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

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

OIL CONS. DIV DIST. 3
JUN 11 2015

Form C-147
Revised March 31, 2015

Recycling Facility and/or Recycling Containment

Type of Facility: ☒ Recycling Facility ☒ Recycling Containment*

Type of action: ☐ Permit ☐ Registration ☐ Modification ☐ Extension ☐ Closure ☐ Other (explain) _____

*** At the time C-147 is submitted to the division for a Recycling Containment, a copy shall be provided to the surface owner.**

Be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances.

1.

Operator: Basin Disposal Inc, dbA Basin Water Recycling (For multiple operators attach page with information) OGRID #: _____

Address: PO Box 100, Aztec NM 87410

Facility or well name (include API# if associated with a well): _____ N/A

OCD Permit Number: _____ (For new facilities the permit number will be assigned by the district office)

U/L or Qtr/Qtr S ½ NE ¼ N ½ SE ¼ Section 13 Township 23N Range 7W County: Rio Arriba

Surface Owner: ☒ Federal ☐ State ☐ Private ☐ Tribal Trust or Indian Allotment

2.

☒ **Recycling Facility:**

Location of recycling facility (if applicable): Latitude 36.225553 "N Longitude 107.520556"W NAD: ☐1927 ☒ 1983

Proposed Use: ☒ Drilling* ☒ Completion* ☒ Production* ☐ Plugging *

The re-use of produced water may NOT be used until fresh water zones are cased and cemented

☐ Other, ***requires permit for other uses. Describe use, process, testing, volume of produced water and ensure there will be no adverse impact on groundwater or surface water.***

☒ Fluid Storage

☒ Above ground tanks ☒ Recycling containment ☐ Activity permitted under 19.15.17 NMAC explain type _____

☐ Activity permitted under 19.15.36 NMAC explain type: _____ ☐ Other explain _____

☐ For multiple or additional recycling containments, attach design and location information of each containment

☐ **Closure Report (required within 60 days of closure completion):** ☐ Recycling Facility Closure Completion Date: _____

3.

☒ **Recycling Containment:**

☐ Annual Extension after initial 5 years (attach summary of monthly leak detection inspections for previous year)

Center of Recycling Containment (if applicable): Latitude 36.225553 "N Longitude 107.520556 "W NAD: ☐1927 ☒ 1983

☐ For multiple or additional recycling containments, attach design and location information of each containment

☒ Lined ☒ Liner type: Thickness 45 mil ☒ LLDPE ☐ HDPE ☐ PVC ☐ Other _____

☒ String-Reinforced

Liner Seams: ☒ Welded ☒ Factory ☐ Other 11' x 133' Volume: 25000 bbl Dimensions: L _____ x W _____ x D _____

☐ Recycling Containment Closure Completion Date: _____

4.

Bonding:

☐ Covered under bonding pursuant to 19.15.8 NMAC per 19.15.34.15(A)(2) NMAC **(These containments are limited to only the wells owned or operated by the owners of the containment.)**

☐ Bonding in accordance with 19.15.34.15(A)(1). Amount of bond $_____ **(work on these facilities cannot commence until bonding amounts are approved)**

☒ Attach closure cost estimate and documentation on how the closure cost was calculated.

5.

Fencing:

☐ Four foot height, four strands of barbed wire evenly spaced between one and four feet

☒ Alternate. Please specify 6 foot chain link

6.

Signs:

☒ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers

☐ Signed in compliance with 19.15.16.8 NMAC

7.

Variances:

Justifications and/or demonstrations that the proposed variance will afford reasonable protection against contamination of fresh water, human health, and the environment.

Check the below box only if a variance is requested:

☒ Variance(s): Requests must be submitted to the appropriate division district for consideration of approval. If a Variance is requested, include the variance information on a separate page and attach it to the C-147 as part of the application.

If a Variance is requested, it must be approved prior to implementation.

8.

Siting Criteria for Recycling Containment

Instructions: The applicant must provide attachments that demonstrate compliance for each siting criteria below as part of the application. Potential examples of the siting attachment source material are provided below under each criteria.

General siting

Ground water is less than 50 feet below the bottom of the Recycling Containment. NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells	☐ Yes ☒ No ☐ NA
Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; written approval obtained from the municipality	☐ Yes ☐ No ☒ NA
Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Minerals Division	☐ Yes ☒ No
Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; topographic map	☐ Yes ☒ No
Within a 100-year floodplain. FEMA map	☐ Yes ☒ No
Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse, or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; visual inspection (certification) of the proposed site	☐ Yes ☒ No
Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. - Visual inspection (certification) of the proposed site; aerial photo; satellite image	☐ Yes ☒ No
Within 500 horizontal feet of a spring or a fresh water well used for domestic or stock watering purposes, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; visual inspection (certification) of the proposed site	☐ Yes ☐ No
Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; topographic map; visual inspection (certification) of the proposed site	☐ Yes ☒ No

9.
Recycling Facility and/or Containment Checklist:
Instructions: Each of the following items must be attached to the application. Indicate, by a check mark in the box, that the documents are attached.

- ☒ Design Plan - based upon the appropriate requirements.
- ☒ Operating and Maintenance Plan - based upon the appropriate requirements.
- ☒ Closure Plan - based upon the appropriate requirements.
- ☒ Site Specific Groundwater Data -
- ☒ Siting Criteria Compliance Demonstrations –
- ☒ **Certify that notice of the C-147 (only) has been sent to the surface owner(s)**

10.
Operator Application Certification:
I hereby certify that the information and attachments submitted with this application are true, accurate and complete to the best of my knowledge and belief.

Name (Print): John Volkerding Title: Gen Mgr / VP

Signature: Date: 6/10/15

e-mail address: jvolkerding@basindisposal.inc.com Telephone: 505 320 2840

11.
OCD Representative Signature: **Approval Date:** 7/16/15

Title: Environmental Spec **OCD Permit Number:** 3RF-2

☐ OCD Conditions

☐ Additional OCD Conditions on Attachment

OIL CONS. DIV DIST. 3

JUN 24 2015

Basin Water Recycling
Lybrook Facility
Variance Explanation for Recycling Containment

All requested variance provide equal or better protection of fresh water, public health, and the environment

C-147 #3. Recycling Containment

19.15.34.12.A (2) NMAC states *" The operator shall construct the containment in a levee with an inside grade no steeper than two horizontal feet to one vertical foot (2H:1V). The levee shall have an outside grade no steeper than three horizontal feet to one vertical foot (3H:1V). The top of the levee shall be wide enough to install an anchor trench and provide adequate room for inspection and maintenance. "*

Basin Water Recycling proposes to install an above ground storage containment using metal walls to create a steel circular tank to contain the primary and secondary liners. Thus Basin Water recycling will not be constructing a levee. The steel walls will be vertical and there will not be an anchor trench.

C-147 #3. Recycling Containment

19.15.34.12.E NMAC states *"Netting. The operator shall ensure that a recycling containment is screened, netted or otherwise protective of wildlife, including migratory birds.. "*

Basin Water Recycling proposes to install a floating roof on the containment.

C-147 #5. Fencing

19.15.34.12.D (1) NMAC states *"Recycling containments shall be fenced with a four foot fence that has at least four strands of barbed wire evenly spaced in the interval between one foot and four feet above ground level."*

Basin Water Recycling proposes to install a 6 foot chain link fence with a barbed wire security top surrounding the entire operational area .

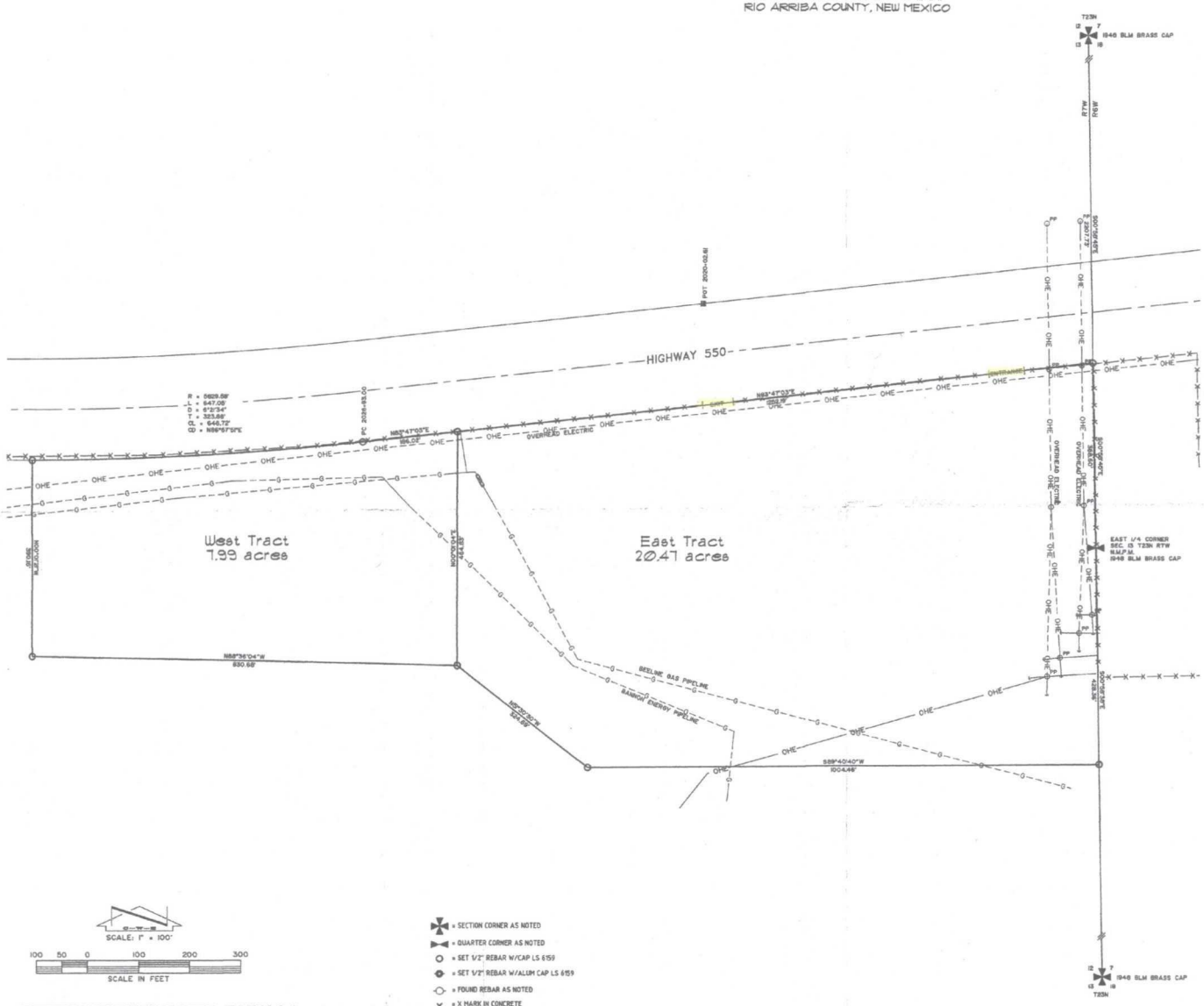
C-147 #6. Signs

19.15.34.12.C NMAC states *"Signs. The operator shall post an upright sign no less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place on the fence surrounding the containment. The operator shall post the sign in a manner and location such that a person can easily read the legend. The sign shall provide the following information: the operator's name, the location of the site by quarter-quarter or unit letter, section, township and range, and emergency telephone numbers."*

Basin Water Recycling proposes to install the sign on the fence at the entrance to the facility.

BASIN WATER RECYCLING

BLM LEASE AREAS FOR THE
LYBROOK WATER RECYCLING FACILITY
LYING IN THE S1/2 NE1/4 AND THE N1/2 SE1/4
OF SECTION 13 T23N R7W N.M.P.M.
RIO ARRIBA COUNTY, NEW MEXICO



SCALE: 1" = 100'

100 50 0 100 200 300
SCALE IN FEET

- = SECTION CORNER AS NOTED
- = QUARTER CORNER AS NOTED
- = SET 1/2" REBAR W/CAP LS 6159
- = SET 1/2" REBAR W/ALUM CAP LS 6159
- = FOUND REBAR AS NOTED
- = X MARK IN CONCRETE
- = SET PK NAIL W/WASHER
- = HWY DEPT BRASS CAP R/W MON
- = NOT SET

CHENEY·WALTERS·ECHOLS INC.
ENGINEERS & SURVEYORS
909 W. APACHE - FARMINGTON, NEW MEXICO 87401 - (505)327-3303

ISSUE DATE: 06/19/2014
PRINTED: July 23, 2014
FILE: G:\D\DWG-CRT\2014CRT\14493\14493.dwg

LEGAL DESCRIPTIONS

EAST LEASE AREA

A TRACT OF LAND LYING IN THE S1/2 NE1/4 AND THE N1/2 SE1/4 OF SECTION 13, T23N R7W N.M.P., RIO ARRIBA COUNTY, NEW MEXICO BEING DESCRIBED AS AS FOLLOWS:
BEGINNING AT THE EAST ONE-QUARTER CORNER OF SAID SECTION 13;
THENCE, S00°58'38"E FOR A DISTANCE OF 428.36 FEET ALONG THE EAST LINE OF SAID SECTION 13;
THENCE, S89°40'40"W FOR A DISTANCE OF 1004.46 FEET;
THENCE, N0°30'30"W FOR A DISTANCE OF 334.89 FEET;
THENCE, N00°0'04"E FOR A DISTANCE OF 464.83 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY LINE OF HIGHWAY 550;
THENCE, N83°47'03"E FOR A DISTANCE OF 1252.19 FEET ALONG SAID RIGHT-OF-WAY TO A POINT ON THE EAST LINE OF SAID SECTION 13;
THENCE, S00°58'40"E FOR A DISTANCE OF 368.60 FEET ALONG SAID EAST LINE TO THE POINT OF BEGINNING.
CONTAINING 20.47 AC.

WEST LEASE AREA

A TRACT OF LAND LYING IN THE S1/2 NE1/4 AND THE N1/2 SE1/4 OF SECTION 13, T23N R7W N.M.P., RIO ARRIBA COUNTY, NEW MEXICO BEING DESCRIBED AS AS FOLLOWS:
BEGINNING AT POINT ON THE SOUTH RIGHT-OF-WAY LINE OF HIGHWAY 550 FROM WHICH THE EAST ONE-QUARTER CORNER OF SAID SECTION 13 BEARS N83°47'05"E FOR A DISTANCE OF 1252.19 FEET AND S00°58'40"E FOR A DISTANCE OF 368.60 FEET;
THENCE, S00°0'04"W FOR A DISTANCE OF 464.83 FEET;
THENCE, N88°36'04"W FOR A DISTANCE OF 830.68 FEET;
THENCE, N00°0'0"E FOR A DISTANCE OF 390.16 FEET TO A POINT ON THE SOUTH RIGHT-OF-WAY OF HIGHWAY 550;
THENCE, 647.06 FEET ALONG SAID RIGHT-OF-WAY AROUND A 5629.58 FEET RADIUS CURVE TO THE LEFT HAVING A CENTRAL ANGLE OF 6°2'34" AND A CHORD BEARING AND DISTANCE OF N86°57'5"E 646.72 FEET;
THENCE, N83°47'03"E FOR A DISTANCE OF 186.02 FEET ALONG SAID RIGHT-OF-WAY TO THE POINT OF BEGINNING.
CONTAINING 7.99 AC.

CERTIFICATION

I, George T. Walters, a New Mexico Professional Surveyor certify that I conducted and am responsible for this Lease Boundary Survey Plat, that this Lease Boundary Survey is true and correct to the best of my knowledge and belief, and that this Boundary Plat meets the Minimum Standards for unclassified Surveying in New Mexico.

I further certify that this is not a division of land as defined in the New Mexico Subdivision Act.

Date

George T. Walters
Professional Land Surveyor No. 6159
State of New Mexico

Figure 1. General Location
BLM Chaco Canyon, NM 1:100,000
Surface Management Status
T23N, R7W, Section 13
Rio Arriba County, New Mexico

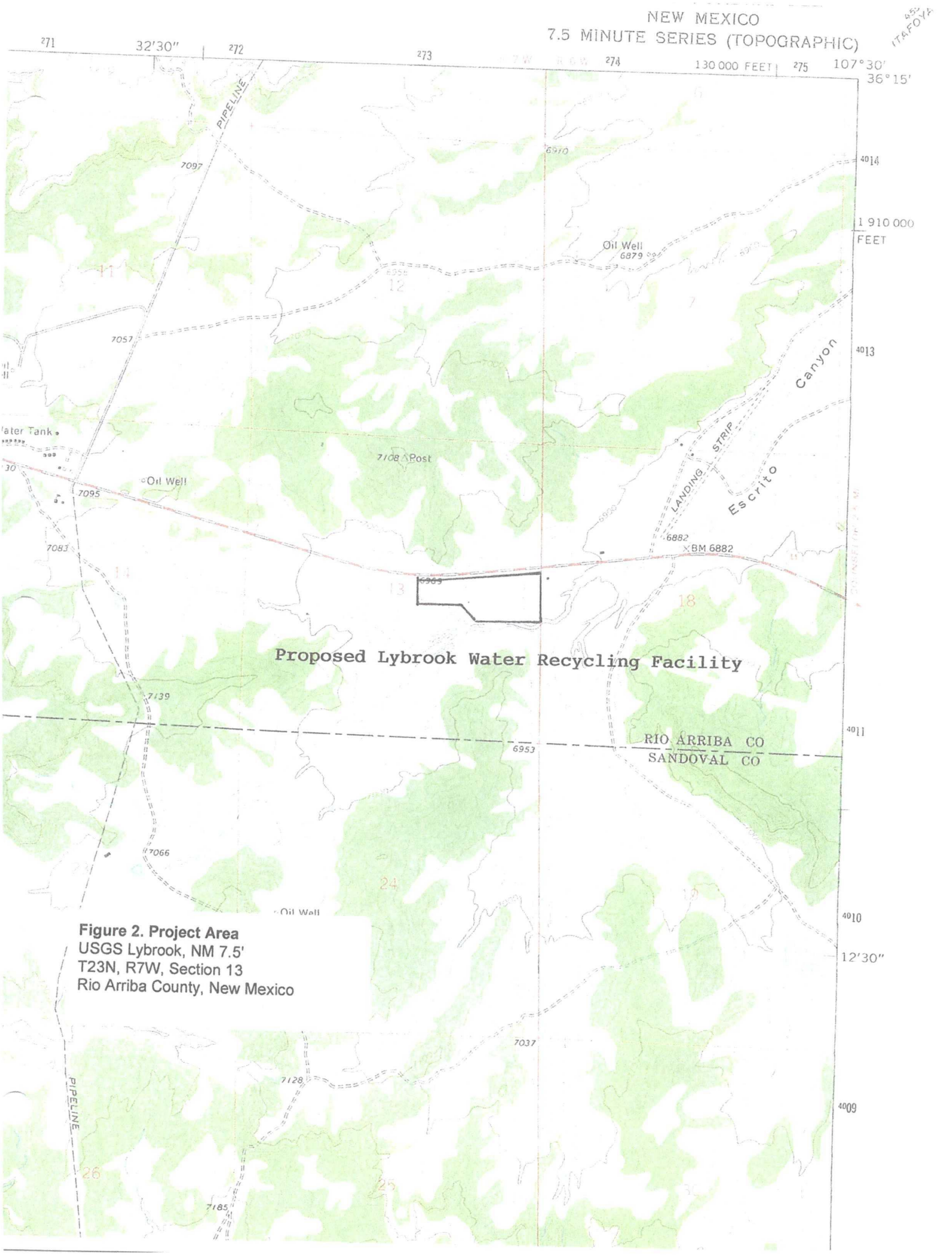


Figure 2. Project Area
USGS Lybrook, NM 7.5'
T23N, R7W, Section 13
Rio Arriba County, New Mexico

NMCRIS DCA
Core Spatial Application

CTA Training and Documentation
Web Mapping Application Help

Clear All
PLSS (1)
PLSS (1)
13; T23N.R07W

nmcris
Archaeological Sites
Architectural Resources
Properties and Districts
NMCRIS Activities
Other Layers
Background Reference Layers
Counties
Towns
DRGs
NM 2009 NAIP Color Aerial Photos
Satellite Imagery
ESRI_Imagery_World_2D

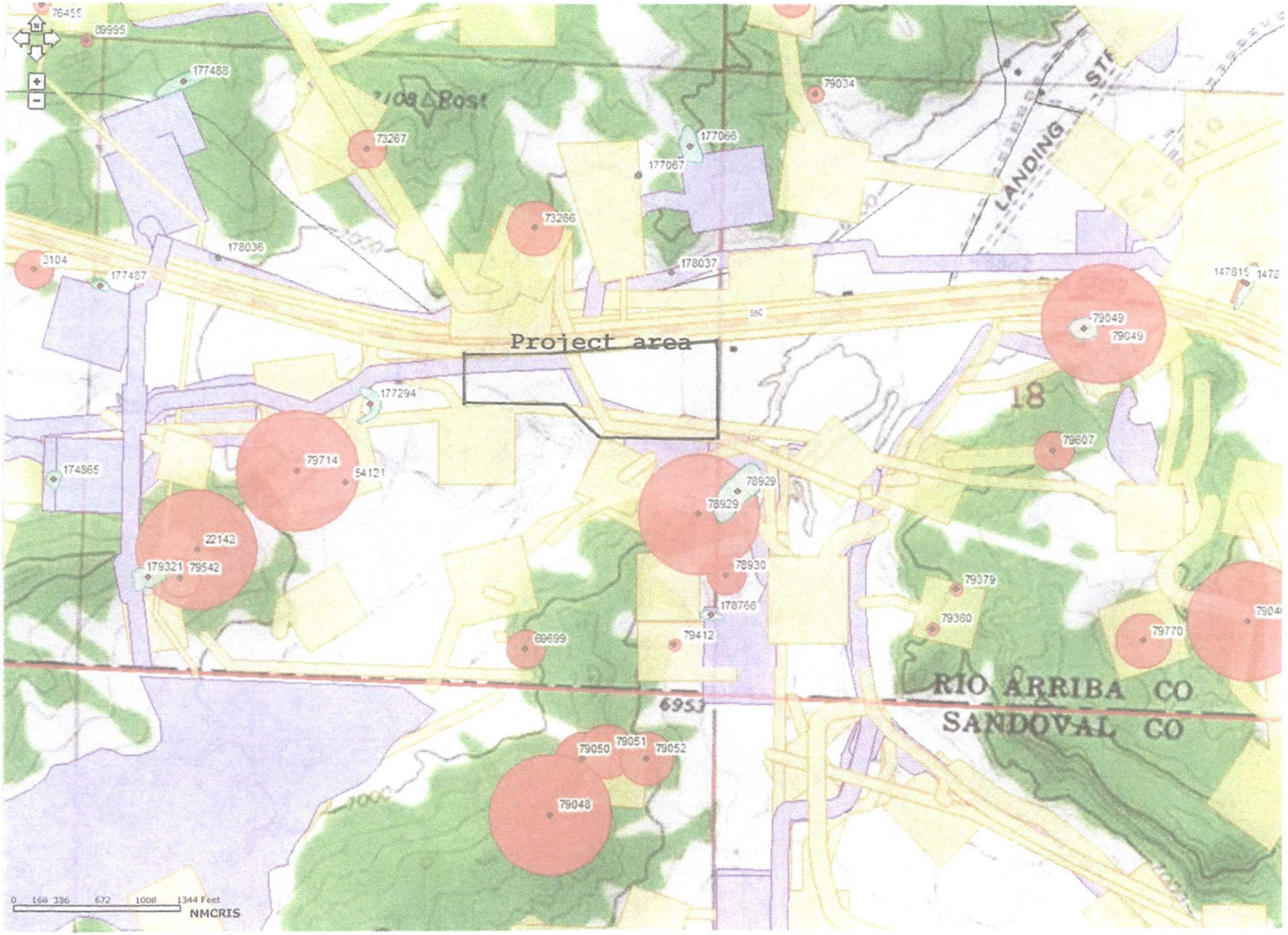


Figure 3. ARMS Mapserver
USGS Lybrook, NM 7.5'
T23N, R7W, Section 13
Rio Arriba County, New Mexico

Ground Bed Drilling Log

Company: WPX Well: Chaco #186H / #203H / #187H Date: 10-20 10-21

Location: Sec 13 T-23N R-7W State: New Mexico Rig: Stoy

Ground Bed Depth: 300' Water Depth: 60' Diameter: 6 3/4

Fuel Usage: 85gal / 90g / 81g

DEPTH	FORMATION	OTHER
0-40	Sand Stone, Shale, Sand w/ Shale w/ Sand	PVC #186H
0-60'	Sand Stone, Shale, Sand w/ Shale w/ Sand	PVC #203H
60-100	Sand Stone, Shale, Sand w/ Shale w/ Sand	
100-140	Sand Stone, Shale, Sand w/ Shale w/ Sand	
140-180	Sand Stone, Shale, Sand w/ Shale w/ Sand	
180-280	Sand Stone, Shale, Sand w/ Shale w/ Sand	
280-300	Sand Stone, Shale, Sand w/ Shale w/ Sand	

GROUNDWATER DEPTH LOG

Company: WPX Energy			Location: Chaco #186H / #203H / #187H
Probe type: Powers			
Date	Time	Depth	Comments
10/20/14	12:32pm	300'	Drilled hole to 300ft let set
10/21/14	7:32Am	60'	Tested w/ probe in Am at 60'

Ground Bed Drilling Log

Company: WPX Well: Chaco #186H / #203H / #187H Date: 10-20 10-21

Location: Sec 13 T-23N R-7W State: New Mexico Rig: Stay

Ground Bed Depth: 300' Water Depth: 100' Diameter: 6 3/4

Fuel Usage: 85gal / 90g / 81g

DEPTH	FORMATION	OTHER
0-40	Sand Stone, Shale, Sand w/ Shale w/ Sand	PVC #186H
0-60'	Sand Stone, Shale, Sand w/ Shale w/ Sand	PVC #203H
60-100	Sand Stone, Shale, Sand w/ Shale w/ Sand	
100-140	Sand Stone, Shale, Sand w/ Shale w/ Sand	
140-180	Sand Stone, Shale, Sand w/ Shale w/ Sand	
180-280	Sand Stone, Shale, Sand w/ Shale w/ Sand	
280-300	Sand Stone, Shale, Sand w/ Shale w/ Sand	

GROUNDWATER DEPTH LOG

Company: WPX Energy			Location: Chaco #186H / #203H / #187H
Probe type: Powers			
Date	Time	Depth	Comments
10/20/14	12:32pm	300'	Drilled hole to 300ft let set
10/21/14	7:32Am	60'	Tested w/ probe in Am at 60'

New Mexico Office of the State Engineer
Water Column/Average Depth to Water

(A CLW##### in the POD suffix indicates the POD has been replaced & no longer serves a water right file.)

(R=POD has been replaced, O=orphaned, C=the file is closed)

(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are smallest to largest)

(NAD83 UTM in meters)

(In feet)

POD Number	POD Sub-basin Code	County	Q 64	Q 16	Q 4	Sec	Tws	Rng	X	Y	Distance	Depth Well	Depth Water	Water Column
SJ 01156		RA	2	2	1	18	23N	06W	274330	4012555*	1038	1500	200	1300
SJ 02233		RA	1	1	2	15	23N	07W	269856	4012864*	3821	1100		
SJ 02233 CLW223636	O	RA	1	1	2	15	23N	07W	269856	4012864*	3821	1100		
SJ 01507		RA	3	3	4	10	23N	07W	269889	4013098*	3857	1709	900	809
SJ 01506		SA	1	1	3	22	23N	06W	278535	4010015*	5323	280		

Average Depth to Water: **550 feet**

Minimum Depth: **200 feet**

Maximum Depth: **900 feet**

Record Count: 5

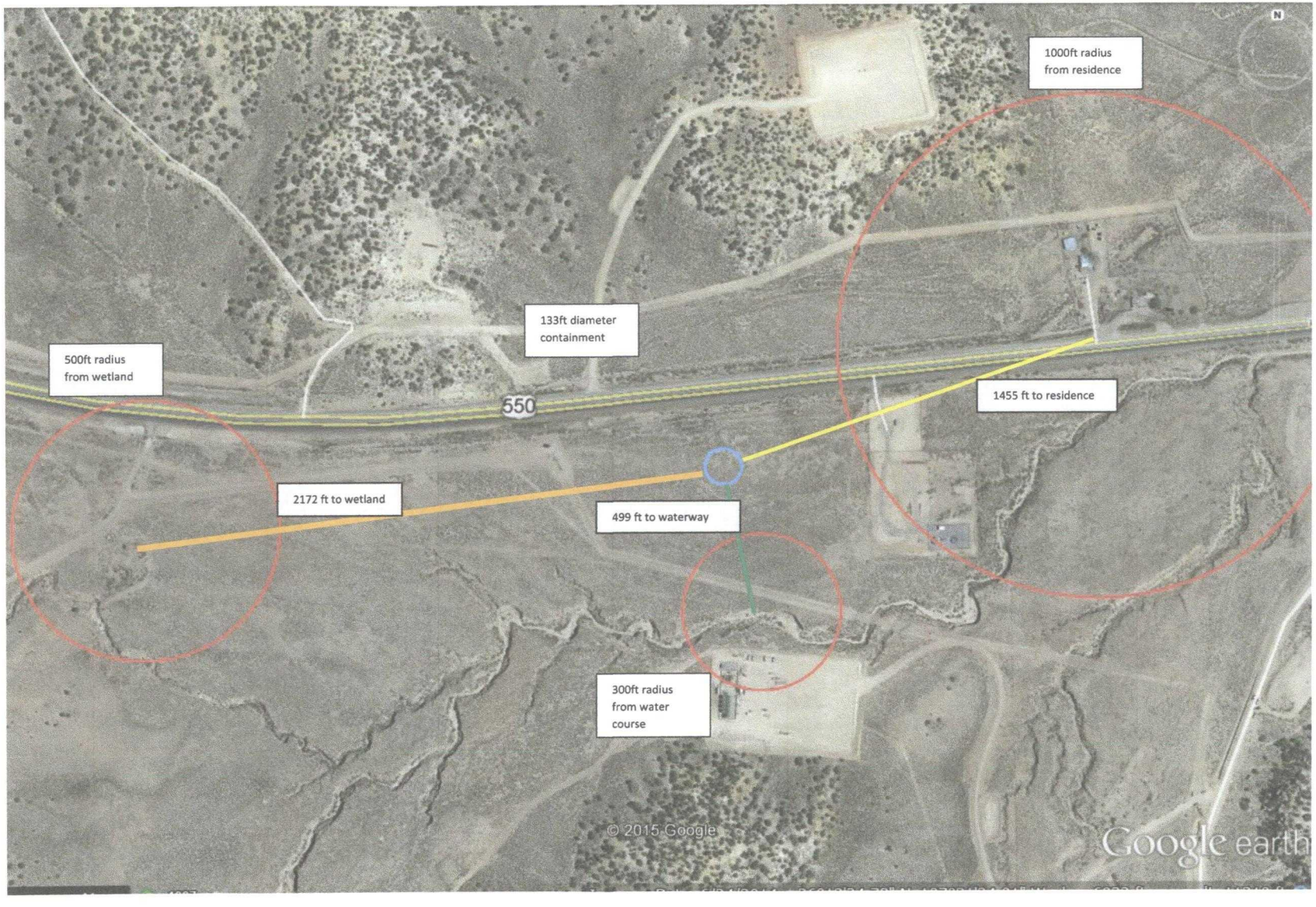
UTMNAD83 Radius Search (in meters):

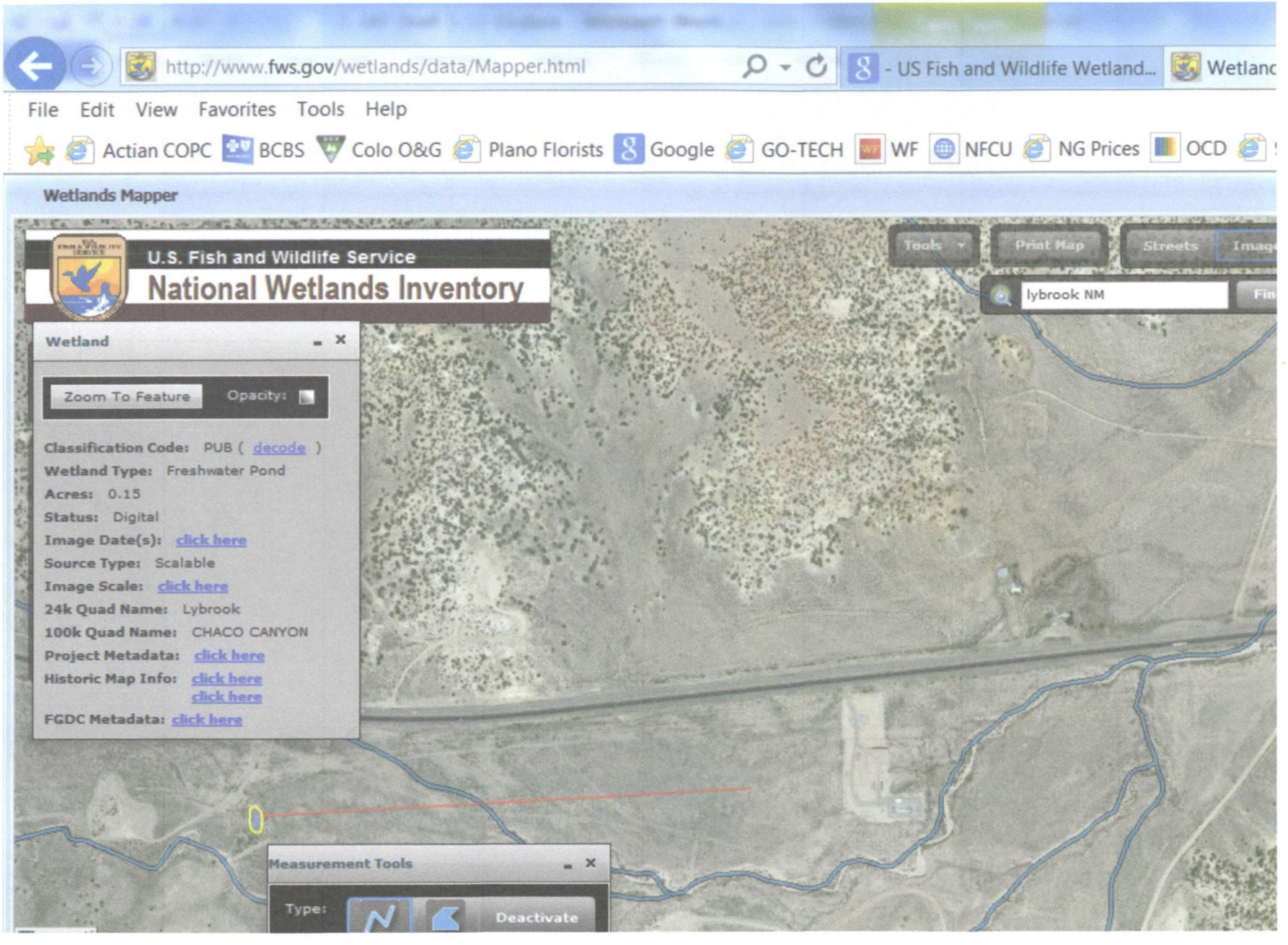
Easting (X): 273546.71 **Northing (Y):** 4011873.79 **Radius:** 8000

***UTM location was derived from PLSS - see Help**

The data is furnished by the NMOSE/ISC and is accepted by the recipient with the expressed understanding that the OSE/ISC make no warranties, expressed or implied, concerning the accuracy, completeness, reliability, usability, or suitability for any particular purpose of the data.

CHACO SLOPE							Distance to Center of Containment		
Well Name	Water Depth	Township/section/range			Long	Lat	ft	Degrees	
Chaco Trunk 4-1 CDP	100'	23N	07W	12/13	107.53006	36.22590	2,816	272	W
NE Chaco Com 172H 173H	85'	23N	07W	13D	107.53433	36.22937	4,284	288	WNW
NE Chaco Com 174H 175H	80'	23N	07W	13L	107.53576	36.22266	4,610	256	WSW
NE Chaco Com 186H 187H 203H 204H	60'	23N	07W	13I	107.51959	36.22301	980	163	SSE
NE Chaco Com 184H 185H	88'	23N	07W	13A	107.51879	36.22980	1,635	18	NNE
NE Chaco Com 240H 256H 292H	83'	23N	06W	18M	107.51783	36.21883	4,070	8	N
NE Chaco Com 170H 171H	80'	23N	07W	12L	107.53496	36.23815	6,240	317	NNW
NE Chaco Com 199H/200H	86'	23N	06W	08L	107.50062	36.23615	7,059	56	ENE
NE Chaco Com 201H/202H	81'	23N	06W	17E	107.50001	36.22861	6,177	79	ESE


1000ft radius
from residence
133ft diameter
containment
500ft radius
from wetland
550
1455 ft to residence
2172 ft to wetland
499 ft to waterway
300ft radius
from water
course
© 2015 Google
Google earth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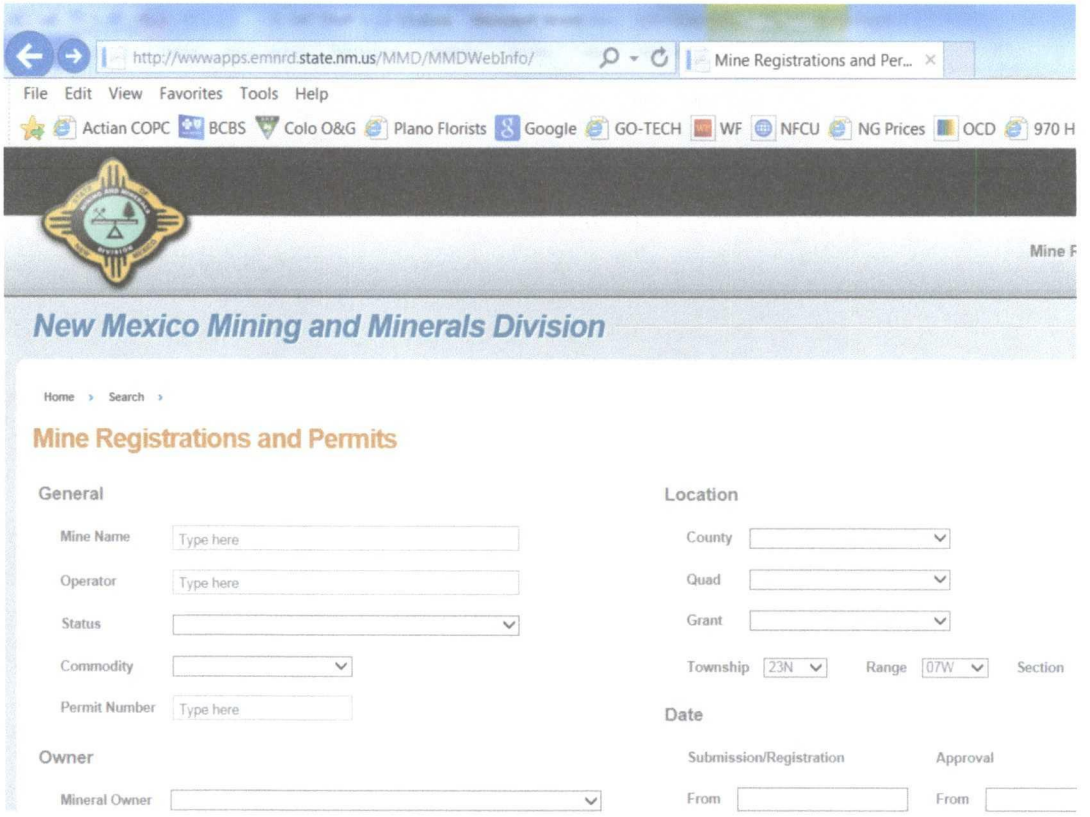
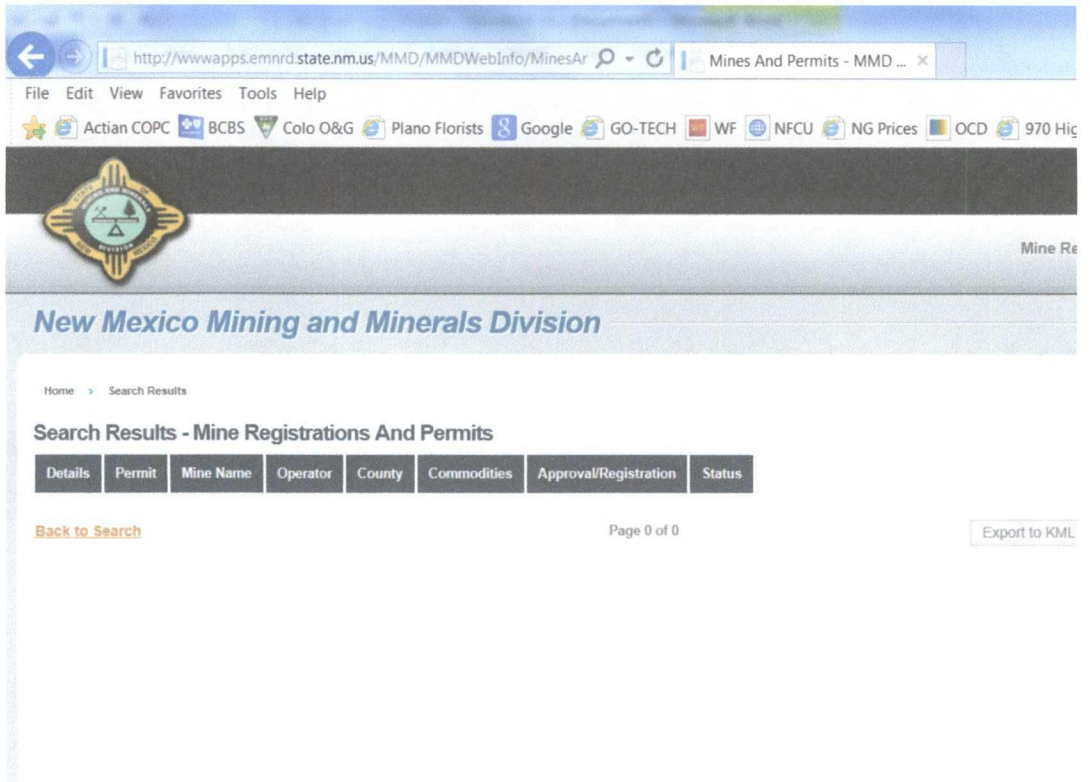
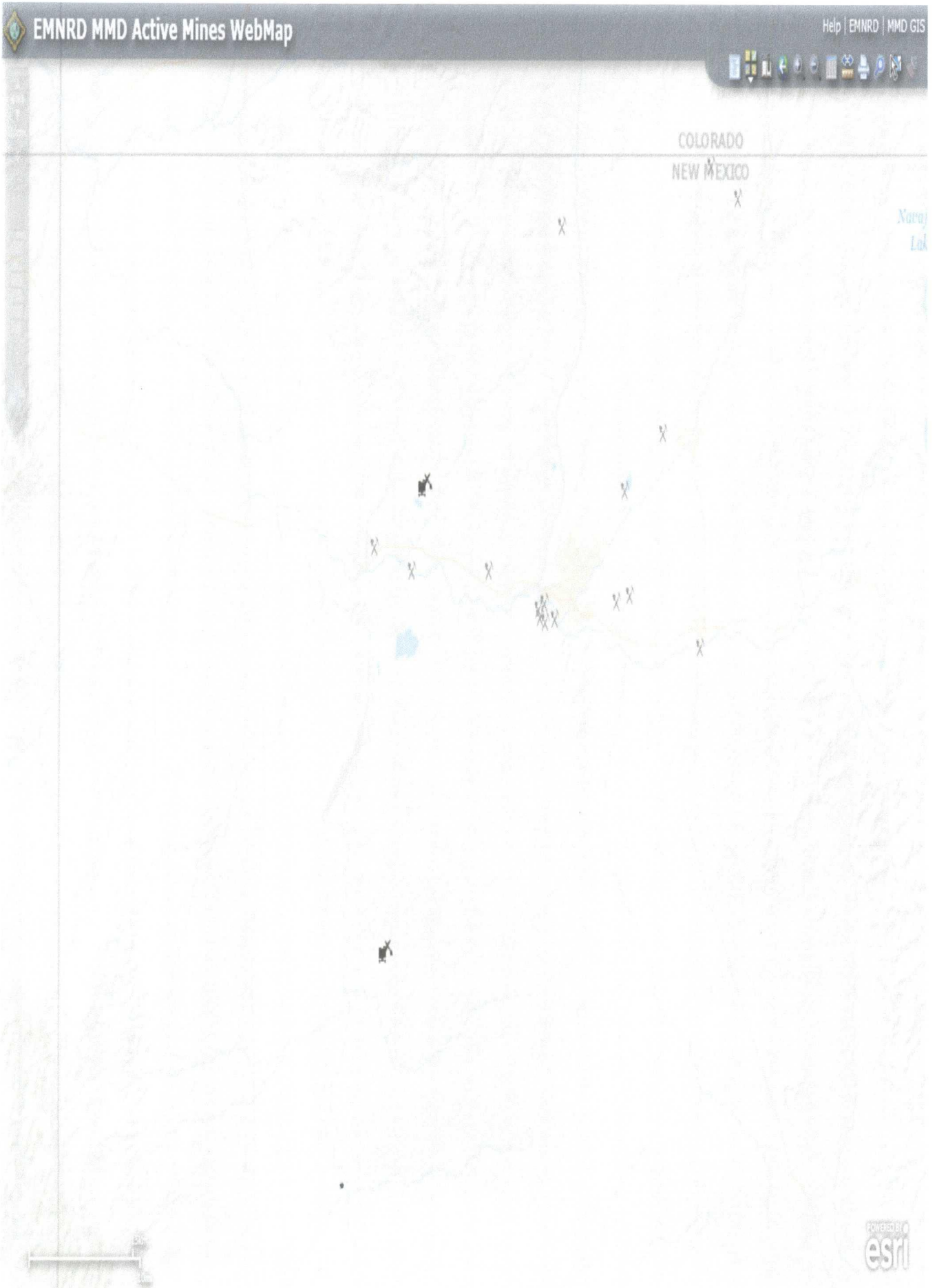
Wetlands Mapper
U.S. Fish and Wildlife Service
National Wetlands Inventory
Tools
Print Map
Streets
lybrook NM
Wetland
Zoom To Feature
Opacity:
Classification Code: PUB (decode)
Wetland Type: Freshwater Pond
Acres: 0.15
Status: Digital
Image Date(s): click here
Source Type: Scalable
Image Scale: click here
24k Quad Name: Lybrook
100k Quad Name: CHACO CANYON
Project Metadata: click here
Historic Map Info: click here
click here
FGDC Metadata: click here
Measurement Tools
Type:
Deactivate

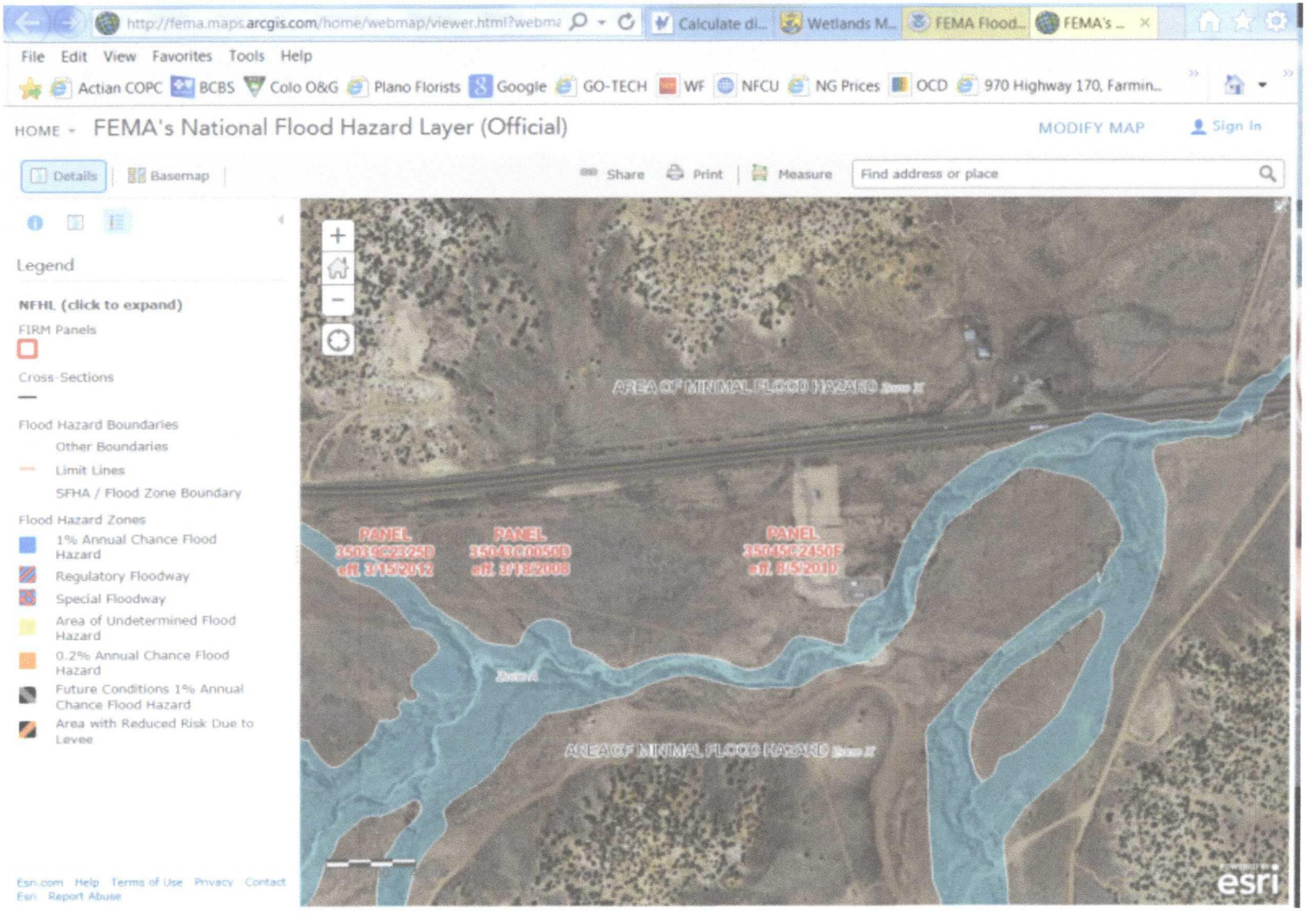
Subsurface mine database search






EMNRD MMD Active Mines WebMap
Help | EMNRD | MMD GIS
COLORADO
NEW MEXICO
esri

FEMA Flood Map



Basin Water Recycling
Lybrook Facility
Regional Hydrological Context

Recycling Containment

The recycling containment shall be on Bureau of Land Management land within Farmington Field Office (FFO) jurisdiction in Rio Arriba County, New Mexico. This site is positioned in the northeastern portion of the San Juan Basin, an asymmetrical syncline that extends from northwestern New Mexico into southwestern Colorado (Carson National Forest FEIS, 2008). Elevation of the referenced recycling containment is approximately 7,186 feet MSL.

General Regional Groundwater Description:

As a portion of the San Juan Basin, the FFO region is underlain by sandstone aquifers of the Colorado Plateau. The primary aquifer of potential concern at this location is the Uinta-Animas Aquifer, composed primarily of Lower Tertiary rocks in the San Juan Basin. The aquifer consists of the San Jose Formation; the underlying Animas formation and its lateral equivalent, the Nacimiento formation; and the Ojo Alamo Sandstone. The thickness of the Uinta-Animas aquifer generally increases toward the central part of the basin. In this region, the maximum thickness of the aquifer is approximately 3500 feet (USGS, 2001). This aquifer contains fresh to moderately saline water.

Groundwater generally flows toward the San Juan River and its tributaries, where it becomes alluvial groundwater or is discharged to stream flow.

Site Specific Information:

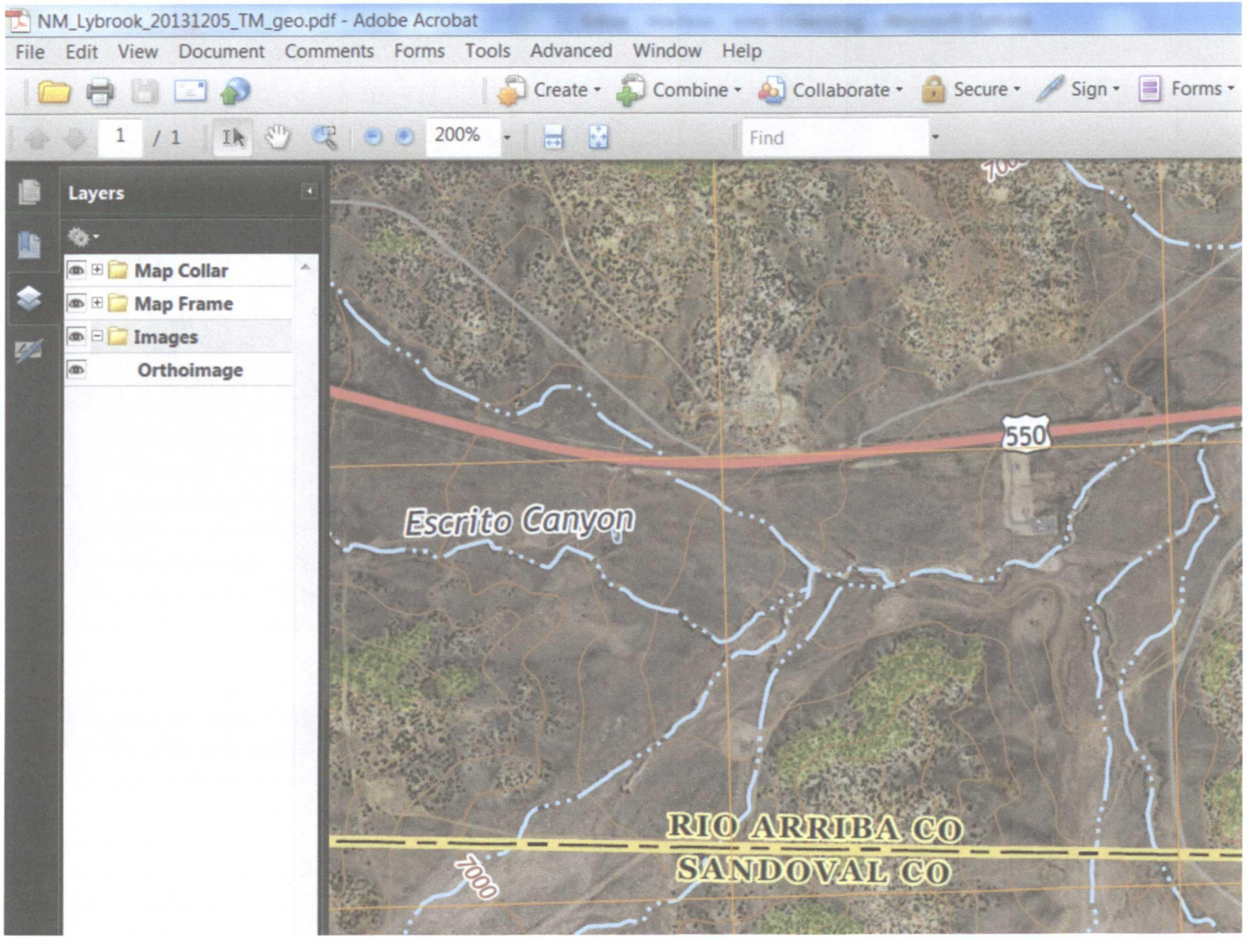
Surface Hydrology: The recycling containment is situated on a flat plain and generally drains northeast into Escrito Canyon.

1st Water Bearing Formation: San Jose, Tertiary; Formation Thickness: Approximately 200 - 700 ft.

Underlying Formation: Nacimiento, Tertiary

Site Specific Information:

Depth to groundwater is estimated to be between 60 and 100 feet below the bottom of the recycling containment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File Edit View Document Comments Forms Tools Advanced Window Help
Create Combine Collaborate Secure Sign Forms
1 / 1
200%
Find
Layers
Map Collar
Map Frame
Images
Orthoimage
550
Escrito Canyon
RIO ARRIBA CO
SANDOVAL CO
7000

Basin Water Recycling
Lybrook Facility
Siting Criteria

1. According to the iWater Database from the State Engineers office, the closest known water well is 1038 meters (0.6 miles) away at Easting(X) 274330 and Northing(Y) 4012555 with a noted well depth of 1500 ft and a water depth of 200 feet. Concerns have been expressed about the construction of this well and thus reliability of the data

   WPX has accumulated a large amount of groundwater data from cathodic protection anode bed installations in the area. Using data from the 9 locations within approximately 1 mile radius of the recycling containment, groundwater is shown to range from a depth of 60 feet to 100 feet. The nearest point, NE Chaco Com 186H 187H 203H 204H location, shows a depth of 60 feet at 980 feet to the SSE (Easting (X) 273860 and Northing(Y) 4011619). The second nearest point, NE Chaco Com 184H 185H shows a depth of 88 feet at 1635 ft to the NNE (Easting (X) 273625 and Northing(Y) 4012379).

   Thus, ground water depth is greater than 50 feet below the bottom of the recycling containment.

2. As shown on the attached Google Earth aerial photos, there are no continuously flowing watercourses within 300' nor any other significant watercourse or lakebed or playa lake within 200' of the recycling containment. The closest water course to the edge of the containment is 499 feet.

3. As shown on the attached Google Earth aerial photos, there are no permanent residence, school, hospital, institution or church at the time of initial registration within 1000' of the recycling containment. The closest residence to the edge of the containment is 1455 feet.

4. As shown on the attached Google Earth aerial photos and USGS database search, there are no spring or fresh water well used for domestic or stock water purposes within 500' in existence at the time of initial registration. The nearest spring to the edge of the containment is 2172 feet.

5. The recycling containment is not within any incorporated municipal boundaries within a defined municipal fresh water well field covered by a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978, as amended,

6. As shown on the attached Google Earth aerial photos and USGS database search, there are no wetland within 500'. The nearest wetland to the edge of the containment is 2172 feet.

7. According to the NM EMNRD Mining and Mineral Division database there are no subsurface mines in Section 13, Township 23N, Range 7W of Rio Arriba County.

8. The recycling containment= is not located in an "unstable" area. The location is not over a mine and is not on the side of a hill. The location of the excavated surface material will not be location with 100 feet of a continuously flowing or significant watercourse.

9. As shown on the FEMA Map, the recycling containment is not located within a 100-year floodplain.

BASIN WATER RECYCLING

Leader in recycling oil & gas water

Lybrook, NM, 505-320-2840

PO Box 100, Aztec, Nm 87410

June 10, 2015

Scott Hall
BLM
6251 College Blvd., Suite A
Farmington, NM 87402

RE: Surface Owner Notification

Dear Mr. Hall;

Per 19.15.34.10.A: .. ***At the time the C-147 is submitted to the division, a copy shall be provided to the surface owner.*** **This letter conveys a copy of the C-147 to the Bureau of Land Management as the surface owner.**

If you need anything else from me, please feel free to contact me on my cell phone at 505-320-2840 or email at jvolkerding@basindisposalinc.com .

Sincerely,

John Volkerding
Gen Mgr/VP

Encl: C-147 Dated 6-10-15

Cc: File

18 Design and Construction Plan

18.1 *Introduction*
The Basin Design and Construction Plan assists Basin personnel in ensuring compliance with the minimum design and construction requirements for recycling containments as defined by the NM OCD outlined in 19.15.34.13 NMAC and in BLM permit NMNM 132770

18.2 *Scope*
The Basin Design and Construction Plan applies to any Employee(s) and Subcontractor(s) whose job requires them assist with the design and construction of the facility.

18.3 *Purpose*
The Basin Design and Construction Plan is designed to ensure compliance with the minimum design and construction requirements for recycling containments as defined by the NM OCD outlined in 19.15.34.13 NMAC and in BLM permit NMNM 132770

18.4 *Required Forms*
None

18.5 *Reference(s)*
A 19.15.34 NMAC
B Permit/Registration XXXX
C BLM Permit, NMNM 132770

18.6 *Design and Construction*

A ***Recycling Containment***

i Basin shall design and construct a recycling containment in accordance with the following specifications.

1 Basin shall design and construct a recycling containment to ensure the confinement of produced water, to prevent releases and to prevent overtopping due to wave action or rainfall.

2 Basin and its contractors shall ensure the recycling containment has a properly constructed foundation and interior slopes consisting of a firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities to prevent the liner's rupture or tear.

3 Basin shall use geotextile under the liner, if needed, to reduce localized stress-strain or protuberances that otherwise may compromise the liner's integrity.

4 Basin's recycling containment shall incorporate, a primary (upper) liner and a secondary (lower) liner with a leak detection system.

5 Basin shall ensure primary (upper) liners in the recycling containment shall be geomembrane liners composed of an impervious, synthetic material that is resistant to ultraviolet light, petroleum hydrocarbons, salts and acidic and alkaline solutions.

6 Basin's primary liners shall be 45-mil LLDPE string reinforced liner.

7 Basin's secondary liner shall be 30-mil LLDPE string reinforced liner

8 Basin shall ensure the subcontractor installing the recycling containment

minimizes liner seams and orient them up and down, not across, a slope of the levee. Basin shall ensure that factory welded seams shall be used where possible.

9 Basin shall ensure the subcontractor installing the recycling containment ensures field seams in geosynthetic material are thermally seamed and that prior to any field seaming, the installer shall overlap liners four to six inches.

10 Basin shall ensure the subcontractor installing the recycling minimizes the number of field seams and corners and irregularly shaped area. Basin will only hire qualified personnel to perform field welding and testing.

11 Basin shall ensure that the liner is protected from excessive hydrostatic force abd mechanical damage at the points of discharge into or suction from the recycling containment. Additionally, Basin shall ensure external discharge or suction lines shall not penetrate the liner. Basin shall accomplish both of these by the installation of an up and over "candy cane" shaped ridged piping that has a steel diverter plate to distribute the water minimizing hydrostatic forces.

12 Basin shall place a leak detection system between the upper and lower geomembrane liners that shall consist of 200-mil geonet to facilitate drainage. The leak detection system shall consist of a properly designed drainage and collection and removal system placed above the lower geomembrane liner in depressions and sloped to facilitate the earliest possible leak detection. A 3 foot wide by 3 foot long by 2 foot deep depression will be constructed to allow for collection of any leaking liquid. A 2 inch pvc line will be installed in between the primary and secondary liners from the top of the tank to the depression to allow for detection and removal of liquid.

B ***Stockpiling of Top Soil***

i Prior to constructing containment, Basin shall strip and stockpile the topsoil for use as the final cover or fill at the time of closure.

ii Basin shall shall not locate material excavated during construction:

(1) within 100 feet of a continuously flowing watercourse or significant watercourse;

(2) within 200 feet from a lakebed, sinkhole or playa lake (measured from the ordinary high-water mark);

(3) within 100 feet of a wetland; or

(4) within a 100-year floodplain.

C ***Berming***

i Berms or firewalls will be constructed around all storage facilities sufficient in size to contain the storage capacity of tanks, or the combined capacity of tanks if a rupture could drain more than one tank

D ***Signs***

i Basin shall post an upright sign no less than 12 inches by 24 inches with lettering not less than two inches in height in a conspicuous place at the entrance to the facility

ii Basin shall post the sign in a manner and location such that a person can easily read the legend.

1 The sign shall provide the following information:
2 the operator's name,
3 the location of the site by quarter-quarter or unit letter, section, township & range,
4 emergency telephone numbers.

E ***Fencing***

i Basin shall fence or enclose the entire working site in a manner that deters unauthorized wildlife and human access and shall maintain the fences in good repair.

ii Basin shall ensure that all gates associated with the fence are closed and locked when responsible personnel are not onsite.

iii Basin shall erect a 6 foot chain link fence with a barbed wire security top.

F ***Netting***

i Basin shall ensure that a recycling containment is screened, netted or otherwise protective of wildlife, including migratory birds.

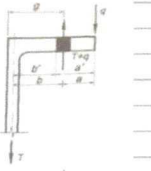
ii Basin shall install a floating roof.

iii Basin employees shall on a monthly basis inspect for and, within 30 days of discovery, report the discovery of dead migratory birds or other wildlife to the appropriate wildlife agency and to the division district office in order to facilitate assessment and implementation of measures to prevent incidents from reoccurring.

Portable Containment Systems

Engineering Deign Calculations for 52K BBL Plate Wall PC Panel Tank

Double angle connection at Plate Wall joint						
Tank height (ft)	11	11	11	11		
Tank fill height (ft)	10.5	10.5	10.5	10.5		
Tank diameter (ft)	191	191	191	191		
Liquid density (lb/ft3)	62.4	62.4	62.4	62.4		
Depth (ft)	10.396	8.42	6.5	4.5		
Pressure at depth (psf)	648.7104	525.408	405.6	280.8		
Tank wall thickness (in)	0.25	0.25	0.25	0.25		
q (pressure x radius/thickness) (psi)	20651	16725	12912	8939		
Bolt diameter (in)	0.75	0.75	0.75	0.75		
Bolt spacing/tributary height	2.5	3	4	6		
B (available bolt tension, table 7-2) (kips)	25	25	25	25		allowable: 19.9 for 3/4", 27.1 for 7/8", 35.3 for 1" A325
T (reqd strength per bolt) (kips)	12.91	12.54	12.91	13.41		allowable: 25.0 for 3/4", 34.0 for 7/8", 44.4 for 1" A490
angle size L4x4x.75						
Fu of angle (ksi)	58	58	58	58		
outstanding angle leg	4	4	4	4		
t angle thickness	0.75	0.75	0.75	0.75		
g	2	2.25	2.25	2.25		see figure 9-4 in AISC manual
b	1.625	1.875	1.875	1.875		
b'	1.25	1.5	1.5	1.5		
a	2	1.75	1.75	1.75		
a'	2.375	2.125	2.125	2.125		
thickness to eliminate prying action	0.86	0.85	0.75	0.62		
d'	0.875	0.875	0.875	0.875		
delta	0.65	0.708	0.781	0.854		
rho	0.526	0.706	0.706	0.706		
beta	1.78	1.407	1.326	1.224		
beta/delta(1-beta)	-3.511	-4.883	-5.208	-6.398		
alpha prime	1	1	1	1		
t minimum	0.67	0.649	0.559	0.456		
tc	1.1981	1.1981	1.0375	0.8472		
T/B	0.516	0.502	0.516	0.536		
(tc/t)^2	2.552	2.552	1.914	1.276		
alpha	0.487	0.397	0	0		
Q (prying force)	12.4	11.01	0	0		
total bolt force = T + Q	25.31	23.55	12.91	13.41		
	NG	OK	OK	OK		



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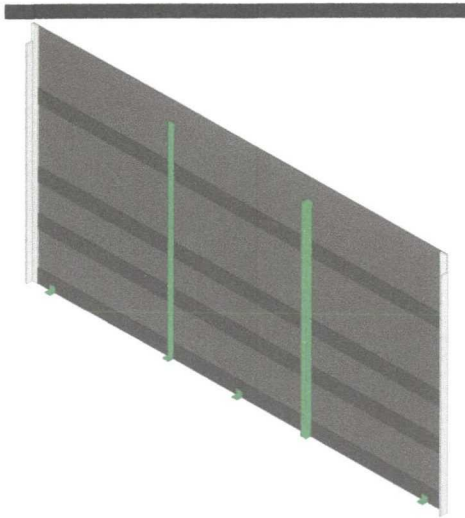
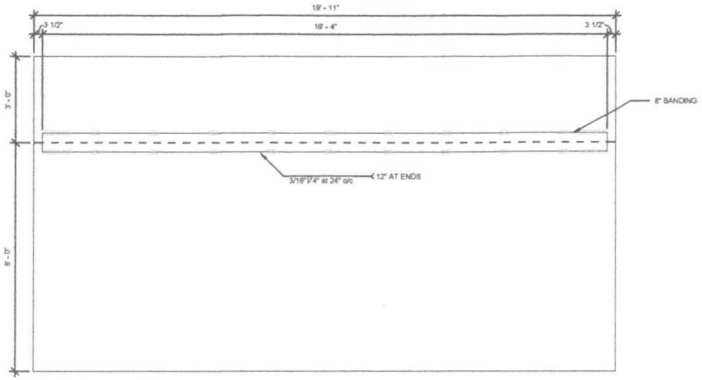


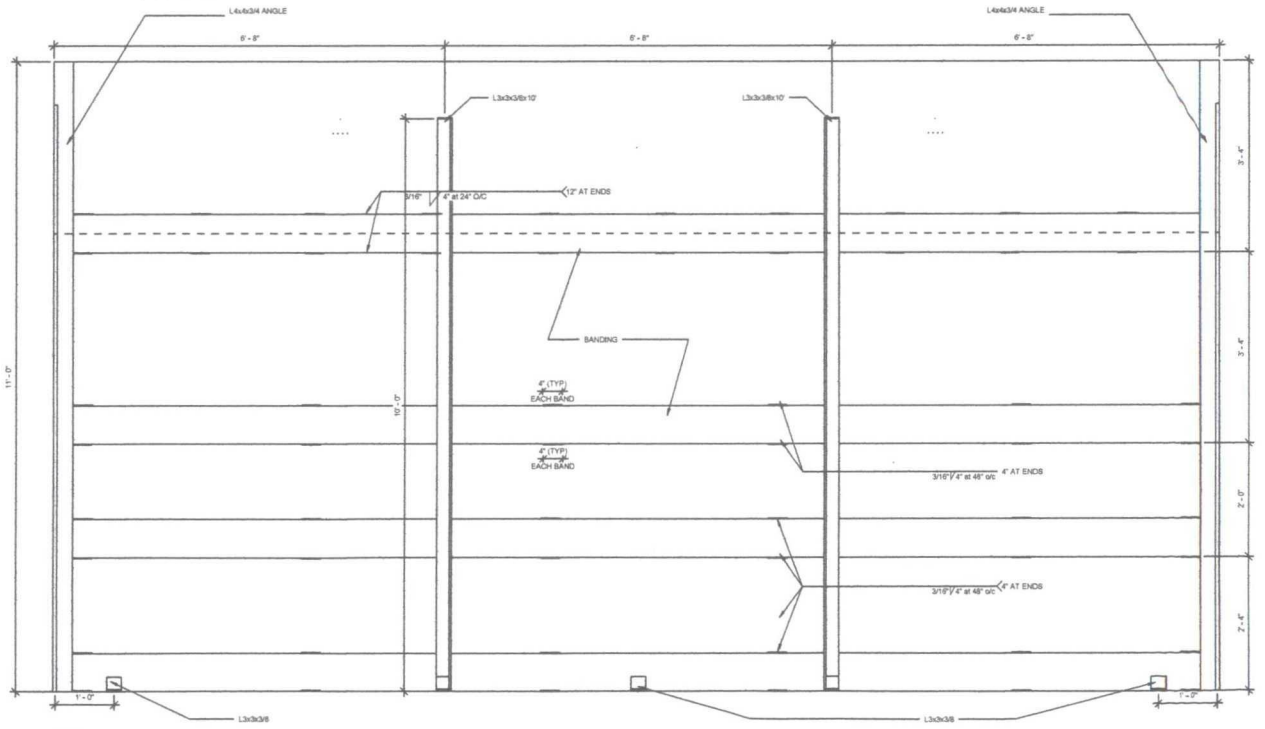
1 PANNEL VIEW



2 PLATE ASSEMBLIES
1/2" = 1'-0"

QTY	ITEM	DESCRIPTION	UNIT W	TOTAL
1	WALL PLATE	.25"x8'-0"x19'-11" - .25"x2'-6"x19'-11" A36 STEEL	2,143	2,143
4	TENSION BANDING	.25"x8"x 19'-4" A36 STEEL	121	484
2	CLOSURE ANGLE	L4X4X3/4 A36 STEEL	-	-
7	BASE ANGLE	L3x3x3/8 x 3" STRUCTURAL ANGLE	-	-
2	VERT. STABILIZATION	L3x3x3/8 x 10'-0" STRUCTURAL ANGLE	-	-
			-	-
		TOTAL ASSEMBLY WT.		

PARTS LIST
1/2" = 1'-0"



3 20 FT PANEL - L CONNECTION - FRONT
1" = 1'-0"

Drawn by AKG/DJM
Checked by JL
Project Date 10/24/2014
Project Number 130704

4000 N. VALLEY DR.
MEAD, CO

DAVID F. MITCHELL
NEW MEXICO
21936
PROFESSIONAL ENGINEER
6/24/15

Portable Containment Systems

EO
Pre-Design

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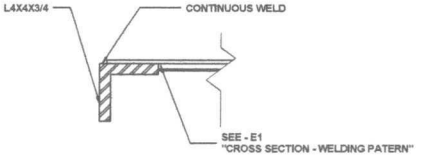
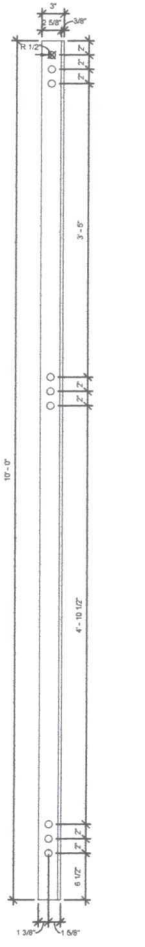
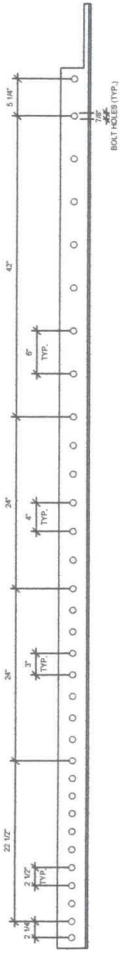


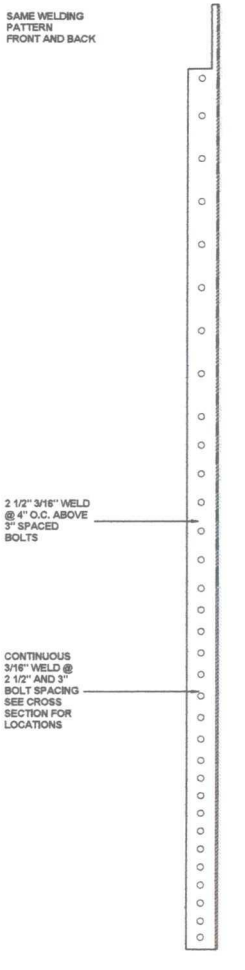
1 Callout of TOP VIEW PANEL ANGLE CONNECTION
3" = 1'-0"



5 SUPPORT SECTION
1 1/2" = 1'-0"



2 L CONNECTION - ELEVATION
1 1/2" = 1'-0"



3 CROSS SECTION - WELDING PATERN
1 1/2" = 1'-0"

Drawn by JK/GDLM
Checked by DM
Project Date 10/24/2014
Project Number 130704

4000 N. VALLEY DR.

MEAD, CO

Portable Containment Systems

DAVID F. MITCHELL
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PROFESSIONAL ENGINEER
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E1
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6/30/2014 4:35:10 PM

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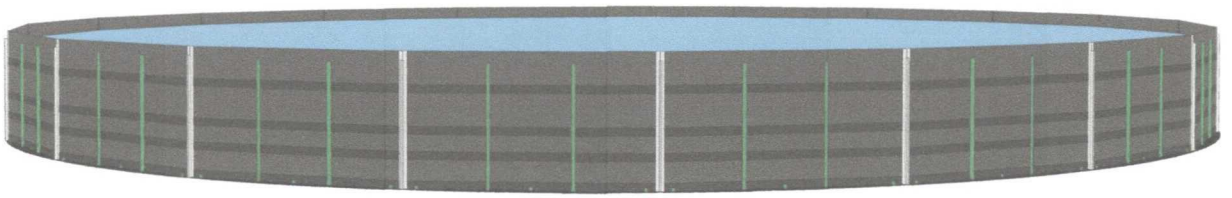

1 3D View 1

Drawn by	AKG
Checked by	LMC
Project Date	10/24/2014
Project Number	130704

4000 N. VALLEY DR.

MEAD, CO

Portable Containment Systems

DAVID F. MITCHELL
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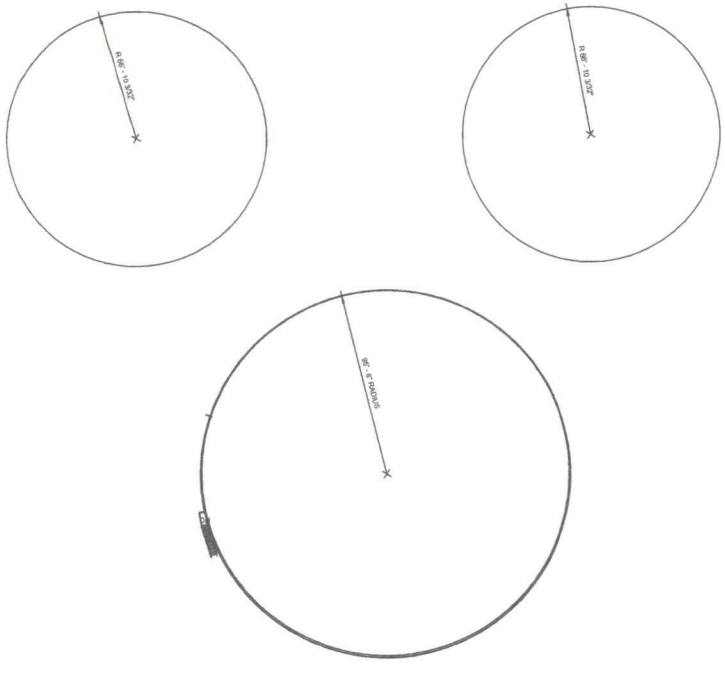
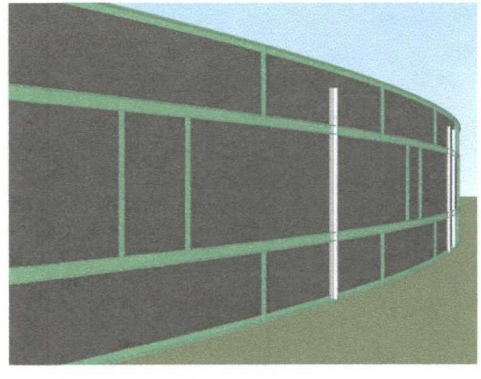
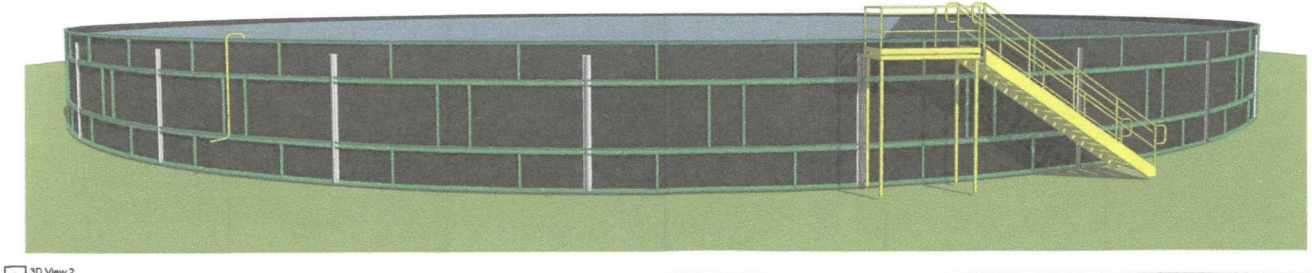


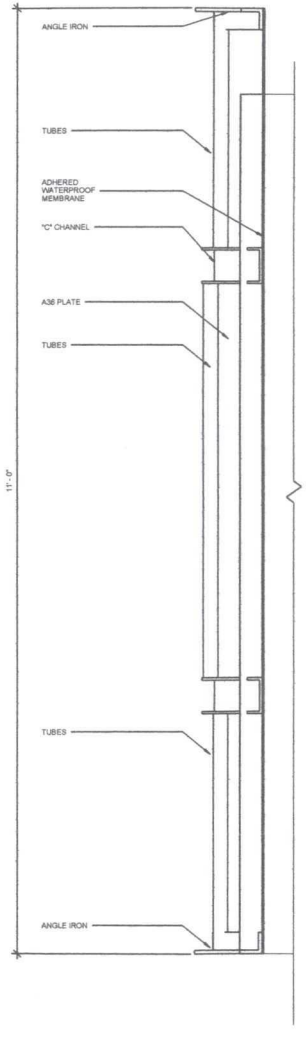
5 PERMANET FLOOR PLAN
1" = 30'-0"



4 PERMANENT - GROUND VIEW



2 3D View 2



1 Section 2
1 1/2" = 1'-0"

Drawn by AKG
Checked by JL
Project Date 07/25/2014
Project Number 130704

WATER RECYCLING FACILITY

LYBROOK, NM

Portable Containment Systems

Pre-Design

7/25/2014 5:10:09 PM

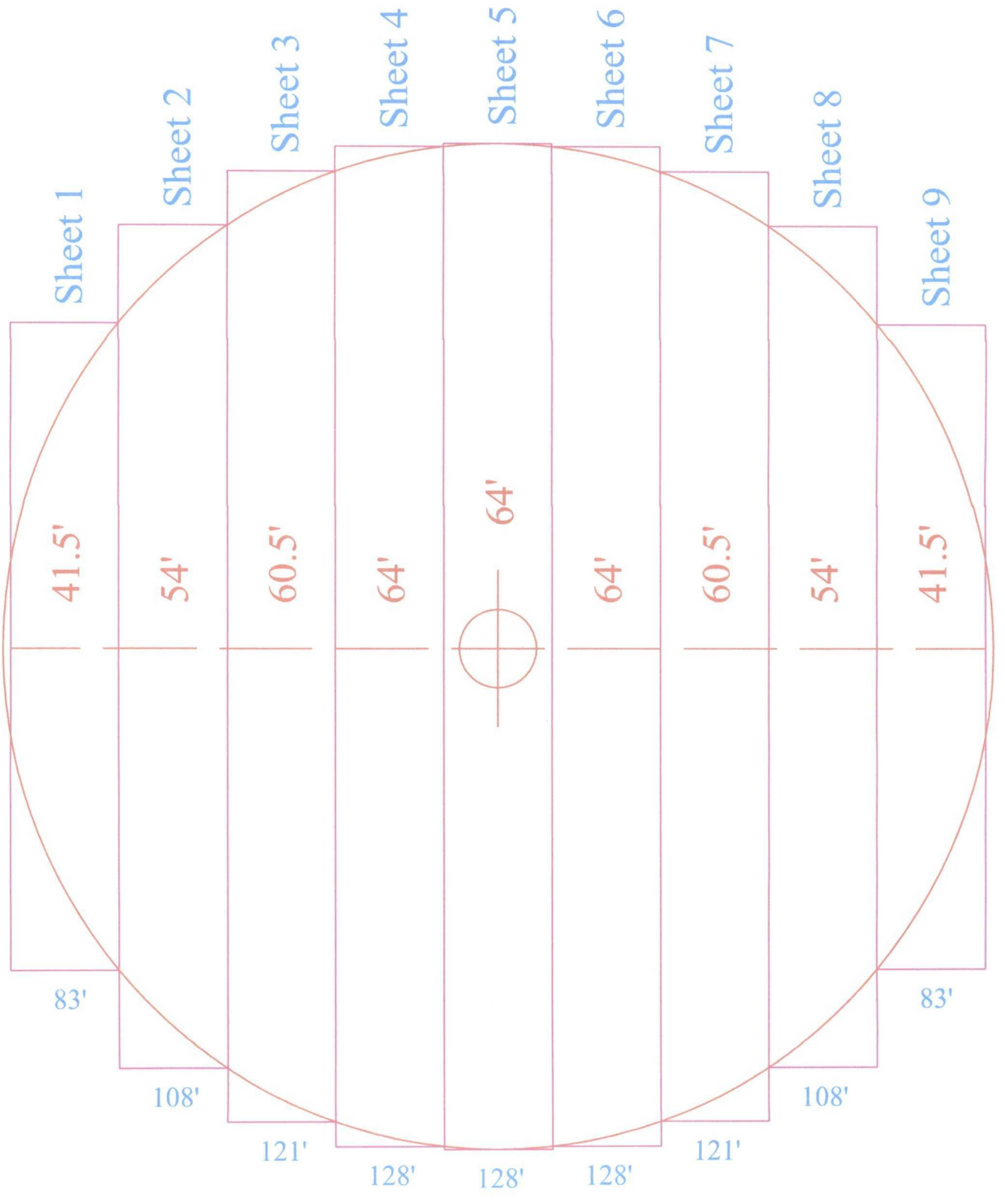
F9 PRODUCTIONS INC. | 703 3rd Ave. Longmont, CO 80501 | PH 303.775.7406 | F 303.658.9846 | Email mail@F9productions.com

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM AVERAGE VALUE[1]		
Geocomposite			**6 oz/yd²**	**8 oz/yd²**	**10 oz/yd²**
Transmissivity[2], gal/min/ft (m^2/sec) Double-Sided Composite Single-Sided Composite	ASTM D 4716	1/540,000 ft^2	 0.48 (1×10^{-4}) 4.83 (1×10^{-3})	 0.48 (1×10^{-4}) 4.83 (1×10^{-3})	 0.43 (9×10^{-5}) 4.34 (9×10^{-4})
Ply Adhesion, lb/in (g/cm)	ASTM D 7005	1/50,000 ft^2	1.0 (178)	1.0 (178)	1.0 (178)
Geonet Core[3] - GSE HyperNet					
Transmissivity[2], gal/min/ft (m^2/sec)	ASTM D 4716		9.66 (2×10^{-3})	9.66 (2×10^{-3})	9.66 (2×10^{-3})
Density, g/cm^3	ASTM D 1505	1/50,000 ft^2	0.94	0.94	0.94
Tensile Strength (MD), lb/in (N/mm)	ASTM D 5035/7179	1/50,000 ft^2	45 (7.9)	45 (7.9)	45 (7.9)
Carbon Black Content, %	ASTM D 1603*/4218	1/50,000 ft^2	2.0	2.0	2.0
Geotextile[3,4]					
Mass per Unit Area, oz/yd^2(g/m^2)	ASTM D 5261	1/90,000 ft^2	6 (200)	8 (270)	10 (335)
Grab Tensile, lb (N)	ASTM D 4632	1/90,000 ft^2	160 (710)	220 (975)	260 (1,155)
Puncture Strength, lb (N)	ASTM D 4833	1/90,000 ft^2	90 (395)	120 (525)	165 (725)
AOS, US sieve (mm)	ASTM D 4751	1/540,000 ft^2	70 (0.212)	80 (0.180)	100 (0.150)
Permittivity, (sec^{-2})	ASTM D 4491	1/540,000 ft^2	1.5	1.3	1.0
Flow Rate, gpm/ft^2 (lpm/m^2)	ASTM D 4491	1/540,000 ft^2	110 (4,480)	95 (3,865)	75 (3,050)
UV Resistance, % retained	ASTM D 4355 (after 500 hours)	once per formulation	70	70	70
NOMINAL ROLL DIMENSIONS					
Geonet Core Thickness, mil (mm)	ASTM D 5199	1/50,000 ft^2	200 (5)	200 (5)	200 (5)
Roll Width[5], ft (m)			14.5 (4.4)	14.5 (4.4)	14.5 (4.4)
Roll Length[5], ft (m)	Double-Sided Composite		270 (82.3)	260 (79.2)	230 (70.1)
	Single-Sided Composite		300 (91.4)	300 (91.4)	290 (88.4)
Roll Area, ft^2 (m^2)	Double-Sided Composite		3,915 (364)	3,770 (350)	3,335 (310)
	Single-Sided Composite		4,350 (404)	4,350 (404)	4,205 (391)

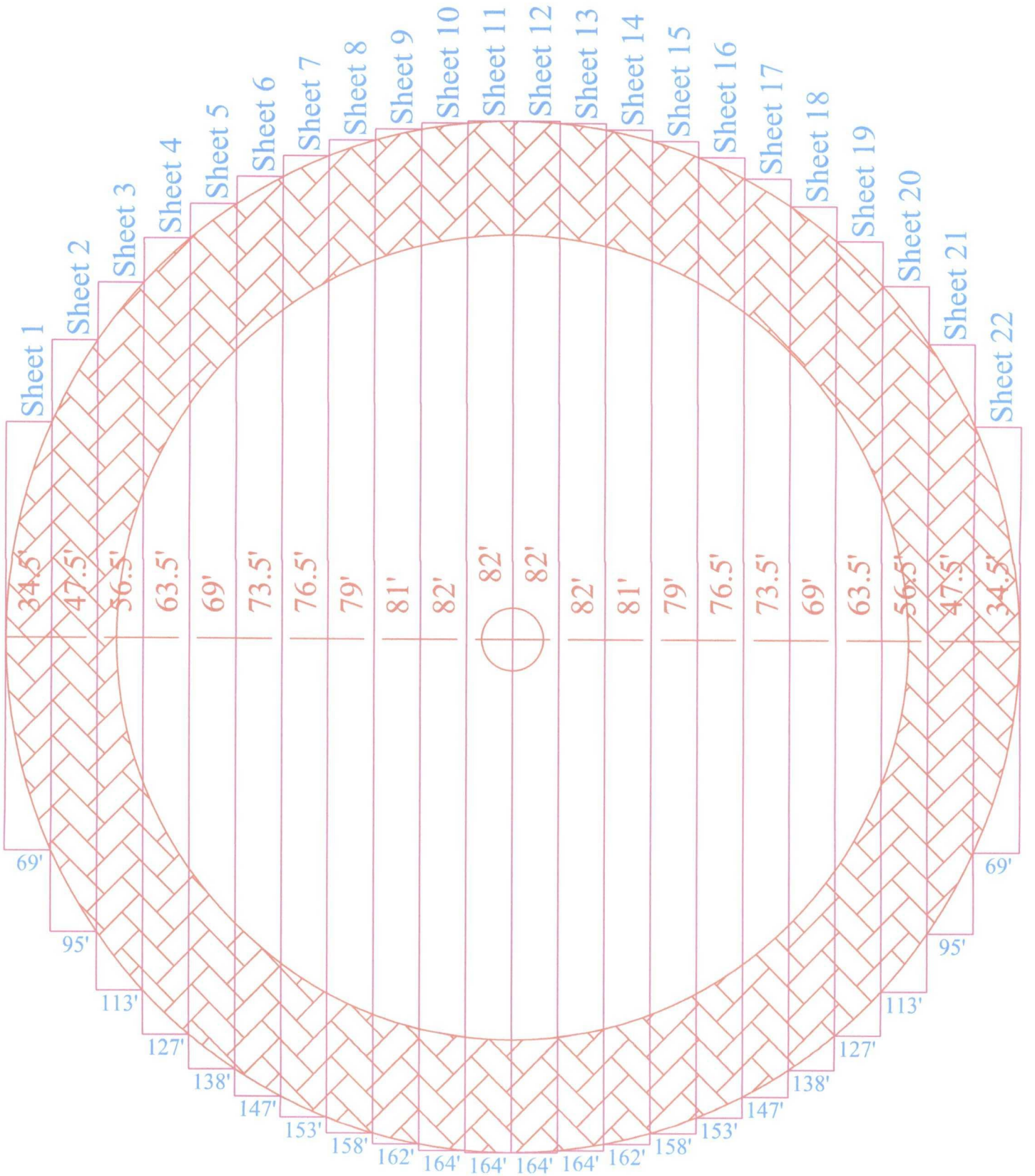
NOTES:

- [1]AOS in mm is a maximum value.
- [2]Gradient of 0.1, normal load of 10,000 psf, water at 70°F between steel plates for 15 minutes. Contact GSE for performance transmissivity value for use in design.
- [3]Component properties prior to lamination.
- [4]Refer to geotextile product data sheet for additional specifications.
- [5]Roll widths and lengths have a tolerance of ±1%.
- *Modified.

Portable Containment System - 128' Tank
Geocomposite - Drainage Layer on Floor
14,500 SF



Portable Containment System - 128' Tank
11' walls plus 7' overhang
RPE - Tank Liner - R
22,231 SF



COLORADO LINING INTERNATIONAL

WWW.COLORADOLINING.COM

CLI offers cost effective thermal and evaporation control frac tank floating covers that aren't gone with the wind, they stick around to enhance your bottom line.

Product Features:

LOW COST with **RE-USABLE HARDWARE** that further reduces cost over time.

Tethering technology that **PREVENTS COVER MOVEMENT & ROTATION** in high winds.

A field determined and cut footprint that allows for clearance around internal tank piping & mixers, etc. Since the cover cannot rotate, **ALIGNMENT AROUND PROTRUSIONS IS ALWAYS ENSURED**

LIGHT WEIGHT & FAST INSTALLATION. Most cover membranes can be made in one or two panels

re-usable tethering hardware for successive tank sets would require only cover membranes & **MINIMAL ADDITIONAL CONSUMABLES SAVES THOUSANDS OF DOLLARS** in each future install.

This tethering mount system is intended to function in tanks or containment structures that can be circular, rectangular or irregular in plan view shape. The design's purpose is to maintain flexible or semi rigid floating cover systems in their proper orientation to provide the maximum coverage over the contained media fluid while helping prevent wind uplift and or displacement by wind or other forces that may be applied to the cover. The ballast element may either rest on the tank's floor or be elevated off of the floor as needed.

To learn more call: 800.524.8672

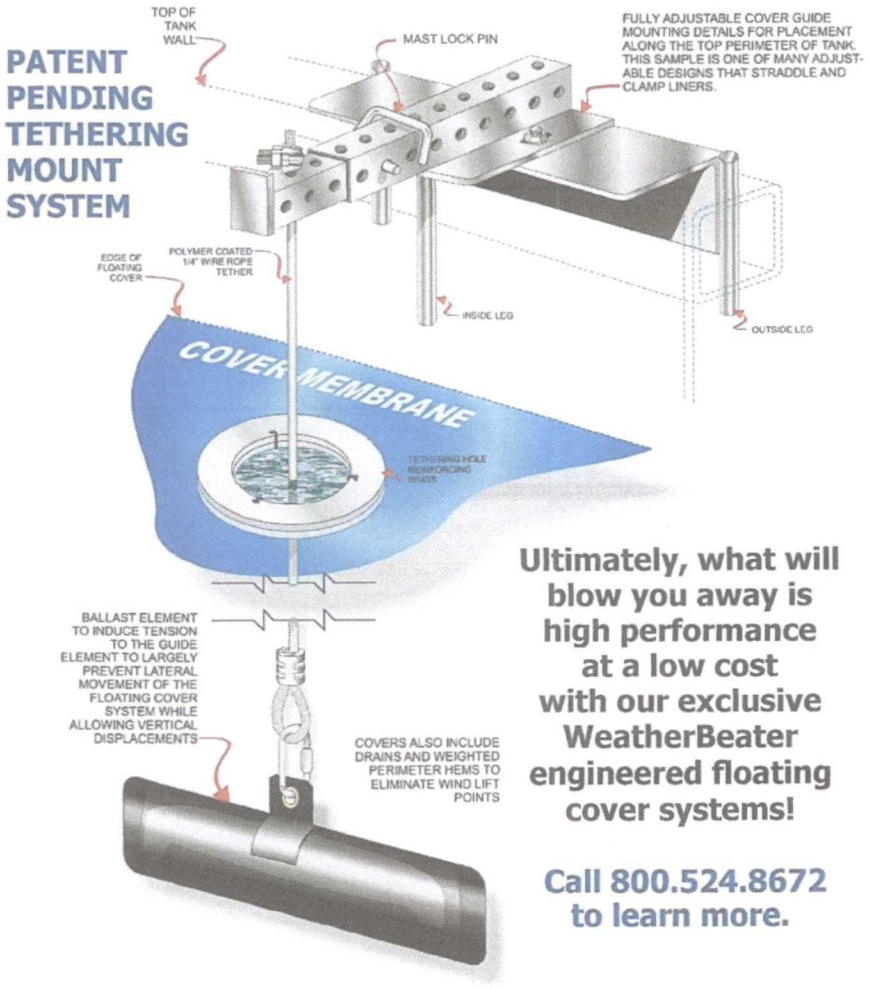
A REVOLUTION IN

Frac Tank Floating Covers

LIGHT WEIGHT INSULATED COVERS

DON'T GET BLOWN AWAY

PATENT PENDING TETHERING MOUNT SYSTEM



Ultimately, what will blow you away is high performance at a low cost with our exclusive WeatherBeater engineered floating cover systems!

Call 800.524.8672 to learn more.

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LLDPE - LINEAR LOW DENSITY POLYETHYLENE

Polyethylene is the most commonly used liner in the industry and must be installed by certified technicians. LLDPE is designed to be used when higher elongation properties are required.

Colorado Lining is a certified installer of Polyethylene products.
We maintain year round field crews capable of installing your next job.
We want to work with you to make your job a success!

Product Features:

- Chemical Resistance
- Flexible
- Can Be Fabricated
- Durable
- Available in Custom Sized Panels
- Cost Effective
- UV Stable
- Wide Product Range:
  - SMOOTH
  - TEXTURED
  - CONDUCTIVE
  - COLORS
- Available In 20, 30, 40, 60, 80 & 100 Mils

Uses & Applications:

- Landfill Caps & Cells
- Vapor Barriers
- Golf Course Ponds
- Greens & Bunker Liner
- Pond & Lake Liners
- Irrigation Reservoirs
- Drop-in Tank Liners & Containment Pits

- ***Project Photo: County Line Landfill in Littleton, CO***
- ***Project Type***
- ***260,000 SF 40 Mil LLDPE***

COLORADO LINING INTERNATIONAL

LLDPE

Smooth

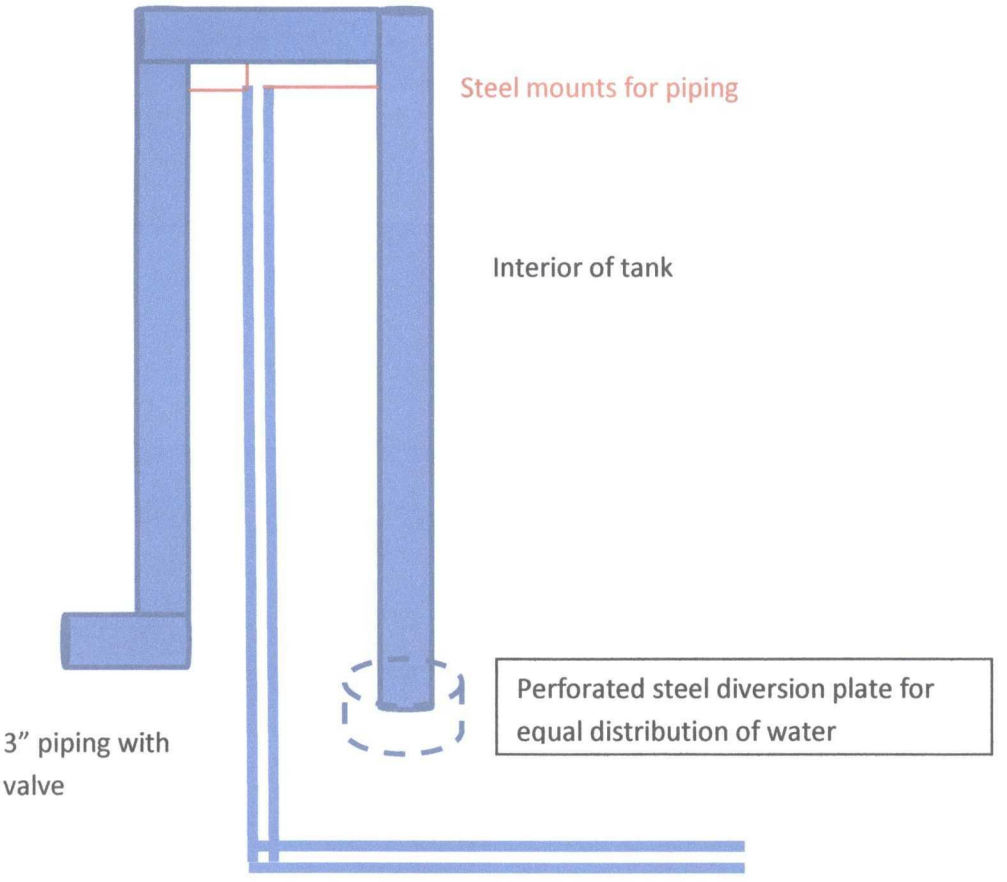
Product Data Sheet

TESTED PROPERTY	TEST METHOD	FREQUENCY	MINIMUM AVERAGE VALUE				
			30 mil	40 mil	60 mil	80 mil	100 mil
Thickness, (minimum average) mil (mm) Lowest individual reading (-10%)	ASTM D 5199	every roll	30 (0.75) 27 (0.69)	40 (1.00) 36 (0.91)	60 (1.50) 54 (1.40)	80 (2.00) 72 (1.80)	100 (2.50) 90 (2.30)
Density, g/cm^3	ASTM D 1505	200,000 lb	0.94	0.94	0.94	0.94	0.94
Tensile Properties (each direction) Strength at Break, lb/in-width (N/mm) Strength at Yield, lb/in-width (N/mm) Elongation at Break, % Elongation at Yield, %	ASTM D 6693, Type IV Dumbell, 2 ipm G.L. 2.0 in (51 mm) G.L. 1.3 in (33 mm)	20,000 lb	 120 (21) 66 (11) 700 13	 152 (26) 84 (14) 700 13	 243 (42) 132 (23) 700 13	 327 (57) 177 (30) 700 13	 410 (71) 212 (37) 700 13
Tear Resistance, lb (N)	ASTM D 1004	45,000 lb	21 (93)	28 (124)	42 (186)	58 (257)	73 (324)
Puncture Resistance, lb (N)	ASTM D 4833	45,000 lb	65 (289)	85 (378)	125 (556)	160 (711)	195 (867)
Carbon Black Content, % (Range)	ASTM D 1 603*/421 8	20,000 lb	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0
Carbon Black Dispersion	ASTM D 5596	45,000 lb	Note[1]	Note[1]	Note[1]	Note[1]	Note[1]
Notched Constant Tensile Load, hr	ASTM D 5397, Appendix	200,000 lb	1000	1000	1000	1000	1000
Oxidative Induction Time, min	ASTM D 3895, 200°C; O_2, 1 atm	200,000 lb	>140	>140	>140	>140	>140

NOTES:

[1]Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 3.

- [2]Roll lengths and widths have a tolerance of ± 1%.
- GSE HD is available in rolls weighing approximately 3,900 lb (1,769 kg).
- All geomembranes have dimensional stability of ±2% when tested according to ASTM D 1204 and LTB of <-77° C when tested according to ASTM D 746.
- *Modified


Steel mounts for piping
Interior of tank
Perforated steel diversion plate for equal distribution of water
3” piping with valve

20 General Operational Requirements

20.1 *Introduction*

The Basin General Operational Requirements Policy assists Employees in complying with the minimum operational requirements for recycling containments as defined by the NM OCD outlined in 19.15.34.13 NMAC and in BLM permit NMNM 132770

20.2 Scope

The Basin General Operational Requirements Policy assists applies to all Basin Employees.

20.3 *Purpose*

The Basin General Operational Policy provides Basin Employees directives for operating the recycling containment in compliance with OCD and BLM rules.

20.4 *Required Forms*

A Inspection Form

20.5 *References*

A 19.15.34 NMAC A&B
B OCD Permit/Registration XXXX
C BLM Permit, NMNM 132770

20.6 *Policy*

A ***Inspection***

i Basin Employees shall inspect the recycling containment and associated leak detection systems weekly while it contains fluids.

ii Basin shall maintain a current log of such inspections and make the log available for review by the division upon request.

B ***Maintenance and Operation***

i Basin Employees shall maintain and operate a recycling containment in accordance with the following requirements.

1 Basin Employees shall remove any visible layer of oil from the surface of the recycling containment.

2 Basin Employees shall maintain at least three feet of freeboard at each containment.

3 Basin shall ensure the injection and withdrawal of fluids from the containment shall be accomplished through pipes with a diverter plate that prevents damage to the liner by erosion.

4 Basin shall ensure the pipes will be sturdily mounted at the top with angle iron to eliminate impact from installation and removal of hoses or pipes.

5 In the event the containment's primary liner is compromised above the fluid's surface, Basin employees shall repair the damage or initiate replacement of the primary liner within 48 hours of discovery or seek an extension of time from the

division district office.

6 In the event the primary liner is compromised below the fluid's surface, Basin employees shall remove all fluid above the damage or leak within 48 hours of discovery, notify the division district office and repair the damage or replace the primary liner.

7 Basin shall ensure the ground surrounding the recycling containment is contoured such that surface water run on is diverted away from the containment to prevent erosion and ensure integrity of the containment.

8 Basin shall maintain on site, an oil absorbent boom to contain an unanticipated release.

C ***Cessation of Operations***

i Basin management shall deem the recycling containments to have ceased operations if less than 20% of the total fluid capacity is used every six months following the first withdrawal of produced water for use.

ii Basin management shall report cessation of operations to the appropriate division district office. The appropriate division district office may grant an extension to this determination of cessation of operations not to exceed six months

4 Basin Closure Plan

4.1 *Introduction*

The purpose of this plan is to establish the minimum requirements, procedures and costs associated with closure and post-closure activities of the Basin Facility being permitted in Lybrook, NM

4.2 *Scope*

The Basin Closure and Post Closure Policy shall be followed by all Basin employees with the key responsibilities as follows:

A. **Senior Management:** Provides the necessary support, commitment, and resources to develop a closure and post closure plan.
B. **General Manager**: Responsible for the preparation of closure and post closure plan, including a responsible third party contractor's cost estimate, sufficient to close the surface waste management facility in a manner that will protect fresh water, public health, safety and the environment.
C. **Plant Manager:** Alerts the General Manager when there are changes in Basin Disposal activities that could impact or effect the closure or post closure plan.

4.3 *Purpose*

The requirements in the Closure and Post Closure Policy will aid in ensuring the closure of the facility in a manner that will protect fresh water, public health, safety and the environment pursuant to EMNRD/OCD requirements.

4.4 Required Forms

A Cost Estimate
B OCD Form C-147
C OCD Form C-133
D OCD Form C-138

4.5 Reference(s)

A. 19.15.34 NMAC
B. Permit/Registration XXXX
C. BLM Permit, NMNM 132770

4.6 Policy

A **Submittal of Financial Assurance**

i Pursuant to 19.15.8 NMAC Basin shall furnish financial assurance acceptable to the division in the amount of the recycling containment's estimated closure cost or $25,000, whichever is greater.

ii The financial assurance shall be on division-prescribed forms, payable to the state of New Mexico and conditioned upon the proper operation and site closure of the recycling containment as required by New Mexico statutes and division rules.

iii Basin shall notify the division of any material change affecting the financial assurance within 30 days of discovery or notice of such change.

iv Forfeiture of financial assurance. The division shall give Basin 20 days written notice and an opportunity for a hearing prior to forfeiting any financial assurance.

v Forms of financial assurance. The division may accept the following forms of financial assurance.

1 Surety bonds
2 Letters of credit
3 Cash accounts

vi The division shall release a financial assurance upon Basin's or surety's written request if the recycling containment has been closed and the location remediated in accordance with 19.15.34 NMAC.

vii The division may use funds in the oil and gas reclamation fund to remediate the impacts of a recycling containment if deemed necessary by the division director in the event of an emergency or insufficient financial assurance. In either case, the costs expended by the division may be recovered from the operator pursuant to Section 70-2-38 NMSA 1978. Basin is responsible for all costs of remediation of the recycling containment even if the costs exceed the financial assurance.

viii

B Closure and Site Reclamation

i Once operations have ceased, Basin shall remove all fluids within 60 days and close the containment within six months from the date the operator ceases operations from the containment for use.(19.15.34.14.A NMAC).

ii Basin shall notify the surface owner (i.e. Bureau of Land Management) by certified mail, return receipt requested that of Basin's planned closure operations at least 72 hours, but not more than one week, prior to any closure operation. Basin shall ensure the notice includes the location.

iii Basin shall notify the appropriate division district office verbally and in writing at least 72 hours, but not more than one week, prior to any closure operation. Basin shall ensure the notice includes the operator's name and the location to be closed by unit letter, section, township and range.

iv Basin shall close the recycling containment by first removing all fluids, contents and synthetic liners and transferring these materials to a division approved facility.

v After the tanks have been emptied Basin will be disconnect the tanks and manways will be removed. Removal of tanks for reuse will require an escort and permits for transporting on highways.

vi Basin shall test the soils beneath the containment for contamination with a five-point composite sample which includes stained or wet soils, if any, and that sample shall be analyzed for the constituents listed below since depth to groundwater is between 51 feet and 100 feet

vii

Constituent	Method*	Limit**
Chloride	EPA 300.0	10,000 mg/kg
TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

* Or other test methods approved by the division.

** Numerical limits or natural background level, whichever is greater.

1 If any contaminant concentration is higher than the parameters listed above, the division may require additional delineation upon review of the results and Basin must receive approval before proceeding with closure.

2 If all contaminant concentrations are less than or equal to the parameters listed in above, then Basin can proceed to backfill with non-waste containing, uncontaminated, earthen material.

viii Within 60 days of closure completion, Basin shall submit a closure report on form C-147, including required attachments, to document all closure activities including sampling results and the details on any backfilling, capping or covering, where applicable. The closure report shall certify that all information in the report and attachments is correct and that the operator has complied with all applicable closure requirements and conditions specified in division rules or directives.

ix Once the recycling containment is closed, Basin shall reclaim the containment's location to a safe and stable condition that blends with the surrounding undisturbed area.

1 Basin shall replace topsoils and subsoils to their original relative positions and contoured so as to achieve erosion control, long-term stability and preservation of surface water flow patterns.

2 Basin shall reseed the disturbed area in the first favorable growing season following closure of a recycling containment.

3 Basin shall substantially restore the impacted surface area to the condition that existed prior to the construction of the recycling containment.

x Reclamation of all disturbed areas no longer in use shall be considered complete when all ground surface disturbing activities at the site have been completed, and a uniform vegetative cover has been established that reflects a life-form ratio of plus or minus fifty percent (50%) of pre-disturbance levels and a total percent plant cover of at least seventy percent (70%) of pre-disturbance levels, excluding noxious weeds.

xi Basin shall follow the BLM Surface Reclamation Plan dated Nov 2014.

xii Basin shall notify the division when reclamation and re-vegetation are complete.

Recycling Closure

Task	Quantity	Trucks	Hours	Cost/unit		# of units	Cost
EQUIPMENT REMOVAL							
Remove liquids from containment and receiving tanks	24,000	300	150	$ 65.00	hour		$ 9,750.00
Disposaof liquids from containment and receiving tanks	24,000			$ 0.75	bbl		$ 18,000.00
Remove liquids from pipes				$ 65.00	hour	2	$ 130.00
Disassemble/Remove piping & pumps				$ 170.00	hour	5	$ 850.00
Remove/Transport tanks				$ 1,340.00	day	1	$ 1,340.00
Remove 6 foot chain link fencing				$ 170.00	hour	2	$ 340.00
Transport fencing to recycler				$ 75.00	hour	2	$ 150.00
Grade/Backfill processing area				$ 1,185.00	day	3	$ 3,555.00
SOILS BELOW CONTAINMENT							
TPH (418.1)				$ 54.00	sample	5	$ 270.00
Chloride, EPA 300				$ 45.00	sample	5	$ 225.00
BTEX (8021B or 8260B)				$ 45.00	sample	5	$ 225.00
Benzene (8021B or 8260B)				$ 45.00	sample	5	$ 225.00
Chlorides (300.0, 300.1, SM4500B)				$ 15.00	sample	5	$ 75.00
GRADE/BACKFILL/RE-VEGETATION							
Grading and Backfill				$ 1,290.00	day	2	$ 2,580.00
Re-vegatation				$ 200.00	acre	10	$ 2,000.00
			TOTAL RECYCLING CLOSURE COSTS				**$ 39,715.00**

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WATER BASIN RECYCLING CONTAINMENT CLOSURE PLAN
BASIN DISPOSAL INC.
RIO ARRIBA COUNTY,
LYBROOK, NEW MEXICO

OIL CONS. DIV DIST. 3
JUN 30 2015

June 25, 2015

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ONLY THE CLIENT OR ITS DESIGNATED REPRESENTATIVES MAY USE THIS DOCUMENT AND ONLY FOR THE SPECIFIC PROJECT FOR WHICH THIS REPORT WAS PREPARED.

A Report Prepared for:

Mr. John Volkerding
Vice President
Basin Disposal Inc.
Bloomfield, New Mexico

WATER BASIN RECYCLING CONTAINMENT CLOSURE PLAN
BASIN DISPOSAL INC.
RIO ARRIBA COUNTY,
LYBROOK, NEW MEXICO

Prepared by:

Theresa Ancell
Environmental Professional

KLEINFELDER
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Denver, Colorado 80202
(303) 237-6601
www.kleinfelder.com

June 25, 2015

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APPENDIX B – COST ESTIMATE

WATER BASIN RECYCLING CONTAINMENT CLOSURE PLAN

1.1. INTRODUCTION

The purpose of this plan is to establish the minimum requirements, procedures and costs associated with closure and post-closure activities of the Water Basin Recycling Containment being permitted in Lybrook, NM.

1.2. SCOPE

The Basin Closure and Post Closure Policy shall be followed by all Basin employees with the key responsibilities as follows:

A. Senior Management: Provides the necessary support, commitment, and resources to develop a closure and post closure plan.

B. General Manager: Responsible for the preparation of closure and post closure plan, including a responsible third party contractor's cost estimate, sufficient to close the surface waste management facility in a manner that will protect fresh water, public health, safety and the environment.

C. Plant Manager: Alerts the General Manager when there are changes in Basin Disposal activities that could impact or effect the closure or post closure plan.

1.3. PURPOSE

The requirements in the Closure and Post Closure Policy will aid in ensuring the closure of the facility in a manner that will protect fresh water, public health, safety and the environment pursuant to New Mexico Energy, Minerals and Natural Resources Department/Oil Conservation Division (NM EMNRD/OCD) requirements.

1.4. REQUIRED FORMS

A. Cost Estimate
B. OCD Form C-147
C. OCD Form C-133
D. OCD Form C-138

1.5. REFERENCES

A. 19.15.34 NMAC

1801 California St, Suite 1100, Denver CO 80202 **p** | 303.237.6601 **f** | 303.237.6602

B. Permit/Registration XXXX
C. BLM Permit, NMNM 132770

1.6. POLICY

A Submittal of Financial Assurance

i Pursuant to 19.15.8 NMAC Basin shall furnish financial assurance acceptable to the division in the amount of the recycling containment's estimated closure cost or $25,000, whichever is greater.

ii The financial assurance shall be on division-prescribed forms, payable to the state of New Mexico and conditioned upon the proper operation and site closure of the recycling containment as required by New Mexico statutes and division rules.

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B Closure and Site Reclamation

i Once operations have ceased, Basin shall remove all fluids within 60 days and close the containment within six months from the date the operator ceases operations from the containment for use.(19.15.34.14.A NMAC).

1801 California St, Suite 1100, Denver CO 80202 **p** | 303.237.6601 **f** | 303.237.6602

ii Basin shall notify the surface owner (i.e. Bureau of Land Management) by certified mail, return receipt requested that of Basin's planned closure operations at least 72 hours, but not more than one week, prior to any closure operation. Basin shall ensure the notice includes the location.

iii Basin shall notify the appropriate division district office verbally and in writing at least 72 hours, but not more than one week, prior to any closure operation. Basin shall ensure the notice includes the operator's name and the location to be closed by unit letter, section, township and range.

iv Basin shall close the recycling containment by first removing all fluids, contents and synthetic liners and transferring these materials to a division approved facility.

v After the tanks have been emptied Basin will be disconnect the tanks and manways will be removed. Removal of tanks for reuse will require an escort and permits for transporting on highways.

vi Basin shall test the soils beneath the containment for contamination with a five-point composite sample which includes stained or wet soils, if any, and that sample shall be analyzed for the constituents listed below since depth to groundwater is between 51 feet and 100 feet

vii Analytical Requirements

Constituent	Method*	Limit**
Chloride	EPA 300.0	10,000 mg/kg
TPH (GRO+DRO+MRO)	EPA SW-846 Method 8015M	2,500 mg/kg
GRO+DRO	EPA SW-846 Method 8015M	1,000 mg/kg
BTEX	EPA SW-846 Method 8021B or 8260B	50 mg/kg
Benzene	EPA SW-846 Method 8021B or 8260B	10 mg/kg

* Or other test methods approved by the division.

** Numerical limits or natural background level, whichever is greater.

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xi Basin shall follow the BLM Surface Reclamation Plan dated November 2014.

xii Basin shall notify the division when reclamation and re-vegetation are complete.

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APPENDIX A – PORTABLE CONTAINMENT SYSTEM SCHEMATIC

Portable Containment Systems

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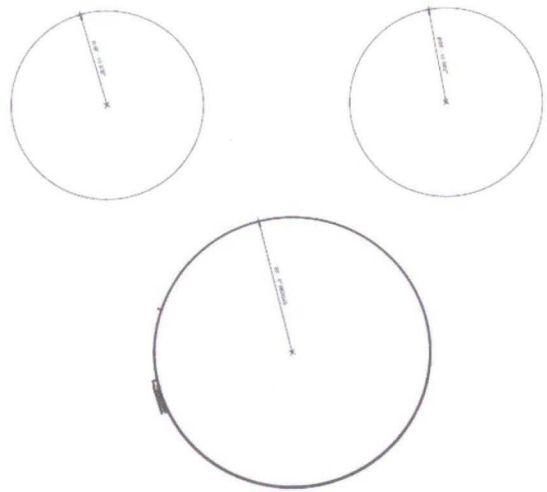
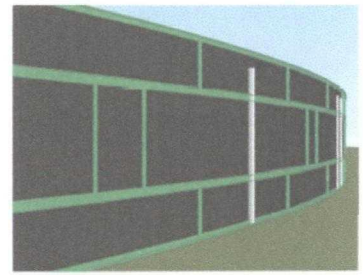
U.S. PATENT PENDING
NO REPRODUCTIONS WITHOUT
EXPRESSED WRITTEN CONSENT

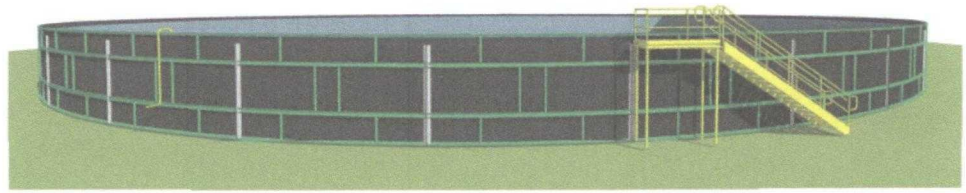
EO



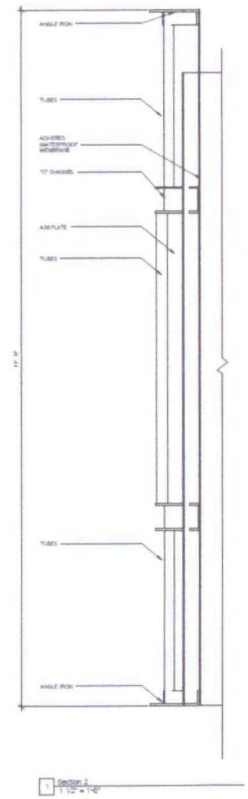
6 PERMANENT FLOOR PLAN
1" = 30'-0"



4 PERMANENT - GROUND VIEW



2 3D View 2



1 Section 1
1 1/2" = 1'-0"

WATER RECYCLING FACILITY

LYBROOK, NM

Drawn by: MAD
Checked by: JL
Project Date: 07/25/2014
Project Number: 130704

Portable Containment Systems

EO

PCS PRODUCTIONS INC. | 703 3rd Ave. Longmont, CO 80501 | PH 303.775.7406 | F 303.651.9145 | Email mail@PCSproductions.com

APPENDIX B – COST ESTIMATE

Recycling Closure – Associated Cost Breakdown						
Task	**Quantity**	**Trucks**	**Hours**	**Cost/unit**	**No. of Units**	**Cost**
EQUIPMENT REMOVAL						
Remove liquids from containment and receiving tanks	24,000	300	150	$ 65.00 /hour		$9,750.00
Disposal of liquids from containment and receiving tanks	24,000			$ 0.75 /bbl		$18,000.00
Remove liquids from pipes				$ 65.00 /hour	2	$130.00
Disassemble/Remove piping & pumps				$ 170.00 /hour	5	$850.00
Remove/Transport tanks				$ 1,340.00 /day	1	$1,340.00
Remove 6 foot chain link fencing				$ 170.00 /hour	2	$340.00
Transport fencing to recycler				$ 75.00 /hour	2	$150.00
Grade/Backfill processing area				$ 1,185.00 /day	3	$3,555.00
					Subtotal	$34,115.00
SOILS BELOW CONTAINMENT						
TPH (418.1)				$ 54.00 /sample	5	$270.00
Chloride, EPA 300				$ 45.00 /sample	5	$225.00
BTEX (8021B or 8260B)				$ 45.00 /sample	5	$225.00
Benzene (8021B or 8260B)				$ 45.00 /sample	5	$225.00
Chlorides (300.0, 300.1, SM4500B)				$ 15.00 /sample	5	$75.00
					Subtotal	$1,020.00
GRADE/BACKFILL/RE-VEGETATION						
Grading and Backfill				$ 1,290.00 /day	2	$2,580.00
Re-vegetation				$ 200.00 /acre	10	$2,000.00
					Subtotal	$4,580.00
					TOTAL RECYCLING CLOSURE COSTS	**$39,715.00**