMAC then the director shall, within 60 days after receiving the required information, approve stage 2 of the abatement plan proposal, or notify the responsible person of the plan's deficiency, based upon the information contained in the plan and the information submitted at the hearing.

D. If the director notifies a responsible person of a deficiency in a site investigation report, or in a stage 1 or stage 2 abatement plan proposal, the responsible person shall submit a modified document to cure the deficiencies the director specifies within 30 days after receiving the notice of deficiency. The responsible person is in violation of 19.15.30 NMAC if the responsible person fails to submit a modified document within the required time, or if the responsible person does not in the modified document make a good faith effort to cure the deficiencies the director specified.

E. Provided that the responsible person meets the other requirements of 19.15.30 NMAC and provided further that stage 2 of the abatement plan, if implemented, shall result in the standards and requirements set forth in 19.15.30.9 NMAC being met within a schedule that is reasonable given the site's particular circumstances, the director shall approve the plan.

[19.15.30.16 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.17 INVESTIGATION AND ABATEMENT: A responsible person who receives the division's approval for stage 1 or stage 2 of an abatement plan shall conduct investigation, abatement, monitoring and reporting activities in compliance with 19.15.30 NMAC and according to the terms and schedules contained in the approved abatement plans.

[19.15.30.17 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.18 ABATEMENT PLAN MODIFICATION:

A. The division may modify an approved abatement plan at the responsible person's written request in accordance with 19.15.30 NMAC with the director's written approval.

B. If data the responsible person submitted pursuant to monitoring requirements specified in the approved abatement plan or other information available to the director indicates that the abatement action is ineffective, or is creating unreasonable injury to or interference with health, welfare, environment or property, the director may require a responsible person to modify an abatement plan within the shortest reasonable time so as to effectively abate water pollution that exceeds the standards and requirements set forth in 19.15.30.9 NMAC, and to abate and prevent unreasonable injury to or interference with health, welfare, environment or property.

[19.15.30.18 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.19 COMPLETION AND TERMINATION:

A. The division shall consider abatement complete when the responsible person meets the standards and requirements set forth in 19.15.30.9 NMAC. At that time, the responsible person shall submit an abatement completion report, documenting compliance with the standards and requirements set forth in 19.15.30.9 NMAC, to the director for approval. The abatement completion report also shall propose changes to long-term monitoring and site maintenance activities, if needed, to be performed after the abatement plan's termination.

B. Provided that the responsible person meets the other requirements of 19.15.30 NMAC and provided further that the responsible person has met the standards and requirements set forth in 19.15.30.9 NMAC, the director shall approve the abatement completion report. When the director approves the abatement completion report, the director shall also notify the responsible person in writing that the abatement plan is terminated.

[19.15.30.19 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.20 DISPUTE RESOLUTION: In the event of a technical dispute regarding the requirements of 19.15.29 NMAC, 19.15.30.9 NMAC, 19.15.30.12 NMAC, 19.15.30.13 NMAC, 19.15.30.18 NMAC or 19.15.30.19 NMAC, including notices of deficiency, the responsible person may notify the director by certified mail that a dispute has arisen, and the responsible person

desires to invoke the dispute resolution provisions of 19.15.30.20 NMAC provided that the responsible person shall send the notification within 30 days after the responsible person receives the director's decision that causes the dispute. Upon the notification, the deadlines affected by the technical dispute shall be extended for a 30 day negotiation period, or for a maximum of 60 days if approved by the director for good cause shown. During this negotiation period, the director or the director's designee and the responsible person shall meet at least once. A mutually agreed upon third part may facilitate the meeting, but the third party shall assume no power or authority granted or delegated to the director by the Oil and Gas Act or by the division or commission. If the dispute remains unresolved after the negotiation period, the director's decision shall be final.
[19.15.30.20 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

19.15.30.21 APPEALS FROM DIRECTOR'S AND DIVISION'S DECISIONS:

A. If the director

(1) determines that an abatement plan is required pursuant to 19.15.29.11 NMAC;

(2) approves or provides notice of deficiency of a proposed abatement plan, technical infeasibility demonstration or abatement completion report; or

(3) modifies or terminates an approved abatement plan

the director shall provide written notice of the action by certified mail to the responsible person and other persons who participated in the action.

B. A person who participated in the action before the director and that the action listed in Subsection A of 19.15.30.21 NMAC adversely affects may file a petition requesting a hearing before a division examiner.

C. The person shall make the petition in writing and file it with the division within 30 days after receiving notice of the director's action. The petition shall specify the portions of the action to which the petitioner objects, certify that the person has mailed or hand-delivered a copy of the petition to the director and to the applicant or permittee if the petitioner is not the applicant or permittee and have attached a copy of the action for which the person seeks review. Unless a person makes a timely petition for hearing, the director's action is final.

D. The hearing before the division shall be conducted in the same manner as other division hearings.

E. The petitioner shall pay the cost of the court reporter for the hearing.

F. A party adversely affected by a division order pursuant to a hearing held by a division examiner, shall have a right to have the matter heard de novo before the commission.

G. The appeal provisions do not relieve the owner, operator or responsible person of their obligations to comply with federal or state laws including regulations or rules.
[19.15.30.21 NMAC - Rp, 19.15.1.19 NMAC, 12/1/08]

HISTORY of 19.15.30 NMAC:

History of Repealed Material: 19.15.1 NMAC, General Provisions and Definitions (filed 04/27/2001) repealed 12/1/08.

NMAC History:
That applicable portion of 19.15.1 NMAC, General Provisions and Definitions (Section 19) (filed 04/27/2001) was replaced by 19.15.30 NMAC, Remediation, effective 12/1/08.

TITLE 19 NATURAL RESOURCES AND WILDLIFE
CHAPTER 15 OIL AND GAS
PART 35 WASTE DISPOSAL

19.15.35.1 ISSUING AGENCY: Energy, Minerals and Natural Resources Department, Oil Conservation Division.
[19.15.35.1 NMAC - Rp, 19.15.9.1 NMAC, 12/1/08]

19.15.35.2 SCOPE: 19.15.35 NMAC applies to persons engaged in oil and gas development and production within New Mexico.
[19.15.35.2 NMAC - Rp, 19.15.9.2 NMAC, 12/1/08]

19.15.35.3 STATUTORY AUTHORITY: 19.15.35 NMAC is adopted pursuant to the Oil and Gas Act, NMSA 1978, Section 70-2-6, Section 70-2-11 and Section 70-2-12, which authorizes the division to regulate the disposition of non-domestic waste resulting from the exploration, development, production or storage of oil or gas; from the oil field service industry; the transportation of oil or gas; the treatment of gas; or the refinement of oil.
[19.15.35.3 NMAC - Rp, 19.15.9.3 NMAC, 12/1/08]

19.15.35.4 DURATION: Permanent.
[19.15.35.4 NMAC - Rp, 19.15.9.4 NMAC, 12/1/08]

19.15.35.5 EFFECTIVE DATE: December 1, 2008, unless a later date is cited at the end of a section.
[19.15.35.5 NMAC - Rp, 19.15.9.5 NMAC, 12/1/08]

19.15.35.6 OBJECTIVE: To establish procedures for the disposal of certain non-domestic waste at solid waste facilities permitted by the New Mexico environment department and for the disposal of regulated NORM associated with the oil and gas industry.
[19.15.35.6 NMAC - Rp, 19.15.9.6 NMAC, 12/1/08]

19.15.35.7 DEFINITIONS:

A. "Discharge plan" means a plan the operator submits and the division approves pursuant to NMSA 1978, Section 70-2-12(B)(22) and WQCC rules.

B. "EPA clean" means the cleanliness standards established by the EPA in 40 C.F.R. section 261.7(b).

C. "NESHAP" means the National Emission Standards for Hazardous Air Pollutants of the EPA, 40 C.F.R. Part 61.

D. "Solid waste facility" means a facility permitted or authorized as a solid waste facility by the New Mexico environment department pursuant to the Solid Waste Act, NMSA 1978, Sections 74-9-1 *et seq.* and New Mexico environmental improvement board rules to accept industrial solid waste or other special waste.

E. "TCLP" means the testing protocol established by the EPA in 40 C.F.R. Part 261, entitled "Toxicity Characteristic Leaching Procedure" or an alternative hazardous constituent analysis the division has approved.

F. "Waste" means non-domestic waste resulting from the exploration, development, production or storage of oil or gas pursuant to NMSA 1978, Section 70-2-12(B)(21) and non-domestic waste arising from the oil field service industry, and certain non-domestic waste arising from the transportation, treatment or refinement of oil or gas pursuant to NMSA 1978, Section 70-2-12(B)(22).
[19.15.35.7 NMAC - Rp, 19.15.9.712 NMAC, 12/1/08]

19.15.35.8 DISPOSAL OF CERTAIN NON-DOMESTIC WASTE AT SOLID WASTE FACILITIES:

A. A person may dispose of certain non-domestic waste arising from the exploration, development, production or storage of oil or gas; certain non-domestic waste arising from the oil field service industry; and certain non-domestic waste arising from oil or gas' transportation, treatment or refinement at a solid waste facility in accordance with 19.15.35.8 NMAC.

B. Procedure.

(1) A person may dispose of waste listed in Paragraph (1) of Subsection D of 19.15.35.8 NMAC at a solid waste facility without the division's prior written authorization.

(2) A person may dispose of waste listed in Paragraph (2) of Subsection D of 19.15.35.8 NMAC at a solid waste facility after testing and the division's prior written authorization. Before the division grants authorization, the applicant for the authorization shall provide copies of test results to the division and to the solid waste facility where the applicant will dispose of the waste. In appropriate cases and so long as a representative sample is tested, the division may authorize disposal of a waste stream listed in Paragraph (2) of Subsection D of 19.15.35.8 NMAC without individual testing of each delivery.

(3) A person may dispose of waste listed in Paragraph (3) of Subsection D of 19.15.35.8 NMAC at a solid waste facility on a case-by-case basis after testing the division may require and the division's prior written authorization. Before the division grants authorization, the applicant for the authorization shall provide copies of test results to the division and to the solid waste facility where it will dispose of the waste.

(4) Simplified procedure for holders of discharge plans. Holders of an approved discharge plan may amend the

discharge plan to provide for disposal of waste listed in Paragraph (2) of Subsection D of 19.15.35.8 NMAC and, as applicable, Paragraph (3) of Subsection D of 19.15.35.8 NMAC. If the division approves the amendment to the discharge plan, the holder may dispose of wastes listed in Paragraphs (2) and (3) of Subsection D of 19.15.35.8 NMAC at a solid waste facility without obtaining the division's prior written authorization.

C. The following provisions apply to the types of waste described below as specified.

(1) The person disposing of the waste does not have to test the following waste before disposal:

(a) barrels, drums, five-gallon buckets or one-gallon containers so long as they are empty and EPA-clean;

(b) uncontaminated brush and vegetation arising from clearing operations;

(c) uncontaminated concrete;

(d) uncontaminated construction debris;

(e) non-friable asbestos and asbestos contaminated waste material, so long as the disposal complies with applicable federal regulations and state rules for non-friable asbestos materials and so long as the facility operator removes the asbestos from steel pipes and boilers and, if applicable, recycles the steel;

(f) detergent buckets, so long as the buckets are completely empty;

(g) fiberglass tanks so long as the tank is empty, cut up or shredded and EPA clean;

(h) grease buckets, so long as empty and EPA clean;

(i) uncontaminated ferrous sulfate or elemental sulfur so long as recovery and sale as a raw material is not possible;

(j) metal plate and metal cable;

(k) office trash;

(l) paper and paper bags, so long as the paper bags are empty;

(m) plastic pit liners, so long as the person cleans them well;

(n) soiled rags or gloves, which if wet pass the paint filter test prior to disposal; or

(o) uncontaminated wood pallets.

(2) The person disposing of the waste shall test the following wastes for the substances indicated prior to disposal:

(a) activated alumina for TPH and BTEX;

(b) activated carbon for TPH and BTEX;

(c) amine filters, which the facility operator air-dries for at least 48 hours before testing, for BTEX;

(d) friable asbestos and asbestos-contaminated waste material, which the facility operator removes asbestos from steel pipes and boilers and, if applicable, recycles the steel before disposal, where the disposal otherwise complies with applicable federal regulations and state rules for friable asbestos materials pursuant to NESHAP;

(e) cooling tower filters, which the facility operator drains and then air-dries for at least 48 hours before testing, for TCLP/chromium;

(f) dehydration filter media, which the facility operator drains and then air-dries for at least 48 hours before testing, for TPH and BTEX;

(g) gas condensate filters, which the facility operator drains and then air-dries for at least 48 hours before testing, for BTEX;

(h) glycol filters, which the facility operator drains and then air-dries for at least 48 hours before testing, for BTEX;

(i) iron sponge, which the facility operator oxidizes completely, for ignitability testing;

(j) junked pipes, valves and metal pipe for NORM;

(k) molecular sieves, which the facility operator cools in a non-hydrocarbon inert atmosphere and hydrates in ambient air for at least 24 hours before testing, for TPH and BTEX;

(l) pipe scale and other deposits removed from pipeline and equipment for TPH, TCLP/metals and NORM;

(m) produced water filters, which the facility operator drains and then air-dries for at least 48 hours before testing, for corrosivity;

(n) sandblasting sand for TCLP/metals or, if the division requires, TCLP/total metals; or

(o) waste oil filters, which the facility operator drains thoroughly of oil at least 24 hours before testing and recycles the oil and metal parts, for TCLP/metals.

(3) A person may dispose of the following wastes on a case-by-case basis with the division's approval:

(a) sulfur contaminated soil;

(b) catalysts;

(c) contaminated soil other than petroleum contaminated soil;

(d) petroleum contaminated soil in the event of a director-declared emergency;

(e) contaminated concrete;

(f) demolition debris not otherwise specified in 19.15.35.8 NMAC;

(g) unused dry chemicals; in addition to testing the division requires, the person applying for division approval shall forward a copy of the material safety data sheet to the division and the solid waste facility on each chemical proposed for disposal;

(h) contaminated ferrous sulfate or elemental sulfur;

(i) unused pipe dope;
(j) support balls;
(k) tower packing materials;
(l) contaminated wood pallets;
(m) partial sacks of unused drilling mud; in addition to testing the division requires, the person applying for division approval shall forward a copy of the material safety data sheet to division and the solid waste facility at which the it will dispose of the partial sacks; or
(n) other wastes as applicable.

D. Testing.

(1) The person applying for division approval to dispose of waste in a solid waste facility shall conduct testing required by 19.15.35.8 NMAC according to the Test Methods for Evaluating Solid Waste, EPA No. SW-846 and shall direct questions concerning the standards or a particular testing facility to the division.

(2) The testing facility shall conduct testing according to the test method listed:

(a) TPH: EPA method 418.1 or 8015 (DRO and GRO only) or an alternative, division-approved hydrocarbon analysis;
(b) TCLP: EPA Method 1311 or an alternative hazardous constituent analysis approved by the division;
(c) paint filter test: EPA Method 9095A;
(d) ignitability test: EPA Method 1030;
(e) corrosivity: EPA Method 1110;
(f) reactivity: test procedures and standards the division establishes on a case-by-case basis; and
(g) NORM. 20.3.14 NMAC.

(3) To be eligible for disposal pursuant to 19.15.35.8 NMAC, the concentration of substances the testing facility identifies during testing shall not exceed the following limits:

(a) benzene: 9.99 mg/kg;
(b) BTEX: 499.99 mg/kg (sum of all);
(c) TPH: 1000 mg/kg;
(d) hazardous air pollutants: the standards set forth in NESHAP; and
(e) TCLP:
(i) arsenic: 5 mg/l,
(ii) barium: 100 mg/l,
(iii) cadmium: 1 mg/l,
(iv) chromium: 5 mg/l,
(v) lead: 5 mg/l,
(vi) mercury: 0.2 mg/l,
(vii) selenium: 1 mg/l, and
(viii) silver: 5 mg/l.

[19.15.35.8 NMAC - Rp, 19.15.9.712 NMAC, 12/1/08]

19.15.35.9 DISPOSAL OF REGULATED NORM: A person disposing of regulated NORM, as defined at 19.15.2.7 NMAC, is subject to 19.15.35.9 NMAC through 19.15.35.14 NMAC and to New Mexico environmental improvement board rule, 20.3.14 NMAC.
[19.15.35.9 NMAC - Rp, 19.15.9.714 NMAC, 12/1/08]

19.15.35.10 NON-RETRIEVED FLOWLINES AND PIPELINES:

A. The division shall consider a proposal from an operator for leaving flowlines and pipelines (hereinafter "pipeline") that contain regulated NORM in the ground provided the operator performs the abandonment procedures in a manner to protect the environment, public health and fresh waters. Division approval is contingent on the applicant meeting the following requirements as a minimum.

B. An application the applicant submits to the division shall contain the following as a minimum:

(1) the pipeline layout over its entire length on a form C-102 including the legal description of the location of both ends and surface ownership along the pipeline;
(2) results of a radiation survey the applicant conducts at all accessible points and a surface radiation survey along the complete pipeline route in a division-approved form; surveys conducted consistent with division-approved procedures;
(3) the type of material for which the applicant or any predecessor operator used the pipeline;
(4) the procedure the applicant will use for flushing hydrocarbons or produced water from the pipeline;
(5) an explanation as to why it is more beneficial to leave the pipeline in the ground than to retrieve it; and
(6) proof the applicant has sent notice of the proposed abandonment to all surface owners where the pipeline is located; the director may require the applicant to send additional notification as described in 19.15.35.14 NMAC.

C. Upon division approval of the application, the operator shall notify the appropriate division district office at least 24 hours prior to beginning work on the pipeline abandonment.

D. As a condition of completion of the pipeline abandonment, the operator shall permanently cap all accessible points.

E. An operator shall not place additional regulated NORM in a pipeline to be abandoned under 19.15.35.10 NMAC other than that which accumulated in the pipeline under the pipeline's normal operation.

F. An operator may abandon a pipeline that does not exhibit regulated NORM pursuant to required surveys without an application pursuant to 19.15.35.10 NMAC in accordance with the operator's applicable lease agreements.

G. If a pipeline's appurtenance contains regulated NORM, but upon the appurtenance's removal, no accessible point or surface above the pipeline exhibits the presence of regulated NORM, then the applicant shall submit to the division the information regarding the regulated NORM in the appurtenance and a statement concerning that regulated NORM's management. With respect to the pipeline left in the ground, the applicant is subject to the requirements of 19.15.35.10 NMAC with the exception of Paragraph (6) of Subsection B of 19.15.35.10 NMAC.

[19.15.35.10 NMAC - Rp, 19.15.9.714 NMAC, 12/1/08]

19.15.35.11 COMMERCIAL OR CENTRALIZED SURFACE WASTE MANAGEMENT FACILITIES:

A. The division shall consider proposals for the disposal of regulated NORM in commercial or centralized surface waste management facilities, provided the applicant performs the disposal in a manner that protects the environment, public health and fresh waters. Division approval is contingent on the applicant obtaining a permit in accordance with 19.15.36 NMAC for the facility and complying with additional requirements specifically related to regulated NORM disposal as described in Subsections B through D of 19.15.35.11 NMAC.

B. The division shall set requests for permission to receive and dispose of regulated NORM in commercial or centralized surface waste management facilities for hearing in order for the facility's operator to obtain or modify a permit in accordance with 19.15.36 NMAC. The division shall consider a request to dispose of regulated NORM at a facility previously permitted under 19.15.36 NMAC a major modification to that facility. The facility's operator shall submit a hearing request to the division that contains the following at a minimum:

(1) complete plans for the facility, including the sources of regulated NORM, radiation survey readings, quantities of regulated NORM to be disposed and monitoring proposals;

(2) a copy of this permit for the facility, if the division has issued one;

(3) proof of public notice of the application as required by 19.15.36 NMAC; and

(4) evidence of issuance of a specific license pursuant to 20.3.14 NMAC, a license pursuant to 20.3.13 NMAC and other authorizations required by law.

C. The division shall establish operating procedures that are protective of the environment, public health and fresh waters in its order.

D. A person desiring to dispose of regulated NORM in an approved commercial or centralized surface waste management facility shall furnish regulated NORM information to the facility's operator sufficient for the operator to submit form C-138 for division approval. The facility operator shall receive division approval prior to receiving the regulated NORM at the disposal facility.

[19.15.35.11 NMAC - Rp, 19.15.9.714 NMAC, 12/1/08]

19.15.35.12 DOWNHOLE DISPOSAL IN WELLS TO BE PLUGGED AND ABANDONED:

A. The division shall consider proposals from an operator for downhole disposal of regulated NORM in wells that are to be plugged and abandoned, provided the operator performs the plugging and abandonment procedures in a manner that protects the environment, public health and fresh waters and in accordance with division rules pertaining to well plugging and abandonment.

B. The applicant shall complete form C-103 and submit it to the division for approval.

(1) In addition to all other information required for C-103 submittal, the form shall specifically state that the applicant will place regulated NORM in the well bore. The abandonment procedure contained in the application shall identify depths at which the operator will place regulated NORM, radiation survey results conducted on the regulated NORM to be disposed, the procedure the operator will use to place the regulated NORM in the well bore and the specific form of regulated NORM the operator will place in the well bore (*e.g.* scale, pipe, dirt, etc.).

(2) The applicant shall address abnormally pressured zones in the well bore that might result in migration of the regulated NORM after it has been placed in the plugged and abandoned well in the application.

(3) The applicant shall send notice of the submittal of an application to dispose of regulated NORM in a plugged and abandoned well to the surface owner and the mineral lessor. The director may require additional notification as described in 19.15.35.14 NMAC.

C. The operator shall not commence work until the division has approved the application for regulated NORM disposal in a plugged and abandoned well.

D. The operator shall comply with the following requirements when disposing of the regulated NORM in a plugged and abandoned well.

(1) The operator shall follow plugging and abandonment procedures the division routinely requires unless the procedures are specifically superseded at the division's instruction to facilitate the regulated NORM disposal.

(2) The operator shall color-dye the cement plug located directly above the regulated NORM and the surface plug with red iron oxide.

(3) The operator shall dispose of regulated NORM at a depth of at least 100 feet below the lower most known underground source of drinking water zone. There must be evidence that there is cement across the known underground source of drinking water zones.

[19.15.35.12 NMAC - Rp, 19.15.9.714 NMAC, 12/1/08]

19.15.35.13 INJECTION:

A. The division shall consider an operator's proposal for injecting regulated NORM into injection wells provided the operator will perform the injection in a manner that protects the environment, public health and fresh waters and complies with division rules pertaining to injection. Division approval is contingent on the applicant meeting the requirements in Subsection B of 19.15.35.13 NMAC at a minimum.

B. An applicant wishing to dispose of regulated NORM in a disposal well shall comply with the following requirements.

(1) An application submitted to the division for permission to dispose of a regulated NORM in an existing or newly permitted disposal well shall contain the following information at a minimum:

(a) a completed form C-108 with proof of required notification and a statement that regulated NORM will be injected;

(b) a description of regulated NORM to be disposed including its source, radiation levels and quantity; and

(c) a description of the process used on the material to improve injectivity.

(2) An operator shall comply with the following requirements when disposing of regulated NORM in a disposal well.

(a) The operator may only inject regulated NORM from the operator's operations.

(b) Each time the operator injects regulated NORM into the disposal well, the operator shall submit a form C-103 to the division and the appropriate division district office. The operator shall submit the completed form C-103 five working days following the injection, which contains the following information: source of regulated NORM, NORM radiation level, quantity of material injected, description of any process the operator used on the material to improve injectivity, the injection pressure while injecting and dates of injection.

(c) The operator shall report mechanical failures to the appropriate division district office within 24 hours of the failure. The operator shall submit a description of the failure and immediate measures the operator took in response to the failure no later than 15 days following the failure. The operator shall notify the appropriate division district office of proposed repair plans. The operator shall receive division approval of repair plans prior to commencing work and provide notice of commencement to the appropriate division district office so that the division may witness or inspect repairs. The operator shall monitor well repairs to ensure regulated NORM does not escape the well bore or is completely contained in the repair operations.

(d) At the time of the disposal well's abandonment, the operator shall squeeze the injection interval that the operator used for regulated NORM injection with cement or locate a cement plug directly above the injection interval. Cement in either case shall contain red iron oxide.

(e) The injection zone shall be at a depth of at least 100 feet below the lower most known underground drinking water zone.

C. Injection in EOR injection wells. The division shall consider issuing a permit for the disposal of regulated NORM into injection wells within an approved EOR project only after notice and hearing and upon the applicant's minimum demonstration that:

(1) the injection will not reduce the project's efficiency or otherwise cause a reduction in the ultimate recovery of hydrocarbons from the project;

(2) the injection will not cause an increase in the radiation level of regulated NORM produced from the EOR interval in an producing well located either within or offsetting the project area; and

(3) the operations will conform to provisions of Subsection B of 19.15.35.13 NMAC.

D. Injection above fracture pressure.

(1) The division shall consider issuing a permit for the disposal of regulated NORM in a disposal well above fracture pressure only after notice and hearing and upon receiving the following minimum information from the applicant:

(a) a completed form C-108 clearly stating that disposal of regulated NORM at or above fracture pressure is proposed;

(b) information required under Subsection B of 19.15.35.13 NMAC above;

(c) model results predicting the fracture propagation including the expected height, extension, direction and any other evidence sufficient to demonstrate that the fracture will not extend beyond the injection interval or into the confining zones; the application shall include the procedure, the anticipated pressures and the type and pressure rating of equipment that the operator will use; the division may consider the current or potential utilization of zones immediately above and below the zone of interest in the acceptance or rejection of model predictions; and

(d) a contingency plan of the procedures, including containment plans that the operator will employ if a mechanical failure occurs.

(2) The operator shall comply with the following requirements when disposing of regulated NORM in a disposal well above fracture pressure.

(a) The operator shall notify the appropriate division district office 24 hours prior to commencing injection.

(b) Upon completion of the injection, the operator shall squeeze the disposal interval with cement or locate a

cement plug directly above the injection interval. In either case the cement in either case shall contain red iron oxide. The operator shall submit a completed form C-103 to the division and the appropriate division district office within five working days of the injection. If the operator desires to return the well to injection below fracture pressure, the operator shall include those plans in the application.

E. Injection in commercial disposal facilities. The division shall consider issuing a permit for the commercial disposal of regulated NORM by injection only after notice and hearing, and provided the applicant has obtained a specific license pursuant to 20.3.14 NMAC and pursuant to 20.3.13 NMAC. In addition to obtaining these licenses the operator shall also comply with Subparagraph (a) of Paragraph 2 of Subsection B of 19.15.35.13 NMAC.

[19.15.35.13 NMAC - Rp, 19.15.9.714 NMAC, 12/1/08]

19.15.35.14 ADDITIONAL NOTIFICATION:

A. The director may require additional notice for an application under 19.15.35.9 NMAC to 19.15.35.13 NMAC.

B. A notified party seeking to comment or request a public hearing on an application shall file comments or a written hearing request with the division within 20 days after receiving notice. A request for a hearing shall set forth the reasons why the division should hold a hearing.

C. The division shall hold a public hearing as required in 19.15.35.9 NMAC through 19.15.35.13 NMAC or if the director determines there is sufficient cause to hold a public hearing.

[19.15.35.14 NMAC - Rp, 19.15.9.714 NMAC, 12/1/08]

HISTORY of 19.15.35 NMAC:

History of Repealed Material: 19.15.9 NMAC, Secondary or Other Enhanced Recovery, Pressure Maintenance, Salt Water Disposal, and Underground Storage (filed 11/13/2000) repealed 12/1/08.

NMAC History:

Those applicable portions of 19.15.9 NMAC, Secondary or Other Enhanced Recovery, Pressure Maintenance, Salt Water Disposal, and Underground Storage (Sections 712 and 714) (filed 11/13/2000) were replaced by 19.15.35 NMAC, Waste Disposal, effective 12/1/08.

Attachment F: Closure Plan

At the conclusion of piloting activities, all remaining liquid wastes will be hauled from the BGNDRF to Gandy Marley by Gandy Corp. This will include washout water from the BGNDRF tanks. All cartridge filters, granular activated carbon filters, and other contaminated waste will also be disposed of by Gandy Corp. Pursuant to NMAC 19.15.35.8, the containment liner will be disposed of in the solid waste landfill in Alamogordo, NM. Land will not need to be reclaimed since the pilot location is a Federal facility.

Pictures of the site will be provided to the New Mexico OCD upon completion of this activity. A report will be provided within 60 days of the completion of activities.