APPROVED

Pueblo West, LLC
125 Greathouse Village
Decatur, Texas 76234

September 2, 2016

State of New Mexico
NMOCD Environmental Bureau
1220 South St. Francis Drive
Santa Fe, NM 87505
Attn: Dr. Tomas Oberding

State of New Mexico
NMOCD District 1 Office
1625 North French Drive
Hobbs, NM 88240
Attn: Kristen Lynch

Re: Proposed Nemo Fund I, LLC Slash Z Recycling Facility / Containment
Section 13, T10S, R36E, Lea County, New Mexico
C-147 Registration Package

Dear Dr. Oberding and Ms. Kristen Lynch,

Attached is a completed form C-147 registration package for the proposed recycling facility and containment referenced above. This proposed facility would be utilized by Nemo Fund I, LLC during their drilling/completion activities of 12 new wells planned in the area. A list of these wells with API numbers is included in Attachment A. The proposed facility is located on private surface. I hereby certify that the surface owner is being copied on this letter/C-147 registration package.

If you need any additional information to consider this registration package, please contact me. Thank you for your consideration of this registration.

Sincerely,

DJ Holcomb

Danny J. Holcomb
Agent for Nemo Fund I, LLC
Email: danny@pwllc.net
Cell: 806-471-5628

cc: Nemo Fund I, LLC
Slash Z Land and Cattle, LLC (surface owner)

Attachments

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment
Section 13, T10S, R36E, Lea County, New Mexico
C-147 Registration Package

Attachment A

Nemo wells associated with the proposed Slash Z Recycling Facility and Containment:

Well Name	Surface Location ULSTR	API Number
Arnage 17 State Com #002H	C-17-10S-37E	30-025-43260
Azure 14 Fee #002H	N-14-10S-36E	30-025-43258
Continental 34 State Com #004H	I-27-10S-36E	30-025-43266
Coombs 10 State Com #1H	E-10-10S-37E	30-025-43264
Flying Spur 6 State #003H	P-06-10S-37E	30-025-43262
Harton 03 State #001H	D-03-10S-37E	30-025-TBD
Midkiff 25 #004H	H-25-10S-36E	30-025-43259
Mulsanne 8 State Com #004H	A-08-10S-37E	30-025-43263
Pita State Com #001H	M-13-10S-36E	30-025-42980
Santa Fe 13 #003H	P-13-10S-36E	30-025-43257
Santa Fe 35 #004H	I-26-10S-36E	30-025-43265
Speed Six 19 State Com #003H	G-19-10S-37E	30-025-43261

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

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: Nemo Fund I, LLC (For multiple operators attach page with information) OGRID #: 310809

Address: 5826 New Territory Box 412, Sugar Land, TX 77479-594

Facility or well name (include API# if associated with a well): Slash Z Recycling Facility and Containment

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

U/L or Qtr/Qtr M Section 13 Township 10S Range 36E County: Lea

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

2.

☒ **Recycling Facility:**

Location of recycling facility (if applicable): Latitude 33°26'30.08" Longitude 103°13'02.15" 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 33°26'32.30" Longitude 103°12'59.50" NAD: ☒1927 ☐ 1983

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

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

☒ String-Reinforced Lower (secondary) liner – 30-mil LLDPE string reinforced, Upper (primary) liner – 60-mil HDPE

Liner Seams: ☒ Welded ☒ Factory ☒ Other Field Seams Volume: 165,600 bbl Outside Dimensions: L 363' x W 443' x D 11'

with a L 40' x W 40' x D 5' sump area in the southwest corner

☐ 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.

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 Preston Bormman, III Title: President

Signature: Date: 9/2/2016

e-mail address: preston@petrowyatt.com Telephone: 713-416-2281

11.
OCD Representative Signature: Kristen D. Lynch **Approval Date:** 10/3/2016

Title: Environmental Specialist **OCD Permit Number:** 1RF 9

☐ OCD Conditions

☐ Additional OCD Conditions on Attachment

pKL1627739367
fKL1627739136

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment

Siting Criteria

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment
Form C-147 Siting Criteria for Recycling Containment

DISTANCE TO GROUNDWATER

Exhibit "A" and the discussion below demonstrate that groundwater (fresh water as defined by NMOCD rules) at the proposed location is greater than 50 feet beneath the proposed containment.
Exhibit "A" is a geologic map that indicates:

1. Groundwater geology
2. The location of the proposed containment including the surface elevation.
3. No fresh water wells are listed in the OSE database within three miles of the proposed containment.
4. The nearest water wells with depth to water listed in the OSE database are indicated with blue well markers on Exhibit "A". They are:
   POD L-001140 – 70 feet (located 5.6 miles NNW of the proposed containment in S23-T9S-R36E)
   POD L-11951 – 75 feet (located 4.1 miles NW of the proposed containment in S8-T10S-R36E)
   POD L-12267 – 120 feet (located 3.1 miles SW of the proposed containment in S28-T10S-R36E)
5. The nearest water wells with depth to water listed in the USGS groundwater database (nwis.waterdata.usgs.gov) are indicated with green well markers on Exhibit "A". Additionally, the landowner confirmed that depths to water in two of these wells are 70 feet from surface.
6. The site inspection identified a nearby undocumented water well located approximately 5185' west of the proposed containment. This well is indicated with a red well marker on Exhibit "A". The landowner confirmed the depth to water in this well is 70 feet from surface.

The site inspection included an inspection of a nearby caliche pit excavated to a depth of approximately 30 feet from surface. This pit is located approximately 3895 feet southwest of the proposed containment. See Exhibit "B" for the location of this caliche pit excavation. No groundwater has been encountered in the excavation of this caliche pit.

The containment design includes a 7 foot tall berm above ground level and a maximum depth of 22 feet in the sump area. Based on this design, the bottom of the containment liner will be located a maximum of 15 feet below ground level. With 70 feet being the shallowest depth to water found in the area, groundwater will be greater than 50 feet beneath the containment liner.

HYDROGEOLOGY

The uppermost water-bearing zone in far northeastern Lea County is the Cretaceous-age Tucumcari Formation. The fine grained character of most of the thickness of the Tucumcari Formation likely impedes development of substantial amounts of water from this unit. In the area of Ranger Lake (5 miles SW of the proposed containment), the Ogallala gains water from the overlying Cretaceous-age Tucumcari Formation.

The Tertiary-age Ogallala Aquifer underlies the Tucumcari Formation and is the primary water-bearing zone in northeastern Lea County. The Ogallala consists of interbedded layers of fine to medium grained sand and gravel, overlain by an upper caliche layer. Thickness of the Ogallala ranges from zero to 350 feet and varies as a result of irregularities formed by erosional channels in the surface of the underlying Triassic-age Dockum Group sediments (aka red beds). The red beds are clay rich and act as a low-permeable barrier to vertical groundwater flow.

DISTANCE TO SURFACE WATER

Exhibit "C" and the site inspection demonstrate that the proposed containment location is not within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal fee of any other fresh water well or spring, in existence on the date of this application. The Llano Estacado in northeastern Lea County slopes east-southeast-ward from 10 to 15 feet per mile. The surface of the plain is dotted with sandhills which are most numerous near the western edge of the plain. There are no perennial streams on the plain and practically no developed surface drainage.

1. There are no continuously flowing watercourses or other water bodies, as described by NMOCD Rules, within the prescribed setbacks for the proposed containment.
2. There are no continuously flowing or intermittent flowing watercourses within 3 miles of the proposed containment.
3. The nearest surface water is a man-made stock tank located approximately 3011 feet southeast of the proposed containment location.
4. The nearest non-man made surface water is Ranger Lake located approximately 5 miles southwest of the proposed containment location. Ranger Lake is seasonally wet, but remains dry during extended periods of drought.

DISTANCE TO PERMANENT RESIDENCES OR STRUCTURES

Exhibit "D" and the site inspection demonstrate that the proposed containment location is not within 1000 feet from an occupied permanent residence, school, hospital, institution or church. There is one oil well owned by the applicant with a wellhead and tank battery located approximately 760 feet south of the proposed containment edge. There are no inhabited structures on this well location. The nearest occupied permanent residence is located 2.2 miles southeast of the proposed containment location.

DISTANCE TO NON-PUBLIC WATER SUPPLY

Exhibit "B" and the site inspection demonstrate that the proposed containment location is not located within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock water purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence on the date of this application.

1. Exhibit "B" shows the location of the nearest three water wells.
2. The nearest water well is located approximately 4643 feet southeast of the proposed containment.

3. Based on the site inspection, no springs were found within the 1000 feet of the proposed containment.

DISTANCE TO MUNICIPAL BOUNDARIES AND FRESH WATER FIELDS

Exhibit ""E" demonstrates that the proposed containment location is not within any incorporated municipal boundaries or within any defined municipal fresh water well fields covered under a municipal ordinance adopted pursuant to Section 3-27-3 NMSA 1978, as amended. The nearest incorporated municipality is Tatum, New Mexico which is approximately 13.5 miles southwest of the proposed containment location. The Tatum municipal water well field is located approximately 14.1 miles southwest of the proposed containment location.

DISTANCE TO WETLANDS

Exhibits "C" and "F" demonstrate that the proposed containment location is not within 500 feet of any designated wetlands. The nearest designated wetland is Ranger Lake located approximately 5 miles to the southwest of the proposed containment. Ranger Lake is seasonally wet, but remains dry during droughts.

DISTANCE TO SUBSURFACE MINES

Exhibit "G" demonstrates that the proposed containment location is not within an area overlying a subsurface mine. The only mine in EMNRD and USGS databases that is within 5 miles of the proposed containment location is a closed surface aggregate pit located approximately 3.6 miles west of the proposed containment location. Accordingly, the site visit confirmed that the proposed containment location is not overlying any subsurface mines.

DISTANCE TO HIGH OR CRITICAL KARST AREAS

Exhibit "H" demonstrates that the proposed containment location is not located within a potential karst area as determined in the BLM Carlsbad Area Resource Management Plan Amendment (Sept-1994). The nearest high potential karst area is located in Chavez County 62 miles west of the proposed containment location. The site inspection and soil analysis confirmed that the proposed containment area is stable with a hard caliche base.

DISTANCE TO 100-YEAR FLOODPLAIN

Exhibit "I" demonstrates that the proposed containment is located within FEMA's 100-Year Floodplain Zone D. Zone D is described as areas with undetermined flood hazards. FEMA has performed no flood hazard analysis in Zone D. Based on the site inspection, the proposed containment location is not within a floodplain. This area has an arid climate and there are no arroyos or watercourses in the general area. The flat sandy surface conditions in the area serve to absorb most rainfall and deter storm water runoff. The risk of flooding is very low.

SOIL ANALYSIS AT PROPOSED CONTAINMENT LOCATION

On August 18, 2016, a soil analysis study was performed at the proposed containment site by Pettigrew &Associates PA, the engineering/design company. Utilizing a backhoe, excavations were dug about 20 feet inside of each corner of the proposed site. A summary of the soil analysis results is listed in the table below:

Location	Depth	Soil Type	Description
NW Corner	0" – 20"	Topsoil	Silty sand (SM), brown medium dense
	20' – 40"	Caliche	Dense dry fine grained calcium carbonate, white, free of rocks
	40" – 72"	Caliche	Dense dry calcium carbonate, brownish, rocky
NE Corner	0" – 6"	Topsoil	Silty sand (SM), brown medium dense
	6" – 52"	Caliche	Dense dry calcium carbonate, brownish, rocky
SE Corner	0" – 12"	Topsoil	Silty sand (SM), brown medium dense
	12" – 48"	Caliche	Loose dry fine grained calcium carbonate, white, free of rocks
	48" – 72"	Caliche	Very dense dry hard calcium carbonate, white, rocky
SW Corner	0" – 24"	Topsoil	Silty sand (SM), brown medium dense
	24" – 72"	Caliche	Loose dry fine grained calcium carbonate, tan, minimal rock

The proposed containment is located on the Llano Estacado approximately 27 miles east of the edge of the exposed caprock. Caliche is known to exist in this area from just below surface to as much as 350 feet deep. An active caliche pit exists approximately 3895 feet southwest of the proposed containment location. Caliche in this pit is currently exposed to a depth of 30 feet below surface. See site inspection photo of this pit. Based on experience during drilling operations at nearby wells and this exposed caliche pit, Nemo fully expects that hard pan caliche exists in excess of 30 feet from surface at the proposed containment location. This hard pan soil type makes an excellent foundation for the proposed containment.

See Pettigrew & Associates' detailed geotechnical observation report attached.

PETTIGREW & ASSOCIATES PA

ENGINEERING | SURVEYING | TESTING

DEFINING QUALITY SINCE 1965

THE NEW MEXICO Private 100

THE TOP 100 COMPANIES IN NEW MEXICO

Project: **NEMO Fund I, LLC**
Proposed Recycle Facility Containment
Section 13, T10S, R36E
Lea County, New Mexico

Date: **August 18, 2016**

Subject: **Geotechnical Observation**

Figure 1 Nemo Site, Lea County, NM

Pettigrew and Associates participated in a site visit for Geotechnical Observation at the Proposed Recycle Facility Containment in Lea County, New Mexico. Erica Hart, P.G. with Pettigrew & Associates, P.A., Butch James with NEMO Fund I, LLC, Danny Holcomb with Pueblo

West, LLC and a backhoe with operator were onsite during the observation. The following construction activities were observed:

- A pit was excavated in each corner of the site;
- Nearby pits were observed.

Site Description and Location

The project site is located at Section 13, T10S, R36E, North of Tatum, New Mexico. Directions to site: From Tatum, go east on US 380 approximately 4 miles to Bledsoe Highway (NM 125). Turn north on 125 and continue to mile marker 10. Turn west on a caliche road and proceed 4 miles to the site on the east side of the road.

Observed Strata

Test Hole #1
At Sump area 20' NE of SW corner.
2' Brown Topsoil
4' Loose Tan Caliche

Test Hole #2
NW Corner of Site
20" Brown Topsoil
20" Dense Caliche, Dry and Brownish Tint

Test Hole #3
NE Corner of Site
6" Topsoil
4' Caliche

Test Hole #4
SE Corner of Site
10-12" Topsoil
3' Loose Caliche, very Dense at bottom of hole

Figure 2 Test Hole #4 in SE Corner of Site

A gas line was observed east of the site. The latitude and longitude of the closest point to the pond is at 33.44179° N and 103.21587° W.

Figure 3 Gas Line East of Property

The centerline of a road to a well pad that is not marked on the survey is at a latitude and longitude of 33.44175° N and 103.21668° W.

An open Caliche Pit was observed south of the site. The pit is approximately 20' deep with heavily weathered Caliche throughout.

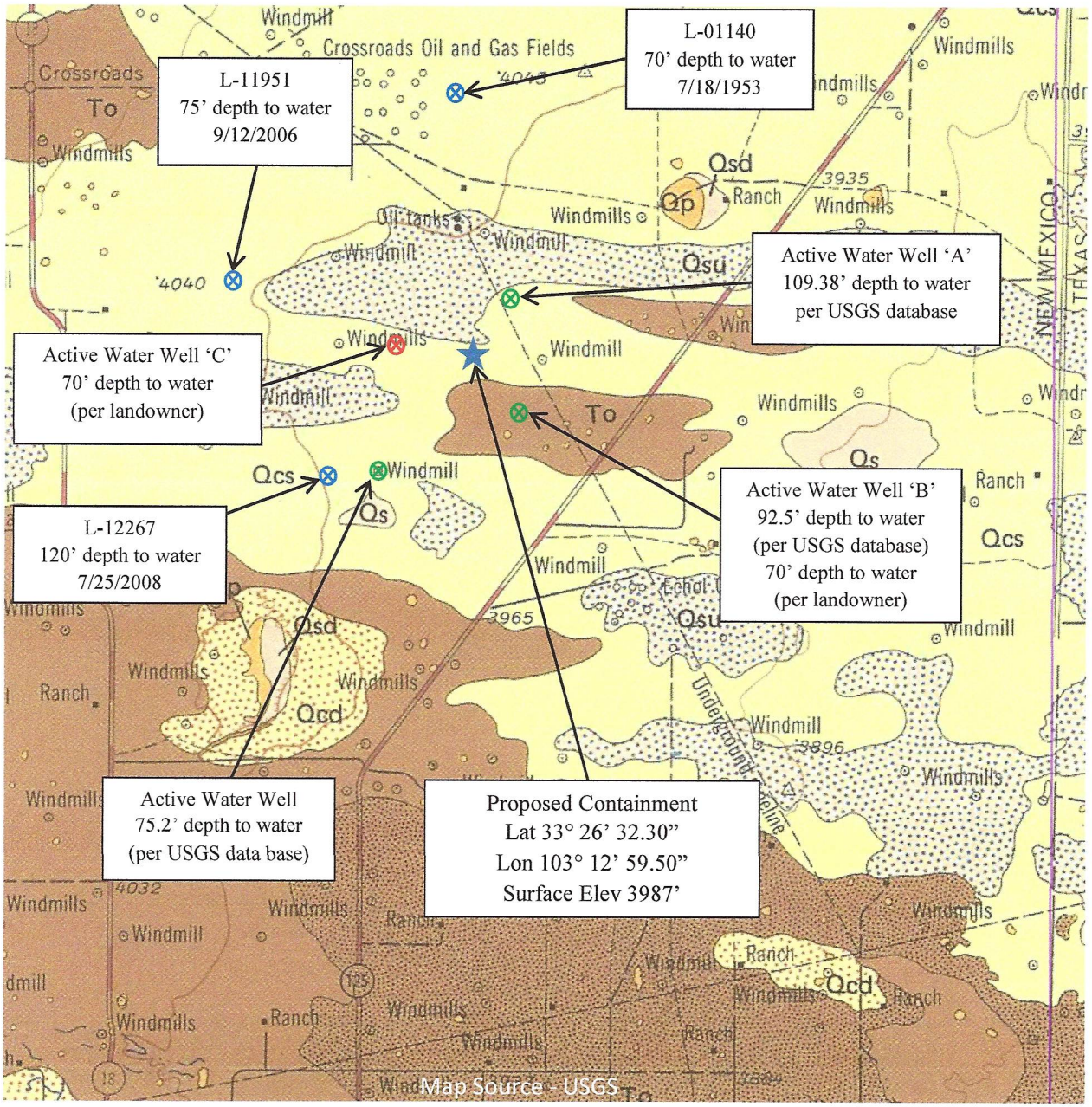
Figure 4 Caliche Pit South of Site (North Wall)

Figure 5 Caliche Pit South of Site (South Wall)

Conclusion

Field observations confirm the presence of Caliche near the surface of the site. Observations of nearby pits indicate the caliche is present to a minimum depth of 20' below ground surface. Caliche materials are suitable for construction of pond berms and temporary roads.

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Groundwater / Geologic Map



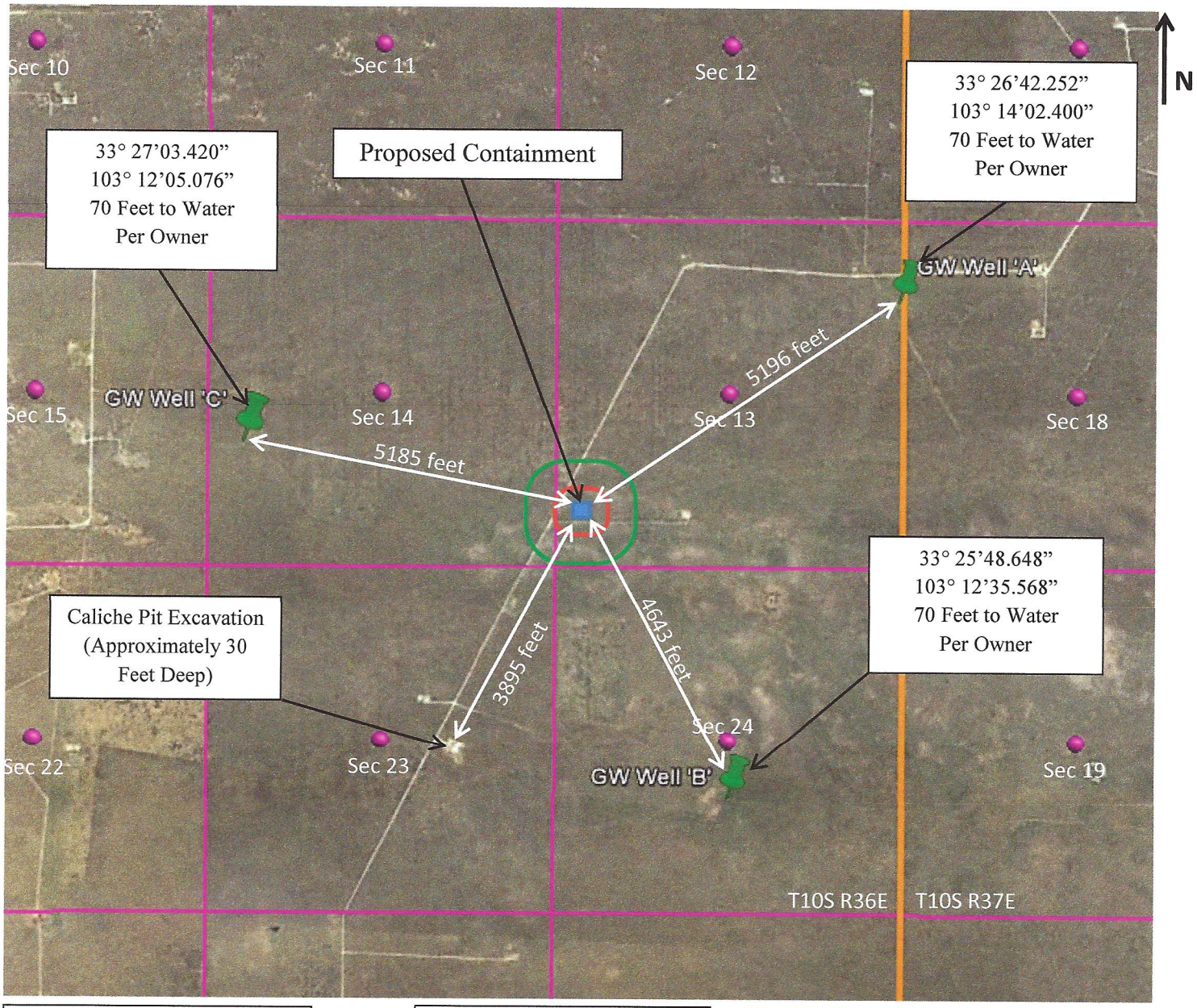
Legend

- Proposed Containment Location
- Groundwater Wells - OSE Database
- Groundwater Wells - USDS Database (nwis.waterdata.usgs.gov)
- Groundwater Well – Site Inspection

4 miles

EXHIBIT "A"

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Groundwater Wells



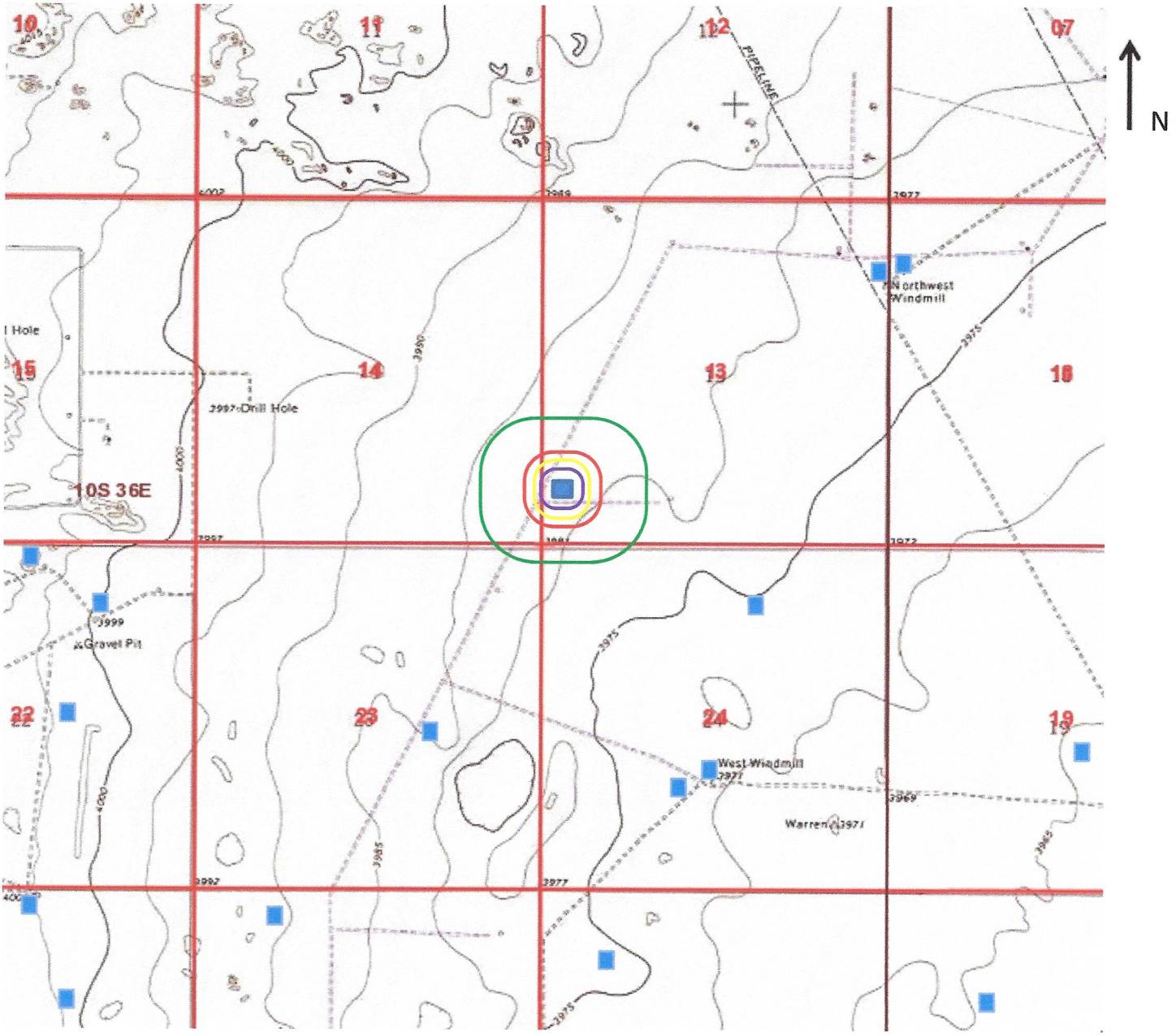
Distance from facility
- 500 ft
- 1000 ft

Map Source – Google Earth

0.5 mile

Exhibit "B"

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Topography and Surface Water



Map Source – NMOCD GIS

Legend	Bodies of Water
Recycle Facility / Containment	Pond/Stock Tank
Distance to Facility	River and Drainages
200 feet	500 feet	Stream/River (none)
300 feet	1000 feet	Intermittent Stream (none)

EXHIBIT "C"

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Nearby Structures

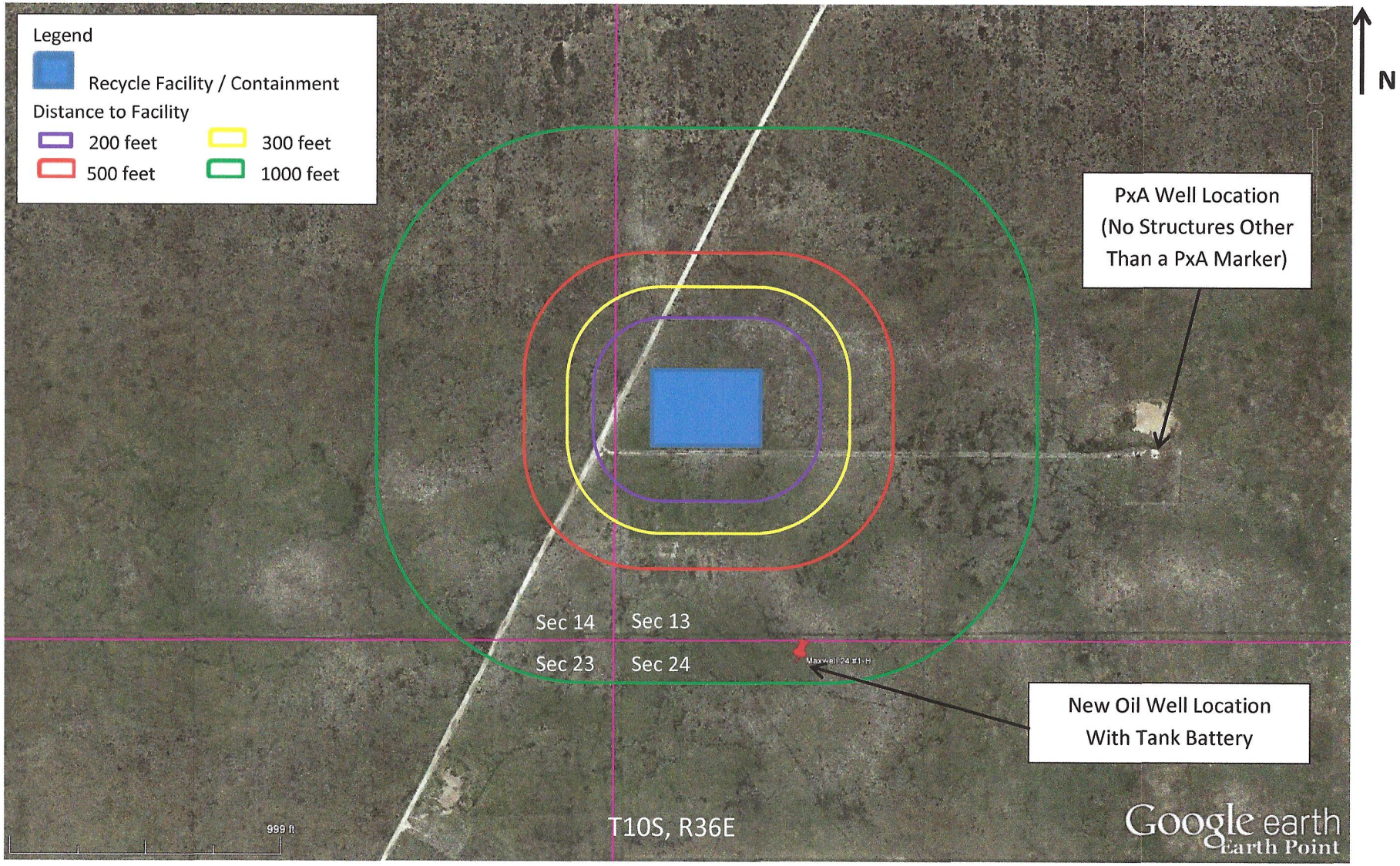
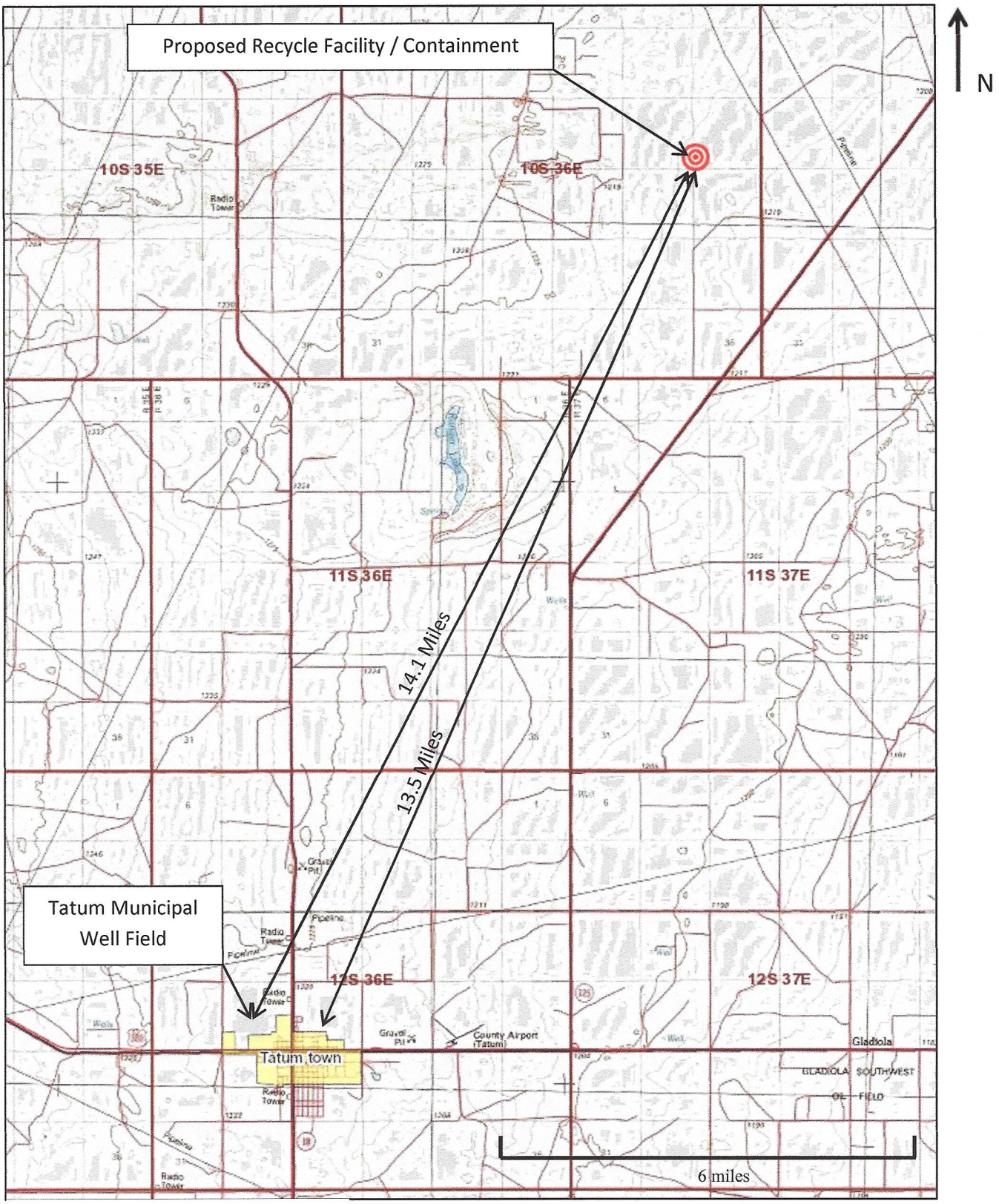


EXHIBIT "D"

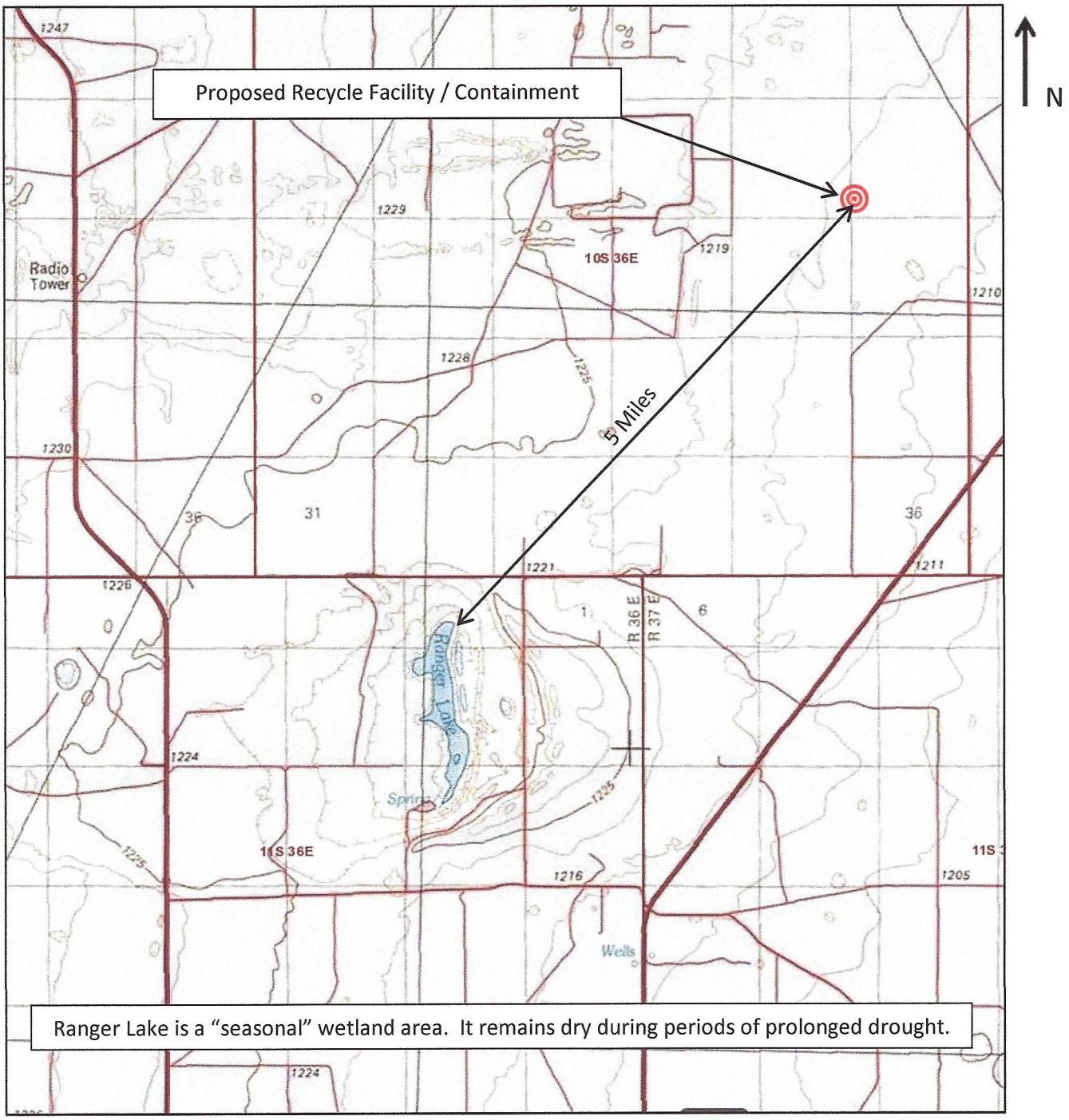
Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Nearest Municipality and Water Well Field



Map Source – NMOCD GIS

EXHIBIT "E"

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Nearest Wetlands

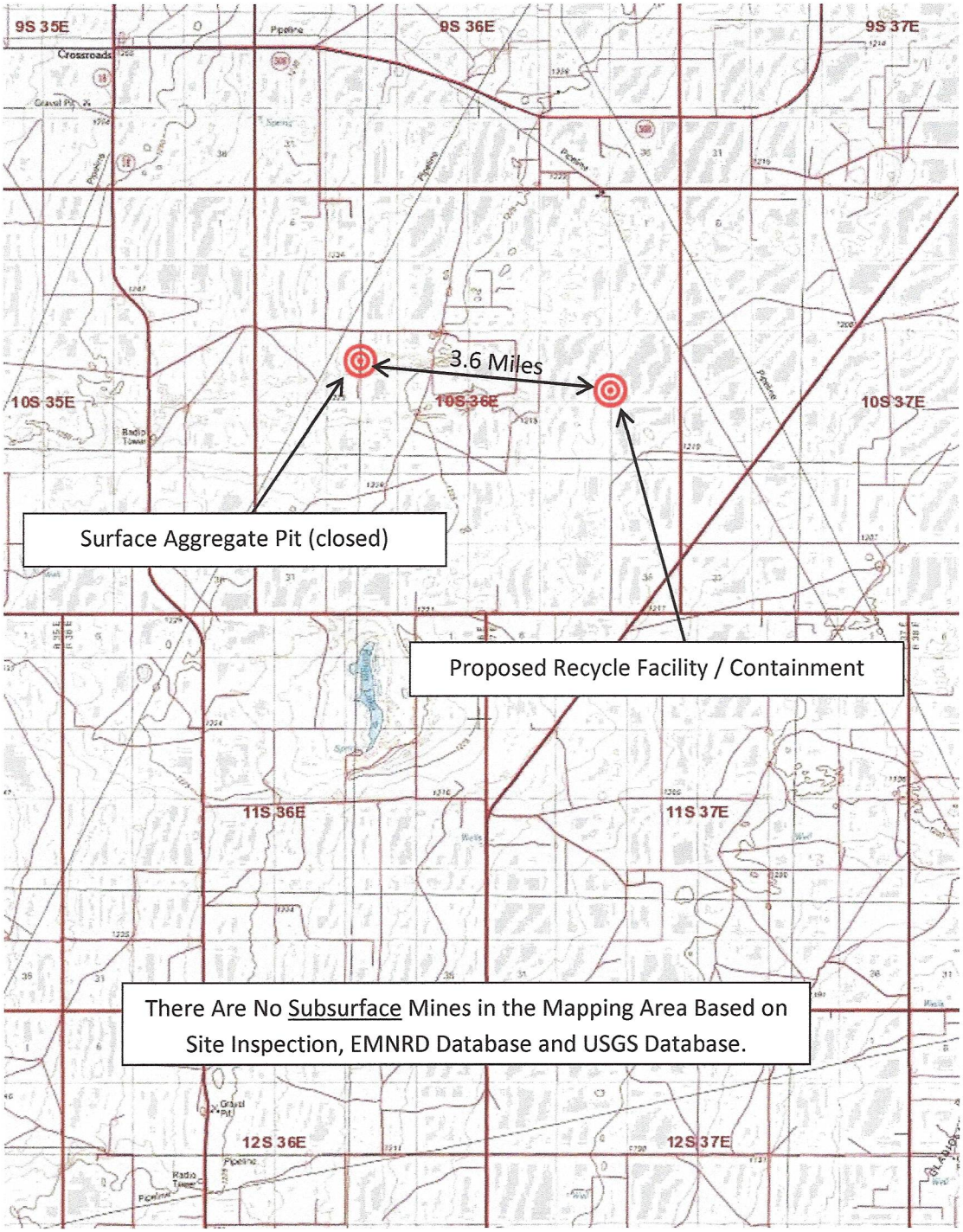


Map Source – NMOCD GIS

2 miles

EXHIBIT "F"

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Nearest Mines



Map Source – NMOCD GIS

EXHIBIT "G"
Page 1

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Nearest Mines

New Mexico Mining and Minerals Division

Home > Search Results > Detail

Mine Registration Detail

Wylie No. 1 - Sec17 T10S R36E

Related MARP Permits: (No Permit)

Registration Information

Operator The Wylie Corporation | Registration Date 2/20/1997 | Signature Date | Start Date 2/20/1997 | Closed Date 12/31/1997

Mine Information

Name	Wylie No. 1 - Sec17 T10S R36E
Status	Permanent Closure, Reclamation Unknown
Program	Mine Registration Program
Commodities	Aggregate
Mine Types	Surface - Open Pit

Coordinates

Latitude	33.447200
Longitude	103.278700

Location

County	Lea
Quads	Ranger Lake
Grants	(None)
PLSS	Sec 17 T10S R36E

Ownership

Surface Ownership	Duncan, Betty
Mineral Ownership	Duncan, Betty

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Karst Potential

Cave or Karst Occurrence Areas

High Potential

Medium Potential

Low Potential

Oil & Gas Potential
Occurrence Boundaries

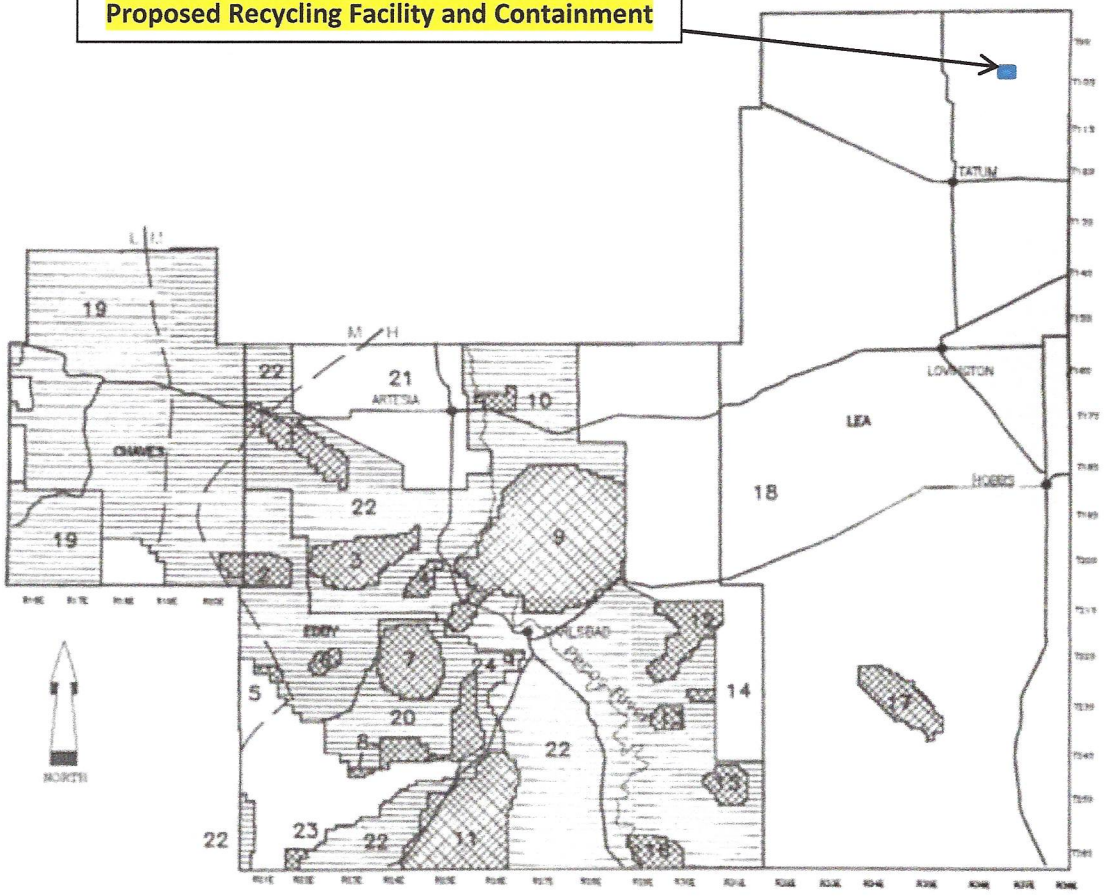
H = High Potential

M = Moderate Potential

L = Low Potential

NOTE - The table associated with this map shows the relative depth of each area shown on this map. For example, area number 9 is the Burton Flats area which has a high potential for the occurrence of caves or karst features to a depth of 350 feet.

Proposed Recycling Facility and Containment



Map Source: BLM Resource Management Plan Amendment (Sept-94)

SCALE
1/2" = 9.5 Miles
BLM Roswell District, 1994

MAP 26
CAVE or KARST OCCURRENCE AREAS
Carlsbad Resource Area

EXHIBIT "H"
Page 1

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Karst Potential

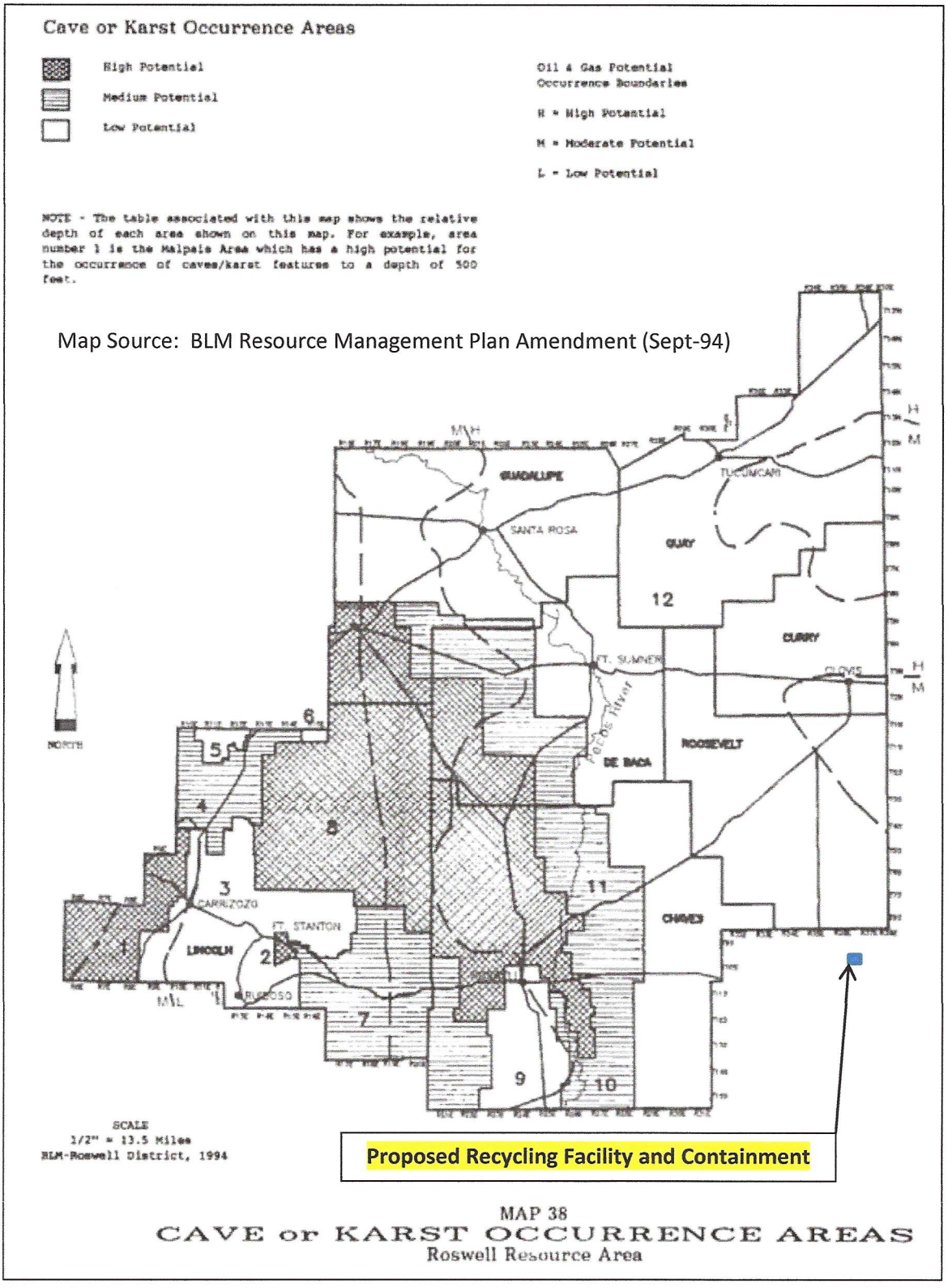
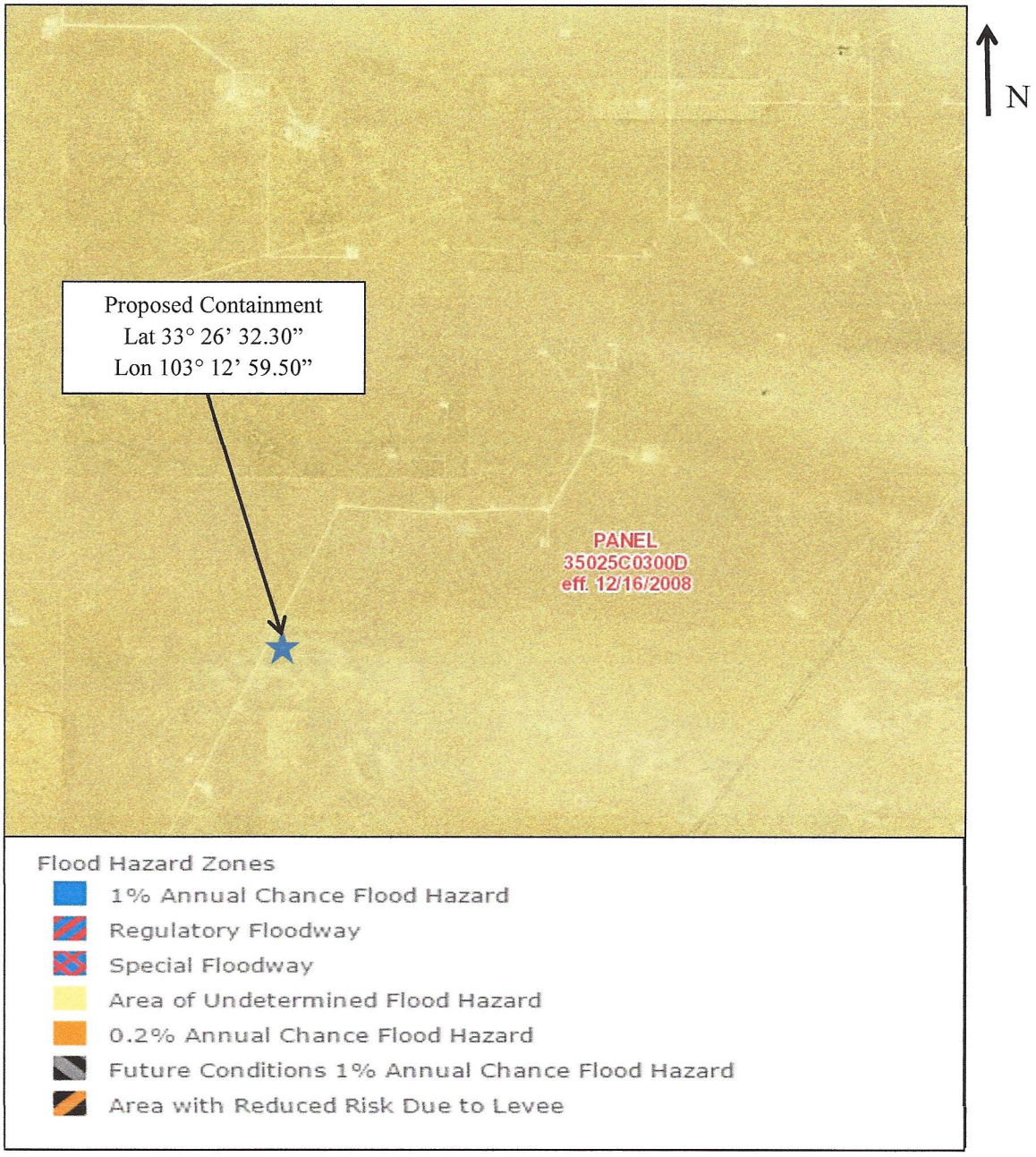


EXHIBIT "H"
Page 2

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
FEMA Flood Map



Map Source - FEMA

EXHIBIT "I"

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility /
Containment

Site Inspection Photos

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Site Inspection Photos

NW corner of site looking SE

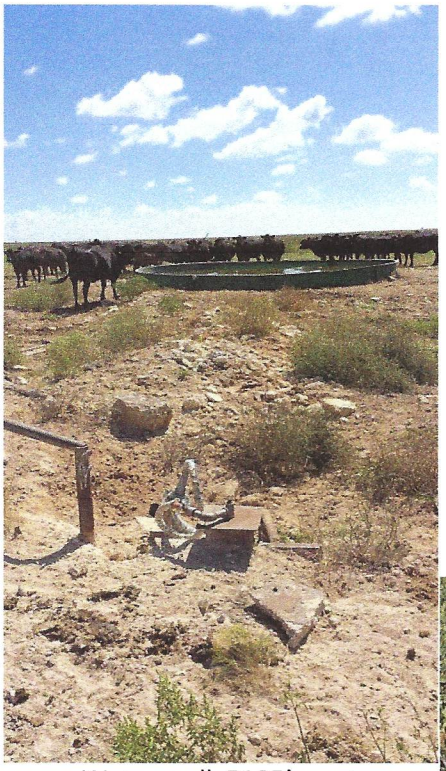
NE corner of site looking SW

Center point of site
looking SW

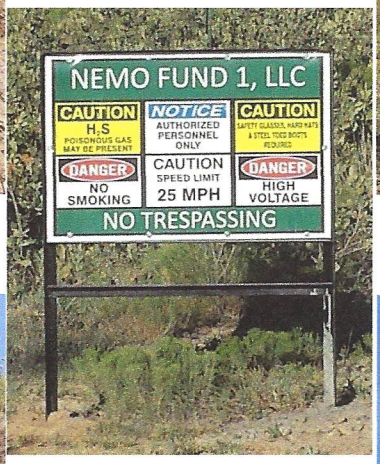
SW corner of site looking NE

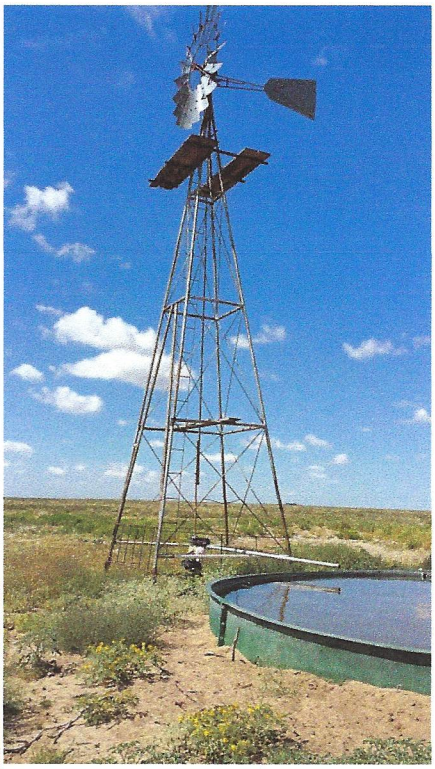
SE corner of site looking NW

Nemo Fund I, LLC
Proposed Slash Z Recycle Facility/Containment
Site Inspection Photos



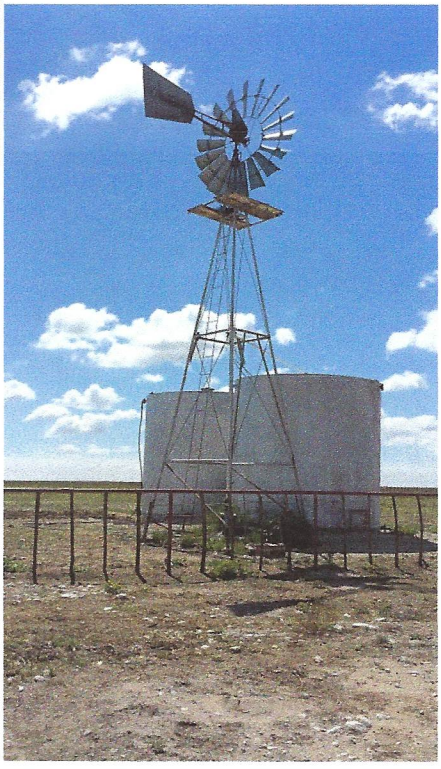
Water well 5185' west
of containment





Water well 5196' northeast
of containment

Caliche pit 3895' southwest
of containment



Water well 4643' northeast
of containment

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment

Site Survey

By West Company

SECTION 13, TOWNSHIP 10 SOUTH, RANGE 36 EAST, N.M.P.M.

2016-0074-1-P

LEA COUNTY NEW MEXICO

FIELD NOTE DESCRIPTION

Field note description of a 4.65 acre Frac Pit located in State of New Mexico Land in the Southwest-quarter of Section 13, T-10-S, Range 36 East, N.M.P.M., Lea County, New Mexico. Said tract being more particularly described as follows:

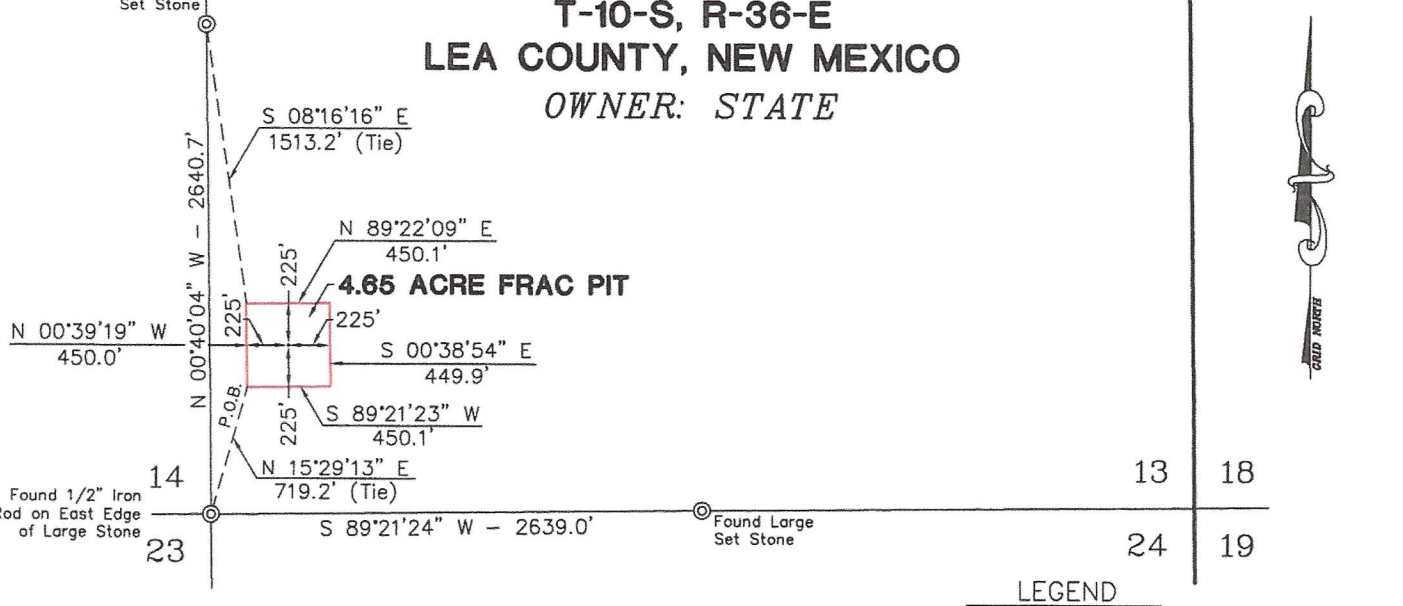
BEGINNING at a point for the Southwest corner of this tract, which lies N 15°29'13" E, a distance of 719.2 feet from a one-half inch iron rod found on East edge of large stone found for the Southwest corner of said Section 13;

THENCE N 00°39'19" W, a distance of 450.0 feet to a point for the Northwest corner of this tract, which lies S 08°16'16" E, a distance of 1513.2 feet from a large stone mound found for the West-quarter corner of said Section 13;

THENCE N 89°22'09" E, a distance of 450.1 feet to a point for the Northeast corner of this tract;

THENCE S 00°38'54" E, a distance of 449.9 feet to a point for the Southeast corner of this tract;

THENCE S 89°21'23" W, a distance of 450.1 feet to the PLACE OF BEGINNING and containing 4.65 acres of land.



LEGEND

◎ – Denotes Found Monument (As Described)

· – Denotes Center Point of Frac Pit

——— – Denotes Border of Frac Pit

1000 0 1000 2000

Graphic Scale in Feet

Date Surveyed: May 4, 2016
Weather: Warm & Clear

NOTE:

1) Plane Coordinates and Bearings shown hereon are Transverse Mercator Grid and Conform to the "New Mexico Coordinate System", New Mexico East Zone, North American Datum of 1927. Distances shown hereon are mean horizontal surface values.

I HEREBY CERTIFY THAT THIS PLAT WAS MADE FROM NOTES TAKEN IN THE FIELD IN A BONA FIDE SURVEY MADE UNDER MY SUPERVISION.

LINDSAY GYGAX NEW MEXICO 23263 PROFESSIONAL SURVEYOR

LINDSAY GYGAX P.L.S. Certificate No. 23263

WEST COMPANY
Land Surveyors ■ Civil Engineers

SURVEYORS - ENGINEERS - PLANNERS
FIRM REGISTRATION NUMBER: 100682-00
110 W. LOUISIANA AVE., SUITE 110
MIDLAND, TEXAS 79701
(432) 687-0865 - FAX (432)687-0868

NEMO Fund I, LLC

Survey of a

4.65 ACRE FRAC PIT

Located in
Section 13, Township 10 South, Range 36 East
N.M.P.M.
Lea County, New Mexico

Drawn By: SC	Date: May 6, 2016
Scale: 1" = 1000'	Field Book: 629/ 04-05
Revision Date:	Quadrangle: Lea
W.O. No: 2016-0074-1	Dwg. No.: 2016-0074-1-P

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility /
Containment

Operations/Maintenance Plan

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment
Form C-147 Operations and Maintenance Plan

In accordance with 19.15.34.13 NMAC, the following information describes the operation and maintenance plan for earthen lined containments at recycle facilities on Nemo Fund I, LLC leases.

1. Recycle facility earthen lined containments will be operated and maintained to contain liquids, prevent contamination of fresh water, and protect the public health and the environment. All fluids will be recycled, reused, reclaimed, or disposed of in a manner approved by the division rules. During periods when recycled water is not needed, produced water will discharge to a division approved SWD well.

2. No substances will be placed into recycle containments other than fresh water, stimulation fluids, produced water used for stimulation or drilling, and flow back from multiple wells.

3. If the containment's primary liner integrity is compromised above the fluid's surface, Nemo will repair the damage or initiate replacement of the liner within 48 hours of discovery or seek an extension of time from the division district office.

4. If the containment's primary liner develops a leak or if penetration of the liner occurs below the fluid's surface, all fluids above the leak line will be removed within 48 hours of discovery and the division district office will be notified. The liner will then be repaired or initiate replacement of the liner.

5. The loading and unloading of fluid from the containment will be accomplished through a header, diverter or other hardware that prevents damage to the liner.

6. Nemo will install a levee/berm around the perimeter of the containment to prevent the collection of surface water run-on.

7. An oil-absorbent boom or other device will be installed and maintained onsite to contain and remove oil from the containment's fluid surface. Any visible layer of oil will be removed from the fluid surface.

8. Nemo shall maintain a minimum of three feet of freeboard in containments.

9. Nemo will inspect containments weekly while they contain fluid and document these inspections until the pit is closed. The inspection will include monitoring of the leak detection system. A written log of the inspections will either be kept onsite or in Nemo's Tatum office. The inspection log will be made available for review by the division district office upon request. See inspection form attached at the end of this O&M Plan.

10. Overtopping of the containment is avoided by utilizing operational best practices. When the capacity of the containment is reached (3 feet of freeboard), the discharge of treated produced water ceases and the produced water generated by nearby oil and gas wells is diverted to area division approved SWD wells. If rising water levels

suggest that 3 feet of freeboard will not be maintained, Nemo will implement one or more of the actions listed below:

A. Cease the flow of produced water into the containment
B. Accelerate withdrawal of re-use water from the containment for approved division uses
C. Transfer water from the containment to area division approved SWD wells

11. As discussed in the Design and Construction Plan, the containment leak detection system includes a riser pipe situated between the upper and lower liners and terminated on top of the containment levee/berm. The pipe is sealed at the surface with a 3" cap. Any leaks in the primary liner will accumulate in the leak detection riser pipe. Nemo will monitor for leak detection by weekly inspecting the leak detection riser pipe. Nemo may utilize a portable electronic water level meter to determine if fluid exists in the riser pipe. If seepage from the containment into the leak detection system is suspected, Nemo take the following actions:
    A. Re-measure fluid levels in the riser pipe on a daily basis for one week to determine the rate of seepage.
    B. Collect a water sample from the riser pipe to confirm whether the seepage is produced water or condensation.
    C. Notify the division within 48 hours if confirmation of a positive leak detection.
    D. Install a pump into the riser pipe to remove water from the leak detection system into the containment until the liner is repaired or replaced.
    E. Reduce containment water levels and inspect liner for leaks by a liner professional.
    F. Provide the division a second notice within 20 days of the initial notification with a report of the inspection results and repair plan.

12. Nemo will remove all fluids from containments within 60 days from the date of the last stimulation operations associated with the containment permit. The division district office may grant an extension of up to two months.

13. Nemo will submit a monthly report form C-148 to the division indicating the amount of produced water and any other water entering the recycling facility and the amount of reuse or recycle water discharged from the recycling facility. This report will indicate whether the recycling containment associated with Nemo's recycling facility is using >20% of the containments' total fluid capacity every 6 months until closure in compliance with 19.15.34.13(C) NMAC. See a sample form C-148 at the end of this O&M plan.

NEMO FUND I, LLC

RECYCLE FACILITY CONTAINMENT INSPECTION

Fac Name	**Slash Z Recycling Facility and Containment**	**Liner Thickness**	**30 / 60 mil**
Location	**UL M, Sec 13, T-10-S, R-36-E**	**Pit Installation Date**	
County	**Lea**	**Last Stimulation Date**	

Inspection Date	Time	By Whom (Initials)	Has any hazardous waste been disposed of in the pit? (Y/N)	Is the pit liner intact and free of penetrations? (Y/N)	Distance from top of pit to fluid level (3' minimum)

All recycle facility containments are to be inspected WEEKLY when they contain fluid.
Any penetration of the liner shall be reported to the NMOCD within 48 hours.

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

Form C-148
Revised March 31, 2015

Operator Name_____ OGRID_____

☐ I certify all recycling containments associated with our recycling facilities are using >20% of the containments' total fluid capacity every 6 months until closure in compliance with 19.15.34.13(C) NMAC.

Month/Year_____

Admin. #	Produced water received*	Other fluid received*	Volume discharged for Recycling/Reuse*

*Report volumes in barrels

Admin. #	Produced water received*	Other fluid received*	Volume discharged for Recycling/Reuse*

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment

Closure Plan

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment
Form C-147 Closure Plan

In accordance with 19.15.34.14 NMAC, the following information describes the closure plans for earthen lined containments at recycling facilities on Nemo leases.

1. After cease of recycling operations, Nemo will remove all fluids from the containment within 60 days and close the containment within six months from the date of the last recycling operations.

2. All liquids that are not recycled, reused or reclaimed will be removed prior to containment closure and disposed of in a division-approved manner or facility. Recycled, reused or reclaimed liquids will be used in a manner approved by the district office. Any solids in the pit (primarily wind blown sand) will be allowed to air dry as completely as possible prior to starting the containment closure.

3. Nemo shall notify the surface owner of the proposed closure plan at least 72 hours prior to closure and provide proof of surface owner notice to the division. Notice of closure will be given to the division district office verbally and in writing within 72 hours and one week of any closure operations.

4. After the 72 hour notice period, Nemo will remove all solid contents and liners from the containment area and transfer these materials to a division approved facility.

5. After contents and liner removal, the soil beneath the containment will be tested by collecting a minimum of a five point composite sample including any obvious stained or wet soils. The sample will be analyzed for the constituents listed in Table I of 19.15.34.14 NMAC. After review of the laboratory results, if any contaminant concentration is higher than the threshold limits in Table I, additional delineation may be required and Nemo will seek division approval before proceeding with the closure. If all contaminant concentrations are less than or equal to the threshold limits in Table I, Nemo will proceed to backfill the containment area with non-waste containing, uncontaminated, earthen material.

6. Upon completion of back-filling the containment area, topsoil shall be replaced to its original position and contoured so as to achieve erosion control and long-term stability of the affected area. All disturbed areas no longer in use shall be reseeded with native grasses during the next planting season.

7. Within 60 days of closure completion, Nemo will submit a closure report via form C-147, with necessary attachments to document all closure activities including sampling results and the details on back-filling, capping and covering, where applicable. The closure report shall certify that all information in the report and attachments is correct and that Nemo has complied with all applicable closure requirements and conditions specified in the approved closure plan.

8. Nemo shall subsequently notify the division when reclamation and re-vegetation are complete. Specifically, the notice will document that 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.

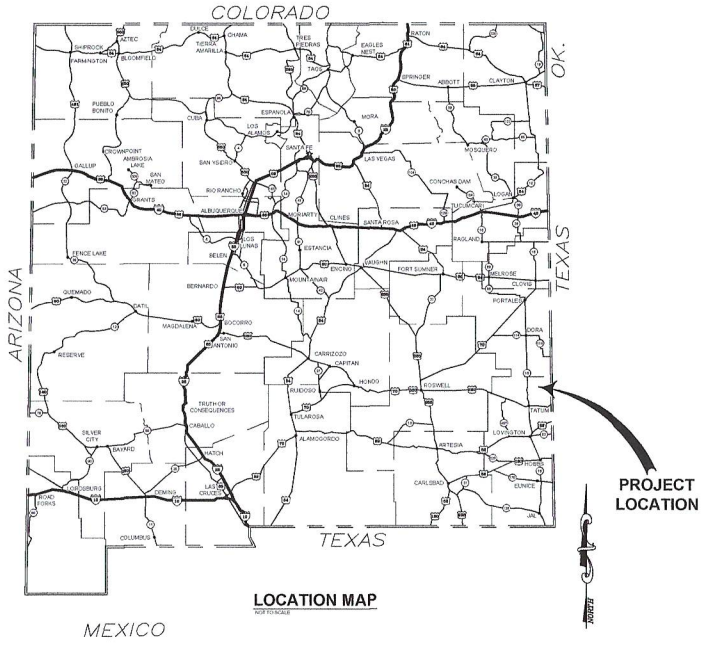
Nemo Fund I, LLC
Proposed Slash Z Recycling Facility /
Containment

Engineering Drawings

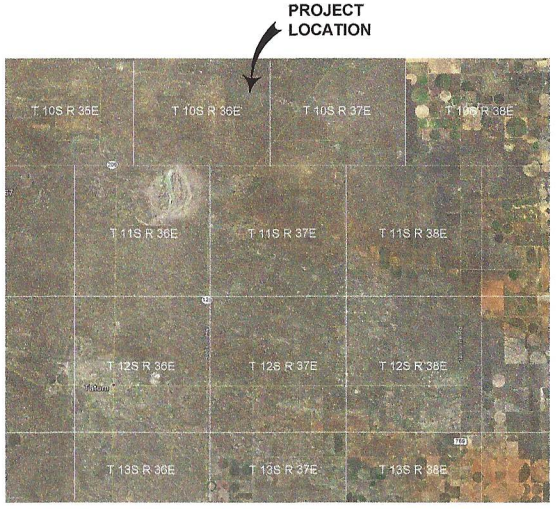
By Pettigrew & Associates PA

SLASH Z CONTAINMENT
NEMO FUND I, LLC
LEA COUNTY, NEW MEXICO
S13 T10S R36E

INDEX OF DRAWINGS



LOCATION MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

POINT	NORTH (FT)	EAST (FT)	ELEVATION (FT)	DESCRIPTION
15099	890611.990	881806.350	3982.85	100 D NAIL
101	890226.789	881554.750	3987.87	BENCHMARK NUMBER 2

THESE COORDINATES ARE SHOWN IN STATE PLANE NM-EAST FOOT NAD 83 COORDINATE SYSTEM.
BASED ON WEST COMPANY TRACT W.O. NUMBER: 2016-0074-1 DATED: MAY, 06 2016

FLOOD NOTE

THIS PROJECT IS LOCATED IN AN AREA WITHOUT A PRINTED FLOOD MAP CORRESPONDING TO FEMA FIRM PANEL 35025C1275D

CONTACTS

OWNER
NEMO FUND I, LLC.
5826 NEW TERRITORY BOULEVARD, BOX 412
SUGAR LAND, TX 77479
(713) 416-2281
JOHN PRESTON BORNMAN III, PRESIDENT

CIVIL ENGINEERING
PETTIGREW & ASSOCIATES, P.A.
100 E NAVAJO DRIVE, SUITE 100
HOBBS, NM 88240
(575) 393-9827
CLAUDIUS SANCHEZ CZYZEWSKA, PE

PETTIGREW & ASSOCIATES PA
ENGINEERING | SURVEYING | TESTING
DEFINING QUALITY SINCE 1965
100 E. Navajo Drive Suite 100 Hobbs New Mexico 88240
T 575 393 9827 F 575 393 1543
Pettigrew.us

CLAUDIUS SANCHEZ CZYZEWSKA NEW MEXICO 22807 PROFESSIONAL ENGINEER
09/01/2016

PROJECT ENGINEER: Claudius Sanchez Czyzewska, PE
PROJECT DESIGNER: Teo Cano, EI
DRAWN BY: TC

REVISIONS

No.	DATE	DESCRIPTION

COVER SHEET

SLASH Z CONTAINMENT

NEMO FUND I, LLC

S13, T10S, R36E
LEA COUNTY, NEW MEXICO

PROJECT NUMBER:
2016.1166

SHEET:
C-001

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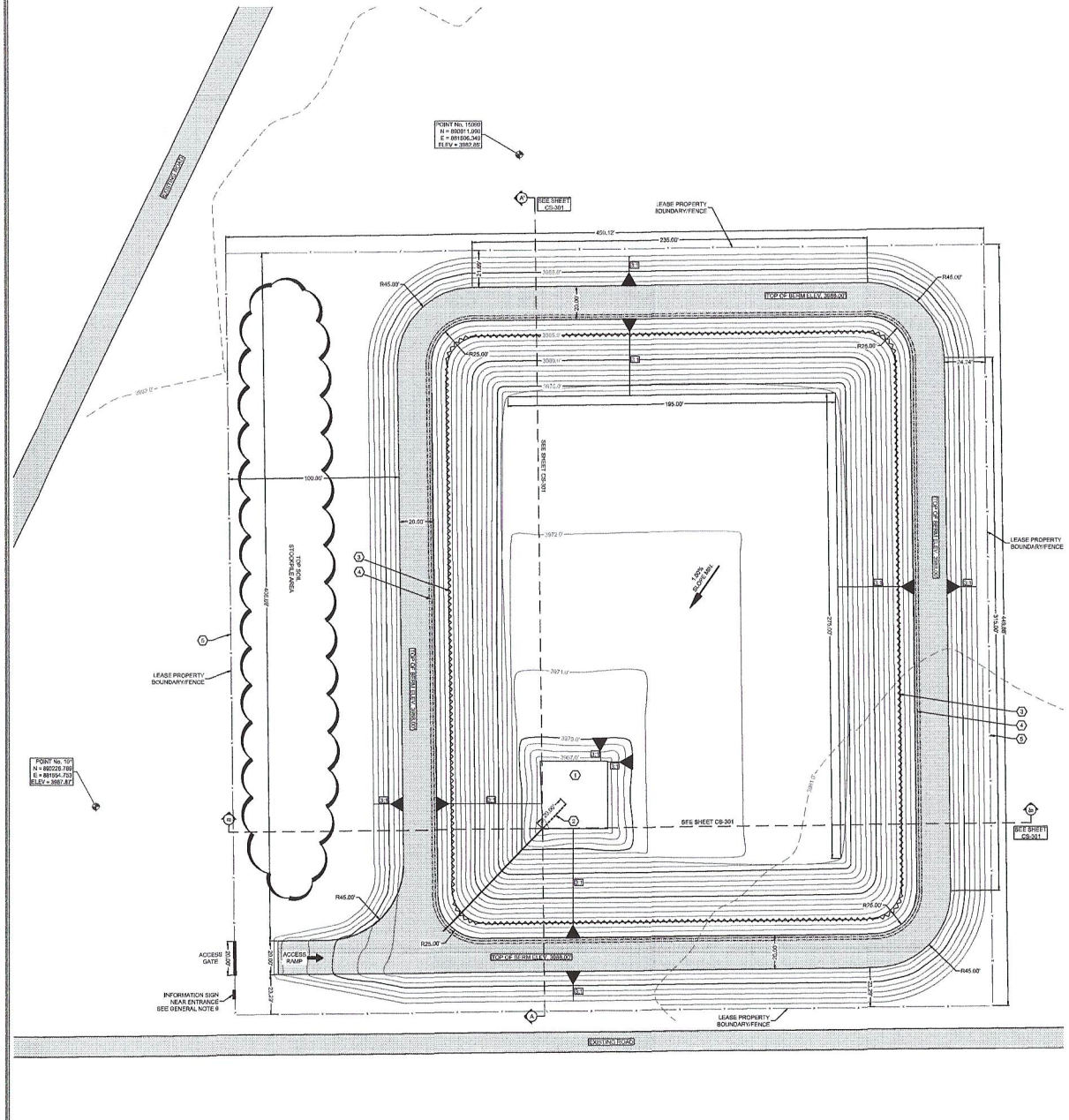

KEYED NOTES

1. 40'X40' LEAK DETECTION SUMP PER DETAIL 1, SHEET CS-501
2. LEAK DETECTION SYSTEM PIPING- 3" DIA ADS 3000 TRIPLE WALL HDPE PIPE, PER DETAILS 2 & 3, SHEET CS-501
3. 3' FREEBOARD DEPTH (ELEV. 3985.00')
4. ANCHOR TRENCH PER DETAIL 4, SHEET CS-501
5. 4 STRAND BARBED WIRE PERIMETER FENCE PER DETAIL 6, SHEET CS-501

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT CONSTRUCTION PLANS OF THE REGISTRATION/PERMIT, NEW MEXICO STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION LATEST EDITION SHALL APPLY TO THIS PROJECT.
2. LEASE PROPERTY BOUNDARY IS BASED ON A SURVEY BY WEST COMPANY W.O. 2016-0074-1 DATE: MAY 6, 2016.
3. ALL DATA SHOWN HEREIN CONCERNING EXISTING PRIVATE AND/OR PUBLIC OWNED UTILITIES HAVE BEEN OBTAINED FROM THE OWNERS AND/OR FIELD OBSERVATIONS, THESE MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR IS CAUTIONED THAT HE IS RESPONSIBLE FOR THE EXACT LOCATION AND PROTECTION OF ALL LINES DURING CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING, IN ADVANCE OF HIS/HER CONSTRUCTION OPERATIONS, IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC, ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION. ANY COST ASSOCIATED WITH THIS EFFORT IS INCIDENTAL TO THE PROJECT.
4. THE BOTTOM OF PIT SHALL BE SLOPED AT A MINIMUM 1% AS SHOWN.
5. THE PERIMETER OF PIT SHALL BE ENCLOSED WITH 4-STRAND BARBED WIRE FENCE AS PRESCRIBED BY DESIGN/CONSTRUCTION PLAN IN REGISTRATION/PERMIT APPLICATION.
6. STRIP AND STOCKPILE TOP SOIL FOR FUTURE CLOSURE USE, NEW MEXICO ADMINISTRATIVE CODE (19.15.34) AND DESIGN AND CONSTRUCTION SPECIFICATIONS FOR A RECYCLING CONTAINMENT IN REGISTRATION/PERMIT SHALL APPLY TO THIS PROJECT.
7. THE RECYCLING CONTAINMENT SHALL HAVE 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. GEOTEXTILE IS REQUIRED UNDER AND OVER THE LINER WHEN NEEDED TO REDUCE LOCALIZED STRESS-STRAIN OR PROTUBERANCES THAT OTHERWISE MAY COMPROMISE THE LINER'S INTEGRITY.
8. LINER SEAMS SHALL BE MINIMIZED AND ORIENTED UP AND DOWN, NOT ACROSS, A SLOPE OF THE LEVEL. FACTORY WELDED SEAMS SHALL BE USED WHERE POSSIBLE, UNLESS DIFFERENTLY STATED IN THE CONSTRUCTION PLAN OF THE REGISTRATION PERMIT.THE CONTRACTOR SHALL ENSURE FIELD SEAMS IN GEOSYNTHETIC MATERIAL ARE THERMALLY SEAMED. PRIOR TO FIELD SEAMING, THE OPERATOR SHALL OVERLAP LINERS FOUR TO SIX INCHES. THE CONTRACTOR SHALL MINIMIZE THE NUMBER OF FIELD SEAMS AND CORNERS AND IRREGULARLY SHAPED AREAS. THERE SHALL BE NO HORIZONTAL SEAMS WITHIN FIVE FEET OF THE SLOPE'S TOE. QUALIFIED PERSONNEL SHALL PERFORM FIELD WELDING AND TESTING.
9. 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.
10. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT NEW MEXICO 811 (FORMERLY NEW MEXICO ONE CALL) A MINIMUM OF 48 HOURS BEFORE EXCAVATION, PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL DESIGNATED UNDERGROUND UTILITIES. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
11. DURING CONSTRUCTION OF THE CONTAINMENT, THE CONTRACTOR WILL REPORT AND RESPOND TO ANY SPILLS OF HAZARDOUS MATERIALS SUCH AS GASOLINE, DIESEL, MOTOR OILS, SOLVENTS, CHEMICALS, TOXIC OR CORROSIVE SUBSTANCES, ETC. A SPILL IS DEFINED AS ANY RELEASE OF A CORROSIVE, HAZARDOUS, TOXIC OR RADIOACTIVE SUBSTANCE THAT MAY BE A THREAT TO PUBLIC HEALTH OR THE ENVIRONMENT. REPORTS OF SPILLS WILL BE MADE IMMEDIATELY TO BOTH THE NEW MEXICO ENVIRONMENT DEPARTMENT EMERGENCY RESPONSE TEAM (505-827-9329 OR 866-428-6535) AND THE LEA COUNTY EMERGENCY DISPATCHER (575-396-7160). THE CONTRACTOR WILL BE RESPONSIBLE FOR REPORTING AND CLEANUP OF ANY SPILL ASSOCIATED WITH PROJECT CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPORTING ANY DISCOVERIES OF PAST SPILLS OR CURRENT SPILLS NOT ASSOCIATED WITH CONSTRUCTION.
12. CONTRACTOR MUST OBTAIN CLIENT PERMISSION BEFORE SALVAGING ANY ITEMS SPECIFIED FOR REMOVAL AND DISPOSAL AFTER COMPLETION OF CONSTRUCTION OF THE CONTAINMENT.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING DISPOSAL SITES THAT ARE ENVIRONMENTALLY SUITABLE FOR DISPOSAL OF ITEMS NOT SPECIFIED TO BE SALVAGED. THE CONTRACTOR IS EXPECTED TO ABIDE BY ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS IN OBTAINING THE NECESSARY PERMITS FROM ALL APPLICABLE AGENCIES AND/OR PRIVATE PROPERTY OWNERS. BORROW MATERIAL, ROCK WASTE, AND VEGETATIVE DEBRIS SHALL NOT BE PLACED IN WETLANDS, ARROYOS, OR AREAS THAT MAY IMPACT THREATENED OR ENDANGERED SPECIES. ARCHEOLOGICAL AND ENVIRONMENTAL CLEARANCES MUST BE OBTAINED BEFORE DISPOSAL.

RECYCLING CONTAINMENT	
TOP OF BERM ELEVATION	3988.00 FT
HIGH WATER	3985.00 FT
BOTTOM OF POND ELEVATION	3970.00 FT
BOTTOM OF SUMP ELEVATION	3968.00 FT
TOTAL CONTAINMENT CAPACITY	217,500 BBL
TOTAL FLUID CAPACITY BELOW 3' FREEBOARD ELEVATION	165,600 BBL

NORTH

SCALE 1" = 30'

0' 15' 30' 60'

PETTIGREW & ASSOCIATES PA
ENGINEERING | SURVEYING | TESTING
DEFINING QUALITY SINCE 1965
100 E. Navajo Drive Suite 100 Hobbs New Mexico 88240
T 575.393.9827 F 575.393.1543
Pettigrew.us

CLAUDIUS SANCHEZ CZERWINSKA NEW MEXICO 22897 PROFESSIONAL ENGINEER

09/01/2016

PROJECT ENGINEER: Claudius Sanchez Czerwinska, PE
PROJECT DESIGNER: Teo Cano, EI
DRAWN BY: TC

LEGEND

- EXIST. GRADE 1.0' CONTOUR
- EXIST. GRADE 5.0' CONTOUR
- FINISHED GRADE 5.0' CONTOUR
- FINISHED GRADE 1.0' CONTOUR
- DRIVING SURFACE
- 3' FREEBOARD DEPTH
- ANCHOR TRENCH
- BARBED WIRE FENCE

REVISIONS

No.	DATE	DESCRIPTION

SITE GRADING PLAN AND GENERAL NOTES

SLASH Z CONTAINMENT

NEMO FUND I, LLC

S13, T10S, R36E
LEA COUNTY, NEW MEXICO

PROJECT NUMBER: 2016.1166

SHEET: CS-101

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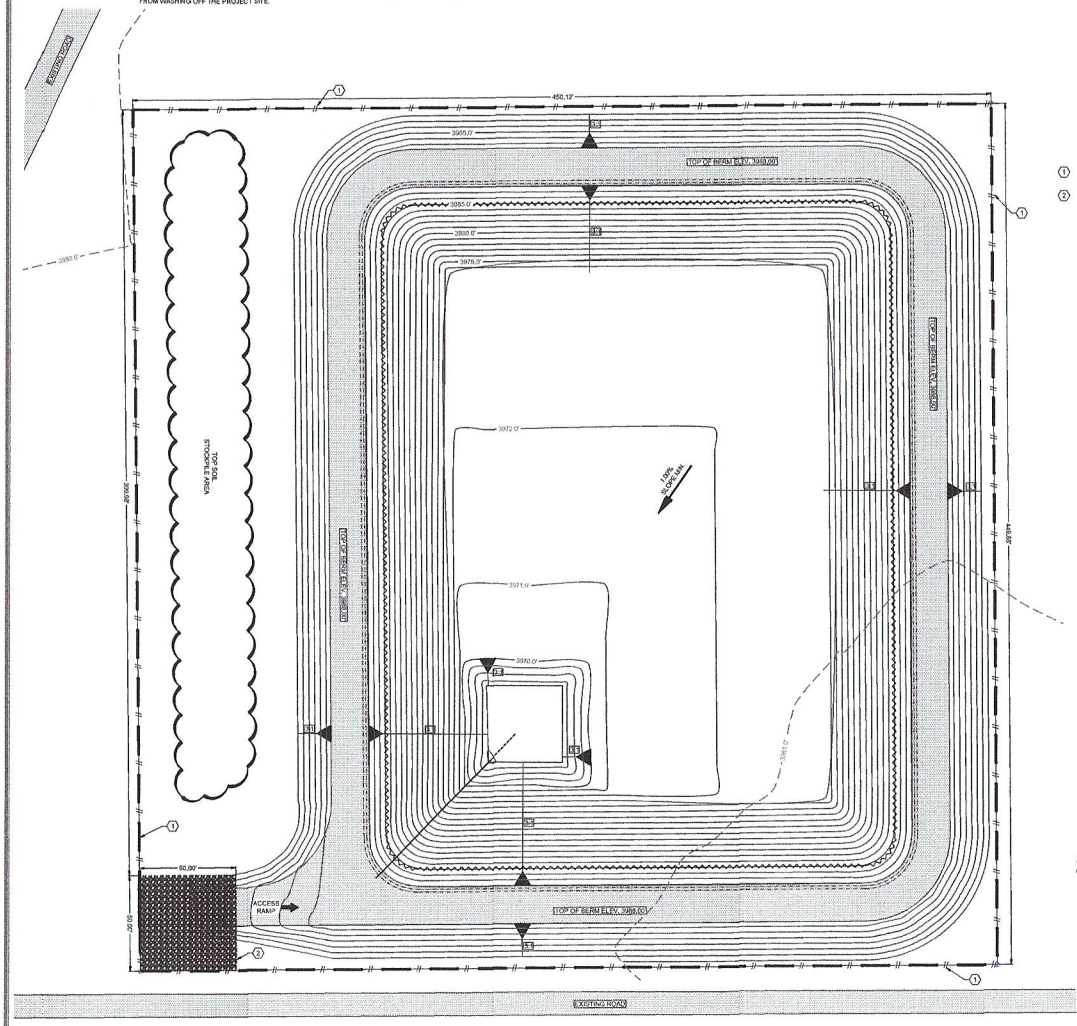
SWPPP GENERAL NOTES

1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO DEVELOP AND IMPLEMENT A STORM WATER POLLUTION PREVENTION PLAN (SWPPP) IN ACCORDANCE WITH THE CONSTRUCTION GENERAL PERMIT (CGP) OF THE EPA. THE STORM WATER POLLUTION PREVENTION PLAN SHALL INCLUDE DEVELOPING, PERMITTING, INSTALLING AND MAINTAINING SWPPP BMPS AS WELL AS PERMANENT SEEDING WHEN THE PROJECT IS COMPLETED.
2. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE ONTO OTHER PROPERTY BY CONSTRUCTING TEMPORARY EROSION CONTROL BERMS OR INSTALLING SILT FENCES AT THE PROPERTY LINES AS INDICATED ON THE APPROVED SWPPP.
3. THE CONTRACTOR SHALL MITIGATE EROSION OF TEMPORARY OR PERMANENT DIRT SWALES BY INSTALLING CHECK DAMS IN THE SWALES PERPENDICULAR TO THE DIRECTION OF FLOW, AND AT INTERVALS SPECIFIED ON THE SWPPP.
4. THE CONTRACTOR SHALL PREPARE AND MAINTAIN A COPY OF THE SWPPP ON-SITE AT ALL TIMES, AND SHALL COMPLY WITH THE REQUIREMENTS INDICATED ON THAT PLAN. COST IS INCIDENTAL TO CONSTRUCTION.
5. ALL DRAINAGE INFORMATION NEEDED TO COMPLETE THE NOTICE OF INTENT (NOI) ARE PROVIDED IN THIS PLAN.
6. BEST MANAGEMENT PRACTICES (BMPS) SHOWN ON TESCP ARE DETERMINED USING THE EQUATIONS SHON ON THIS SHEET AND OTHER HYDROLOGICAL MODELS AS SPECIFIED IN THE DEPARTMENTS DRAINAGE MANUALS LATEST EDITION. BMPS CONTROL SEDIMENT SO THAT NO ADDITIONAL SEDIMENT RESULTING FORM CONSTRUCTION ACTIVITIES DISCHARGE TO WATERWAYS.
7. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST AND EROSION CONTROL REGULATIONS. THE CONTRACTOR SHALL PREPARE AND OBTAIN ANY NECESSARY DUST OR EROSION CONTROL PERMITS FROM REGULATORY AGENCIES.
8. THE CONTRACTOR SHALL PROMPTLY REMOVE ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY TO KEEP IT FROM WASHING OFF THE PROJECT SITE.

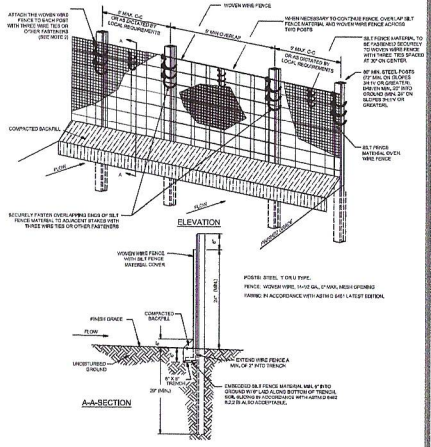
SITE DESCRIPTION / EROSION AND SEDIMENT CONTROL NOTES

1. THE OFFICIAL NAME OF THIS PROJECT IS SLASH Z CONTAINMENT, AND IT IS LOCATED IN A 4.65 ACRE LEASE AREA IN SECTION S 13, T 10S, R 36E.
2. THIS PROJECT IS DESCRIBED AS CONSTRUCTION OF A RECYCLING CONTAINMENT.
3. THE EXISTING CONDITIONS OF THE SITE ARE CONSIDERED UNDEVELOPED RANGELAND.
4. MAJOR SOIL DISTURBANCE AND CONSTRUCTION ACTIVITIES INCLUDE HEAVY EARTH MOVING AND LINER INSTALLATION.
5. TOTAL PROJECT AREA AND AREA TO BE DISTURBED IS ESTIMATED TO BE 4.65 ACRES.
6. NO RECEIVING WATERS APPLY TO THIS PROJECT.
7. CONSTRUCT TEMPORARY EROSION CONTROLS INCLUDING SILT FENCES.
8. STRIP AND STOCKPILE TOP SOIL IN DESIGNATED AREA.
9. CONSTRUCT APPROPRIATE EROSION CONTROLS TO MAINTAIN NATURAL DRAINAGE TO THE EXTENT POSSIBLE.
10. EXCAVATE TO THE ELEVATIONS SHOWN ON THE GRADING PLAN, SHEET CS-101.
11. CONSTRUCT A COMPOSITE LINER IN ACCORDANCE WITH THE PERMIT REGISTRATION.



KEYED NOTES

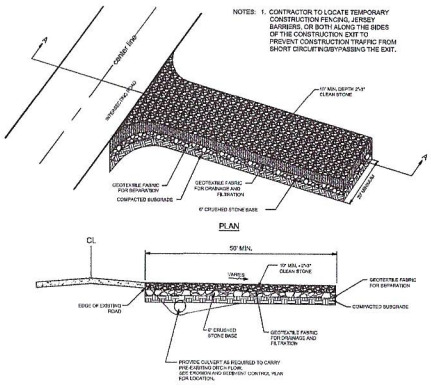
1. INSTALL APPROXIMATELY 1,780 FT OF SILT FENCE PER DETAIL 1 ON THIS SHEET
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE PER DETAIL 2 ON THIS SHEET



1. INSTALLATION SHALL COMPLY WITH ASTM D 6462 LATEST EDITION.
2. ATTACH THE WOVEN WIRE FENCE TO EACH POST AND THE GEOTEXTILE TO THE WOVEN WIRE FENCE (SPACED EVERY 30") WITH THREE WIRE TIES OR OTHER FASTENERS, ALL SPACED WITHIN THE TOP 8" OF THE FABRIC. ATTACH EACH TIE DIAGONALLY 45 DEGREES THROUGH THE FABRIC, WITH EACH PUNCTURE AT LEAST 1" VERTICALLY APART. ALSO, EACH TIE PLACED ON A POST SHOULD BE POSITIONED TO HANG ON A POST NIPPLE WHEN TIGHTENED TO PREVENT SAGGING.
3. WHEN TWO SECTIONS OF SILT FENCE MATERIAL ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED A MINIMUM OF 60" ACROSS TWO POSTS, AS SHOWN.
4. MAINTENANCE SHALL BE PERFORMED AS NOTED IN THE SWPPP. DEPTH OF ACCUMULATED SEDIMENTS MAY NOT EXCEED ONE-HALF THE HEIGHT OF THE FENCE. MAINTENANCE CLEANOUT MUST BE CONDUCTED REGULARLY TO PREVENT ACCUMULATED SEDIMENTS FROM REACHING ONE-HALF THE HEIGHT OF THE SILT FENCE MATERIAL ABOVE GRADE.
5. ALL SILT FENCE SHALL INCLUDE WIRE SUPPORT UNLESS THE STATIC SLICING EQUIPMENT IS UTILIZED TO INSTALL THE FENCE.
6. WRAP APPROXIMATELY 6" OF FABRIC AROUND THE END POSTS AND SECURE WITH 3 TIES.
7. COMPACT THE SOIL IMMEDIATELY NEXT TO THE SILT FENCE FABRIC WITH THE FRONT WHEEL OF THE TRACTOR, SKID STEER, OR ROLLER EXERTING AT LEAST 60 POUNDS PER SQ. INCH. COMPACT THE UPSTREAM SIDE FIRST, COMPACT EACH SIDE TWICE FOR A TOTAL OF FOUR TRIPS.
8. ADD POST CAPS AS NEEDED BASED ON SITE CONDITIONS AND APPLICABLE AGENCY REQUIREMENTS.

1 SILT FENCE DETAIL

SCALE: N.T.S.



2 CONSTRUCTION ENTRANCE DETAIL

SCALE: N.T.S.

PETTIGREW & ASSOCIATES PA
ENGINEERING | SURVEYING | TESTING
DEFINING QUALITY SINCE 1985
100 E. Navajo Drive Suite 100 Hobbs New Mexico 88240
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Pettigrew.us

CLAUDIUS ANICETO CZYZEWSKA NEW MEXICO 22897 PROFESSIONAL ENGINEER

09/01/2016

PROJECT ENGINEER: Claudius Sanchez Czyzewska, PE
PROJECT DESIGNER: Teo Cano, EI
DRAWN BY: TC

LEGEND

- EXIST. GRADE 1.0' CONTOUR
- EXIST. GRADE 5.0' CONTOUR
- FINISHED GRADE 5.0' CONTOUR
- FINISHED GRADE 1.0' CONTOUR
- DRIVING SURFACE
- 3' FREEBOARD DEPTH
- ANCHOR TRENCH
- SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE

REVISIONS

No.	DATE	DESCRIPTION

SEDIMENT CONTROL AND EROSION PROTECTION PLAN

SLASH Z CONTAINMENT

NEMO FUND I, LLC

S13, T10S, R36E
LEA COUNTY, NEW MEXICO

PROJECT NUMBER: 2016.1166

SHEET: CS-201

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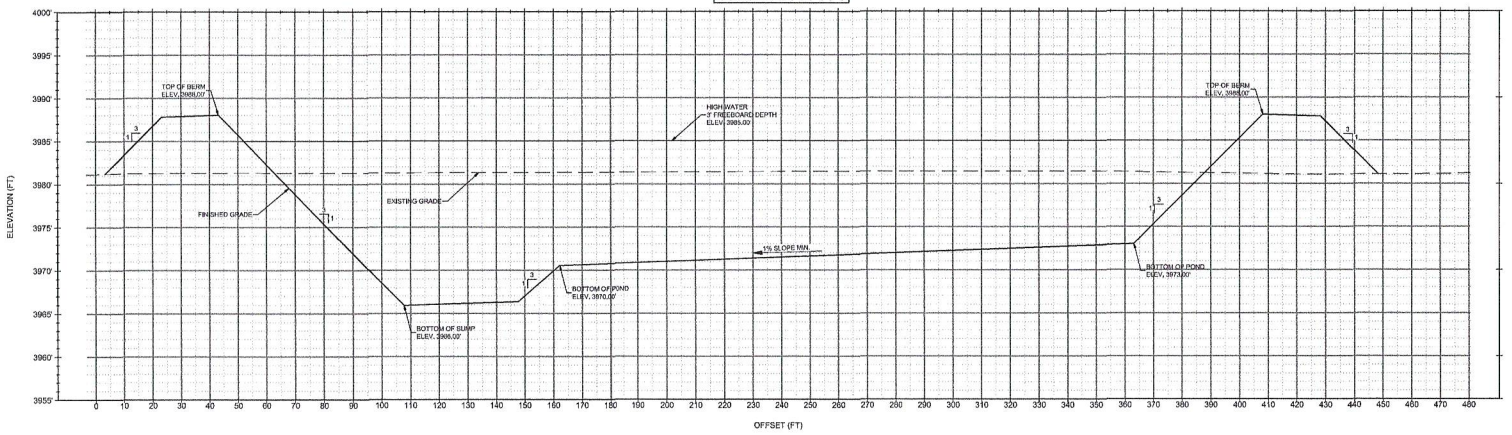
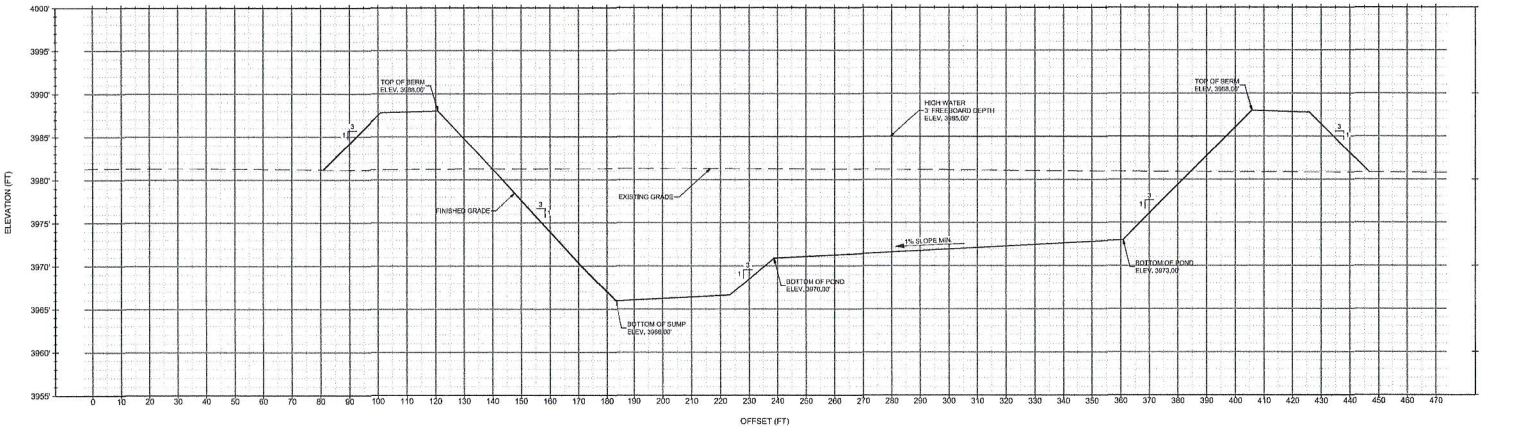
SECTION A-A'



SCALE:
VERTICAL 2" = 20'
HORIZONTAL 1" = 20'

SECTION B-B'



SCALE:
VERTICAL 2" = 20'
HORIZONTAL 1" = 20'

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CLAUDIUS SANCHEZ CZYZEWSKI NEW MEXICO 22897 PROFESSIONAL ENGINEER

09/01/2016

PROJECT ENGINEER: Claudius Sanchez Czyzewski, PE
PROJECT DESIGNER: Teo Cano, EI
DRAWN BY: TC

LEGEND
- EXISTING GRADE
- FINISHED GRADE
- 3' FREEBOARD DEPTH

REVISIONS

No.	DATE	DESCRIPTION

SECTIONS

SLASH Z CONTAINMENT

NEMO FUND I, LLC

S13, T10S, R36E
LEA COUNTY, NEW MEXICO

PROJECT NUMBER:
2016.1166

SHEET:
CS-301

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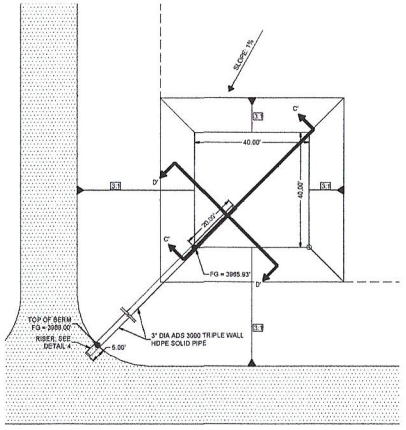
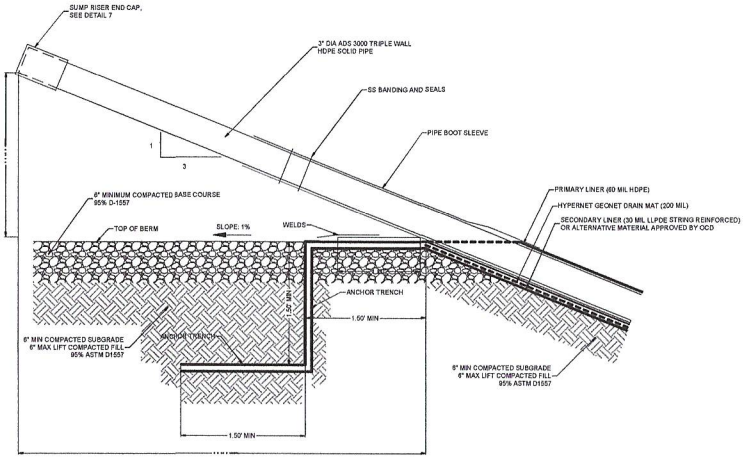
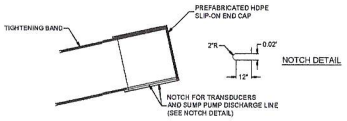


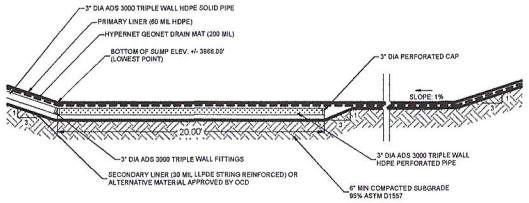
1 LEAK DETECTION SYSTEM SUMP PLAN SCALE: N.T.S.



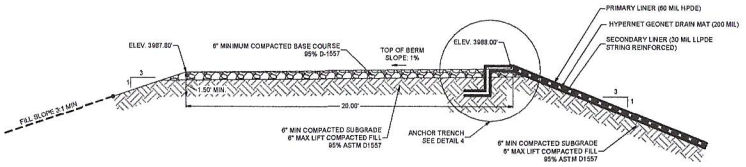
4 LEAK DETECTION SYSTEM TYPICAL ANCHOR TRENCH AND RISER DETAIL SCALE: N.T.S.



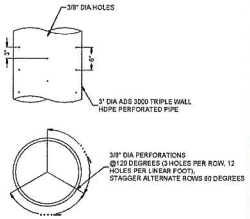
7 SUMP RISER END CAP SCALE: N.T.S.



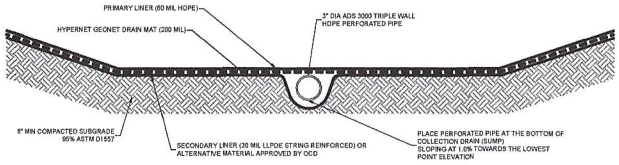
2 LEAK DETECTION SYSTEM SUMP DETAIL SECTION C'-C' SCALE: N.T.S.



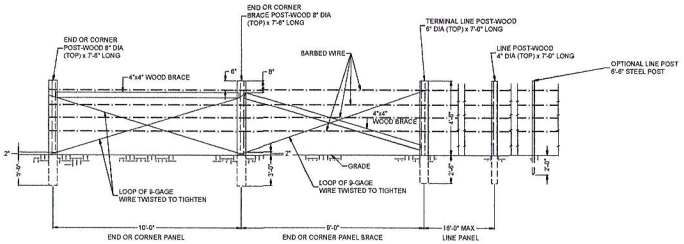
5 TOP OF BERM AND TYPICAL CONTAINMENT EDGE DETAIL SCALE: N.T.S.



8 LEAK DETECTION SYSTEM PIPE PERFORATION DETAIL SCALE: N.T.S.



3 LEAK DETECTION SYSTEM SUMP DETAIL SECTION D'-D' SCALE: N.T.S.



6 4 STRAND BARBED WIRE FENCE SCALE: N.T.S.

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CLAUDIUS SANCHEZ CZYZEWSKA NEW MEXICO 22897 PROFESSIONAL ENGINEER
09/01/2016

PROJECT ENGINEER: Claudius Sanchez Czyzewska, PE
PROJECT DESIGNER: Teo Cano, EI
DRAWN BY: TC

REVISIONS

No.	DATE	DESCRIPTION

DETAILS

FLASH Z CONTAINMENT

NEMO FUND I, LLC

S13, T10S, R36E
LEA COUNTY, NEW MEXICO

PROJECT NUMBER: 2016.1166

SHEET: CS-501

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Nemo Fund I, LLC
Proposed Slash Z Recycling Facility /
Containment

Design/Construction Plan

Nemo Fund I, LLC
Proposed Slash Z Recycling Facility / Containment
Form C-147 Design / Construction Plan

In accordance with 19.15.34.12 NMAC, the following information describes the design and construction of earthen lined containments at recycle facilities on Nemo Fund I, LLC leases.

1. Nemo will design and construct earthen lined containments to effectively contain liquids in order to prevent contamination of fresh water and to protect public health and the environment. The design, construction and operations plans prevent potential releases via liner integrity and overtopping due to wave action or rainfall. Additionally, the design prevents run-on of surface water as the containment is surrounded by an above-grade levee (berm) to prevent run-on of surface water.

2. Prior to constructing the pit, any available topsoil will be stockpiled in the construction zone for later use in surface restoration.

3. An upright sign will be installed not less than 12" X 24" in size with 2" minimum lettering indicating the operator's name, the facility name, the facility location (unit letter, section, township, range) and emergency telephone numbers.

4. A barbed wire fence will be installed around each earth lined containment. The fence will be a minimum of 4 strands barbed wire sufficient to keep livestock and wildlife from entering. The fence will include a 16 foot wide metal access gate at the berm ramp for maintenance access. This gate will remain locked during unattended operations.

5. Due to the size of earthen lined containment, netting and screening are not feasible. Nemo will inspect the containment monthly for dead migratory birds or other wildlife. Any discovery of dead wildlife will be reported to the division office and the appropriate wildlife agency. The inspections will be documented on the containment inspection form included in the O&M Plan.

6. The containment will be constructed so that the foundation and interior slopes are firm and free of rocks, debris, sharp edges or irregularities to prevent liner failure. Containment walls will be constructed so that the interior slopes are no steeper than two horizontal feet to one vertical foot (2H:1V). Exterior slopes will be no steeper than three horizontal feet to one vertical foot (3H: 1V). Top of the levee/berm is sufficient width to install an 18" deep liner anchor trench and provide access for inspection and maintenance operations. In one corner of the floor of the containment will be a 40' X 40' x 5' deep sump area. The containment floor will have a slope (approximately 1%) toward the sump area to facilitate drainage into a leak detection system. The containment will be excavated into the ground such that most of the fluid force lies against native earth (caliche) and the engineered foundation.

7. The containment will be internally lined with geomembrane liners:
    A. The primary (upper) liner will consist of an impervious, synthetic 60-mil HDPE material that is resistant to ultraviolet light, petroleum hydrocarbons, salt and acidic and alkaline solutions.

B. The secondary (lower) liner will consist of a 30-mil LLDPE string reinforced synthetic material. Liner compatibility will meet or exceed the EPA SW-846 method 9090A or subsequent relevant publications.

C. A leak detection system will be located between the upper and lower liners and designed for the earliest possible leak detection. It will consist of a 200-mil geonet material to facilitate drainage between the liners and a length of 3" ADS 3000 triple wall HDPE pipe running from below the sump area to the top of the levee/berm to serve as a leak detection conduit.

The liners will be anchored around the containment perimeter in the bottom of a 18 inch compacted earth-filled trench. A geotextile material will be installed under the liner where needed to reduce localized stress-strain or protuberances that may otherwise compromise the liner's integrity. Liner seams will be oriented up and down, not across, sloped areas of the containment. Nemo will minimize liner seams and utilize factory welded seams where possible. Any field seams will be thermally seamed with a minimum of four to six inches overlap and performed by qualified personnel. There will be no horizontal seams within 5 feet of the slope's toe.

8. The liner will be protected from fluid force or mechanical damage through the use of mud pit slides, a manifold system, or other approved method. The design plan has no external discharge or suction lines that penetrate the liner. Temporary polyethylene pipelines placed in the containment with have floats attached to prevent any liner damage.