

NM1 - 57

**PART 36
PERMIT
APPLICATION**

November 7, 2013

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division



December 9, 2013

Adrian Holman
DNCS Properties, LLC
2028 E. Hackberry Place
Chandler, Arizona 85286

**RE: Notice of Administrative Completeness Determination
DNCS Properties, LLC – DNCS Environmental Solutions
Location: S/2 of Section 31, Township 17 South, Range 33 East and N/2 of Section 6,
Township 18 South, Range 33 East, NMPM, Lea County, New Mexico**

Dear Mr. Holman:

Pursuant to 19.15.36.8(E) NMAC, the Oil Conservation Division (OCD) has reviewed your Surface Waste Management Facility application, dated November 7, 2013, and has found it to be administratively complete. Given the administrative completeness determination, you may now proceed to the notice as specified in 19.15.36.9(A) NMAC. As the applicant, you are required to furnish proof to OCD that required notices have been given. Please provide this proof to OCD as soon as possible. Proof of notice may begin the 30 day public comment period.

OCD will also provide notice of its administrative completeness determination within 30 days from the date of this letter per 19.15.36.9(B) NMAC. The public has 30 days to comment from the date of notice provided by the applicant or the date that OCD distributes notice, whichever is later. (See 19.15.36.9(C) NMAC)

The determination of administrative completeness does not mean that the application meets the technical requirements of 19.15.36 NMAC. OCD will now evaluate the technical merits of your application. Within 60 days after the end of the public comment period, OCD will issue its tentative decision regarding your application. (See 19.15.36.9(D) NMAC)

If you have any questions, please feel free to Brad Jones at brad.a.jones@state.nm.us or (505) 476-3487.

Sincerely,

A handwritten signature in black ink that reads "Scott Dawson".

Scott Dawson
Deputy Director

SD/baj

Cc: OCD District I Office, Hobbs
Keith Gordan, Gordon Environmental, Inc., 213 S. Camino Del Pueblo, Bernalillo, NM 87004

PART 36 CHECKLIST FOR ADMINISTRATIVELY INCOMPLETE APPLICATIONS

19.15.36.8 NMAC - SURFACE WASTE MANAGEMENT FACILITY PERMITS AND APPLICATION REQUIREMENTS:

36.8C. Application requirements for new facilities, major modifications and permit renewals.

- | | |
|---|--|
| ✓ | (1) the names and addresses of the applicant and principal officers and owners of 25 percent or more of the applicant; |
| ✓ | (2) a plat and topographic map showing the surface waste management facility's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the surface waste management facility site; watercourses ; fresh water sources , including wells and springs; and inhabited buildings within one mile of the site's perimeter; |
| ✓ | (3) the names and addresses of the surface owners of the real property on which the surface waste management facility is sited and surface owners of the real property within one mile of the site's perimeter; |
| ✓ | (4) a description of the surface waste management facility with a diagram indicating the location of fences and cattle guards , and detailed construction/installation diagrams of pits, liners, dikes, piping, sprayers, tanks, roads, fences, gates, berms, pipelines crossing the surface waste management facility, buildings and chemical storage areas ; |
| ✓ | (5) engineering designs , certified by a registered professional engineer, including technical data on the design elements of each applicable treatment, remediation and disposal method and detailed designs of surface impoundments ; |
| ✓ | (6) a plan for management of approved oil field wastes that complies with the applicable requirements contained in
19.15.36.13 NMAC (Siting and Operational Requirements – See Part 2 below),
19.15.36.14 NMAC (Landfills – See Part 3 below),
19.15.36.15 NMAC (Landfarms – See Part 4 below),
and 19.15.36.17 NMAC (Ponds – See Part 5 below); |
| ✓ | (7) an inspection and maintenance plan that complies with the requirements contained in Subsection L of 19.15.36.13 NMAC ;

<i>36.13L. Each operator shall have an that includes the following:</i>
(1) monthly inspection of leak detection sumps including sampling if fluids are present with analyses of fluid samples furnished to the division; and maintenance of records of inspection dates, the inspector and the leak detection system's status;
(2) semi-annual inspection and sampling of monitoring wells as required, with analyses of ground water furnished to the division; and maintenance of records of inspection dates, the inspector and ground water monitoring wells' status; and
(3) inspections of the berms and the outside walls of pond levees quarterly and after a major rainfall or windstorm, and maintenance of berms in such a manner as to prevent erosion. |
| ✓ | (8) a hydrogen sulfide prevention and contingency plan that complies with those provisions of 19.15.11 NMAC that apply to surface waste management facilities; |

✓	(9) a 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 (the closure and post closure plan shall comply with the requirements contained in Subsection D of 19.15.36.18 NMAC); (See Part 6 below).
✓	(10) a contingency plan that complies with the requirements of Subsection N of 19.15.36.13 NMAC and with NMSA 1978, Sections 12-12-1 through 12-12-30, as amended;
✓	(11) a plan to control run-on water onto the site and run-off water from the site that complies with the requirements of Subsection M of 19.15.36.13 NMAC ;
✓	(12) in the case of an application to permit a new or expanded landfill , a leachate management plan that describes the anticipated amount of leachate that will be generated and the leachate's handling, storage, treatment and disposal, including final post closure options;
✓	(13) in the case of an application to permit a new or expanded landfill , a gas safety management plan that complies with the requirements of Subsection O of 19.15.36.13 NMAC ;
✓	(14) a best management practice plan to ensure protection of fresh water, public health, safety and the environment;
✓	(15) geological/hydrological data including:
✓	(a) a map showing names and location of streams, springs or other watercourses, and water wells within one mile of the site;
✓	(b) laboratory analyses, performed by an independent commercial laboratory, for major cations and anions; BTEX; RCRA metals; and TDS of ground water samples of the shallowest fresh water aquifer beneath the proposed site;
✓	(c) depth to, formation name, type and thickness of the shallowest fresh water aquifer;
✓	(d) soil types beneath the proposed surface waste management facility, including a lithologic description of soil and rock members from ground surface down to the top of the shallowest fresh water aquifer;
✓	(e) geologic cross-sections;
✓	(f) potentiometric maps for the shallowest fresh water aquifer; and
✓	(g) porosity, permeability, conductivity, compaction ratios and swelling characteristics for the sediments on which the contaminated soils will be placed;
✓	(16) certification by the applicant that information submitted in the application is true, accurate and complete to the best of the applicant's knowledge, after reasonable inquiry; and
	(17) other information that the division may require to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, safety or the environment and that the surface waste management facility will comply with division rules and orders.

Owner: DNCS Properties, LLC – DNCS Environmental Solutions

Location: S/2 of Section 31, Township 17 South, Range 33 East and N/2 of Section 6, Township 18 South, Range 33 East, NMPM, Lea County, New Mexico

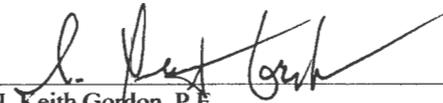
Reviewer: Brad A. Jones

Date: December 9, 2013

STATE OF NEW MEXICO
DIRECTOR OF OIL CONSERVATION DIVISION

IN THE MATTER OF THE §
APPLICATION OF DNCS §
ENVIRONMENTAL SOLUTIONS §
FOR A SURFACE WASTE §
MANAGEMENT FACILITY PERMIT §

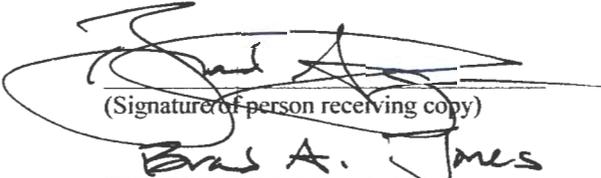
APPLICATION FOR PERMIT


I. Keith Gordon, P.E.
Gordon Environmental, Inc.
213 South Camino del Pueblo
Bernalillo, New Mexico 87004
(505) 867-6990
Environmental Consultant to and
Representative of
DNCS Environmental Solutions
2028 E. Hackberry Place
Chandler, Arizona 85286
480.437.0044
Applicant

CERTIFICATION OF SERVICE

I hereby certify that a copy of the foregoing Application for Permit was delivered to the following party of record on
November 7, 2013

Oil Conservation Division
NM Energy, Minerals, and Natural Resources Dept.
1220 South St. Francis Drive
Santa Fe, New Mexico 87505


(Signature of person receiving copy)

Brad A. Jones
(Name of signer)

**STATE OF NEW MEXICO
DIRECTOR OF OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE
APPLICATION OF DNCS
PROPERTIES, LLC FOR A
SURFACE WASTE MANAGEMENT
FACILITY PERMIT**

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

NOVEMBER 2013

VOLUME I: PERMIT APPLICATION TEXT

Prepared For:

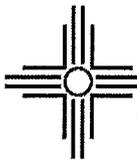
**DNCS Properties, LLC
2028 E. Hackberry Place
Chandler, AZ 85286
480.437.0044**

Submitted To:

**New Mexico Energy, Minerals, and Natural Resources Department
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505
505.476.3440**

Prepared By:

**Gordon Environmental, Inc.
213 S. Camino del Pueblo
Bernalillo, NM 87004
505.867.6990**



November 7, 2013

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

**Re: DNCS Environmental Solutions [542.01.01]
Application for Permit**

Dear Gentlemen:

On behalf of our client, DNCS Properties, LLC (DNCS), Gordon Environmental, Inc. (GEI) is pleased to submit the enclosed Application for Permit (the Application) for the proposed DNCS Environmental Solutions Surface Waste Management Facility to the Oil Conservation Division (OCD). This Application addresses the requirements of the New Mexico (NM) Oil and Gas Rules, specifically the Surface Waste Management Facility standards in 19.15.36 NMAC.

The DNCS Facility is designed in compliance with 19.15.36 NMAC, and will be constructed and operated in compliance with a Surface Waste Management Facility Permit issued by the OCD. The DNCS Facility will accept oil field waste for processing and disposal from oil and gas exploration and production operations in southwestern NM and west Texas. The DNCS site is located approximately 10.5 miles east of the US 82/NM 529 intersection, and 6.3 miles southeast of Maljamar in unincorporated Lea County, NM.

The site is comprised of a 562-acre \pm tract of land. A portion of the 562-acre tract is a drainage feature that will be excluded from development. The drainage feature includes a 500-foot (ft) buffer zone that totals 67 acres \pm . The DNCS Facility will include two main components; a liquid oil field waste Processing Area (177 acres \pm); and an oil field waste Landfill (318 acres \pm). Perimeter setbacks in excess of 200 ft are provided for surface water management and site access, as well as a buffer zone to adjacent properties.

To facilitate your review, the Application is organized consistent with the regulatory requirements listed in 19.15.36 NMAC, and is subdivided into four Volumes provided in five binders:

- Volume I: Application Text
- Volume II: Facility Management Plans
- Volume III: Engineering Design and Calculations
- Volume IV: Siting and Hydrogeology

Permit Plans, sealed by a NM Professional Engineer, specializing in waste management design and construction, are provided as a separate 24 x 36-inch Permit Plan Set (14 Sheets); and are also included in 11 x 17-inch format with Volume III. The Application is also furnished to OCD electronically on a CD in PDF format. The OCD "Part 36 Checklist" is also included with this submittal.

We look forward to working with you and the OCD on the review and approval of the DNCS Environmental Solutions Application for Permit. Please contact GEI at 505.867.6990 or dtucholke@gordonenvironmental.com with your comments and questions.

Very truly yours,
Gordon Environmental, Inc.



I. Keith Gordon, P.E.
Principal



Charles W. Fiedler
Project Director

cc: Ms. Adrian Holman, DNCS Properties, LLC
Dr. Mark Turnbough, Consultant
Dacia R. Tucholke, Project Manager, GEI

Attachments:

- Part 36 Checklist
- Application for Permit (4 Binders; 2 hard copies)
- Permit Plan Set (24 x 36-inches, 14 Sheets; 2 hard copies)
- Electronic Copy (CD; 2 copies)

PART 1 19.15.36.8 NMAC - SURFACE WASTE MANAGEMENT FACILITY PERMITS AND APPLICATION REQUIREMENTS:		
Permit Application Requirements	OCD Comments	Location in Application
<p>36.8C. Application requirements for new facilities, major modifications and permit renewals.</p> <p>'An applicant or operator shall file an application, form C-137, for a permit for a new surface waste management facility, to modify an existing surface waste management facility or for permit renewal with the environmental bureau in the division's Santa Fe office.</p> <p>The application shall include:</p>		<i>Volume I</i>
<p>(1) the names and addresses of the applicant and principal officers and owners of 25 percent or more of the applicant;</p>		<i>Form C-137</i>
<p>(2) a plat and topographic map showing the surface waste management facility's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the surface waste management facility site; watercourses; fresh water sources, including wells and springs; and inhabited buildings within one mile of the site's perimeter;</p>	<p>Topographic Map: Landfill: 36.13.B(1-6) Landfarm: 36.13.B(1-6) Ponds/Pits: 36.13.B(1-6) Plat: Landfill: 36.13.C Landfarm: 36.13.C Ponds/Pits: 36.13.C</p>	<p><i>Site Location Map, Figure I.1</i> <i>Site Topograph, Figure I.3</i> <i>Boundary Survey, Attachment I.C</i> <i>Surface Water Courses, Figure IV.2.9</i></p>
<p>(3) the names and addresses of the surface owners of the real property on which the surface waste management facility is sited and surface owners of the real property within one mile of the site's perimeter;</p>	<p>Landfill: 36.13.C Landfarm: 36.13.C Ponds/Pits: 36.13.C</p>	<i>Public Notification, Attachment I.A</i>
<p>(4) a description of the surface waste management facility with a diagram indicating the location of fences and cattle guards, and detailed construction/installation diagrams of pits, liners, dikes, piping, sprayers, tanks, roads, fences, gates, berms, pipelines crossing the surface waste management facility, buildings and chemical storage areas;</p>	<p>Written Description: Map/Diagram: 36.13.I fencing; Construction/Installation Diagrams: Landfill: 36.13.I fencing; 36.14.C(10) external piping Landfarm: 36.13.I fencing; 36.15.C(1) berms; Ponds/Pits: 36.13.I fencing; 36.17.A dike protection and integrity and fluid collection and removal system; 36.17.C(3) fencing and netting;</p>	<i>Permit Plans, Sheets 2 and 3</i>

<p>(5) engineering designs, certified by a registered professional engineer, including technical data on the design elements of each applicable treatment, remediation and disposal method and detailed designs of surface impoundments;</p>	<p>Engineered Drawings: Landfill: 36.14.C; D; E; F; Landfarm: 36.15.C(1) berms; 36.15.C(10) Ponds/Pits: 36.17.A design plan, leak detection system; 36.17.B(1-12); 36.17.B(4); 36.17.C(4) spray system; 36.17.C(5) skimmer pit or tank; 36.17.D; Technical Data/Specifications: Landfill: 36.14.C; D; E; F; Landfarm: 36.15.C(10) Ponds/Pits: 36.17.A leak detection system, liner specifications; 36.17.B(1-12); 36.17.B(4); 36.17.C(4) spray system; 36.17.C(5) skimmer pit or tank; 36.17.D;</p>	<p>Permit Plans, Sheets 1-14</p>
<p>(6) a plan for management of approved oil field wastes that complies with the applicable requirements contained in 19.15.36.13 NMAC (Siting and Operational Requirements – See Part 2 below), 19.15.36.14 NMAC (Landfills – See Part 3 below), 19.15.36.15 NMAC (Landfarms – See Part 4 below), and 19.15.36.17 NMAC (Ponds – See Part 5 below);</p>	<p>Waste Management Plan: Landfill: 36.13.D; E; F; G; H; 36.14.A; Landfarm: 36.13.D; E; F; G; H; 36.15.A; B; C(1-10); D; E; F; G; H; Ponds/Pits: 36.13.D; F; G; H; 36.17.A waste streams and chemical analysis; 36.17.C(5) skimmer pit or tank;</p>	<p>Oil Field Waste Management Plan, Volume II.2</p>
<p>(7) an inspection and maintenance plan that complies with the requirements contained in Subsection L of 19.15.36.13 NMAC;</p> <p>36.13L. Each operator shall have an that includes the following: <i>(1) monthly inspection of leak detection sumps including sampling if fluids are present with analyses of fluid samples furnished to the division; and maintenance of records of inspection dates, the inspector and the leak detection system's status;</i> <i>(2) semi-annual inspection and sampling of monitoring wells as required, with analyses of ground water furnished to the division; and maintenance of records of inspection dates, the inspector and ground water monitoring wells' status; and</i> <i>(3) inspections of the berms and the outside walls of pond levees quarterly and after a major rainfall or windstorm, and maintenance of berms in such a manner as to prevent erosion.</i></p>	<p>Inspection and Maintenance Plan; Landfill: 36.14.B; 36.14.G.(7); Landfarm: 36.15.C(1) berms Ponds/Pits: 36.17.A freeboard and overtopping, monitoring and inspection plan; and erosion control; 36.17.C(1-2)</p> <p><i>36.8C(7) adopts 36.13L (items 1 -3 in italics).</i></p>	<p>Operations, Inspection, and Maintenance Plan, Volume II.1</p>

<p>(8) a hydrogen sulfide prevention and contingency plan that complies with those provisions of 19.15.11 NMAC that apply to surface waste management facilities;</p>	<p>Hydrogen Sulfide Prevention and Contingency Plan: 19.15.11.2; 19.15.11.9-10; 19.15.11.12-14; 19.15.11.16</p> <p><i>36.8C(8) requires Operator to Comply with Part 11 (H2S).. Does not apply unless Operators tests for >100 ppm H2S.</i></p>	<p><i>Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3</i></p>
<p>(9) a 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 (the closure and post closure plan shall comply with the requirements contained in Subsection D of 19.15.36.18 NMAC); (See Part 6 below).</p>	<p>Closure and Post Closure Plan: Landfill: 36.13.O; 36.14.A.(8); 36.18.A; 36.18.D(2-3); 36.18.G; Landfarm: 36.13.N; 36.15.F; G; H; 36.18.A; 36.18.D(4); 36.18.F; 36.18.G; Ponds/Pits: 36.13.N; 36.17.A closure plan; 36.17.E; 36.18.A; 36.18.E; 36.18.F; 36.18.G; Oil Treating Plant: 36.18.A; 36.18.D(1); 36.18.G;</p> <p><i>36.8C(9) adopts 36.18. See Part 6 below.</i></p>	<p><i>Closure/Post-Closure Plan, Volume II.4</i></p>
<p>(10) a contingency plan that complies with the requirements of Subsection N of 19.15.36.13 NMAC and with NMSA 1978, Sections 12-12-1 through 12-12-30, as amended;</p>	<p>Contingency Plan: Landfill: 36.13.N Landfarm: 36.13.N Ponds/Pits: 36.13.N; 36.17.A emergency response plan;</p> <p><i>36.8C(10) adopts 36.13N. See Part 2 below.</i></p>	<p><i>Contingency Plan, Volume II.5</i></p>
<p>(11) a plan to control run-on water onto the site and run-off water from the site that complies with the requirements of Subsection M of 19.15.36.13 NMAC;</p>	<p>Stormwater Run-on/off Control Plan: Landfill: 36.13.M; Landfarm: 36.13.M; 36.15.C(1); Ponds/Pits: 36.13.M;</p> <p><i>36.8C(11) adopts 36.13M. See Part 2 below.</i></p>	<p><i>Volume III, Volume II.1, and Permit Plans</i></p>
<p>(12) in the case of an application to permit a new or expanded landfill, a leachate management plan that describes the anticipated amount of leachate that will be generated and the leachate's handling, storage, treatment and disposal, including final post closure options;</p>	<p>Leachate Collection/Management Plan: Landfill: 36.18.D(3)(a);</p> <p><i>36.8C(12) adopts 36.14C(5), (6), & (10) and 36.14F. See Part 3 below.</i></p>	<p><i>Leachate Management Plan, Volume II.9</i></p>

<p>(13) in the case of an application to permit a new or expanded landfill, a gas safety management plan that complies with the requirements of Subsection O of 19.15.36.13 NMAC;</p>	<p>Landfill Gas Safety Management Plan: Landfill: 36.13.O; 36.14.G; H; 36.8C(13) adopts 36.13O. See Part 2 below.</p>	<p><i>Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(14) a best management practice plan to ensure protection of fresh water, public health, safety and the environment;</p>		<p><i>Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(15) geological/hydrological data including:</p>	<p>Ponds/Pits: 36.17.A hydrologic report</p>	<p><i>Hydrogeology, Volume IV.2</i></p>
<p>(a) a map showing names and location of streams, springs or other watercourses, and water wells within one mile of the site;</p>	<p>Landfill: 36.13.B(1-2); Landfarm: 36.13. B(1-2); Ponds/Pits: 36.13. B(1-2);</p>	<p><i>Surface Water Courses, Figure IV.2.9</i></p>
<p>(b) laboratory analyses, performed by an independent commercial laboratory, for major cations and anions; BTEX; RCRA metals; and TDS of ground water samples of the shallowest fresh water aquifer beneath the proposed site;</p>		<p><i>Hydrogeology, Volume IV.2</i></p>
<p>(c) depth to, formation name, type and thickness of the shallowest fresh water aquifer;</p>	<p>Landfill: 36.13.A.(1); Landfarm: 36.13.A.(2); 36.13.A.(3); Ponds/Pits: 36.13.A.(5);</p>	<p><i>Hydrogeology, Volume IV.2</i></p>
<p>(d) soil types beneath the proposed surface waste management facility, including a lithologic description of soil and rock members from ground surface down to the top of the shallowest fresh water aquifer;</p>		<p><i>Hydrogeology, Volume IV.2</i></p>
<p>(e) geologic cross-sections;</p>		<p><i>Form C-137</i></p>
<p>(f) potentiometric maps for the shallowest fresh water aquifer; and</p>		<p><i>Potentiometric Surface of the Santa Rosa Sandstone Aquifer, Figure IV.2.10</i></p>
<p>(g) porosity, permeability, conductivity, compaction ratios and swelling characteristics for the sediments on which the contaminated soils will be placed;</p>		<p><i>Volume IV.2; Soils Laboratory Analyses Summary, Table IV.2.3</i></p>
<p>(16) certification by the applicant that information submitted in the application is true, accurate and complete to the best of the applicant's knowledge, after reasonable inquiry; and</p>		<p><i>Volume I</i></p>
<p>(17) other information that the division may require to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, safety or the environment and that the surface waste management facility will comply with division rules and orders.</p>		<p><i>"Other information" will be provided upon request from OCD.</i></p>
<p>PART 2 19.15.36.13 NMAC - SITING AND OPERATIONAL REQUIREMENTS APPLICABLE TO ALL PERMITTED SURFACE WASTE MANAGEMENT FACILITIES:</p>		

<p>36.13 A. Depth to ground water.</p> <p>(1) No landfill shall be located where ground water is less than 100 feet below the lowest elevation of the design depth at which the operator will place oil field waste.</p> <p>(2) No landfarm that accepts soil or drill cuttings with a chloride concentration that exceeds 500 mg/kg shall be located where ground water is less than 100 feet below the lowest elevation at which the operator will place oil field waste. See Subsection A of 19.15.36.15 NMAC for oil field waste acceptance criteria.</p> <p>(3) No landfarm that accepts soil or drill cuttings with a chloride concentration that is 500 mg/kg or less shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.</p> <p>(4) No small landfarm shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.</p> <p>(5) No other surface waste management facility shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.</p>	<p>19.15.36.8.C(15)(c) depth to, formation name, type and thickness of the shallowest fresh water aquifer;</p>	<p><i>Volume I; Siting, Volume IV.1; Hydrogeology, Volume IV.2</i></p>
<p>36.13 B. Siting Requirements: No surface waste management facility shall be located:</p> <p>(1) within 200 feet of a watercourse, lakebed, sinkhole or playa lake;</p> <p>(2) within an existing wellhead protection area or 100-year floodplain;</p> <p>(3) within, or within 500 feet of, a wetland;</p> <p>(4) within the area overlying a subsurface mine;</p> <p>(5) within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or</p> <p>(6) within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.</p>	<p>19.15.36.8.C(2) topographic map 19.15.36.8.C(15)(a) a map showing names and location of streams, springs or other watercourses, and water wells within one mile of the site;</p>	<p><i>Volume I; Siting, Volume IV.1; Figures IV.1.1 through IV.1.11</i></p>
<p>36.13 C. Size: No surface waste management facility shall exceed 500 acres.</p>	<p>19.15.36.8.C(2) plat</p>	<p><i>Volume I; Siting, Volume IV.1</i></p>
<p>36.13 D. Form C-133: The operator shall not accept oil field wastes transported by motor vehicle at the surface waste management facility unless the transporter has a form C-133, authorization to move liquid waste, approved by the division.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>
<p>36.13 E. The operator shall not place oil field waste containing free liquids in a landfill or landfarm cell. The operator shall use the paint filter test, as prescribed by the EPA (EPA SW-846, method 9095) to determine conformance of the oil field waste to this criterion.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>
<p>36.13 F. Surface waste management facilities shall accept only exempt or non-hazardous waste, except as provided in Paragraph (3) of Subsection F of 19.15.36.13 NMAC.</p> <p>The operator shall not accept hazardous waste at a surface waste management facility.</p> <p>The operator shall not accept wastes containing NORM at a surface waste management facility except as provided in 19.15.35 NMAC.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>

<p>(1) Exempt oil field wastes. The operator shall require a certification on form C-138, signed by the generator or the generator's authorized agent, that represents and warrants that the oil field wastes are generated from oil and gas exploration and production operations, are exempt waste and are not mixed with non-exempt waste. The operator shall have the option to accept such certifications on a monthly, weekly or per load basis. The operator shall maintain and shall make the certificates available for the division's inspection.</p>		<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>
<p>(2) Non-exempt, non-hazardous, oil field wastes. The operator shall require a form C-138, oil field waste document, signed by the generator or its authorized agent. This form shall be accompanied by acceptable documentation to determine that the oil field waste is non-hazardous.</p>		<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>
<p>(3) Emergency non-oil field wastes. The operator may accept non-hazardous, non-oil field wastes in an emergency if ordered by the department of public safety. The operator shall complete a form C-138, oil field waste document, describing the waste, and maintain the same, accompanied by the department of public safety order, subject to division inspection.</p>		<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>
<p>36.13 G. Records: The operator of a commercial facility shall maintain records reflecting the generator, the location of origin, the location of disposal within the commercial facility, the volume and type of oil field waste, the date of disposal and the hauling company for each load or category of oil field waste accepted at the commercial facility. The operator shall maintain such records for a period of not less than five years after the commercial facility's closure, subject to division inspection.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>
<p>36.13 H. Disposal at a commercial facility shall occur only when an attendant is on duty unless loads can be monitored or otherwise isolated for inspection before disposal. The surface waste management facility shall be secured to prevent unauthorized disposal.</p>		<p><i>Volume I; Oilfield Waste Management Plan, Volume II.2</i></p>
<p>36.13 I. To protect migratory birds, tanks exceeding eight feet in diameter, and exposed pits and ponds shall be screened, netted or covered. Surface waste management facilities shall be fenced in a manner approved by the division.</p>		<p><i>Volume I; Migratory Bird Protection Plan, Volume II.6</i></p>
<p>36.13 J. Sign: Surface waste management facilities shall have a sign, readable from a distance of 50 feet and containing the operator's name; surface waste management facility permit or order number; surface waste management facility location by unit letter, section, township and range; and emergency telephone numbers.</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>

<p>36.13 K. The operators shall comply with the spill reporting and corrective action provisions of 19.15.30 NMAC or 19.15.29 NMAC.</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>36.13 L. Each operator shall have an inspection and maintenance plan that includes the following: (1) monthly inspection of leak detection sumps including sampling if fluids are present with analyses of fluid samples furnished to the division; and maintenance of records of inspection dates, the inspector and the leak detection system's status; (2) semi-annual inspection and sampling of monitoring wells as required, with analyses of ground water furnished to the division; and maintenance of records of inspection dates, the inspector and ground water monitoring wells' status; and (3) inspections of the berms and the outside walls of pond levees quarterly and after a major rainfall or windstorm, and maintenance of berms in such a manner as to prevent erosion.</p>	<p>19.15.36.8.C(7) inspection and maintenance plan <i>This requirement is duplicative of C7 above.</i></p>	<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>36.13 M. Each operator shall have a plan to control run-on water onto the site and run-off water from the site, such that: (1) the run-on and run-off control system shall prevent flow onto the surface waste management facility's active portion during the peak discharge from a 25-year storm; and (2) run-off from the surface waste management facility's active portion shall not be allowed to discharge a pollutant to the waters of the state or United States that violates state water quality standards.</p>	<p>19.15.36.8.C(11) stormwater run on/off management plan</p>	<p><i>Volume I, Volume II.1, Volume III, Permit Plans</i></p>
<p>36.13 N. Contingency plan. Each operator shall have a contingency plan. The contingency plan for emergencies shall:</p>	<p>19.15.36.8.C(10) contingency plan <i>For Admin Completeness Determination (ACD), accept any attachment labeled Contingency Plan. Details will be part of Technical Review.</i></p>	<p><i>Contingency Plan, Volume II.5</i></p>
<p>(1) describe the actions surface waste management facility personnel shall take in response to fires, explosions or releases to air, soil, surface water or ground water of contaminants or oil field waste containing constituents that could threaten fresh water, public health, safety or the environment;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(2) describe arrangements with local police departments, fire departments, hospitals, contractors and state and local emergency response teams to coordinate emergency services;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(3) list the emergency coordinator's name; address; and office, home and mobile phone numbers (where more than one person is listed, one shall be named as the primary emergency coordinator);</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(4) include a list, which shall be kept current, of emergency equipment ... containing a physical description of each item on the list and a brief outline of its capabilities;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(5) include an evacuation plan</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(6) include an evaluation of expected contaminants, expected media</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(7) list where copies of the contingency plan will be kept, which shall include the surface waste management facility; local police departments, fire departments and hospitals; and state and local emergency response teams;</p>		<p><i>Contingency Plan, Volume II.5</i></p>

<p>(8) indicate when the contingency plan will be amended, which shall be within five working days whenever: (a) the surface waste management facility permit is revised or modified; (b) the plan fails in an emergency; (c) the surface waste management facility changes design, construction, operation, maintenance or other circumstances in a way that increases the potential for fires, explosions or releases of oil field waste constituents that could threaten fresh water, public health, safety or the environment or change the response necessary in an emergency; (d) the list of emergency coordinators or their contact information changes; or (e) the list of emergency equipment changes;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(9) describe how the emergency coordinator or the coordinator's designee, whenever there is an imminent or actual emergency situation, will immediately; (a) activate internal surface waste management facility alarms or communication systems, where applicable, to notify surface waste management facility personnel; and (b) notify appropriate state and local agencies with designated response roles if their assistance is needed;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(10) describe how the emergency coordinator, whenever there is a release, fire or explosion, will immediately identify the character, exact source, amount and extent of released materials and describe how the emergency coordinator will concurrently assess possible hazards to fresh water, public health, safety or the environment that may result from the release, fire or explosion;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(11) describe how, if the surface waste management facility stops operations in response to fire, explosion or release, the emergency coordinator will monitor for leaks, pressure buildup, gas generation or rupture in valves, pipes or the equipment, wherever this is appropriate;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(12) describe how the emergency coordinator, immediately after an emergency, will provide for treating, storing or disposing of recovered oil field waste, or other material that results from a release, fire or explosion at a surface waste management facility;</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(13) describe how the emergency coordinator will ensure that no oil field waste, which may be incompatible with the released material, is treated, stored or disposed of until cleanup procedures are complete; and</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>(14) provide that the emergency coordinator may amend the plan during an emergency as necessary to protect fresh water, public health, safety or the environment.</p>		<p><i>Contingency Plan, Volume II.5</i></p>
<p>36.13 O. Gas safety management plan. Each operator ... a landfill shall have a gas safety management plan.... The plan shall also include final post closure monitoring and control options.</p>	<p>19.15.36.8.C(13) gas safety management plan <i>For ACD, accept any attachment labeled Gas Safety Management Plan.</i></p>	<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</i></p>

<p>36.13 P. Training program. Each operator shall conduct an annual training program for key personnel that includes general operations, permit conditions, emergencies proper sampling methods and identification of exempt and non-exempt waste and hazardous waste. The operator shall maintain records of such training, subject to division inspection, for five years.</p>	<p><i>For ACD, accept any attachment labeled Training Program</i></p>	<p><i>Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>PART 3 19.15.36.14 NMAC - SPECIFIC REQUIREMENTS APPLICABLE TO LANDFILLS</p>		
<p>36.14A. General operating requirements.</p>		
<p>(1) The operator shall confine the landfill's working face to the smallest practical area and compact the oil field waste to the smallest practical volume. The operator shall not use equipment that may damage the integrity of the liner system in direct contact with a geosynthetic liner.</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(2) The operator shall prevent unauthorized access by the public and entry by large animals to the landfill's active portion through the use of fences, gates, locks or other means that attain equivalent protection.</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(3) The operator shall prevent and extinguish fires.</p>	<p><i>These are Permit Conditions, but not required to be ACD.</i></p>	
<p>(4) The operator shall control litter and odors.</p>		
<p>(5) The operator shall not excavate a closed cell or allow others to excavate a closed cell except as approved by the division.</p>		
<p>(6) The operator shall provide adequate cover for the landfill's active face as needed to control dust, debris, odors or other nuisances, or as otherwise required by the division.</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(7) For areas of the landfill that will not receive additional oil field waste for one month or more, but have not reached the final waste elevation, the operator shall provide intermediate cover....</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(8) Landfill cell closure: When the operator has filled a landfill cell, the operator shall close it pursuant to the conditions contained in the surface waste management facility permit and the requirements of Paragraph (2) of Subsection D of 19.15.36.18 NMAC. The operator shall notify the division's environmental bureau at least three working days prior to a landfill cell's closure.</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>36.14B. Ground water monitoring program. the operator shall establish a ground water monitoring program ... which shall include a ground water monitoring work plan, a sampling and analysis plan, a ground water monitoring system and a plan for reporting ground water monitoring results. The ground water monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths, to yield ground water samples from the uppermost aquifer that: (1) represent the quality of background ground water that leakage from a landfill has not affected; and (2) represent the quality of ground water passing beneath and down gradient of the surface waste management facility.</p>	<p>19.15.36.8.C(7) inspection and maintenance plan</p>	<p><i>Volume I, Vadose Zone Monitoring Plan, Volume II.8; Hydrogeology, Volume IV.2; Attachment IV.2.A</i></p>

<p>36.14C. Landfill design specification. New landfill design systems shall include a base layer and a lower geomembrane liner (e.g., composite liner), a leak detection system, an upper geomembrane liner, a leachate collection and removal system, a leachate collection and removal system protective layer, an oil field waste zone and a top landfill cover.</p>	<p>19.15.36.8.C(5) technical data and design drawings For ACD, accept any plan that refers to Landfill Design that has all of the required elements shown in bold. Details will be part of Technical Review. This is duplicative of 36.8C(xx) above.</p>	<p>Volume I; Liner CQA Plan, Volume II.7; Engineering Design, Volume III.1; HELP Model, Volume III.4; Compatibility Documentation, Volume III.5; Permit Plans</p>
<p>(1) Base layer: The base layer shall, at a minimum, consist of two feet of clay soil compacted to a minimum 90 percent standard proctor density (ASTM D-698) with a hydraulic conductivity of 1×10^{-7} cm/sec or less. In areas where no ground water is present, the operator may propose an alternative base layer design, subject to division approval.</p>		<p>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</p>
<p>(2) Lower geomembrane liner: The lower geomembrane liner shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division.</p>		<p>Volume I; Liner CQA Plan, Volume II.7; Engineering Design, Volume III.1; HELP Model, Volume III.4; Compatibility Documentation, Volume III.5; Permit Plans</p>
<p>(3) Leak detection system: The operator shall place the leak detection system, which shall consist of two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-5} cm/sec or greater, between the lower and upper geomembrane liners. The leak detection system shall consist of a drainage and collection system placed no more than six inches above the lower geomembrane liner in depressions and sloped so as to facilitate the earliest possible leak detection at designated collection points. Drainage piping shall be designed to withstand chemical attack from oil field waste and leachate and structural loading and other stresses and disturbances from overlying oil field waste, cover materials, equipment operation, expansion or contraction, and to facilitate clean-out maintenance. The material placed between the pipes and laterals shall be sufficiently permeable to allow the transport of fluids to the drainage pipe. The slope of the landfill sub-grade and drainage pipes and laterals shall be at least two percent grade; i.e., two feet of vertical drop per 100 horizontal feet. The piping collection network shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. The operator shall seal a solid drainage pipe to convey collected liquids to a corrosion-proof sump or sumps located outside the landfill's perimeter for observation, storage, treatment or disposal. The operator may install alternative designs as approved by the division.</p>		<p>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</p>
<p>(4) The operator shall place the upper geomembrane liner, which shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division, over the leak detection system.</p>		<p>Volume I; Liner CQA Plan, Volume II.7; Engineering Design, Volume III.1; HELP Model, Volume III.4; Compatibility Documentation, Volume III.5; Permit Plans</p>

<p>(5) The operator shall place the leachate collection and removal system, which shall consist of at least two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-2} cm/sec or greater, over the upper geomembrane liner to facilitate drainage.</p> <p>The leachate collection and removal system shall consist of a drainage and collection and removal system placed no more than six inches above the upper geomembrane liner in depressions and sloped so as to facilitate the maximum leachate collection.</p> <p>Piping shall be designed to withstand chemical attack from oil field waste or leachate and structural loading and other stresses and disturbances from overlying oil field waste, cover materials, equipment operation, expansion or contraction and to facilitate clean-out maintenance.</p> <p>The material placed between the pipes and laterals shall be sufficiently permeable to allow the transport of fluids to the drainage pipe.</p> <p>The slope of the upper geomembrane liner and drainage lines and laterals shall be at least two percent grade; i.e., two feet of vertical drop per 100 horizontal feet.</p> <p>The piping collection network shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80.</p> <p>The operator shall seal a solid drainage pipe to convey collected fluids outside the landfill's perimeter for storage, treatment and disposal. The operator may install alternative designs as approved by the division.</p>		<p><i>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</i></p>
<p>(6) The operator shall place the leachate collection and removal system protection layer, which shall consist of a soil layer at least one foot thick with a saturated hydraulic conductivity of 1×10^{-2} cm/sec or greater, over the leachate collection and removal system.</p>		<p><i>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</i></p>
<p>(7) The operator shall place oil field waste over the leachate collection and removal system protective layer.</p>		<p><i>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</i></p>
<p>(8) The top landfill cover design shall consist of the following layers (top to bottom):</p> <ul style="list-style-type: none"> a soil erosion layer composed of at least 12 inches of fertile topsoil re-vegetated in accordance with the post closure provisions of Subparagraph (b) of Paragraph (2) of Subsection D of 19.15.36.18 NMAC; a protection or frost protection layer composed of 12 to 30 inches of native soil; a drainage layer composed of at least 12 inches of sand or gravel with a saturated hydraulic conductivity of 1×10^{-2} cm/sec or greater and a minimum bottom slope of four percent, a hydraulic barrier-layer-geomembrane (minimum of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division); and a gas vent or foundation layer composed of at least 12 inches of sand or gravel above oil field waste with soils compacted to the minimum 80 percent Standard Proctor Density. The operator shall install the top landfill cover within one year of achieving the final landfill cell waste elevation. ... 		<p><i>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</i></p>

<p>(9) Alternatively, the operator may propose a performance-based landfill design system using geosynthetics or geocomposites, including geogrids, geonets, geosynthetic clay liners, composite liner systems, etc., when supported by EPA's "hydrologic evaluation of landfill performance" (HELP) model or other division-approved model.</p> <p>The operator shall design the landfill to prevent the "bathtub effect". The bathtub effect occurs when a more permeable cover is placed over a less permeable bottom liner or natural subsoil.</p>		<p>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</p>
<p>(10) External piping, e.g., leachate collection, leak detection and sump removal systems shall be designed for installation of a sidewall riser pipe.</p> <p>Pipes shall not penetrate the liner with the exception of gas vent or collection wells where the operator shall install a flexible clamped pipe riser through the top landfill cover liner that will accommodate oil field waste settling and will prevent tears.</p>		<p>Volume I; Engineering Design, Volume III.1; HELP Model, Volume III.4; Permit Plans</p>
<p>36.14 D. Liner specifications and requirements.</p>	<p>19.15.36.8.C(5) technical data and design drawings For ACD, accept any plan that refers to Liner Specs. Details will be part of Technical Review.</p>	<p>Liner CQA Plan, Volume II.7; Permit Plans, Compatibility Documentation, Volume III.6</p>
<p>(1) General requirements. (a) Geomembrane liner specifications.</p> <p>Geomembrane liners shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division. Geomembrane liners shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec.</p> <p>Geomembrane liners shall be composed of impervious, geosynthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Liners shall also be resistant to ultraviolet light, or the operator shall make provisions to protect the material from sunlight.</p> <p>Liner compatibility shall comply with EPA SW-846 method 9090A.</p> <p>(b) Liners shall be able to withstand projected loading stresses, settling and disturbances from overlying oil field waste, cover materials and equipment operations.</p> <p>(c) The operator shall construct liners with a minimum of two percent slope to promote positive drainage and to facilitate leachate collection and leak detection.</p>		<p>Liner CQA Plan, Volume II.7; Permit Plans, Compatibility Documentation, Volume III.6; Tensile Stress Analysis, Volume III.7; Settlement Calculations, Volume III.9</p>

<p>(2) Additional requirements for geomembranes.</p> <p>(a) Geomembranes shall be compatible with the oil field waste to be disposed. Geomembranes shall be resistant to chemical attack from the oil field waste or leachate.</p> <p>The operator shall demonstrate this by means of the manufacturer's test reports, laboratory analyses or other division-approved method.</p> <p>(b) Geosynthetic material the operator installs on a slope greater than 25 percent shall be designed to withstand the calculated tensile forces acting upon the material. The design shall consider the maximum friction angle of the geosynthetic with regard to a soil-geosynthetic or geosynthetic-geosynthetic interface and shall ensure that overall slope stability is maintained.</p> <p>(c) The operator shall thermally seal (hot wedge) field seams in geosynthetic material with a double track weld to create an air pocket for non-destructive air channel testing. In areas where double-track welding cannot be achieved, the operator may propose alternative thermal seaming methods. A stabilized air pressure of 35psi, plus or minus one percent, shall be maintained for at least five minutes.</p> <p>The operator shall overlap liners four to six inches before seaming, and shall orient seams parallel to the line of maximum slope; i.e., oriented along, not across, the slope.</p> <p>The operator shall minimize the number of field seams in corners and irregularly shaped areas.</p> <p>The operator shall use factory seams whenever possible.</p> <p>The operator shall not install horizontal seams within five feet of the slope's toe. Qualified personnel shall perform all field seaming.</p>		<p><i>Liner CQA Plan, Volume II.7; Permit Plans; Engineering Design, Volume III.1; Compatibility Documentation, Volume III.6; Tensile Stress Analysis, Volume III.7; Settlement Calculations, Volume III.9</i></p>
<p>36.14E. Requirements for the soil component of composite liners.</p> <p>(1) The operator shall place and compact the base layer to 90 percent standard proctor density on a prepared sub-grade.</p> <p>(2) The soil surface upon which the operator installs a geosynthetic shall be free of stones greater than one half inch in any dimension, organic matter, local irregularities, protrusions, loose soil and abrupt changes in grade that could damage the geosynthetic.</p> <p>(3) The operator shall compact a clay soil component of a composite liner to a minimum of 90 percent standard proctor density, which shall have, unless otherwise approved by the division, a plasticity index greater than 10 percent, a liquid limit between 25 and 50 percent, a portion of material passing the no. 200 sieve (0.074 mm and less fraction) greater than 40 percent by weight; and a clay content greater than 18 percent by weight.</p>	<p>19.15.36.8.C(5) technical data and design drawings For ACD, accept any plan that refers to Soil component of Composite Liners. Details will be part of Technical Review.</p>	<p><i>Volume I; Liner CQA Plan, Volume II.7; Engineering Design, Volume III.1; Permit Plans; HELP Model, Volume III.4</i></p>

<p>36.14F. The leachate collection and removal system protective layer and the soil component of the leak detection system shall consist of soil materials that shall be free of organic matter, shall have a portion of material passing the no. 200 sieve no greater than five percent by weight and shall have a uniformity coefficient (Cu) less than 6, where Cu is defined as D60/D10.</p> <p>Geosynthetic materials or geocomposites including geonets and geotextiles, if used as components of the leachate collection and removal or leak detection system, shall have a hydraulic conductivity, transmissivity and chemical and physical qualities that oil field waste placement, equipment operation or leachate generation will not adversely affect.</p> <p>These geosynthetics or geocomposites, if used in conjunction with the soil protective cover for liners, shall have a hydraulic conductivity designed to ensure that the liner's hydraulic head never exceeds one foot.</p>	<p>19.15.36.8.C(5) technical data and design drawings For ACD, accept any plan that refers to Leachate Collection and removal system protective layer. Details will be part of Technical Review.</p>	<p>Volume I; Volume III; Volume III.4</p>
<p>36.14G. Landfill gas control systems. If the gas safety management plan or requirements of other federal, state or local agencies require the installation of a gas control system at a landfill, the operator shall submit a plan for division approval, which shall include the following:</p>	<p>19.15.36.8.C(13) gas safety management plan</p>	<p>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(1) the system's design, indicating the location and design of vents, barriers, collection piping and manifolds and other control measures that the operator will install (gas vent or collection wells shall incorporate a clamped and seamed pipe riser design through the top cover liner);</p>	<p>For ACD, accept any plan that refers to Landfill Gas Control System. Details will be part of Technical Review.</p>	<p>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(2) if gas recovery is proposed, the design of the proposed gas recovery system and the system's major on-site components, including storage, transportation, processing, treatment or disposal measures required in the management of generated gases, condensates or other residues;</p>		<p>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(3) if gas processing is proposed, a processing plan designed in a manner that does not interfere or conflict with the activities on the site or required control measures or create or cause danger to persons or property;</p>		<p>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(4) if gas disposal is proposed, a disposal plan designed: (a) in a manner that does not interfere or conflict with the activities on the site or with required control measures; (b) so as not to create or cause danger to persons or property; and (c) with active forced ventilation, using vents located at least one foot above the landfill surface at each gas vent's location;</p>		<p>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(5) physical and chemical characterization of condensates or residues that are generated and a plan for their disposal;</p>		<p>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>

<p>(6) means that the operator will implement to prevent gas generation and lateral migration such that</p> <p>(a) the concentration of the gases the landfill generates does not exceed 25 percent of the lower explosive limit for gases in surface waste management facility structures (excluding gas control or recovery system components); and</p> <p>(b) the concentration of gases does not exceed the lower explosive limit for gases at the surface waste management facility boundary; and</p>		<p>Volume I; Vadose Zone Monitoring Plan, Volume II.8</p>
<p>(7) a routine gas monitoring program providing for monitoring at least quarterly; the specific type and frequency of monitoring to be determined based on the following:</p> <p>(a) soil conditions;</p> <p>(b) the hydrogeologic and hydraulic conditions surrounding the surface waste management facility; and</p> <p>(c) the location of surface waste management facility structures and property lines.</p>		<p>Volume I; Vadose Zone Monitoring Plan, Volume II.8</p>
<p>36.14H. Landfill gas response. If gas levels exceed the limits specified in Paragraph (6) of Subsection G of 19.15.36.14 NMAC, the operator shall:</p>	<p>19.15.36.8.C(13) gas safety management plan</p>	<p>Volume I; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(1) immediately take all necessary steps to ensure protection of fresh water, public health, safety and the environment and notify the division;</p>	<p><i>For ACD, accept any plan that refers to Landfill Gas Response. Details will be part of Technical Review.</i></p>	<p>Volume I; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(2) within seven days of detection, record gas levels detected and a description of the steps taken to protect fresh water, public health, safety and the environment;</p>		<p>Volume I; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(3) within 30 days of detection, submit a remediation plan for gas releases that describes the problem's nature and extent and the proposed remedy; and</p>		<p>Volume I; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>(4) within 60 days after division approval, implement the remediation plan and notify the division that the plan has been implemented.</p>		<p>Volume I; Hydrogen Sulfide Prevention and Contingency Plan, Volume II.3; Contingency Plan, Volume II.5</p>
<p>PART 4</p>		
<p>19.15.36.15 NMAC - SPECIFIC REQUIREMENTS APPLICABLE TO LANDFARMS</p>		

<p>36.15A. Oil field waste acceptance criteria. Only soils and drill cuttings predominantly contaminated by petroleum hydrocarbons shall be placed in a landfarm. The division may approve placement of tank bottoms in a landfarm if the operator demonstrates that the tank bottoms do not contain economically recoverable petroleum hydrocarbons. Soils and drill cuttings placed in a landfarm shall be sufficiently free of liquid content to pass the paint filter test, and shall not have a chloride concentration exceeding 500 mg/kg if the landfarm is located where ground water is less than 100 feet but at least 50 feet below the lowest elevation at which the operator will place oil field waste or exceeding 1000 mg/kg if the landfarm is located where ground water is 100 feet or more below the lowest elevation at which the operator will place oil field waste. The person tendering oil field waste for treatment at a landfarm shall certify, on form C-138, that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content, and that the samples have been found to conform to these requirements. The landfarm's operator shall not accept oil field waste for landfarm treatment unless accompanied by this certification.</p>	<p>19.15.36.8.C(6) waste management plan <i>36.15A is mostly Permit Conditions. Check for commitments to meet these requirements.</i></p>	<p><i>Not Applicable.</i></p>
<p>36.15B. Background testing. Prior to beginning operation of a new landfarm or to opening a new cell at an existing landfarm at which the operator has not already established background, the operator shall take, at a minimum, 12 composite background soil samples, with each consisting of 16 discrete samples from areas that previous operations have not impacted at least six inches below the original ground surface, to establish background soil concentrations for the entire surface waste management facility. The operator shall analyze the background soil samples for TPH, as determined by EPA method 418.1 or other EPA method approved by the division; BTEX, as determined by EPA SW-846 method 8021B or 8260B; chlorides; and other constituents listed in Subsections A and B of 20.6.2.3103 NMAC, using approved EPA methods.</p>		<p><i>Not Applicable.</i></p>
<p>36.15C. Operation and oil field waste treatment.</p>		<p><i>Not Applicable.</i></p>
<p>(1) The operator shall berm each landfarm cell to prevent rainwater run-on and run-off.</p>	<p>19.15.36.8.C(6) waste management plan 19.15.36.8.C(11) stormwater run on/off management plan 19.15.36.8.C(4) detailed construction/ installation diagrams</p>	<p><i>Not Applicable.</i></p>
<p>(2) The operator shall not place contaminated soils received after the effective date of 19.15.36 NMAC within 100 feet of the surface waste management facility's boundary.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Not Applicable.</i></p>
<p>(3) The operator shall not place contaminated soils received at a landfarm after the effective date of 19.15.36 NMAC within 20 feet of a pipeline crossing the landfarm.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Not Applicable.</i></p>
<p>(4) With 72 hours after receipt, the operator shall spread and disk contaminated soils in eight-inch or less lifts or approximately 1000 cubic yards per acre per eight-inch lift or biopile.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Not Applicable.</i></p>
<p>(5) The operator shall ensure that soils are disked biweekly and biopiles are turned at least monthly.</p>	<p>19.15.36.8.C(6) waste management plan</p>	<p><i>Not Applicable.</i></p>

(6) The operator shall add moisture, as necessary, to enhance bioremediation and to control blowing dust.	19.15.36.8.C(6) waste management plan	Not Applicable.
(7) The application of microbes for the purposes of enhancing bioremediation requires prior division approval.	19.15.36.8.C(6) waste management plan	Not Applicable.
(8) Pooling of liquids in the landfarm is prohibited. The operator shall remove freestanding water within 24 hours.		Not Applicable.
(9) The operator shall maintain records of the landfarm's remediation activities in a form readily accessible for division inspection.		Not Applicable.
(10) The division's environmental bureau may approve other treatment procedures if the operator demonstrates that they provide equivalent protection for fresh water, public health, safety and the environment.	19.15.36.8.C(6) waste management plan 19.15.36.8.C(5) technical data and design drawings	Not Applicable.
<p>36.15D. Treatment zone monitoring. The operator shall spread contaminated soils on the surface in eight- inch or less lifts or approximately 1000 cubic yards per acre per eight-inch lift. The operator shall conduct treatment zone monitoring to ensure that prior to adding an additional lift the TPH concentration of each lift, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg and that the chloride concentration, as determined by EPA method 300.1, does not exceed 500 mg/kg if the landfarm is located where ground water is less than 100 feet but at least 50 feet below the lowest elevation at which the operator will place oil field waste or 1000 mg/kg if the landfarm is located where ground water is 100 feet or more below the lowest elevation at which the operator will place oil field waste. The operator shall collect and analyze at least one composite soil sample, consisting of four discrete samples, from the treatment zone at least semi-annually using the methods specified below for TPH and chlorides. The maximum thickness of treated soils in a landfarm cell shall not exceed two feet or approximately 3000 cubic yards per acre. When that thickness is reached, the operator shall not place additional oil field waste in the landfarm cell until it has demonstrated by monitoring the treatment zone at least semi-annually that the contaminated soil has been treated to the standards specified in Subsection F of 19.15.36.15 NMAC or the contaminated soils have been removed to a division approved surface waste management facility.</p>	19.15.36.8.C(6) waste management plan	Not Applicable.
36.15E. Vadose zone monitoring.	Permit condition, but not needed for ACD.	Not Applicable.
<p>(1) Sampling. The operator shall monitor the vadose zone beneath the treatment zone in each landfarm cell. The operator shall take the vadose zone samples from soils between three and four feet below the cell's original ground surface.</p>		Not Applicable.
<p>(2) Semi-annual monitoring program. The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone at least semi-annually using the methods specified below for TPH, BTEX and chlorides and shall compare each result to the higher of the PQL or the background soil concentrations to determine whether a release has occurred.</p>		Not Applicable.

<p>(3) Five year monitoring program. The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone, using the methods specified below for the constituents listed in Subsections A and B of 20.6.2.3103 NMAC at least every five years and shall compare each result to the higher of the PQL or the background soil concentrations to determine whether a release has occurred.</p>		<p><i>Not Applicable.</i></p>
<p>(4) Record keeping. The operator shall maintain a copy of the monitoring reports in a form readily accessible for division inspection.</p>		<p><i>Not Applicable.</i></p>
<p>(5) Release response. If vadose zone sampling results show that the concentrations of TPH, BTEX or chlorides exceed the higher of the PQL or the background soil concentrations, then the operator shall notify the division's environmental bureau of the exceedance, and shall immediately collect and analyze a minimum of four randomly selected, independent samples for TPH, BTEX, chlorides and the constituents listed in Subsections A and B of 20.6.2.3103 NMAC. The operator shall submit the results of the re-sampling event and a response action plan for the division's approval within 45 days of the initial notification. The response action plan shall address changes in the landfarm's operation to prevent further contamination and, if necessary, a plan for remediating existing contamination.</p>		<p><i>Not Applicable.</i></p>
<p>36.15F. Treatment zone closure performance standards. After the operator has filled a landfarm cell to the maximum thickness of two feet or approximately 3000 cubic yards per acre, the operator shall continue treatment until the contaminated soil has been remediated to the higher of the background concentrations or the following closure performance standards. The operator shall demonstrate compliance with the closure performance standards by collecting and analyzing a minimum of one composite soil sample, consisting of four discrete samples.</p>	<p>19.15.36.8.C(9) closure and post-closure care plan <i>Permit condition, but not needed for ACD</i></p>	<p><i>Not Applicable.</i></p>
<p>(1) Benzene, as determined by EPA SW-846 method 8021B or 8260B, shall not exceed 0.2 mg/kg.</p>		<p><i>Not Applicable.</i></p>
<p>(2) Total BTEX, as determined by EPA SW-846 method 8021B or 8260B, shall not exceed 50 mg/kg.</p>		<p><i>Not Applicable.</i></p>
<p>(3) The GRO and DRO combined fractions, as determined by EPA SW-846 method 8015M, shall not exceed 500 mg/kg. TPH, as determined by EPA method 418.1 or other EPA method approved by the division, shall not exceed 2500 mg/kg.</p>		<p><i>Not Applicable.</i></p>
<p>(4) Chlorides, as determined by EPA method 300.1, shall not exceed 500 mg/kg if the landfarm is located where ground water is less than 100 feet but at least 50 feet below the lowest elevation at which the operator will place oil field waste or 1000 mg/kg if the landfarm is located where ground water is 100 feet or more below the lowest elevation at which the operator will place oil field waste.</p>		<p><i>Not Applicable.</i></p>
<p>(5) The concentration of constituents listed in Subsections A and B of 20.6.2.3103 NMAC shall be determined by EPA SW-846 methods 6010B or 6020 or other methods approved by the division. If the concentration of those constituents exceed the PQL or background concentration, the operator shall either perform a site specific risk assessment using EPA approved methods and shall propose closure standards based upon individual site conditions that protect fresh water, public health, safety and the environment, which shall be subject to division approval or remove pursuant to Paragraph (2) of Subsection G of 19.15.36.15 NMAC.</p>		<p><i>Not Applicable.</i></p>

36.15G. Disposition of treated soils.	19.15.36.8.C(6) waste management plan 19.15.36.8.C(9) closure and post-closure care plan	<i>Not Applicable.</i>
(1) If the operator achieves the closure performance standards specified in Subsection F of 19.15.36.15 NMAC, then the operator may either leave the treated soils in place, or, with prior division approval, dispose or reuse of the treated soils in an alternative manner.	<i>Permit condition, but not needed for ACD.</i>	<i>Not Applicable.</i>
(2) If the operator cannot achieve the closure performance standards specified in Subsection F of 19.15.36.15 NMAC within five years or as extended by the division, then the operator shall remove contaminated soils from the landfarm cell and properly dispose of it at a division-permitted landfill, or reuse or recycle it in a manner approved by the division.		<i>Not Applicable.</i>
(3) If the operator cannot achieve the closure performance standards specified in Subsection F of 19.15.36.15 NMAC within five years or as extended by the division, then the division may review the adequacy of the operator's financial assurance, as provided in Subsection G of 19.15.36.11 NMAC. In that event, the division may require the operator to modify its financial assurance to provide for the appropriate disposition of contaminated soil in a manner acceptable to the division.		<i>Not Applicable.</i>
(4) The operator may request approval of an alternative soil closure standard from the division, provided that the operator shall give division-approved public notice of an application for alternative soil closure standards in the manner provided in 19.15.36.9 NMAC. The division may grant the request administratively if no person files an objection thereto within 30 days after publication of notice; otherwise the division shall set the matter for hearing.		<i>Not Applicable.</i>
36.15H. Environmentally acceptable bioremediation endpoint approach.	19.15.36.8.C(6) waste management plan 19.15.36.8.C(9) closure and post-closure care plan	<i>Not Applicable.</i>
(1) A landfarm operator may use an environmentally acceptable bioremediation endpoint approach to landfarm management in lieu of compliance with the requirements of Paragraph (3) of Subsection F of 19.15.36.15 NMAC....	<i>Permit condition, but not needed for ACD.</i>	<i>Not Applicable.</i>
(2) In addition to the requirements specified in Subsection C of 19.15.36.8 NMAC, an operator who plans to use an environmentally acceptable bioremediation endpoint approach shall submit for the division's review and approval a detailed landfarm operation plan for those landfarm cells exclusively dedicated to the use of the environmentally acceptable bioremediation endpoint approach. At a minimum, the operations plan shall include detailed information on the native soils, procedures to characterize each lift of contaminated soil, operating procedures and management procedures that the operator shall follow.		<i>Not Applicable.</i>

<p>(3) In addition to other operational requirements specified in 19.15.36.15 NMAC, the operator using an environmentally acceptable bioremediation endpoint approach shall comply with the following.</p> <p>(a) Native soil information required. The operator shall submit detailed information on the soil conditions present for each of its landfarm cells immediately prior to the application of the petroleum hydrocarbon- contaminated soils, including: treatment cell size, soil porosity, soil bulk density, soil pH, moisture content, field capacity, organic matter concentration, soil structure, SAR, EC, soil composition, soil temperature, soil nutrient (C:N:P) (calcium, nitrogen and phosphate) concentrations and oxygen content.</p> <p>(b) Characterization of contaminated soil. The operator shall submit a description of the procedures that it will follow to characterize each lift of contaminated soil or drill cuttings, prior to treating each lift of contaminated soil or drill cuttings, for petroleum hydrocarbon loading factor, TPH, BTEX, chlorides, constituents listed in Subsections A and B of 20.6.2.3103 NMAC, contaminated soil moisture, contaminated soil pH and API gravity of the petroleum hydrocarbons.</p> <p>(c) Operating procedures. The operator shall submit a description of the procedures, including a schedule, that it shall follow to properly monitor and amend each lift of contaminated soil in order to maximize bioremediation, including tilling procedures and schedule; procedures to limit petroleum hydrocarbon loading to less than five percent; procedures to maintain pH between six and eight; procedures to monitor and apply proper nutrients; procedures to monitor, apply and maintain moisture to 60 to 80 percent of field capacity; and procedures to monitor TPH concentrations.</p> <p>(d) Management procedures. The operator shall submit a description of the management procedures that it shall follow to properly schedule landfarming operations, including modifications during cold weather, record keeping, sampling and analysis, statistical procedures, routine reporting, determination and reporting of achievement of the environmentally acceptable bioremediation endpoint and closure and post-closure plans.</p>		<p><i>Not Applicable.</i></p>
<p>PART 5 19.15.36.17 NMAC - SPECIFIC REQUIREMENTS APPLICABLE TO EVAPORATION, STORAGE, TREATMENT AND SKIMMER PONDS:</p>		

<p>36.17A. Engineering design plan. An applicant for a surface waste management facility permit or modification requesting inclusion of a skimmer pit; an evaporation, storage or treatment pond; or a below-grade tank shall submit ... a detailed engineering design plan, certified by a registered profession engineer, including operating and maintenance procedures; 19.15.36.8.C(5) technical data and design drawings a closure plan; 19.15.36.8.C(9) closure and post-closure care plan and a hydrologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the division to evaluate the actual and potential effects on soils, surface water and ground water. 19.15.36.8.C(15) geological/ hydrological data The plan shall include detailed information on dike protection and structural integrity; leak detection, including an adequate fluid collection and removal system; 19.15.36.8.C(5) technical data and design drawings liner specifications and compatibility; 19.15.36.8.C(5) technical data and design drawings freeboard and overtopping prevention; 19.15.36.8.C(7) inspection and maintenance plan prevention of nuisance and hazardous odors such as H2S; 19.15.36.8.C(8) hydrogen sulfide prevention and contingency plan; 19.15.36.8.C(7) inspection and maintenance plan an emergency response plan, unless the pit is part of a surface waste management facility that has an integrated contingency plan; 19.15.36.8.C(10) contingency plan type of oil field waste stream, including chemical analysis; 19.15.36.8.C(6) waste management plan climatological factors, including freeze-thaw cycles;</p>	<p><i>For ACD, accept any plan that refers to Engineering Design Plan and that has all of the required elements shown in bold. Details will be part of Technical Review.</i></p>	<p><i>Facility Management Plans, Volume II Engineering Design and Calculations, Volume III Siting and Hydrogeology, Volume IV Permit Plans</i></p>
<p>36.17B. Construction, standards.</p>	<p>19.15.36.8.C(5) technical data and design drawings</p>	<p><i>Volume I; Liner CQA Plan, Volume II.7; Permit Plans</i></p>
<p>(1) In general. The operator shall ensure each pit, pond and below-grade tank is designed, constructed and operated so as to contain liquids and solids in a manner that will protect fresh water, public health, safety and the environment.</p>	<p><i>For ACD, accept any plan that refers to Construction Standards and that has all of the required elements shown in bold. Details will be part of Technical Review</i></p>	<p><i>Volume I; Liner CQA Plan, Volume II.7; Permit Plans</i></p>
<p>(2) Liners required. Each pit or pond shall contain, at a minimum, a primary (upper) liner and a secondary (lower) liner with a leak detection system appropriate to the site's conditions.</p>		<p><i>Volume I; Engineering Design, Volume III.1</i></p>

<p>(3) Liner specifications. Liners shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division. Synthetic (geomembrane) liners shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. Geomembrane liners shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Liner materials shall be resistant to ultraviolet light, or the operator shall make provisions to protect the material from sunlight. Liner compatibility shall comply with EPA SW-846 method 9090A.</p>		<p><i>Volume I; Liner CQA Plan, Volume II.7; Compatibility Documentation, Volume III.6; Permit Plans</i></p>
<p>(4) Alternative liner media. The division may approve other liner media if the operator demonstrates to the division's satisfaction that the alternative liner protects fresh water, public health, safety and the environment as effectively as the specified media.</p>	<p><i>Optional 19.15.36.8.C(5) technical data and design drawings</i></p>	<p><i>Volume I</i></p>
<p>(5) Each pit or pond shall have a properly constructed foundation or firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities, in order to prevent rupture or tear of the liner and an adequate anchor trench; and shall be constructed so that the inside grade of the levee is no steeper than 2H:1V. Levees shall have an outside grade no steeper than 3H:1V. The levees' tops shall be wide enough to install an anchor trench and provide adequate room for inspection and maintenance. The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory seams where possible. The operator shall ensure field seams in geosynthetic material are thermally seamed (hot wedge) with a double track weld to create an air pocket for non-destructive air channel testing. A stabilized air pressure of 35 psi, plus or minus one percent, shall be maintained for at least five minutes. The operator shall overlap liners four to six inches before seaming, and orient seams parallel to the line of maximum slope, i.e., oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. There shall be no horizontal seams within five feet of the slope's toe. Qualified personnel shall perform field seaming.</p>		<p><i>Engineering Design, Volume III.1; Liner CQA Plan, Volume II.7</i></p>
<p>(6) At a point of discharge into or suction from the lined pit, the liner shall be protected from excessive hydrostatic force or mechanical damage, and external discharge lines shall not penetrate the liner.</p>		<p><i>Volume I; Permit Plans</i></p>
<p>(7) Primary liners shall be constructed of a synthetic material.</p>		<p><i>Volume I</i></p>

<p>(8) A secondary liner may be a synthetic liner or an alternative liner approved by the division. Secondary liners constructed with compacted soil membranes, i.e., natural or processed clay and other soils, shall be at least three feet thick, placed in six-inch lifts and compacted to 95 percent of the material's standard proctor density, or equivalent. Compacted soil membranes used in a liner shall undergo permeability testing in conformity with ASTM standards and methods approved by the division before and after construction. Compacted soil membranes shall have a hydraulic conductivity of no greater than 1 x 10⁻⁸ cm/sec. The operator shall submit results of pre-construction testing to the division for approval prior to construction.</p>		Volume I
<p>(9) Leak detection system: The operator shall place a leak detection system between the lower and upper geomembrane liners that consists of two feet of compacted soil with a saturated hydraulic conductivity of 1 x 10⁻⁵ cm/sec or greater 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 so as to facilitate the earliest possible leak detection. Piping used shall be designed to withstand chemical attack from oil field waste or leachate; structural loading from stresses and disturbances from overlying oil field waste, cover materials, equipment operation or expansion or contraction; and to facilitate clean-out maintenance. The material placed between the pipes and laterals shall be sufficiently permeable to allow the transport of fluids to the drainage pipe. The slope of the interior sub-grade and of drainage lines and laterals shall be at least a two percent grade, i.e., two feet vertical drop per 100 horizontal feet. The piping collection system shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. The operator shall seal a solid sidewall riser pipe to convey collected fluids to a collection, observation and disposal system located outside the perimeter of the pit or pond. The operator may install alternative methods as approved by the division.</p>		Volume I; Volume III; Permit Plans
<p>(10) The operator shall notify the division at least 72 hours prior to the primary liner's installation so that a division representative may inspect the leak detection system before it is covered.</p>	Permit Condition, not ACD. Note if included in application.	Volume I
<p>(11) The operator shall construct pits and ponds in a manner that prevents overtopping due to wave action or rainfall, and maintain a three foot freeboard at all times.</p>		Volume I; Volume III
<p>(12) The maximum size of an evaporation or storage pond shall not exceed 10 acre-feet.</p>	19.15.36.8.C(5) technical data and design drawings	Volume I; Volume III
<p>36.17C. Operating standards.</p>	19.15.36.8.C(7) inspection and maintenance plan Permit Condition, not ACD. Note if included in application.	Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1

<p>(1) The operator shall ensure that only produced fluids or non-hazardous waste are discharged into or stored in a pit or pond; and that no measurable or visible oil layer is allowed to accumulate or remain anywhere on a pit's surface except an approved skimmer pit.</p>	<p>19.15.36.8.C(7) inspection and maintenance plan</p>	<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(2) The operator shall monitor leak detection systems pursuant to the approved surface waste management facility permit conditions, maintain monitoring records in a form readily accessible for division inspection and report discovery of liquids in the leak detection system to the division within 24 hours.</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(3) Fencing and netting. The operator shall fence or enclose pits or ponds to prevent unauthorized access and maintain fences in good repair. Fences are not required if there is an adequate perimeter fence surrounding the surface waste management facility. The operator shall screen, net, cover or otherwise render non- hazardous to migratory birds tanks exceeding eight feet in diameter and exposed pits and ponds. Upon written application, the division may grant an exception to screening, netting or covering requirements upon the operator's showing that an alternative method will adequately protect migratory birds or that the tank or pit is not hazardous to migratory birds.</p>		<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1; Permit Plans; Migratory Bird Protection Plan, Volume III.6</i></p>
<p>(4) Spray systems: The division may approve spray systems to enhance natural evaporation. The operator shall submit engineering designs for spray systems to the division's environmental bureau for approval prior to installation. The operator shall ensure that spray evaporation systems are operated so that spray-borne suspended or dissolved solids remain within the perimeter of the pond's lined portion.</p>	<p>19.15.36.8.C(5) technical data and design drawings</p>	<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>(5) Skimmer Pits Or Tanks: The operator shall use skimmer pits or tanks to separate oil from produced water prior to water discharge into a pond. The operator shall install a trap device in connected ponds to prevent solids and oils from transferring from one pond to another unless approved in the surface waste management facility permit.</p>	<p><i>Depending on the design, this may be an application requirement.</i> 19.15.36.8.C(6) waste management plan 19.15.36.8.C(5) technical data and design drawings</p>	<p><i>Volume I; Operations, Inspection, and Maintenance Plan, Volume II.1</i></p>
<p>36.17D. Below-grade tanks and sumps.</p>		
<p>(1) Secondary containment and leak detection: The operator shall construct below-grade tanks with secondary containment and leak detection. The operator shall not allow below-grade tanks to overflow. The operator shall install only below-grade tanks of materials resistant to the tank's particular contents and to damage from sunlight.</p>	<p>19.15.36.8.C(5) technical data and design drawings</p>	<p><i>Volume I</i></p>
<p>(2) The operator shall test sumps' integrity annually, and shall promptly repair or replace a sump that does not demonstrate integrity. The operator may test sumps that can be removed from their emplacements by visual inspection. The operator shall test other sumps by appropriate mechanical means. The operator shall maintain records of sump inspection and testing and make such records available for division inspection.</p>		<p><i>Volume I</i></p>
<p>E. Closure required. The operator shall properly close pits, ponds and below-grade tanks within six months after cessation of use.</p>	<p>19.15.36.8.C(9) closure and post-closure care plan</p>	<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>

PART 6		
19.15.36.18 NMAC - CLOSURE AND POST CLOSURE:		
36.18A. Surface waste management facility closure by operator.	19.15.36.8.C(9) closure and post-closure care plan	<i>Volume I; Closure/Post-closure Plan, Volume II.4</i>
(1) The operator shall notify the division's environmental bureau at least 60 days prior to cessation of operations at the surface waste management facility and provide a proposed schedule for closure. Upon receipt of such notice and proposed schedule, the division shall review the current closure plan for adequacy and inspect the surface waste management facility.		<i>Volume I; Closure/Post-closure Plan, Volume II.4</i>
(2) The division shall notify the operator within 60 days after the date of cessation of operations specified in the operator's closure notice of modifications of the closure plan and proposed schedule or additional requirements that it determines are necessary for the protection of fresh water, public health, safety or the environment.	<i>A(2) through A(5) are permit conditions or regulatory requirements, but not application requirements.</i>	
(3) If the division does not notify the operator of additional closure requirements within 60 days as provided, the operator may proceed with closure in accordance with the approved closure plan; provided that the director may, for good cause, extend the time for the division's response for an additional period not to exceed 60 days by written notice to the operator.		
(4) The operator shall be entitled to a hearing concerning a modification or additional requirement the division seeks to impose if it files an application for a hearing within 10 days after receipt of written notice of the proposed modifications or additional requirements.		
(5) Closure shall proceed in accordance with the approved closure plan and schedule and modifications or additional requirements the division imposes. During closure operations the operator shall maintain the surface waste management facility to protect fresh water, public health, safety and the environment.		
(6) Re-vegetate: Upon completion of closure, the operator shall re-vegetate the site unless the division has approved an alternative site use plan as provided in Subsection G of 19.15.36.18 NMAC. Re-vegetation, except for landfill cells, shall consist of establishment of a vegetative cover equal to 70 percent of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) or scientifically documented ecological description consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons.		<i>Volume I; Closure/Post-closure Plan, Volume II.4</i>
36.18D. Surface waste management facility and cell closure and post closure standards. The following minimum standards shall apply to closure and post closure of the installations indicated, whether the entire surface waste management facility is being closed or only a part of the surface waste management facility.		<i>Volume I; Closure/Post-closure Plan, Volume II.4</i>

<p>(1) Oil treating plant closure. The operator shall ensure that:</p> <p>(a) tanks and equipment used for oil treatment are cleaned and oil field waste is disposed of at a division-approved surface waste management facility (the operator shall reuse, recycle or remove tanks and equipment from the site within 90 days of closure);</p> <p>(b) the site is sampled, in accordance with the procedures specified in chapter nine of EPA publication SW-846, test methods for evaluating solid waste, physical/chemical methods, for TPH, BTEX, major cations and anions and RCRA metals, in accordance with a gridded plat of the site containing at least four equal sections that the division has approved; and</p> <p>(c) sample results are submitted to the environmental bureau in the division's Santa Fe office.</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>(2) Landfill cell closure.</p> <p>(a) The operator shall properly close landfill cells, covering the cell with a top cover pursuant to Paragraph (8) of Subsection C of 19.15.36.14 NMAC, with soil contoured to promote drainage of precipitation; side slopes shall not exceed a 25 percent grade (four feet horizontal to one foot vertical), such that the final cover of the landfill's top portion has a gradient of two percent to five percent, and the slopes are sufficient to prevent the ponding of water and erosion of the cover material. (b) The operator shall re-vegetate the area overlying the cell with native grass covering at least 70 percent of the landfill cover and surrounding areas, consisting of at least two grasses and not including noxious weeds or deep rooted shrubs or trees, and maintain that cover through the post closure period.</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4; Permit Plans, Sheets 5 and 8</i></p>
<p>(3) Landfill post closure. Following landfill closure, the post closure care period for a landfill shall be 30 years.</p> <p>(a) A post closure care and monitoring plan shall include maintenance of cover integrity, maintenance and operation of a leak detection system and leachate collection and removal system and operation of gas and ground water monitoring systems.</p> <p>(b) The operator or other responsible entity shall sample existing ground water monitoring wells annually and submit reports of monitoring performance and data collected within 45 days after the end of each calendar year. The operator shall report any exceedance of a ground water standard that it discovers during monitoring pursuant to 19.15.29 NMAC.</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4; Permit Plans, Sheets 5 and 8</i></p>

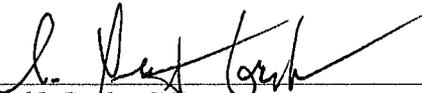
<p>(4) Landfarm closure. The operator shall ensure that:</p> <p>(a) disking and addition of bioremediation enhancing materials continues until soils within the cells are remediated to the standards provided in Subsection F of 19.15.36.15 NMAC, or as otherwise approved by the division;</p> <p>(b) soils remediated to the foregoing standards and left in place are re-vegetated in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC;</p> <p>(c) landfarmed soils that have not been or cannot be remediated to the standards in Subsection F of 19.15.36.15 NMAC are removed to a division-approved surface waste management facility and the landfarm remediation area is filled in with native soil and re-vegetated in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC;</p> <p>(d) if treated soils are removed, the cell is filled in with native soils and re-vegetated in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC;</p> <p>(e) berms are removed;</p> <p>(f) buildings, fences, roads and equipment are removed, the site cleaned-up and tests conducted on the soils for contamination;</p> <p>(g) annual reports of vadose zone and treatment zone sampling are submitted to the division's environmental bureau until the division has approved the surface waste management facility's final closure; and</p> <p>(h) for an operator who chooses to use the landfarm methods specified in Subsection H of 19.15.36.15 NMAC, that the soil has an ECs of less than or equal to 4.0 mmhos/cm (dS/m) and a SAR of less than or equal to 13.0.</p>		<p><i>Not Applicable.</i></p>
<p>36.18E. Pond and pit closure. The operator shall ensure that:</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>(1) liquids in the ponds or pits are removed and disposed of in a division-approved surface waste management facility;</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>(2) liners are disposed of in a division-approved surface waste management facility;</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>(3) equipment associated with the surface waste management facility is removed;</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>(4) the site is sampled, in accordance with the procedures specified in chapter nine of EPA publication SW-846, test methods for evaluating solid waste, physical/chemical methods for TPH, BTEX, metals and other inorganics listed in Subsections A and B of 20.6.2.3103 NMAC, in accordance with a gridded plat of the site containing at least four equal sections that the division has approved; and</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>(5) sample results are submitted to the environmental bureau in the division's Santa Fe office.</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
<p>36.18F. Landfarm and pond and pit post closure. The post-closure care period for a landfarm or pond or pit shall be three years if the operator has achieved clean closure. During that period the operator or other responsible entity shall regularly inspect and maintain required re-vegetation. If there has been a release to the vadose zone or to ground water, then the operator shall comply with the applicable requirements of 19.15.30 NMAC and 19.15.29 NMAC.</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>

<p>G. Alternatives to re-vegetation. If the landowner contemplates use of the land where a cell or surface waste management facility is located for purposes inconsistent with re-vegetation, the landowner may, with division approval, implement an alternative surface treatment appropriate for the contemplated use, provided that the alternative treatment will effectively prevent erosion. If the division approves an alternative to re-vegetation, it shall not release the portion of the operator's financial assurance reserved for post-closure until the landowner has obtained necessary regulatory approvals and begun implementation of such alternative use.</p>		<p><i>Volume I; Closure/Post-closure Plan, Volume II.4</i></p>
--	--	--

**STATE OF NEW MEXICO
DIRECTOR OF OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE §
APPLICATION OF DNCS §
ENVIRONMENTAL SOLUTIONS §
FOR A SURFACE WASTE §
MANAGEMENT FACILITY PERMIT §**

APPLICATION FOR PERMIT

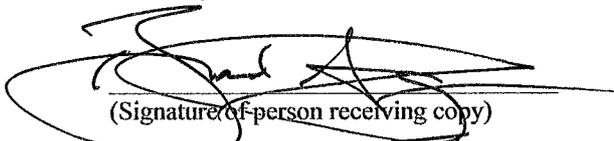


I. Keith Gordon, P.E.
Gordon Environmental, Inc.
213 South Camino del Pueblo
Bernalillo, New Mexico 87004
(505) 867-6990
Environmental Consultant to and
Representative of
DNCS Environmental Solutions
2028 E. Hackberry Place
Chandler, Arizona 85286
480.437.0044
Applicant

CERTIFICATION OF SERVICE

I hereby certify that a copy of the foregoing Application for Permit was delivered to the following party of record on
November 7, 2013

Oil Conservation Division
NM Energy, Minerals, and Natural Resources Dept.
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

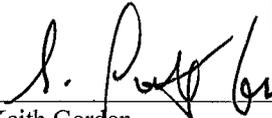


(Signature of person receiving copy)
Brad A. Jones

(Name of signer)

CERTIFICATION OF APPLICATION

The Permit Application submitted for the DNCS Environmental Solutions Surface Waste Management Facility located in Lea County, New Mexico, was prepared by me and technical staff under my direct supervision. I provided input and review to each of the consultants responsible for the preparation of the other technical reports. I certify that, to the best of my knowledge and belief, the information contained herein is accurate, and that the Permit Application complies with the current New Mexico Oil and Gas Rules (19.15.36 NMAC). I am a registered professional engineer in good standing in the State of New Mexico practicing under License No. 10984.

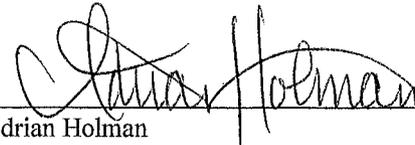

I. Keith Gordon
New Mexico P.E. No. 10984



SIGNATURE AND VERIFICATION

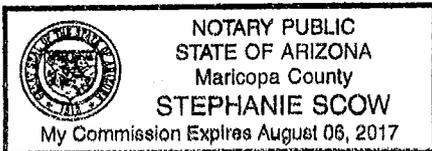
STATE OF Arizona)
COUNTY OF Maricopa)

I, Adrian Holman, being first duty sworn, state that I am a Member of DNCS Properties, LLC that I have read the foregoing Application for Permit including the contents of any exhibits, and the same is true and correct to the best of my knowledge and belief.


Adrian Holman
DNCS Properties, LLC

Subscribed and sworn to before me this 4 day of November 2013.

Notary Public Stephanie Scow
My Commission Expires 8-16-17



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

For State Use Only:

Form C-137
Revised August 1, 2011
Submit 1 Copy to Santa Fe Office

APPLICATION FOR SURFACE WASTE MANAGEMENT FACILITY

A meeting should be scheduled with the Division's Santa Fe office Environmental Bureau prior to pursuing an application for a surface waste management facility in order to determine if the proposed location is capable of satisfying the siting requirements of Subsections A and B of 19.15.36.13 NMAC for consideration of an application submittal.

1. Application: New Modification Renewal
2. Type: Evaporation Injection Treating Plant Landfill Landfarm Other
3. Facility Status: Commercial Centralized
4. Operator: DNCS Properties, LLC
Address: 2028 E. Hackberry Place, Chandler, AZ 85286
Contact Person: Adrian Holman Phone: 480.437.0044
See
5. Location: Application /4 _____ /4 Section 31, 6 Township 17, 18 Range 33 East
6. Is this an existing facility? Yes No If yes, provide permit number _____
7. Attach the names and addresses of the applicant and principal officers and owners of 25 percent or more of the applicant. Specify the office held by each officer and identify the individual(s) primary responsible for overseeing management of the facility.
8. Attach a plat and topographic map showing the surface waste management facility's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the surface waste management facility site; watercourses; fresh water sources, including wells and springs; and inhabited buildings within one mile of the site's perimeter.
9. Attach the names and addresses of the surface owners of the real property on which the surface waste management facility is sited and surface owners of the real property within one mile of the site's perimeter.
10. Attach a description of the surface waste management facility with a diagram indicating the location of fences and cattle guards, and detailed construction/installation diagrams of pits, liners, dikes, piping, sprayers, tanks, roads, fences, gates, berms, pipelines crossing the surface waste management facility, buildings and chemical storage areas.
11. Attach engineering designs, certified by a registered professional engineer, including technical data on the design elements of each applicable treatment, remediation and disposal method and detailed designs of surface impoundments.
12. Attach a plan for management of approved oil field wastes that complies with the applicable requirements contained in 19.15.36.13, 19.15.36.14, 19.15.36.15 and 19.15.36.17 NMAC.
13. Attach an inspection and maintenance plan that complies with the requirements contained in Subsection L of 19.15.36.13 NMAC.
14. Attach a hydrogen sulfide prevention and contingency plan that complies with those provisions of 19.15.3.118 NMAC that apply to surface waste management facilities.

15. Attach a 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 (the closure and post closure plan shall comply with the requirements contained in Subsection D of 19.15.36.18 NMAC).

16. Attach a contingency plan that complies with the requirements of Subsection N of 19.15.36.13 NMAC and with NMSA 1978, Sections 12-12-1 through 12-12-30, as amended (the Emergency Management Act).

17. Attach a plan to control run-on water onto the site and run-off water from the site that complies with the requirements of Subsection M of 19.15.36.13 NMAC.

18. In the case of an application to permit a new or expanded landfill, attach a leachate management plan that describes the anticipated amount of leachate that will be generated and the leachate's handling, storage, treatment and disposal, including final post closure options.

19. In the case of an application to permit a new or expanded landfill, attach a gas safety management plan that complies with the requirements of Subsection O of 19.15.36.13 NMAC

20. Attach a best management practice plan to ensure protection of fresh water, public health, safety and the environment.

21. Attach a demonstration of compliance with the siting requirements of Subsections A and B of 19.15.36.13 NMAC.

22. Attach geological/hydrological data including:

- (a) a map showing names and location of streams, springs or other watercourses, and water wells within one mile of the site;
- (b) laboratory analyses, performed by an independent commercial laboratory, for major cations and anions; benzene, toluene, ethyl benzene and xylenes (BTEX); RCRA metals; and total dissolved solids (TDS) of ground water samples of the shallowest fresh water aquifer beneath the proposed site;
- (c) depth to, formation name, type and thickness of the shallowest fresh water aquifer;
- (d) soil types beneath the proposed surface waste management facility, including a lithologic description of soil and rock members from ground surface down to the top of the shallowest fresh water aquifer;
- (e) geologic cross-sections;
- (f) potentiometric maps for the shallowest fresh water aquifer; and
- (g) porosity, permeability, conductivity, compaction ratios and swelling characteristics for the sediments on which the contaminated soils will be placed.

23. In the case of an existing surface waste management facility applying for a minor modification, describe the proposed change and identify information that has changed from the last C-137 filing.

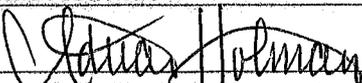
24. The division may require additional information to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, safety or the environment and that the surface waste management facility will comply with division rules and orders

25. CERTIFICATION

I hereby certify that the information submitted with this application is true, accurate and complete to the best of my knowledge and belief.

Name: Adrian Holman

Title: Member

Signature: 

Date: 11/4/2013

E-mail Address: ajholman33@yahoo.com

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

TABLE OF CONTENTS

**CERTIFICATION OF APPLICATION
CERTIFICATION OF SERVICE
C-137 APPLICATION FOR SURFACE WASTE MANAGEMENT FACILITY**

VOLUME I: PERMIT APPLICATION TEXT

<u>Section</u>	<u>Title</u>
19.15.36	Surface Waste Management Facilities

VOLUME II: FACILITY MANAGEMENT PLANS

<u>Section</u>	<u>Title</u>
1	Operations, Inspection, and Maintenance Plan
2	Oil Field Waste Management Plan
3	Hydrogen Sulfide (H ₂ S) Prevention and Contingency Plan
4	Closure/Post-Closure Plan
5	Contingency Plan
6	Migratory Bird Protection Plan
7	Liner Construction Quality Assurance (CQA) Plan
8	Groundwater Monitoring Plan
9	Leachate Management Plan

VOLUME III: ENGINEERING DESIGN AND CALCULATIONS

<u>Section</u>	<u>Title</u>
1	Engineering Design
2	Volumetrics Calculations
3	Drainage Calculations
4	HELP Model
5	Pipe Loading Calculations
6	Geosynthetic Application and Compatibility Documentation
7	Tensile Stress Analysis
8	Erosion Calculations
9	Settlement Calculations
10	Evaporation Pond Calculations
11	Wave Action Calculations

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

TABLE OF CONTENTS (cont.)

VOLUME IV: SITING AND HYDROGEOLOGY

<u>Section</u>	<u>Title</u>
1	Siting Criteria
2	Hydrogeology

LIST OF PERMIT PLANS

<u>Sheet</u>	<u>Title</u>
1	Cover Sheet and Drawing Index
2	Existing Site Conditions
3	Site Development Plan
4	Landfill Base Grading Plan
5	Landfill Final Grading Plan
6	Landfill Cross Sections
7	Landfill Completion Drainage Plan
8	Liner System and Cover Details
9	Leachate Collection System Details
10	Stormwater Drainage Details
11	Processing Area Layout
12	Evaporation Pond Details
13	Evaporation Pond and Stabilization/Solidification Area Cross Sections
14	Processing Area Cross Sections

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

**VOLUME I: PERMIT APPLICATION TEXT
PART 36: SURFACE WASTE MANAGEMENT FACILITIES**

TABLE OF CONTENTS

Section No.	Title	Page
1.0	INTRODUCTION.....	I-1
19.15.36.8	SURFACE WASTE MANAGEMENT FACILITY PERMITS AND APPLICATION REQUIREMENTS:.....	I-13
19.15.36.9	NOTICE REQUIREMENTS FOR NEW SURFACE WASTE MANAGEMENT FACILITIES, MAJOR MODIFICATIONS OR RENEWALS AND ISSUANCE OF A TENTATIVE DECISION:	I-22
19.15.36.10	COMMENTS AND HEARING ON APPLICATION:.....	I-24
19.15.36.11	FINANCIAL ASSURANCE REQUIREMENTS:.....	I-25
19.15.36.12	PERMIT APPROVAL, DENIAL, REVOCATION, SUSPENSION, MODIFICATION OR TRANSFER:.....	I-28
19.15.36.13	SITING AND OPERATIONAL REQUIREMENTS APPLICABLE TO ALL PERMITTED SURFACE WASTE MANAGEMENT FACILITIES: EXCEPT AS OTHERWISE PROVIDED IN 19.15.36 NMAC.	I-32
19.15.36.14	SPECIFIC REQUIREMENTS APPLICABLE TO LANDFILLS:.....	I-43
19.15.36.15	SPECIFIC REQUIREMENTS APPLICABLE TO LANDFARMS:.....	I-62
19.15.36.16	SMALL LANDFARMS:.....	I-62
19.15.36.17	SPECIFIC REQUIREMENTS APPLICABLE TO EVAPORATION, STORAGE, TREATMENT AND SKIMMER PONDS:.....	I-62
19.15.36.18	CLOSURE AND POST CLOSURE:	I-70
19.15.36.19	EXCEPTIONS AND WAIVERS:.....	I-77
19.15.36.20	TRANSITIONAL PROVISIONS:	I-78

LIST OF FIGURES

Figure No.	Title	Page
I.1	SITE LOCATION MAP.....	I-2
I.2	SITE PLAN.....	I-4
I.3	SITE TOPOGRAPHY	I-15
I.4	SITE ENTRANCE SIGN (TYPICAL).....	I-38
I.5	LINER SCHEMATIC.....	I-50
I.6	FINAL COVER PROFILE.....	I-51

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

**VOLUME I: PERMIT APPLICATION TEXT
PART 36: SURFACE WASTE MANAGEMENT FACILITIES**

LIST OF TABLES

Table No.	Title	Page
I.1	SITE ACREAGES	I.3
I.2	ESTIMATED OPERATIONAL RATES	I.5
I.3	PROPOSED FACILITIES	I.5
I.4	DNCS DEVELOPMENT SEQUENCE	I.7
I.5	LIST OF PERMIT PLANS.....	I.9
I.6	LIST OF ACRONYMS AND DEFINITIONS.....	I.10
I.7	FIRE PREVENTION AND CONTROL	I.44
I.8	DUST CONTROL	I.45

LIST OF ATTACHMENTS

Attachment No.	Title
I.A	PUBLIC NOTIFICATION
I.B	FINANCIAL ASSURANCE
I.C	BOUNDARY SURVEY (PETTIGREW & ASSOCIATES PA, 12/13/2012)

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

**VOLUME I: PERMIT APPLICATION TEXT
PART 36: SURFACE WASTE MANAGEMENT FACILITIES**

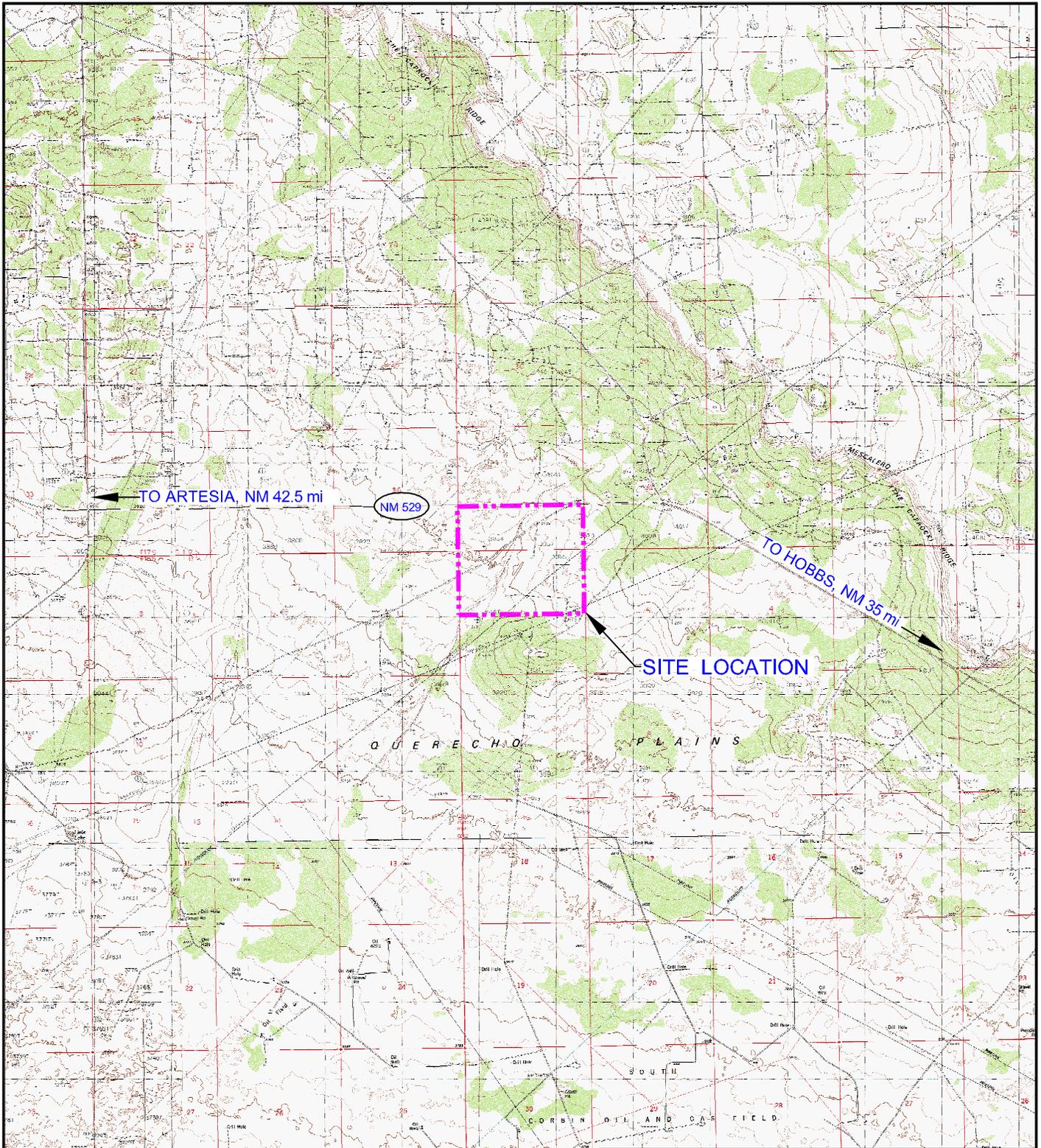
1.0 INTRODUCTION

DNCS Environmental Solutions (DNCS Facility) is a proposed Surface Waste Management Facility for oil field waste processing and disposal services. The proposed DNCS Facility is subject to regulation under the New Mexico Oil and Gas Rules, specifically 19.15.36 NMAC, administered by the Oil Conservation Division (OCD). The Facility is designed in compliance with 19.15.36 NMAC, and will be constructed and operated in compliance with a Surface Waste Management Facility Permit issued by the OCD. The Facility is owned by, and will be constructed and operated by, DNCS Properties, LLC.

DNCS Properties, LLC herein submits this Application for Permit (Application) for the proposed DNCS Facility. This Application has been developed in order to address the specific standards of 19.15.36 NMAC. As a Surface Waste Management Facility per 19.15.2.7.S.11 NMAC, DNCS will meet the siting, design, and operating requirements of 19.15.36 NMAC, as detailed in this Application. More specifically, the proposed DNCS Facility is a “*commercial facility*” as defined in Section 19.15.36.7.A.(2) NMAC: “... *a surface waste management facility that is not a centralized facility*”, more specifically a landfill and a processing area.

1.1 Site Location

The DNCS site is located approximately 10.5 miles east of the US 82/NM 529 intersection and 6.3 miles southeast of Maljamar in unincorporated Lea County, New Mexico (NM). The DNCS site is comprised of a 562-acre ± tract of land located south of NM 529 in portions of Section 31, Township 17 South, Range 33 East; and in the northern half of Section 6, Township 18 South, Range 33 East, in Lea County, NM. Site access will be provided via the south side of NM 529. A Site Location Map is provided as **Figure I.1**.



LEGEND

--- SITE BOUNDARY



MAP REFERENCE:
 LAGUNA GATUNA NW 1984,
 MALJAMAR 1985 PROVISIONAL EDITION,
 GREENWOOD LAKE 1985 PROVISIONAL EDITION, AND
 DOG LAKE 1985 PROVISIONAL EDITION,
 USGS 1:24000, 7.5 MINUTE SERIES, TOPOGRAPHIC MAPS

Drawing: P:\acad 2003\542.01.01\PERMIT FIGURES\SITE LOC MAP.dwg
 Date/Time: Oct. 18, 2013-15:14:52 ; LAYOUT: A (P)
 Copyright © All Rights Reserved, Gordon Environmental, Inc. 2013

SITE LOCATION MAP

DNCS ENVIRONMENTAL SOLUTIONS
 LEA COUNTY, NEW MEXICO



Gordon Environmental, Inc.
 Consulting Engineers

213 S. Camino del Pueblo
 Bernalillo, New Mexico, USA
 Phone: 505-867-6990
 Fax: 505-867-6991

DATE: 10/18/2013	CAD: SITE LOC MAP.dwg	PROJECT #: 542.01.01
DRAWN BY: DMI	REVIEWED BY: DRT	FIGURE I.1
APPROVED BY: IKG	gel@gordonenvironmental.com	

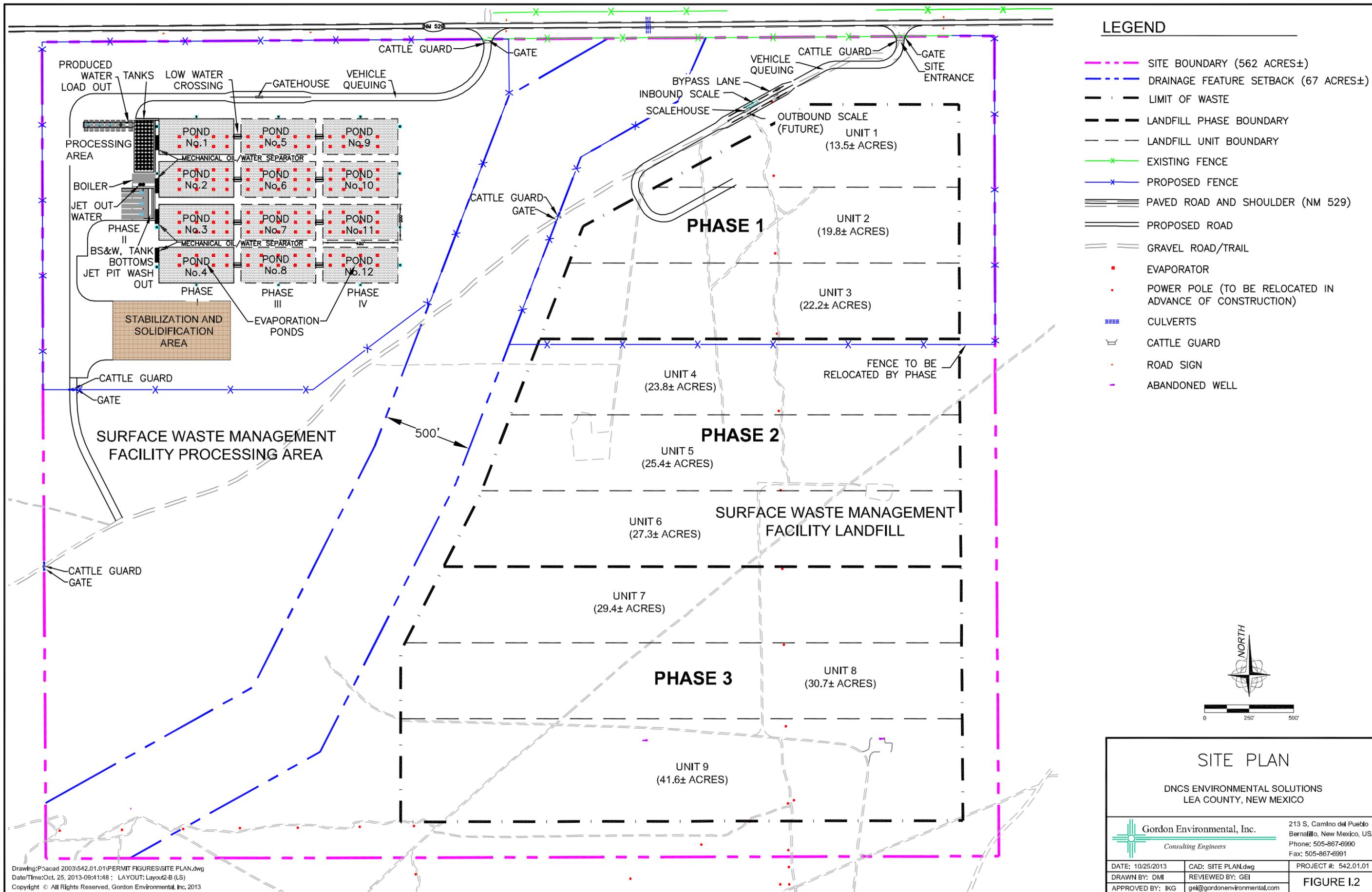
1.2 Site Description

A portion of the 562-acre tract is a drainage feature that will be excluded from development. The drainage feature includes a 500-ft buffer zone that totals 67 acres ±. The DNCS Facility will include two main components; a liquid oil field waste Processing Area (177 acres ±); and an oil field waste Landfill (318 acres ±). Oil field wastes are anticipated to be delivered to the DNCS Facility from oil and gas exploration and production operations in southeastern NM and west Texas. The Site Plan provided as **Figure I.2** identifies the locations of the Processing Area and Landfill facilities, and **Table I.1** provides a description of site acreages. Perimeter setbacks in excess of 200 ft are provided for surface water management and site access, as well as a buffer zone to adjacent properties.

TABLE I.1
Site Acreages
DNCS Environmental Solutions

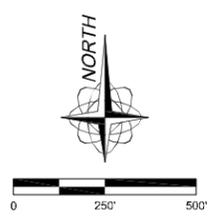
Description	Acres (±)
DNCS Site: Total Tract	562
Drainage Feature (including buffer zone)	67
Surface Waste Management Facility Boundary	495
Surface Waste Management Facility: Processing Area (West Tract)	177
Surface Waste Management Facility: Landfill (East Tract)	318
Landfill: Disposal Footprint	234
Processing Area: Operations Footprint	98

A Site Plan which identifies the layout of the proposed DNCS Facility is provided as **Figure I.2**. Operations at the proposed DNCS Facility will be constructed in phases over a period of several years, as dictated by demand. The estimated Facility operational rates are presented in **Table I.2**, and the phased development sequence is described in Section 1.3 and **Table I.4**.



LEGEND

- SITE BOUNDARY (562 ACRES±)
- DRAINAGE FEATURE SETBACK (67 ACRES±)
- LIMIT OF WASTE
- LANDFILL PHASE BOUNDARY
- LANDFILL UNIT BOUNDARY
- EXISTING FENCE
- PROPOSED FENCE
- == PAVED ROAD AND SHOULDER (NM 529)
- == PROPOSED ROAD
- GRAVEL ROAD/TRAIL
- EVAPORATOR
- POWER POLE (TO BE RELOCATED IN ADVANCE OF CONSTRUCTION)
- === CULVERTS
- ⌘ CATTLE GUARD
- ROAD SIGN
- ABANDONED WELL



SITE PLAN

DNCS ENVIRONMENTAL SOLUTIONS
LEA COUNTY, NEW MEXICO

Gordon Environmental, Inc.
Consulting Engineers
213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

DATE: 10/25/2013	CAD: SITE PLAN.dwg	PROJECT #: 542.01.01
DRAWN BY: DMI	REVIEWED BY: GEI	FIGURE I.2
APPROVED BY: IKG	gei@gordonenvironmental.com	

Drawing: P:\acad 2003\542.01.01\PERMIT FIGURES\SITE PLAN.dwg
Date/Time: Oct. 25, 2013-09:41:48 ; LAYOUT: Layout2-B (LS)
Copyright © All Rights Reserved, Gordon Environmental, Inc. 2013

TABLE I.2
Estimated Operational Rates^{1,2,3}
DNCS Environmental Solutions

Average Daily Liquid Operational Rate	10,000 bbl/day
Maximum Daily Liquid Operational Rate	12,000 bbl/day
Average Daily Solid Waste Acceptance Rate	2,500 cy/day
Maximum Daily Solid Waste Acceptance Rate	5,000 cy/day
Liquid Receiving and Storage Capacity	949,400 bbl

Notes:

¹*Subject to change. The estimated operational rates are based on familiarity with local oil and gas industry operations; therefore this list may be modified in response to changes in waste streams, market conditions, technology, etc.*

²*bbl = barrels of oil*

³*cy = cubic yards*

The proposed DNCS surface waste management facilities are listed in **Table I.3**, and identified on the Site Plan provided as **Figure I.2**.

TABLE I.3
Proposed Facilities¹
DNCS Environmental Solutions

Description	No.
Oil field waste disposal landfill	1
Produced water load-out points	9
Produced water receiving tanks	12
Produced water settling tanks	48
Mechanical oil/water separation unit	4
Evaporation ponds	12
Stabilization and Solidification Area	1
Oil treatment plant	1
Crude oil recovery tanks	5
Oil sales tanks	5
Customer jet wash	1 (6 bays)

Note:

¹*Subject to change. The proposed facilities are based on projected waste types and volumes; therefore this list may be modified in response to changes in waste streams, market conditions, technology, etc.*

The improvements identified in **Table I.3** are discussed in detail in this Application. In addition, various support facilities, including: an office, scale(s), waste acceptance/security, maintenance building, roads, break room, emergency shower & eyewash station, and stormwater detention basins are proposed for the new Facility (see **Engineering Design, Volume III**).

1.3 Development Sequence

The development sequence for the DNCS Facility is proposed to be conducted in four primary phases (**Table I.4**). This phased development sequence is estimated to take place over a period of approximately four years from the issuance of the Permit, depending on the demand for the services provided by the Facility. However, different combinations of these improvements may be constructed to any time. The phased development is projected as follows:

Phase I - Initial Landfill and Produced Water Processing Operation. This Phase will include the initial 13.5-acre cell (**Figure I.2**) of the landfill where landfilling of materials will be conducted. This Phase will also include:

- The installation of four Produced Water Load-Out points
- The complete tank farm berm
- The 75 horsepower (HP) boiler circulating a heat transfer fluid to the four 1,000 barrel (bbl) heated Produced Water Receiving Tanks
- Sixteen 1,000 bbl Produced Water Settling Tanks
- A heated 1,000 bbl Crude Oil Recovery Tank
- A 1,000 bbl Oil Sale Tank
- A mechanical oil/water separation unit
- Four Evaporation Ponds with a capacity of 9.5 acre-feet each, capable of evaporating 3,000 bbl per day of liquid.

It is estimated that this Phase will be completed within approximately one year of permitting.

Phase II - Jet-Out Pit Operation. This Phase of the operation will include installation of the six-station Jet-Out Pit for handling bottom sediment and water (BS&W), Tank Bottoms, Oily Drilling Muds and Tank Wash-Outs. A heated 1,000 bbl Crude Oil Recovery Tank will be installed in the Tank Farm. It is estimated that this Phase will be completed within approximately two years of permitting.

TABLE I.4
DNCS Development Sequence¹
DNCS Environmental Solutions

Description	Summary	Year No. ²
Phase I - Initial Landfill & Produced Water Processing Operation.		
<ul style="list-style-type: none"> • Initial Landfill Cell (13.5-acres) • Produced water load-out points (4) • Tank farm berm (complete) • Boiler (75 HP) running a heat transfer fluid tank farm • Produced Water Receiving Tanks (4), 1,000 bbl capacity³ • Settling Tanks (16), 1,000 bbl capacity • Crude Oil Recovery Tank (1), 1,000 bbl capacity • Oil Sale Tank (1), 1,000 bbl capacity • Mechanical Oil/Water Separation Unit • Ponds (4) capable of evaporating 3,000 bbl of liquid per day 	The oil recovered from the Produced Water Processing Operations process is anticipated to be 6 bbl per day. This material will be pumped to the heated crude oil recovery tank for further processing before being pumped to the oil sale tank.	1
Phase II - Jet-Out Pit Operation.		
<ul style="list-style-type: none"> • Jet-Out Pit (six-station) for handling basic sediment and water (BS&W), tank bottoms, oily drilling muds and tank wash-outs • Additional crude oil recovery tank (1), 1,000 bbl capacity • Install 5-acre Stabilization and Solidification area 	The oil recovered from the top of the Jet-Out Pit will be pumped to a heated Crude Oil Recovery Tank installed in the Tank Farm. Oil recovery from the Produced Water Tanks will also be plumbed to this tank. Water recovered from the Pit will be pumped to the Produced Water Receiving Tanks. Sediments from the Pit will be bucket-loaded out of the pit and transferred to the Stabilization and Solidification Area for processing prior to landfilling.	2
Phase III - Expanded Produced Water Processing Operation.		
<ul style="list-style-type: none"> • Produced water load-out points (4) • Additional Produced Water Receiving Tanks (4), 1,000 bbl capacity • Additional Settling Tanks (16), 1,000 bbl capacity • Additional Crude Oil Recovery Tanks (3), 1,000 bbl capacity • Additional Oil Sales Tanks (2), 1,000 bbl capacity • Additional (2) Mechanical Oil/Water Separation Units • Additional ponds (4) capable of evaporating an additional 5,000 bbl per day of liquid 	The additional oil recovered from the expanded Produced Water Processing Operation process, anticipated to be 6 bbl per day, will be pumped to the Crude Oil Recovery tanks for further processing.	3
Phase VI - Ultimate Produced Water Processing Facility.		
<ul style="list-style-type: none"> • Additional Produced Water Receiving Tank (4), 1,000 bbl capacity • Additional Settling Tanks (16), 1,000 bbl capacity • Additional Oil Sales Tanks (1), 1,000 bbl capacity • Additional Mechanical Oil/Water Separation Unit • Additional ponds (4) capable of evaporating an additional 4,000 bbl per day of liquid 	The additional oil recovered from the ultimate Produced Water Processing Facility will be pumped to the Crude Oil Recovery Tank for further processing.	4

Notes:

¹ The DNCS site development sequence is subject to change. Different combination of these improvements may be constructed at any time.

² Estimated number of years after OCD Surface Waste Management Facility Permit issued

³ bbl = barrels of oil

Phase III - Expanded Produced Water Processing Operation. This Phase will include the installation of an additional four Produced Water Load-Out points, four additional 1,000 bbl heated Produced Water Receiving Tanks, sixteen additional 1,000 bbl Produced Water Settling Tanks, three additional Crude Oil Recovery Tanks, an additional mechanical oil/water separator unit and four additional 9.5 acre-foot ponds capable of evaporating an additional 5,000 bbl per day of liquid. It is estimated that this Phase will be completed within approximately three years of permitting.

Phase IV- Ultimate Produced Water Processing Facility. This Phase will include the installation of two additional Produced Water Load-Out points, four additional 10,000 bbl heated Produced Water Receiving Tanks, sixteen additional 1,000 bbl Produced Water Settling Tanks, an additional mechanical oil/water separator unit, and four additional Evaporation Ponds capable of evaporating an additional 4,000 bbl per day of liquid. It is estimated that this Phase will be completed within approximately four years of permitting.

1.4 Permit Application Format

For ease of review and reference, this Application for Permit has been organized into a four-volume set, in the same order and format as the current Rules for Surface Waste Management Facilities (19.15.36 NMAC). OCD Form C-137 (*Application for Surface Waste Management Facilities*) is provided as a preface to this **Volume**. The Permit Application Text provided in **Volume I** addresses the applicable requirements of 19.15.36 NMAC, by restating each requirement (**in bold**) followed by the appropriate response (*in italics*).

The Facility Management Plans provided in **Volume II** address the operation and closure of storage tanks, evaporation ponds, solid waste landfill and supporting infrastructure (i.e., stormwater drainage). Design data and supporting calculations in accordance with the applicable sections of 19.15.36 NMAC are presented in **Volume III**. **Volume IV** of this Application provides the results of focused site characterization and hydrogeological investigations for the entire 562 acre ± site.

In many cases, the technical response to a particular item is so sufficiently detailed or complex that a separate graphic, table, report, plan, or calculation has been prepared. The applicable technical documents in this Application are cross-referenced in the narrative responses to each of the individual regulatory requirements as delineated in **Volume I**. Each section of each volume also includes, as applicable:

- Table of Contents
- List of Figures
- List of Tables
- List of Attachments

The Table of Contents for the entire four-volume Application is also included in each volume in order to assist in cross-referencing, along with the List of **Permit Plans (Table I.5)**. The four-volume Application is provided in five binders. Each binder is divided by tabs which identify the Volume and Section as referenced in the master Table of Contents.

TABLE I.5
List of Permit Plans
DNCS Environmental Solutions

Sheet No.	Title
1.	Cover Sheet and Drawing Index
2.	Existing Site Conditions
3.	Site Development Plan
4.	Landfill Base Grading Plan
5.	Landfill Final Grading Plan
6.	Landfill Cross Sections
7.	Landfill Completion Drainage Plan
8.	Liner System and Cover Details
9.	Leachate Collection System Details
10.	Stormwater Drainage Details
11.	Processing Area Layout
12.	Evaporation Pond Details
13.	Evaporation Pond and Stabilization/Solidification Area Cross Sections
14.	Processing Area Cross Sections

TABLE I.6
List of Acronyms and Definitions
DNCS Environmental Solutions

<i>ADC</i>	<i>Alternative Daily Cover:</i> Materials that are suitable for use, with Department approval, as a replacement for the 6” daily cover layer include; tarps, foams, select C & D and other emerging technologies that conserve landfill capacity.
<i>ASTM</i>	<i>American Society for Testing and Materials</i>
<i>BBL</i>	<i>Barrels;</i> 42 gallons (oil)
<i>BLM</i>	<i>Bureau of Land Management</i>
<i>BTEX</i>	<i>Benzene, Toluene, Ethylbenzene, and Xylenes</i>
<i>C/PC</i>	<i>Closure/Post-Closure:</i> C/PC refers to two independent steps following completion of facility operations: <ul style="list-style-type: none"> • Closure typically refers to regrading the surface and repositioning of infrastructure to accommodate the post-closure. • Post-closure care refers to maintenance and monitoring after completion of closure.
<i>cm/sec</i>	<i>Centimeters per second</i>
<i>DNCS</i>	<i>DNCS Environmental Solutions</i>
<i>CQA</i>	<i>Construction Quality Assurance:</i> CQA is the process of applying field and laboratory testing, and construction observation to confirm that environmental control systems (e.g., liners and covers) are installed according to the design, regulatory requirements, and current industry standards.
<i>FEMA</i>	<i>Federal Emergency Management Agency,</i> which administers the Flood Insurance Rate Map (FIRM) program.
<i>FML</i>	<i>Flexible Membrane Liner (or geomembrane):</i> Geosynthetic plastic liners are the standard design for the primary (upper) containment layer of the composite liner system, which in a RCRA Subtitle D (solid waste) Landfill is underlain by a compacted clay liner (CCL) or a geosynthetic clay liner (GCL).
<i>GCL</i>	<i>Geosynthetic Clay Liner:</i> These are composite materials with geotextiles (fabrics) used in conjunction with dense bentonite clays, and are commonly used as the secondary lower liner in the landfill liner system.

HDPE	High Density Polyethylene: This geomembrane (plastic) is the preferred material for FML landfill liners, and is typically installed in 60 – 100 mil thicknesses. HDPE is also used for leachate collection system piping and landfill gas management systems.
H₂S	Hydrogen Sulfide
LEL	Lower Explosive Limit is the lowest percent by volume of a mixture of explosive gases in air that will propagate a flame at 77 degrees Fahrenheit and atmospheric pressure.
LFG	Landfill Gas: Decomposing organic wastes in landfill environments typically produce LFG, which in MSW landfills is comprised of approximately 50% methane (CH ₄) and 50% carbon dioxide (CO ₂), both of which are odorless and colorless. C & D produce less gas, and at a slower rate, than other MSW waste streams (i.e., residential).
mcf	Thousand Cubic Feet
mg/l	Milligrams Per Liter
NMAC	New Mexico Administrative Code
NMDOT	New Mexico Department of Transportation: The NMDOT is committed to providing safe and reliable transportation systems to the state of New Mexico. NMDOT also works closely with other state agencies on transportation related issues.
NMPM	New Mexico Principal Meridian
NOI	Notice of Intent: Application to USEPA for stormwater discharges associated with industrial activity under the NPDES program.
	Notice of Inspection: The written record of a compliance inspection by a regulatory agency.
NORM	Naturally Occurring Radioactive Material
NPDES	National Pollutant Discharge Elimination System: The federal permit program which requires point sources discharging pollutants to waters of the United States to obtain a permit.
NRCS	Natural Resources Conservation Service: The federal agency with local offices that provide guidance on seeding of the final cover.

<i>OCD</i>	<i>Oil Conservation Division;</i> a division of the New Mexico Energy, Minerals, and Natural Resources Department
<i>OSE</i>	<i>Office of the State Engineer</i>
<i>PE</i>	<i>Professional Engineer</i>
<i>PSL</i>	<i>Protective Soil Layer:</i> Liners typically shall have a protective cover of at least two feet of granular soil. This protective cover shall, in addition to providing physical protection for the liner, facilitate the collection of leachate in the leachate collection system.
<i>PVC</i>	<i>Polyvinyl Chloride</i>
<i>RAI</i>	<i>Request for Additional Information;</i> typically issued by a regulatory agency to an Applicant in response to an Application.
<i>RCRA</i>	<i>Resource Conservation and Recovery Act;</i> the program administered by USEPA that sets national standards for solid waste management and disposal.
<i>SLO</i>	<i>State Land Office</i>
<i>SWPPP</i>	<i>Stormwater Pollution Prevention Plan:</i> Sites subject to the federal National Pollutant Discharge Elimination System (NPDES) regulations must prepare and implement a SWPPP. The Plan identifies potential pollutant sources and plans to mitigate/eliminate these sources.
<i>TDS</i>	<i>Total Dissolved Solids;</i> a measure of water quality
<i>TPH</i>	<i>Total Petroleum Hydrocarbons</i>
<i>USEPA</i>	<i>United States Environmental Protection Agency:</i> The federal entity responsible for administering the RCRA program. USEPA also sets national standards for air quality (NSPS) and stormwater quality (NPDES) protection.
<i>USGS</i>	<i>United State Geological Survey</i>
<i>µm</i>	<i>Micrometers</i>
<i>UV</i>	<i>Ultra-violet light;</i> one component of sunlight
<i>WQCC</i>	<i>Water Quality Control Commission (NMWQCC);</i> responsible for the protection of groundwater and surface water in New Mexico.

19.15.36.8 SURFACE WASTE MANAGEMENT FACILITY PERMITS AND APPLICATION REQUIREMENTS:

- A. Permit required. No person shall operate a surface waste management facility (other than a small landfarm registered pursuant to Paragraph (1) of Subsection A of 19.15.36.16 NMAC) except pursuant to and in accordance with the terms and conditions of a division-issued surface waste management facility permit.**

DNCS proposes to operate a new Surface Waste Management Facility, pursuant to and in accordance with the terms and conditions of a Surface Waste Management Facility Permit issued by the Oil Conservation Division (OCD) of the New Mexico Energy, Minerals and Natural Resources Department.

- B. Permitting requirements. Except for small landfarms registered pursuant to Paragraph (1) of Subsection A of 19.15.36.16 NMAC, new commercial or centralized facilities prior to commencement of construction, and existing commercial or centralized facilities prior to modification or permit renewal, shall be permitted by the division in accordance with the applicable requirements of Subsection C of 19.15.36.8 NMAC and 19.15.36.11 NMAC.**

DNCS is requesting a new commercial Surface Waste Management Facility Permit in accordance with the applicable requirements of 19.15.36.8.C NMAC and 19.15.36.11 NMAC. The purpose of this Application is to detail the Facility design, capacity, and operational practices in accordance with the Rules. For ease of regulatory review, this Application provides the information required in applicable sections of 19.15.36 NMAC as delineated in this Volume.

- C. Application requirements for new facilities, major modifications and permit renewals. An applicant or operator shall file an application, form C-137, for a permit for a new surface waste management facility, to modify an existing surface waste management facility or for permit renewal with the environmental bureau in the division's Santa Fe office. The application shall include:**
- (1) the names and addresses of the applicant and principal officers and owners of 25 percent or more of the applicant;**

The purpose of this Application is to request a Permit for a new surface waste management facility, and to document Facility design, capacity, and proposed operational activities. The completed form C-137, provided for informational purposes, is located as the preface to this Volume. The names and addresses of the Applicant and principal officers and owners of 25 percent or more of the Applicant are listed on C-137.

- (2) **a plat and topographic map showing the surface waste management facility's location in relation to governmental surveys (quarter-quarter section, township and range); highways or roads giving access to the surface waste management facility site; watercourses; fresh water sources, including wells and springs; and inhabited buildings within one mile of the site's perimeter;**

*A Site Location Map that shows the DNCS Facility plotted on the most current United States Geological Survey (USGS) Quadrangle map is provided as **Figure I.1**. The Site Location Map shows the Facility and the surrounding area, and **Figure I.3** is a detailed Site Topograph. A more detailed discussion of site characteristics and land use is provided in **Volume IV.1** (Siting Criteria). A Boundary Survey of the DNCS site is provided as **Attachment I.C**.*

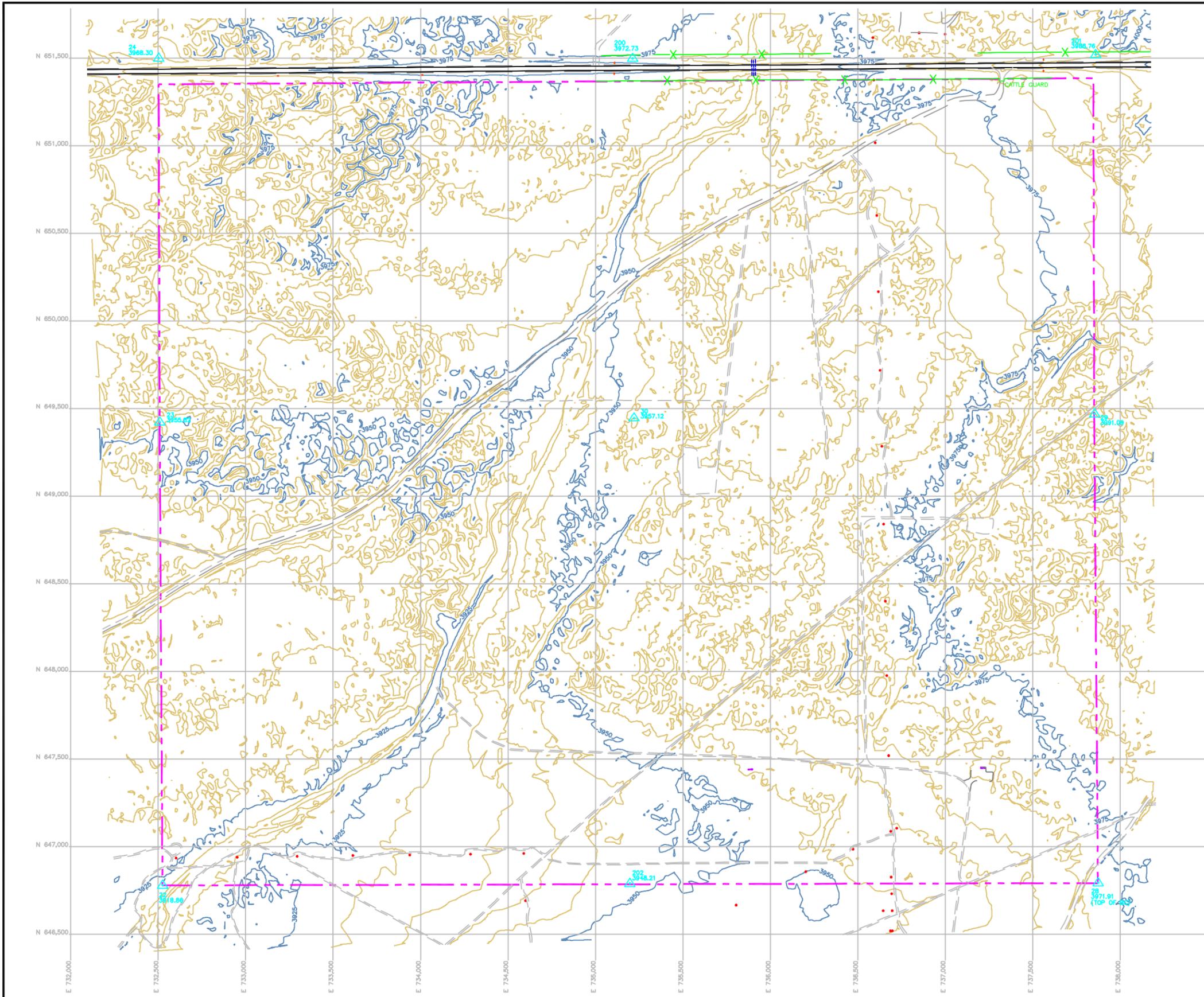
- (3) **the names and addresses of the surface owners of the real property on which the surface waste management facility is sited and surface owners of the real property within one mile of the site's perimeter;**

The owner of the real property on which the Surface Waste Management Facility is sited is:

DNCS Properties, LLC
2028 E. Hackberry Place
Chandler, AZ 85286

*DNCS Properties, LLC recently acquired the property for their use as a Surface Waste Management Facility. **Attachment I.A** (Public Notification) includes a list of the names and addresses of real surface owners of the real property within one mile of the site's perimeter based on the data available from the Lea County Assessor's Office.*

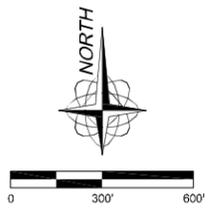
- (4) **a description of the surface waste management facility with a diagram indicating the location of fences and cattle guards, and detailed construction/installation diagrams of pits, liners, dikes, piping, sprayers, tanks, roads, fences, gates, berms, pipelines crossing the surface waste management facility, buildings and chemical storage areas;**



- LEGEND**
- - - SITE BOUNDARY (562 ACRES±)
 - 25' TOPOGRAPHIC CONTOUR
 - 5' TOPOGRAPHIC CONTOUR
 - X EXISTING FENCE
 - = = = PAVED ROAD AND SHOULDER (NM 529)
 - — — GRAVEL ROAD/TRAIL
 - POWER POLE
 - = = = CULVERTS
 - ⌋ CATTLE GUARD
 - ROAD SIGN
 - ABANDONED WELL
 - ▲ SURVEY CONTROL POINT

N 646,500
E 732,000
SITE GRID

AERIAL SURVEY BY DALLAS AERIAL SURVEYS, INC. (D.A.S.)
MAPPING AND SURVEYING
10220 Forest Lane
Dallas, Texas 75243
(214)349-2200 (800)862-2190
(214)349-2193 Fax
www.dasmaps.com
D.A.S. JOB No. 13113
DATE OF PHOTOGRAPHY: 02-28-2013



SITE TOPOGRAPHY

DNCS ENVIRONMENTAL SOLUTIONS
LEA COUNTY, NEW MEXICO

Gordon Environmental, Inc.
Consulting Engineers
213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

DATE: 10/11/2013	CAD: SITE TOPO.dwg	PROJECT #: 542.01.01
DRAWN BY: DMI	REVIEWED BY: DRT	FIGURE I.3
APPROVED BY: IKG	gei@gordonenvironmental.com	

*Volume III.1 (Engineering Design) includes a set of **Permit Plans** which are listed on **Table I.4**. The **Permit Plans, Sheet 3** (Site Development Plan) indicates the location of roads, pipeline crossings, fences and gates. The **Permit Plans, Sheet 8** provides construction and installation details on the landfill liner, and **Sheet 9** provides these details for the leachate collection system. Layout details for the processing area, which includes the tank farm containment berm, tanks, jet out pit and piping is depicted on the **Permit Plans, Sheet 11** (Processing Area Layout); with additional details provided on **Sheet 14** (Process Layout Cross Sections). The **Permit Plans, Sheet 12** provides construction and installation details for the evaporation ponds including the mechanical evaporator locations.*

- (5) engineering designs, certified by a registered professional engineer, including technical data on the design elements of each applicable treatment, remediation and disposal method and detailed designs of surface impoundments;**

*The **Permit Plans** included in **Volume III.1** are provided at a reduced scale and establish the engineering design criteria for the Facility. The same drawings are submitted to the OCD with this Application as a full-size (24 x 36-inch) plan set. The List of **Permit Plans** is provided with the master Table of Contents and included as **Table I.4**. These **Permit Plans**, and the Certification Statement that prefaces this volume, have been signed and sealed by a Professional Engineer registered in the State of New Mexico. That engineer, who is a specialist in geotechnical engineering and waste containment design, is identified as follows:*

*I. Keith Gordon, P.E.
New Mexico Professional Engineer #10984
Principal, Gordon Environmental, Inc.
213 South Camino del Pueblo
Bernalillo, NM 87004
(505) 867-6990 Phone
(505) 867-6991 Fax*

- (6) a plan for management of approved oil field wastes that complies with the applicable requirements contained in 19.15.36.13 NMAC, 19.15.36.14 NMAC, 19.15.36.15 NMAC and 19.15.36.17 NMAC;**

The Oil Field Waste Management Plan included as Volume II.2 provides the applicable information required in 19.15.36.13.A through H, 19.15.36.14, 19.15.35.15, and 19.15.36.17 NMAC.

- (7) an inspection and maintenance plan that complies with the requirements contained in Subsection L of 19.15.36.13 NMAC;**

The Operations, Inspection, and Maintenance Plan included as Volume II.1 provides the applicable information required in 19.15.36.13.L.(1) and (3) and 19.15.9.711.B.(1).(g) NMAC.

- (8) a hydrogen sulfide prevention and contingency plan that complies with those provisions of 19.15.11 NMAC that apply to surface waste management facilities;**

The Hydrogen Sulfide Prevention and Contingency Plan included as Volume II.3 provides information to ensure that the regulatory thresholds in 19.15.11 NMAC are not exceeded. In addition, the Contingency Plan provided as Volume II.5 addresses the requirements of 19.15.36.13.N NMAC concerning contingencies to minimize hazards to fresh water, public health, safety or the environment.

- (9) a 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 (the closure and post closure plan shall comply with the requirements contained in Subsection D of 19.15.36.18 NMAC);**

The Closure/Post-closure (C/PC) Plan is provided as Volume II.4. The C/PC Plan addresses the information required in this section as well as 19.15.36.18.D NMAC; and provides the estimated third-party C/PC cost estimate (Attachment II.4.A) to address the requirements in this section.

- (10) a contingency plan that complies with the requirements of Subsection N of 19.15.36.13 NMAC and with NMSA 1978, Sections 12-12-1 through 12-12-30, as amended;**

A Contingency Plan written in compliance with 19.15.36.13.N NMAC and the NMSA 1978 as referenced, is provided as Volume II.5.

- (11) **a plan to control run-on water onto the site and run-off water from the site that complies with the requirements of Subsection M of 19.15.36.13 NMAC;**

Volume III.1 provides the design for berms, conveyance channels, and detention ponds to control run-on/run-off during the peak discharge from a 25-year, 24-hour storm; and Volume III.3 provides the supporting calculations. The DNCS Facility will not be required to obtain a permit under the Multi-Sector General Permit for Stormwater Discharges promulgated September 29, 2008 since the operation is situated within a closed basin. DNCS through adherence to the Operations, Inspection, and Maintenance Plan (Volume II.1) and construction of the detention structures described in this Application (Volume III.1), will prevent discharge of pollutants to the waters of the State or United States in violation of state water quality standards.

- (12) **in the case of an application to permit a new or expanded landfill, a leachate management plan that describes the anticipated amount of leachate that will be generated and the leachate's handling, storage, treatment and disposal, including final post closure options;**

The Leachate Management Plan included as Volume II.9 provides details including the anticipated volume of leachate that will be generated; and the leachate handling, storage, treatment and disposal technologies that will be employed during operations and final post-closure management options. Leachate management details are also described in Volume II.1 as well as the Permit Plans.

- (13) **in the case of an application to permit a new or expanded landfill, a gas safety management plan that complies with the requirements of Subsection O of 19.15.36.13 NMAC;**

In compliance with 19.15.36.13.O NMAC, landfill gas safety management is addressed in Section 6.6 of Volume II.1. The Hydrogen Sulfide (H₂S) Prevention and Contingency Plan is provided as Volume II.3.

- (14) **a best management practice plan to ensure protection of fresh water, public health, safety and the environment;**

Best management practices to ensure the protection of fresh water, public health, safety, and the environment, are described in detail in the Operations, Inspection, and Maintenance Plan (Volume II.1) as well as on the Permit Plans.

(15) geological/hydrological data including:

The DNCS site is located in a hydrogeologic setting that is ideally selected for waste processing and disposal. The absence of shallow groundwater (i.e., > 150 feet (ft) below ground surface) and the presence of a significant aquitard (i.e., the red bed formation consisting of the Chinle) minimize the potential for groundwater contamination. Regional and site-specific hydrogeologic data are presented in Volume IV.2 (Hydrogeology). Gordon Environmental, Inc. (GEI) conducted three hydrogeologic site investigations in February 2012, February 2013, and May 2013. These investigations are described in Volume IV.2.

(a) a map showing names and location of streams, springs or other watercourses, and water wells within one mile of the site;

The USGS Quadrangle Map provided as Figure I.1 identifies streams, springs, and watercourses with the vicinity of the DNCS Facility. In addition, wells within the vicinity are identified on the Water Well Location Map provided as Figure IV.1.6. This map is based on data from the NM Office of the State Engineer. The closest well is a livestock well, approximately 2,250 ft north of the DNCS site boundary.

(b) laboratory analyses, performed by an independent commercial laboratory, for major cations and anions; BTEX; RCRA metals; and TDS of ground water samples of the shallowest fresh water aquifer beneath the proposed site;

As described in Volume IV.2, no shallow water was encountered in any of the six borings installed during the February 2012, February 2013 and May 2013 drilling programs. Therefore, no laboratory analyses were performed.

(c) depth to, formation name, type and thickness of the shallowest fresh water aquifer;

*The Santa Rosa Sandstone is considered to be the shallowest fresh water aquifer in the vicinity of the DNCS site at a depth of approximately 600 ft below grade. A detailed description of this aquifer, including depth and thickness, is provided in **Volume IV.2**.*

- (d) soil types beneath the proposed surface waste management facility, including a lithologic description of soil and rock members from ground surface down to the top of the shallowest fresh water aquifer;**

*A summary of the soil data obtained during GEI's site investigations is provided in **Table IV.2.2**. This table summarizes the standard engineering index properties (i.e., USCS soil classification; grain size distribution; natural dry density, Atterberg limits; and gravimetric moisture content) for selected soil samples obtained during the drilling program at DNCS. **Table IV.2.2** also summarizes lab test results for Standard Proctor density and permeability. The soils laboratory testing was conducted in accordance with guidance provided by OCD. The site geology is described in detail in **Volume IV.2** including lithologic descriptions of the soil borings installed at the site.*

- (e) geologic cross-sections;**

*A geologic cross-section of the site is provided as **Figures IV.2.8**, including a site map identifying the locations of the geological cross-section (**Figure IV.2.7**). These cross-sections are discussed in **Volume IV.2**.*

- (f) potentiometric maps for the shallowest fresh water aquifer; and**
*Potentiometric groundwater surface data for the Santa Rosa Sandstone is not available, mainly due to wide spacing of data representing only Santa Rosa Sandstone completed wells, poor drill logs and inconsistencies in the definition of the Santa Rosa Sandstone. The geometry of land surface and underlying geologic units, as well as groundwater saturations in the vicinity of the DNCS site are depicted in the hydrogeologic cross-section shown on **Figure IV.2.8**. This diagram indicates that no shallow alluvial groundwater is present at the DNCS site, consistent with site-specific drilling results. Based upon information projected from nearby petroleum wells, the shallowest potential water-bearing zone is the Santa Rosa Sandstone (lower Triassic Chinle; **Figure IV.2.10**), which is approximately 600 ft below grade at the DNCS site.*

- (g) **porosity, permeability, conductivity, compaction ratios and swelling characteristics for the sediments on which the contaminated soils will be placed;**

*A detailed description of porosity, permeability, conductivity, compaction ratios, and swelling characteristics is provided in **Volume IV.2**. The calculated porosities and permeabilities are summarized in **Table IV.2.2**. **Table IV.2.2** also summarizes the standard proctor densities and optimum moistures; and summarizes the swell/collapse characteristics of the onsite soils.*

- (16) **certification by the applicant that information submitted in the application is true, accurate and complete to the best of the applicant's knowledge, after reasonable inquiry; and**

*The certification is located in the preface to this **Volume** of the Application (i.e., Form C-137).*

- (17) **other information that the division may require to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, safety or the environment and that the surface waste management facility will comply with division rules and orders.**

DNCS will provide other applicable information reasonably requested by the OCD in order to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, safety or the environment. In addition, DNCS will comply with applicable Rules and Orders issued by OCD.

D. Application requirements for minor modifications. An existing surface waste management facility applying for a minor modification shall file a form C-137 with the environmental bureau in the division's Santa Fe office describing the proposed change and identifying information that has changed from its last C-137 filing.

At this time, DNCS is not seeking a minor modification. DNCS will comply with this requirement when applicable.

- E. Determination that an application is administratively complete. Upon receipt of an application for a surface waste management facility permit or modification or renewal of an existing surface waste management facility permit, the division shall review the application for administrative completeness. To be deemed administratively complete, the application shall provide information required by Subsection C or D (as applicable) of 19.15.36.8 NMAC. The division shall notify the applicant in writing when it deems the application administratively complete. If the division determines that the application is not administratively complete, the division shall notify the applicant of the deficiencies in writing within 30 days after the application's receipt and state what additional information is necessary.**

No response required.

19.15.36.9 NOTICE REQUIREMENTS FOR NEW SURFACE WASTE MANAGEMENT FACILITIES, MAJOR MODIFICATIONS OR RENEWALS AND ISSUANCE OF A TENTATIVE DECISION:

- A. Upon receipt of notification of the division's determination that the application is administratively complete, the applicant for a new surface waste management facility permit, permit renewal or major modification shall give written notice of the application, by certified mail, return receipt requested, to the surface owners of record within one-half mile of the surface waste management facility, the county commission of the county where the surface waste management facility site is located, the appropriate city officials if the surface waste management facility site is within city limits or within one-half mile of the city limits, and affected federal, tribal or pueblo governmental agencies. The notice shall contain the information in Paragraphs (1) through (4) of Subsection F of 19.15.36.9 NMAC. The division may extend the distance requirements for notice if the division determines that the proposed surface waste management facility has the potential to adversely impact fresh water, public health, safety or the environment at a distance greater than one-half mile. The applicant shall furnish proof that it has given the required notices.**

Draft Public Notification language is provided in Attachment I.A. The Draft Public Notification was prepared in accordance with 19.15.36.9.F(1) through (4) NMAC. Following OCD approval, Public Notification will be provided in compliance with 19.15.36.9.A NMAC, to the surface owners of record located within one-half mile of the Facility. Owners of record, as determined by the Lea County Assessor's Office, are listed in Attachment I.A, and include the State Land Office (SLO) and Bureau of Land Management (BLM). Additionally, the Public Notification will be provided to the Lea County Commission. The Facility is not located within

one-half mile of any city limit and therefore no additional federal, tribal or pueblo governmental agencies are affected.

- B. The division shall distribute notice of its determination that an application for a new surface waste management facility or for a renewal or major modification of an existing surface waste management facility is administratively complete to persons who have requested notification of division and commission hearing dockets within 30 days following the date that the division determines the application to be administratively complete.**

No response required.

- C. A person wishing to comment on an application prior to the division's preliminary consideration of the application may file comments within 30 days, or as extended by the director, after the later of the date when the applicant mails the notice required by Subsection A of 19.15.36.9 NMAC or the date when the division distributes the notice provided in Subsection B of 19.5.36.9 NMAC.**

No response required

- D. Within 60 days after the end of the public comment period provided in Subsection C of 19.15.36.9 NMAC, the division shall issue a tentative decision concerning the application, renewal or modification, including proposed conditions for approval or reasons for disapproval, as applicable. The division shall mail notice of the tentative decision, together with a copy of the decision, by certified mail, return receipt requested, to the applicant and shall post notice on the division's website, together with a copy of the tentative decision.**

No response required

- E. Within 30 days after receiving the division's tentative decision, the applicant shall provide notice of the tentative decision by:**
- (1) publishing a display ad in English and Spanish, in a form approved by the division, in a newspaper of general circulation in this state and in a newspaper of general circulation in the county where the surface waste management facility is or will be located; the display ad shall be at least three inches by four inches and shall not be published in the newspaper's legal or classified sections;**
 - (2) mailing notice by first class mail or e-mail to persons, as identified to the applicant by the division, who have requested notification of applications generally, or of the particular application, including persons who have filed comments on the particular application during the initial public comment period, and who have included in such comments a legible return address or e-mail address; and**

- (3) **mailing notice by first class or e-mail to affected local, state, federal or tribal governmental agencies, as determined and identified to the applicant by the division.**

DNCS will comply with the notification requirements identified in 19.15.39.9.E NMAC. It is proposed that the display ad be published in the Albuquerque Journal and the Hobbs News-Sun, both of which are newspapers in general circulation in the State of New Mexico and Lea County.

F. This notice issued pursuant to Subsection E of 19.15.36.9 NMAC shall include:

- (1) **the applicant's name and address;**
- (2) **the surface waste management facility's location, including a street address if available, and sufficient information to locate the surface waste management facility with reference to surrounding roads and landmarks;**
- (3) **a brief description of the proposed surface waste management facility;**
- (4) **the depth to, and TDS concentration of, the ground water in the shallowest aquifer beneath the surface waste management facility site;**
- (5) **a statement that the division's tentative decision is available on the division's website, or, upon request, from the division clerk, including the division clerk's name, address and telephone number;**
- (6) **a description of alternatives, exceptions or waivers that may be under consideration in accordance with Subsection G of 19.15.36.18 NMAC or 19.15.36.19 NMAC;**
- (7) **a statement of the comment period and of the procedures for requesting a hearing on the application; and**
- (8) **a brief statement of the procedures the division shall follow in making a final decision.**

DNCS will, upon receiving OCD's tentative decision, issue Public Notification in compliance with this section.

19.15.36.10 COMMENTS AND HEARING ON APPLICATION:

- A. A person, whether or not such person has previously submitted comments, may file comments or request a hearing on the application by filing their comments or, in accordance with 19.15.4.9 NMAC, a hearing request with the division clerk within 30 days after the date that the applicant issued public notice of the division's tentative decision. A request for a hearing shall be in writing and shall state specifically the reasons why a hearing should be held. The division shall schedule a public hearing on the application if, in addition to the requirements in 19.15.4.9 NMAC:**

- (1) the division has proposed to deny the application or grant it subject to conditions not expressly required by rule, and the applicant requests a hearing;
 - (2) the director determines that there is significant public interest in the application;
 - (3) the director determines that comments have raised objections that have probable technical merit; or
 - (4) determination of the application requires that the division make a finding, pursuant to Paragraph (3) of Subsection F of 19.15.2.7 NMAC, whether a water source has a present or reasonably foreseeable beneficial use that contamination would impair.
- B. If the division schedules a hearing on an application, the hearing shall be conducted according to 19.15.14.1206 through 19.15.14.1215 NMAC.

No response required.

19.15.36.11 FINANCIAL ASSURANCE REQUIREMENTS:

- A. **Centralized facilities.** Upon notification by the division that it has approved a permit but prior to the division issuing the permit, an applicant for a new centralized facility permit shall submit acceptable financial assurance in the amount of \$25,000 per centralized facility, or a statewide “blanket” financial assurance in the amount of \$50,000 to cover all of that applicant’s centralized facilities, unless such applicant has previously posted a blanket financial assurance for centralized facilities.

No response required, as DNCS is a proposed “Commercial Facility” per 19.15.36.7.A(2) NMAC.

- B. **New commercial facilities or major modifications of existing commercial facilities.** Upon notification by the division that it has approved a permit for a new commercial facility or a major modification of an existing commercial facility but prior to the division issuing the permit, the applicant shall submit acceptable financial assurance in the amount of the commercial facility’s estimated closure and post closure cost, or \$25,000, whichever is greater. The commercial facility’s estimated closure and post closure cost shall be the amount provided in the closure plan the applicant submitted unless the division determines that such estimate does not reflect a reasonable and probable closure and post closure cost, in which event, the division shall determine the estimated closure and post closure cost and shall include such determination in its tentative decision. If the applicant disagrees with the division’s determination of estimated closure and post closure cost, the applicant may request a hearing as provided in 19.15.36.10 NMAC. If the applicant so requests, and no other person files a request for a hearing regarding

the application, the hearing shall be limited to determination of estimated closure and post closure cost.

Once OCD has approved the DNCS Application for Permit, DNCS will submit financial assurance for \$1,088,352, as detailed in the C/PC Cost Estimate Tables provided as Attachment II.4.A. The C/PC Cost Estimate will be reviewed prior to issuance of the Permit, and also prior to each new Phase of site development (see Table I.4). This amount represents the closure costs and post closure care requirements that will be required for Phase I of the development.

- C. Terms of financial assurance. The financial assurance shall be on division-prescribed forms, payable to the state of New Mexico and conditioned upon the surface waste management facility's proper operation, site closure and post closure monitoring in compliance with state of New Mexico statutes, division rules and the surface waste management facility permit terms. The applicant shall notify the division of a material change affecting the financial assurance within 30 days of discovery of such change.**

DNCS will comply with this requirement.

- D. Forfeiture of financial assurance. The division shall give the operator 20 days notice and an opportunity for a hearing prior to forfeiting financial assurance.**

No response required.

- E. Forms of financial assurance. The division may accept the following forms of financial assurance.**
- (1) Surety bonds. A surety bond shall be executed by the applicant and by a corporate surety licensed to do business in the state, and shall be non-cancelable.**
 - (2) Letters of credit. A letter of credit shall be issued by a bank organized or authorized to do commercial banking business in the United States, shall be irrevocable for a term of not less than five years and shall provide for automatic renewal for successive, like terms upon expiration, unless the issuer has notified the division in writing of non-renewal at least 90 days before its expiration date. The letter of credit shall be payable to the state of New Mexico in part or in full upon receipt from the director or the director's authorized representative of demand for payment accompanied by a notice of forfeiture.**

- (3) Cash accounts.** An applicant may provide financial assurance in the form of a federally insured or equivalently protected cash account or accounts in a financial institution, provided that the operator and the financial institution shall execute as to each such account a collateral assignment of the account to the division, which shall provide that only the division may authorize withdrawals from the account. In the event of forfeiture pursuant to Subsection C of 19.15.36.18 NMAC, the division may, at any time and from time to time, direct payment of all or part of the balance of such account (excluding interest accrued on the account) to itself or its designee for the surface waste management facility's closure.

Once the Permit is approved, DNCS will elect a financial assurance mechanism pursuant to 19.15.36.11.E NMAC. Documentation will be included in Attachment I.B once OCD approves the Application for Permit. The amount of the mechanism will represent the closure costs and post-closure care requirements that will be required for Phase I of the development, as identified in the C/PC Cost Estimate Summary provided as Attachment II.4.A. The C/PC Cost Estimate will be reviewed prior to issuance of the Permit, and also prior to each new Phase of site development (see Table I.4).

F. Replacement of financial assurance.

- (1) The division may allow an operator to replace existing forms of financial assurance with other forms of financial assurance that provide equivalent coverage.**
- (2) The division shall not release existing financial assurance until the operator has submitted, and the division has approved, an acceptable replacement.**

DNCS will comply with this requirement.

- G. Review of adequacy of financial assurance.** The division may at any time not less than five years after initial acceptance of financial assurance for a commercial facility, or whenever the operator applies for a major modification of the commercial facility's permit, initiate a review of such financial assurance's adequacy. Additionally, whenever the division determines that a landfarm operator has not achieved the closure standards specified in Paragraph (3) of Subsection G of 19.15.36.15 NMAC, the division may review the adequacy of the landfarm operator's financial assurance, without regard to the date of its last review. Upon determination, after notice to the operator and an opportunity for a hearing, that the financial assurance is not adequate to cover the reasonable and probable cost of a commercial facility's closure and post closure monitoring, the

division may require the operator to furnish additional financial assurance sufficient to cover such reasonable and probable cost, provided that the financial assurance required of a commercial facility permitted prior to the effective date of 19.15.36 NMAC shall not exceed \$250,000 except in the event of a major modification of the commercial facility. If such a commercial facility applies for a major modification, the division shall determine the applicable financial assurance requirement based on the total estimated closure and post closure cost of the commercial facility as modified, without regard to the \$250,000 limit.

DNCS will comply with this requirement.

19.15.36.12 PERMIT APPROVAL, DENIAL, REVOCATION, SUSPENSION, MODIFICATION OR TRANSFER:

A. Granting of permit.

- (1) The division may issue a permit for an new surface waste management facility or major modification upon finding that an acceptable application has been filed, that the conditions of 19.15.36.9 NMAC and 19.15.36.11 NMAC have been met and that the surface waste management facility or modification can be constructed and operated in compliance with applicable statutes and rules and without endangering fresh water, public health, safety or the environment.**

DNCS will comply with the public notice requirements of 19.15.36.9 NMAC and the financial assurance requirements of 19.15.36.11 NMAC, as necessary to achieve Permit approval. Attachment I.A includes the current list of property owners within one-half mile of the Facility, which will be updated prior to formal notice. Following OCD review and approval of the Application, DNCS will distribute the public notice in accordance with 19.15.36.9 NMAC. Attachment I.B provides the proposed C/PC Cost Estimate that will be the basis for the financial assurance mechanism to be put into place in accordance with 19.15.36.11 NMAC upon approval of the Permit. This Application provides the required plans and engineering calculations to construct and operate the Facility in compliance with applicable statutes and Rules that ensure fresh water, public health, safety, or the environment will be protected.

- (2) Each permit the division issues for a new surface waste management facility shall remain in effect for 10 years from the date of its issuance. If the division grants a permit for a major modification of a surface waste management facility, the permit for that surface waste management facility shall remain in effect for 10 years from the date the division approves the major modification.

This Application requests a Permit in accordance with 19.15.36.8 NMAC. A new Application for Permit Renewal will be submittal to OCD at least 120 days prior to the expiration of the Permit granted in response to this Application (i.e., 10 years).

- (a) A surface waste management facility permit may be renewed for successive 10-year terms. If the holder of a surface waste management facility permit submits an application for permit renewal at least 120 days before the surface waste management facility permit expires, and the operator is not in violation of the surface waste management facility permit on the date of its expiration, then the existing surface waste management facility permit for the same activity shall not expire until the division has approved or denied an application for renewal. If the division has not notified the operator of a violation, if the operator is diligently pursuing procedures to contest a violation or if the operator and the division have signed an agreed compliance order providing for remedying the violation, then the surface waste management facility permit shall continue in effect as above provided notwithstanding the surface waste management facility permit violation's existence. A surface waste management facility permit continued under this provision remains fully effective and enforceable.

This Application requests a Permit in accordance with 19.15.36.8 NMAC.

- (b) An application for permit renewal shall include and adequately address the information necessary for evaluation of a new surface waste management facility permit as provided in Subsection C of 19.15.36.8 NMAC. Previously submitted materials may be included by reference provided they are current, readily available to the division and sufficiently identified so that the division may retrieve them.

This Application requests a Permit in accordance with 19.15.36.8 NMAC.

- (c) **The operator shall give public notice of the renewal application in the manner prescribed by 19.15.36.9 NMAC. The division shall grant an application for renewal if the division finds that an acceptable application has been filed, that the conditions of 19.15.36.9 NMAC and 19.15.36.11 NMAC have been met and that the surface waste management facility can be operated in compliance with applicable statutes and rules and without endangering fresh water, public health, safety or the environment.**

DNCS will continue to comply with the public notice requirements of 19.15.36.9 NMAC and the financial assurance requirements of 19.15.36.11 NMAC, as necessary to achieve Permit renewal. This Application provides the required plans and engineering calculations to construct and operate the Facility in compliance with applicable statutes and Rules that ensure fresh water, public health, safety, and the environment will be protected.

- (3) **The division shall review each surface waste management facility permit at least once during the 10-year term, and shall review surface waste management facility permits to which Paragraph (2) of Subsection A of 19.15.36.12 NMAC does not apply at least every five years. The review shall address the operation, compliance history, financial assurance and technical requirements for the surface waste management facility. The division, after notice to the operator and an opportunity for a hearing, may require appropriate modifications of the surface waste management facility permit, including modifications necessary to make the surface waste management facility permit terms and conditions consistent with statutes, rules or judicial decisions.**

DNCS will make available all necessary operational, compliance, financial assurance and other technical documents to OCD at any time during the 10 year permit period for the completion of a mid-term review. DNCS will respond to OCD requests for updates to address changes in regulatory standards.

- B. Denial of permit. The division may deny an application for a surface waste management facility permit or modification of a surface waste management facility permit if it finds that the proposed surface waste management facility or modification may be detrimental to fresh water, public health, safety or the environment. The division may also deny an application for a surface waste management facility permit if the applicant, an owner of 25 percent or greater interest in the applicant or an affiliate of the applicant has a history of failure to comply with division rules and orders or state or federal environmental laws; is subject to a division or commission order, issued after notice and hearing, finding**

such entity to be in violation of an order requiring corrective action; or has a penalty assessment for violation of division or commission rules or orders that is unpaid more than 70 days after issuance of the order assessing the penalty. An affiliate of an applicant, for purposes of Subsection B of 19.15.36.12 NMAC, shall be a person who controls, is controlled by or under is common control with the applicant or a 25 percent or greater owner of the applicant.

No response required.

- C. **Additional requirements.** The division may impose conditions or requirements, in addition to the operational requirements set forth in 19.15.36 NMAC, that it determines are necessary and proper for the protection of fresh water, public health, safety or the environment. The division shall incorporate such additional conditions or requirements into the surface waste management facility permit.

DNCS will comply with any additional requirements or conditions imposed by OCD intended to protect fresh water, public health, safety or the environment, and comply with any applicable permit conditions.

- D. **Revocation, suspension or modification of a permit.** The division may revoke, suspend or impose additional operating conditions or limitations on a surface waste management facility permit at any time, for good cause, after notice to the operator and an opportunity for a hearing. The division may suspend a surface waste management facility permit or impose additional conditions or limitations in an emergency to forestall an imminent threat to fresh water, public health, safety or the environment, subject to the provisions of NMSA 1978, Section 70-2-23, as amended. If the division initiates a major modification it shall provide notice in accordance with 19.15.36.9 NMAC. Suspension of a surface waste management facility permit may be for a fixed period of time or until the operator remedies the violation or potential violation. If the division suspends a surface waste management facility's permit, the surface waste management facility shall not accept oil field waste during the suspension period.

No response required.

- E. **Transfer of a permit.** The operator shall not transfer a permit without the division's prior written approval. A request for transfer of a permit shall identify officers, directors and owners of 25 percent or greater in the transferee. Unless the director otherwise orders, public notice or hearing are not required for the transfer request's approval. If the division denies the transfer request, it shall notify the operator and the proposed transferee of the denial by certified mail, return receipt requested, and either the operator or the proposed transferee may request a hearing with 10 days after receipt of the notice. Until the division

approves the transfer and the required financial assurance is in place, the division shall not release the transferor's financial assurance.

DNCS will comply with this requirement.

19.15.36.13 SITING AND OPERATIONAL REQUIREMENTS APPLICABLE TO ALL PERMITTED SURFACE WASTE MANAGEMENT FACILITIES: EXCEPT AS OTHERWISE PROVIDED IN 19.15.36 NMAC.

*Siting documentation is detailed in **Volume IV.1** to demonstrate that the operation of the Facility will protect public health and the environment. This section confirms the remote location, absence of any residential housing within over one mile of the Facility boundary, absence of churches, schools, parks or other unrelated business in the area. With open pasture and oil field production facilities surrounding the DNCS Facility, the location is ideally suited for development as a surface waste management facility.*

A. Depth to ground water.

- (1) No landfill shall be located where ground water is less than 100 feet below the lowest elevation of the design depth at which the operator will place oil field waste.**

*Groundwater is demonstrated to be more than 100 ft below the lowest elevation of the design depth of the landfill where oil field waste will be placed. Additional detail is provided in **Volume IV.1** (Siting) and in **Volume IV.2** (Hydrogeology).*

- (2) No landfarm that accepts soil or drill cuttings with a chloride concentration that exceeds 500 mg/kg shall be located where ground water is less than 100 feet below the lowest elevation at which the operator will place oil field waste. See Subsection A of 19.15.36.15 NMAC for oil field waste acceptance criteria.**

Not Applicable. DNCS does not propose to operate a landfarm permitted under 19.15.36.15 NMAC.

- (3) No landfarm that accepts soil or drill cuttings with a chloride concentration that is 500 mg/kg or less shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.**

Not Applicable. DNCS does not propose to operate a landfarm permitted under 19.15.36.15 NMAC.

- (4) No small landfarm shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.**

Not Applicable.

- (5) No other surface waste management facility shall be located where ground water is less than 50 feet below the lowest elevation at which the operator will place oil field waste.**

*Groundwater is not located less than 50 ft below the lowest elevation of the processing area where oil field waste will be placed. Additional detail is provided in **Volume IV.1** (Siting) and in **Volume IV.2** (Hydrogeology).*

B. No surface waste management facility shall be located:

- (1) within 200 feet of a watercourse, lakebed, sinkhole or playa lake;**

*The Facility is **not located within 200 feet of a watercourse, lakebed, sinkhole or playa lake.** Documentation regarding the locations of watercourses, lakebeds, sinkholes and playa lakes with respect to the DNCS site is provided in **Volume IV.1.***

- (2) within an existing wellhead protection area or 100-year floodplain;**

*The Facility is **not located within an existing wellhead protection area or 100-year floodplain.** Documentation regarding wellhead protection areas and 100-year floodplains is provided in **Volume IV.1.***

- (3) within, or within 500 feet of, a wetland;**

*The Facility is **not located within 500 ft of a wetland.** Documentation regarding wetlands in the vicinity of the DNCS site is provided in **Volume IV.1.***

- (4) within the area overlying a subsurface mine;**

*The Facility is **not located in an area overlying a known subsurface mine.** Documentation of mines, mills, and quarries is provided in **Volume IV.1.***

- (5) **within 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application; or**

The Facility is not located within 500 ft of the nearest permanent residence, school, hospital, institution, or church. Land use setback documentation is provided in Volume IV.1.

- (6) **within an unstable area, unless the operator demonstrates that engineering measures have been incorporated into the surface waste management facility design to ensure that the surface waste management facility's integrity will not be compromised.**

As documented in Volume IV.1, the DNCS Facility is not located in an unstable area.

C. No surface waste management facility shall exceed 500 acres.

The DNCS Facility will not exceed 500 acres. Total acreage for the DNCS site is 562 ± acres. However, as described in Section I.3, a portion of the 562-acre tract is a drainage feature that will be excluded from development, as well as extensive perimeter setbacks. The drainage feature includes a 500-ft buffer zone and totals 67 acres ±. The DNCS Facility will include two main components; a liquid oil field waste Processing Area (177 acres ±), and an oil field waste Landfill (318 acres ±); therefore the DNCS Facility comprises 495 acres ±. A copy of the Boundary Survey for the DNCS site, which describes the size of the site and the site boundary is provided in Attachment I.C. Note that the Survey Description included on the Boundary Survey provides the description for the 562 acre ± DNCS Site. Table I.1 provides details regarding site facilities and acreages.

D. The operator shall not accept oil field wastes transported by motor vehicle at the surface waste management facility unless the transporter has a form C-133, authorization to move liquid waste, approved by the division.

DNCS will comply with this requirement. The Oil Field Waste Management Plan provided as Volume II.2 requires that, prior to acceptance of any liquid waste, the transporter must provide the Facility with a Division-approved Form C-133.

- E. The operator shall not place oil field waste containing free liquids in a landfill or landfarm cell. The operator shall use the paint filter test, as prescribed by the EPA (EPA SW-846, method 9095) to determine conformance of the oil field waste to this criterion.**

DNCS will comply with this requirement. The Oil Field Waste Management Plan (Volume II.2) requires that, prior to acceptance of any oil field waste in the landfill portion of the Facility, the material will pass the paint filter test. Solidification, if necessary, will be accomplished in the Mixing/Solidification Area located in the lined Landfill Cells and described in Operation, Inspection, and Maintenance Plan (Volume II.1).

- F. Surface waste management facilities shall accept only exempt or non-hazardous waste, except as provided in Paragraph (3) of Subsection F of 19.15.36.13 NMAC. The operator shall not accept hazardous waste at a surface waste management facility. The operator shall not accept wastes containing NORM at a surface waste management facility except as provided in 19.15.35 NMAC. The operator shall require the following documentation for accepting oil field wastes, and both the operator and the generator shall maintain and make the documentation available for division inspection.**

DNCS will comply with this requirement. The Oil Field Waste Management Plan (Volume II.2) provides a detailed description of oil field waste acceptance protocol. Included in this Plan are Form C-138 certification, certification frequency; and naturally occurring radioactive materials (NORM) acceptance requirements. DNCS will maintain and make documentation of this available for OCD inspection.

- (1) Exempt oil field wastes. The operator shall require a certification on form C-138, signed by the generator or the generator's authorized agent, that represents and warrants that the oil field wastes are generated from oil and gas exploration and production operations, are exempt waste and are not mixed with non-exempt waste. The operator shall have the option to accept such certifications on a monthly, weekly or per load basis. The operator shall maintain and shall make the certificates available for the division's inspection.**

DNCS will comply with this requirement. The Oil Field Waste Management Plan (Volume II.2) provides a detailed description of oil field waste acceptance protocol. Included in this Plan is the Form C-138 certification and additional documentation that the oil field waste is Resource Conservation and Recovery Act (RCRA) exempt.

- (2) **Non-exempt, non-hazardous, oil field wastes. The operator shall require a form C-138, oil field waste document, signed by the generator or its authorized agent. This form shall be accompanied by acceptable documentation to determine that the oil field waste is nonhazardous.**

DNCS will comply with this requirement. The Oil Field Waste Management Plan (Volume II.2) provides a detailed description of oil field waste acceptance protocol. Included in this Plan is the Form C-138 certification and additional documentation that any non-exempt oil field waste is non-hazardous.

- (3) **Emergency non-oil field wastes. The operator may accept non-hazardous, non-oil field wastes in an emergency if ordered by the department of public safety. The operator shall complete a form C-138, oil field waste document, describing the waste, and maintain the same, accompanied by the department of public safety order, subject to division inspection.**

DNCS will comply with this requirement.

- G. The operator of a commercial facility shall maintain records reflecting the generator, the location of origin, the location of disposal within the commercial facility, the volume and type of oil field waste, the date of disposal and the hauling company for each load or category of oil field waste accepted at the commercial facility. The operator shall maintain such records for a period of not less than five years after the commercial facility's closure, subject to division inspection.**

DNCS will comply with this requirement. The Oil Field Waste Management Plan (Volume II.2) provides a detailed description of oil field waste acceptance recordkeeping forms. The forms in this Plan include the information required in this subsection and will be maintained and retained for a period of not less than five years following Facility closure. DNCS will make these records available for OCD inspection upon request.

- H. Disposal at a commercial facility shall occur only when an attendant is on duty unless loads can be monitored or otherwise isolated for inspection before disposal. The surface waste management facility shall be secured to prevent unauthorized disposal.**

DNCS plans to conduct Facility operations 24 hours a day, 7 days a week. The Facility will be secured with barbed wire fencing, cattle guards, and locking gates to prevent any unauthorized access or disposal when an attendant is not on duty. A truck with an acceptable load of oil field waste that may arrive while the DNCS Facility is closed may park in a designated area outside the fence until a qualified inspection can take place upon the arrival of an attendant. In this case, the temporarily parked load will be inspected for any leakage and will be required to have any valves or access ports secured and locked to prevent spillage or tampering.

- I. To protect migratory birds, tanks exceeding eight feet in diameter, and exposed pits and ponds shall be screened, netted or covered. Upon the operator's written application, the division may grant an exception to screening, netting or covering upon the operator's showing that an alternative method will protect migratory birds or that the surface waste management facility is not hazardous to migratory birds. Surface waste management facilities shall be fenced in a manner approved by the division.**

*DNCS herein requests an exception to 19.15.36.13.I NMAC. The Migratory Bird Protection Plan presented as **Volume II.6** describes an alternate methodology to the screening requirement of the storage ponds. This Plan describes visual inspections and migratory bird retrieval and clean-up procedures should bird(s) require decontamination. In addition, the Engineering Design (**Volume III.1**) provides a process design for produced waters and other liquids that will remove the oils present in these materials prior to discharge through the evaporation ponds.*

- J. Surface waste management facilities shall have a sign, readable from a distance of 50 feet and containing the operator's name; surface waste management facility permit or order number; surface waste management facility location by unit letter, section, township and range; and emergency telephone numbers.**

*The proposed Site Entrance Sign is provided as **Figure I.4**. The sign was designed in compliance with the requirements of 19.15.36.13.J NMAC. A 4-ft by 8-ft sign with 3-inch lettering will identify the Facility operator as DNCS, and will include the Facility permit number, location and emergency phone numbers.*

- K. The operators shall comply with the spill reporting and corrective action provisions of 19.15.30 NMAC or 19.15.29 NMAC.**

DNCS ENVIRONMENTAL SOLUTIONS

SURFACE WASTE MANAGEMENT FACILITY
OIL CONSERVATION DIVISION PERMIT NO. NM-_____
S 1/2 of Section 31, T17S, R33E
N 1/2 of Section 6, T18S, R33E

HOURS OF OPERATION: 24 HOURS PER DAY - 7 DAYS PER WEEK

SITE RESTRICTIONS:

- NO Hazardous Waste
- NO Scavenging
- NO Smoking
- NO Fires
- NO Disposal After Hours
- NO Trespassing – Authorized Personnel Only

FOLLOW SITE RULES:

- Check-in at Scalehouse
- OBEY Posted Speed Limits
- OBEY Signs and Traffic Barriers
- OBEY Instructions by Site Staff
- Loads Subject to Inspection
- Unload Only as Directed
- Untarped Loads May Be Penalized

EMERGENCY CONTACT (24 HOURS): 575.XXX.XXX

OCD: 575.393.6161 Spill Emergencies 24-Hour Hotline: 505.827.9329

SITE ENTRANCE SIGN (TYPICAL)

DNCS ENVIRONMENTAL SOLUTIONS
LEA COUNTY, NEW MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

DATE: 10/16/2013	CAD: ENTRANCE SIGN.dwg	PROJECT #: 542.01.01
DRAWN BY: DMI	REVIEWED BY: DRT	FIGURE I.4
APPROVED BY: IKG	gei@gordonenvironmental.com	

The DNCS Facility is specifically designed to prevent pollutants from entering surface and groundwater, as demonstrated through the Facility Management Plans (Volume II), and the Engineering Design and Calculations (Volume III) and the Permit Plans (Volume III.1) presented in this Application. Successful implementation of the engineering design and operational programs will ensure compliance with 19.15.30 NMAC. The DNCS Contingency Plan (Volume II.5) is designed to comply with the notification and corrective action as required in 19.15.29 NMAC.

- L. Each operator shall have an inspection and maintenance plan that includes the following:**
- (1) monthly inspection of leak detection sumps including sampling if fluids are present with analyses of fluid samples furnished to the division; and maintenance of records of inspection dates, the inspector and the leak detection system's status;**
 - (2) semi-annual inspection and sampling of monitoring wells as required, with analyses of ground water furnished to the division; and maintenance of records of inspection dates, the inspector and ground water monitoring wells' status; and**
 - (3) inspections of the berms and the outside walls of pond levees quarterly and after a major rainfall or windstorm, and maintenance of berms in such a manner as to prevent erosion.**

The Operations, Inspection, and Maintenance Plan for the DNCS Facility is provided as Volume II.1. The Plan describes in detail the methods and frequency for inspections, sampling, recordkeeping, and maintenance for the leak detection sumps, and containment berms.

- M. Each operator shall have a plan to control run-on water onto the site and run-off water from the site, such that:**
- (1) the run-on and run-off control system shall prevent flow onto the surface waste management facility's active portion during the peak discharge from a 25-year storm; and**
 - (2) run-off from the surface waste management facility's active portion shall not be allowed to discharge a pollutant to the waters of the state or United States that violates state water quality standards.**

Volume III (Engineering Design and Calculations) provides the design for berms, conveyance channels, and detention capacity to control run-on/run-off for at least the peak discharge from a 25-year 24-hour storm. DNCS will prevent discharge of pollutants to the waters of the State or United States in violation of state water quality standards through adherence to the

Operations, Inspection, and Maintenance Plan (Volume II.1), and construction of the detention ponds described in this Application. The DNCS Facility will not be required to obtain a permit under the Multi-Sector General Permit for Stormwater Discharges promulgated September 29, 2008 due to the proposed Facility's location within a closed basin.

- N. Contingency plan. Each operator shall have a contingency plan. The operator shall provide the division's environmental bureau with a copy of an amendment to the contingency plan, including amendments required by Paragraph (8) of Subsection N of 19.15.36.13 NMAC; and promptly notify the division's environmental bureau of changes in the emergency coordinator or in the emergency coordinator's contact information. The contingency plan shall be designed to minimize hazards to fresh water, public health, safety or the environment from fires, explosions or an unplanned sudden or non-sudden release of contaminants or oil field waste to air, soil, surface water or ground water. The operator shall carry out the plan's provisions immediately whenever there is a fire, explosion or release of contaminants or oil field waste constituents that could threaten fresh water, public health, safety or the environment; provided that the emergency coordinator may deviate from the plan as necessary in an emergency situation. The contingency plan for emergencies shall:**
- (1) describe the actions surface waste management facility personnel shall take in response to fires, explosions or releases to air, soil, surface water or ground water of contaminants or oil field waste containing constituents that could threaten fresh water, public health, safety or the environment;**
 - (2) describe arrangements with local police departments, fire departments, hospitals, contractors and state and local emergency response teams to coordinate emergency services;**
 - (3) list the emergency coordinator's name; address; and office, home and mobile phone numbers (where more than one person is listed, one shall be named as the primary emergency coordinator);**
 - (4) include a list, which shall be kept current, of emergency equipment at the surface waste management facility, such as fire extinguishing systems, spill control equipment, communications and alarm systems and decontamination equipment, containing a physical description of each item on the list and a brief outline of its capabilities;**
 - (5) include an evacuation plan for surface waste management facility personnel that describes signals to be used to begin evacuation, evacuation routes and alternate evacuation routes in cases where fire or releases of wastes could block the primary routes;**
 - (6) include an evaluation of expected contaminants, expected media contaminated and procedures for investigation, containment and correction or remediation;**
 - (7) list where copies of the contingency plan will be kept, which shall include the surface waste management facility; local police departments, fire departments and hospitals; and state and local emergency response teams;**

- (8) indicate when the contingency plan will be amended, which shall be within five working days whenever:**

 - (a) the surface waste management facility permit is revised or modified;**
 - (b) the plan fails in an emergency;**
 - (c) the surface waste management facility changes design, construction, operation, maintenance or other circumstances in a way that increases the potential for fires, explosions or releases of oil field waste constituents that could threaten fresh water, public health, safety or the environment or change the response necessary in an emergency;**
 - (d) the list of emergency coordinators or their contact information changes; or**
 - (e) the list of emergency equipment changes;**
- (9) describe how the emergency coordinator or the coordinator's designee, whenever there is an imminent or actual emergency situation, will immediately;**

 - (a) activate internal surface waste management facility alarms or communication systems, where applicable, to notify surface waste management facility personnel; and**
 - (b) notify appropriate state and local agencies with designated response roles if their assistance is needed;**
- (10) describe how the emergency coordinator, whenever there is a release, fire or explosion, will immediately identify the character, exact source, amount and extent of released materials (the emergency coordinator may do this by observation or review of surface waste management facility records or manifests, and, if necessary, by chemical analysis) and describe how the emergency coordinator will concurrently assess possible hazards to fresh water, public health, safety or the environment that may result from the release, fire or explosion (this assessment shall consider both the direct and indirect hazard of the release, fire or explosion);**
- (11) describe how, if the surface waste management facility stops operations in response to fire, explosion or release, the emergency coordinator will monitor for leaks, pressure buildup, gas generation or rupture in valves, pipes or the equipment, wherever this is appropriate;**
- (12) describe how the emergency coordinator, immediately after an emergency, will provide for treating, storing or disposing of recovered oil field waste, or other material that results from a release, fire or explosion at a surface waste management facility;**
- (13) describe how the emergency coordinator will ensure that no oil field waste, which may be incompatible with the released material, is treated, stored or disposed of until cleanup procedures are complete; and**
- (14) provide that the emergency coordinator may amend the plan during an emergency as necessary to protect fresh water, public health, safety or the environment.**

*The Contingency Plan included as **Volume II.5** provides detailed information in response to 19.15.36.13.N.1 through 14 NMAC.*

- O. Gas safety management plan. Each operator of a surface waste management facility that includes a landfill shall have a gas safety management plan that describes in detail procedures and methods that will be used to prevent landfill-generated gases from interfering or conflicting with the landfill's operation and protect fresh water, public health, safety and the environment. The plan shall address anticipated amounts and types of gases that may be generated, an air monitoring plan that includes the vadose zone and measuring, sampling, analyzing, handling, control and processing methods. The plan shall also include final post closure monitoring and control options.**

DNCS does not believe that this Section applies to the proposed Facility. Landfill Gas (LFG) is typically produced when there is a significant supply of readily putrescible organic material, moisture; and a lack of oxygen in the fill. Oil field wastes do not contain significant amounts of putrescible wastes and will not provide a suitable environment for LFG production. Typical oil field wastes will not generate significant quantities of LFG, nor the requisite pressure to promote migration. Conventional LFG monitoring and control systems would not be necessary or effective; and the waste matrix itself would inhibit migration or collection if it contained primarily soils and <5% degradable organics.

*However, a gas monitoring program consisting of testing incoming vehicles during unloading will be utilized to ensure that hydrogen sulfide (H₂S) gas concentrations do not exceed 10 parts per million (ppm) on-site or at the property boundary. Areas around the landfill disposal cells, treating plant, liquid solidification, and evaporation ponds will utilize monitors that issues a visual and audible signal at 10 ppm H₂S to ensure compliance with regulatory alert levels. Routine gas monitoring of the proposed vadose zone monitoring wells will also be conducted. Monitoring points may be added or replaced as necessary. Gas safety management details are presented in **Volume II.1**, **Volume II.5**, and the H₂S Prevention and Contingency Plan (**Volume II.3**).*

- P. Training program. Each operator shall conduct an annual training program for key personnel that includes general operations, permit conditions, emergencies proper sampling methods and identification of exempt and non-exempt waste and hazardous waste. The operator shall maintain records of such training, subject to division inspection, for five years.**

DNCS will comply with this requirement. The Operation, Inspection, and Maintenance Plan (Volume II.1) describes in detail the training programs for site personnel. Training records will be maintained by DNCS for OCD inspection for a period of not less than five years.

19.15.36.14 SPECIFIC REQUIREMENTS APPLICABLE TO LANDFILLS:

A. General operating requirements.

- (1) The operator shall confine the landfill's working face to the smallest practical area and compact the oil field waste to the smallest practical volume. The operator shall not use equipment that may damage the integrity of the liner system in direct contact with a geosynthetic liner.**

DNCS will follow accepted principles of landfill engineering for waste placement, compaction and covering methods. Operations will be conducted to maintain a confined working face so that it is sufficiently wide to provide for the safe unloading of trucks, but no greater than necessary. It is estimated that the typical thickness of each daily cell will be approximately 10 to 15 ft, with working slopes not greater than 2:1. In order to compact the waste to the smallest practical volume, the lifts will be spread in layers approximately 2 ft thick and worked by a high ground-pressure bulldozer or equivalent. The Engineering Design (Volume III.1) and the Liner Construction Quality Assurance (CQA) Plan (Volume II.7) mandate a 2 ft thick protective soil layer over the geosynthetic liner. The Operations, Inspection, and Maintenance Plan (Volume II.1) addresses daily fill face activities in detail provided to protect the liners during operations.

- (2) The operator shall prevent unauthorized access by the public and entry by large animals to the landfill's active portion through the use of fences, gates, locks or other means that attain equivalent protection.**

The DNCS Processing Area will be enclosed with barbed wire fencing, cattle guards, and locking gates, as will the DNCS Landfill (Figure I.2). This will prevent unauthorized access by the public or entry by large animals (Engineering Design, Volume III.1).

(3) The operator shall prevent and extinguish fires.

DNCS will provide adequate means to prevent and extinguish fires. Fire protection measures are described in detail in the Contingency Plan (Volume II.5). Measures to prevent and control fires are listed in Table I.7, which are augmented by focused employee training.

**TABLE I.7
Fire Prevention and Control
DNCS Environmental Solutions**

1. Fire Prevention Measures

- *Routine cleaning of debris from equipment, particularly radiators.*
- *Random inspections of incoming loads at the Processing Are Gatehouse and Landfill Scalehouse to prevent unauthorized waste acceptance.*
- *Training of equipment operators to identify suspect (“hot”) loads and measures for mitigation (e.g., covering smoldering waste with stockpiled soil).*
- *Coordination with local fire response professionals for input on fire prevention and control.*

2. Fire Control Procedures

- *The placement and maintenance of fire extinguishers in all mobile equipment and on-site structures.*
- *Locating cover material or borrow areas near the working face that can be used to smother fires.*
- *Ensuring water availability from the water truck and/or detention basins.*
- *Implementation of a site-wide communication network to optimize mobilization of appropriate response personnel and equipment.*
- *Employee training.*
- *Well established emergency response procedures.*

(4) The operator shall control litter and odors.

As described in the Operations, Inspection, and Maintenance Plan (Volume II.1), DNCS will be operated using proven disposal practices to minimize and control litter and odor. The waste stream will consist primarily of contaminated soils, which are not prone to wind-blown dispersion. The size of the actual working face will be minimized to facilitate compacting and covering the waste. Also, depending on wind direction and/or velocity, portable litter fences may be used to control blowing debris, in addition to the perimeter fencing; and most operations can be conducted below the grade of the perimeter berms as necessary.

Staff members will closely monitor the area adjacent to the working face for waste and litter. Litter will be removed and disposed of on a regular basis and within 24-hours if the waste has a potential for diversion or being transported by vectors. In order to control litter mitigate and potential odors, the active working face will typically be covered at the end of each operating day with at least 6 inches of daily cover, or an approved alternative daily cover material, when the solid waste contains significant amounts of waste prone to become windblown. The prevailing wind is from the south and southeast, and adjacent land uses to the north and northwest are open pasture/oil exploration.

- (5) The operator shall not excavate a closed cell or allow others to excavate a closed cell except as approved by the division.**

Excavation of permanently closed cells is not anticipated; however, if a permanently closed cell needs to be excavated, such excavation will be conducted only after prior approval has been obtained from OCD.

- (6) The operator shall provide adequate cover for the landfill's active face as needed to control dust, debris, odors or other nuisances, or as otherwise required by the division.**

Soil cover, or an approved alternate cover, will be applied to the active face as needed. Approximately 6,000,000 cy of equivalent to 15% of the gross airspace, has been devoted to cover operations. In addition to the activities described in the response to 19.15.36.14.A.4 NMAC above regarding debris, odors, or other nuisances, DNCS will implement dust control measures as outlined in **Table I.8**.

TABLE I.8
Dust Control
DNCS Environmental Solutions

A water truck will be available to apply water or approved recycled waters to the access roads and active areas within the DNCA Facility, as needed to reduce dust. In addition, the posted speed limit will be 15 mph inside the property. Listed below are routine operations that are the most likely sources of dust, along with recommended primary and secondary control measures:

- **Disposal Operations -**
 - Primary Control Measure: Pave of high-traffic areas, apply water to unpaved roads as necessary, enforce speed limit posted on site.

- Secondary Control Measure: Apply dust surfactant to unpaved portions of the Facility, provide additional pavement.
- **Excavations -**
 - Primary Control Measure: Pre-water areas prior to and during excavation. Water areas of excavation and haul roads during and at the end of each day to form a dust-binding soil crust.
 - Secondary Control Measure: Phase work to reduce the amount of disturbed surfaces, apply additional water, work at lower elevations (i.e., below-grade) and when wind velocity is high.
- **Stockpiles -**
 - Primary Control Measure: Pre-water areas prior to excavation. Apply water to short-term stockpiles and when transporting soils.
 - Secondary Control Measure: Control vehicle access to the area. Apply dust surfactant to long-term stockpiles and apply seed/mulch to prevent erosion.
- **Track out extending onto public roadways –**
 - Primary Control Measure: Pave on-site entrance road, sweep as necessary.
 - Secondary Control Measure: Apply recycled asphalt, caliche/gravel pads or similar materials at the transition from unpaved to paved roadways.
- **Unpaved roadways and parking areas –**
 - Primary Control Measure: Limit vehicle speed via posting speed limits; apply water, use aggregate or caliche.
 - Secondary Control Measure: Apply water and surfactants to unpaved roads and parking lots, as needed, provide additional pavement.

- (7) **For areas of the landfill that will not receive additional oil field waste for one month or more, but have not reached the final waste elevation, the operator shall provide intermediate cover that shall be:**
- (a) **approved by the division;**
 - (b) **stabilized with vegetation; and**
 - (c) **inspected and maintained to prevent erosion and manage infiltration or leachate during the oil field waste deposition process.**

*DNCS will place an intermediate cover at least 6-inches thick, in addition to daily cover, over areas of the landfill that will not receive further oil field waste for one month or more, but have not reached final elevation. Areas of intermediate cover will be properly sloped to promote clean run-off and minimize leachate generation, and may be used for temporary cover stockpiles. Intermediate cover may be seeded with temporary grasses such as rye if the area will not be subject to additional landfilling within 12 months. If long-term re-vegetation is required, native grass will be applied after consultation with the local Natural Resources Conservation Service (NRCS) representative (see Closure/Post-closure Plan, **Volume II.4**). Areas of intermediate cover will be inspected periodically for erosion and settlement, and prompt regrading and maintenance action will be initiated as required.*

- (8) When the operator has filled a landfill cell, the operator shall close it pursuant to the conditions contained in the surface waste management facility permit and the requirements of Paragraph (2) of Subsection D of 19.15.36.18 NMAC. The operator shall notify the division's environmental bureau at least three working days prior to a landfill cell's closure.**

*DNCS will close a landfill cell when it has been filled to final grade in accordance with the conditions established in the Surface Waste Management Permit, 19.15.36.18.D(2) NMAC, and the Closure/Post-closure Plan provided in **Volume II.4** of this Application. DNCS will install a prescriptive or alternative final cover system in accordance with 19.15.36.14.C(8) NMAC (see **Permit Plans, Volume III.1**). DNCS will notify OCD at least three working days prior to the landfill cell closure.*

- B. Ground water monitoring program. If fresh ground water exists at a site, the operator shall, unless otherwise approved by the division, establish a ground water monitoring program, approved by the division's environmental bureau, which shall include a ground water monitoring work plan, a sampling and analysis plan, a ground water monitoring system and a plan for reporting ground water monitoring results. The ground water monitoring system shall consist of a sufficient number of wells, installed at appropriate locations and depths, to yield ground water samples from the uppermost aquifer that:**
 - (1) represent the quality of background ground water that leakage from a landfill has not affected; and**
 - (2) represent the quality of ground water passing beneath and down gradient of the surface waste management facility.**

*DNCS presents information in **Volume IV.2** (Hydrogeology) relating to the confirmed absence of groundwater resources beneath the proposed Facility. Justification for monitoring the most appropriate depth at the Chinle formation interface vs. uppermost aquifer, reportedly in excess of 600 ft below the site, is specifically outlined in **Volume IV.2**. As an alternative to groundwater monitoring DNCS has proposed to monitor the vadose zone as detailed in the Proposal for Vadose Zone Monitoring (**Attachment II.8.A**). The Vadose Zone Monitoring Plan is presented as **Volume II.8** of this Application. The Plan includes the locations and construction details for ten potential vadose zone wells; as well as procedures for routine monitoring, and sampling and analysis, should this be required.*

- C. Landfill design specification. New landfill design systems shall include a base layer and a lower geomembrane liner (e.g., composite liner), a leak detection system, an upper geomembrane liner, a leachate collection and removal system, a leachate collection and removal system protective layer, an oil field waste zone and a top landfill cover.**

*DNCS will construct a liner designed consistent with the requirements of 19.15.36.14.C NMAC at the proposed Facility. The liner design is described in **Volume III.1 (Engineering Design)** and will be installed on a compacted subgrade and employ the prescriptive 60-mil high-density polyethylene (HDPE) liner as both the lower and upper components of the double-liner system (see **Permit Plans, Volume III.1**). The leak detection system will consist of a 200-mil geonet installed between the upper and lower geosynthetic liner system that will drain to the sump areas and confirm the integrity of the liner system. A 2 ft of uncompacted soil with a minimum saturated hydraulic conductivity (k_{sat}) of 5.2×10^{-4} cm/sec (i.e., drainage layer; protective soil layer; PSL) will be installed above the upper geosynthetic liner system to reduce any potential for hydrostatic head on the primary liner. The proposed alternative liner system was evaluated with the HELP Model (**Volume III.4**) and confirmed to be equivalent to the prescriptive liner system.*

*The liner system is detailed in the **Permit Plans (Volume III.1), Sheet 8**; and in the **Liner CQA Plan (Volume II.7)** provides geosynthetics specifications; and compatibility documentation is demonstrated in **Volume III.6**.*

- (1) The base layer shall, at a minimum, consist of two feet of clay soil compacted to a minimum 90 percent standard proctor density (ASTM D-698) with a hydraulic conductivity of 1×10^{-7} cm/sec or less. In areas where no ground water is present, the operator may propose an alternative base layer design, subject to division approval.**

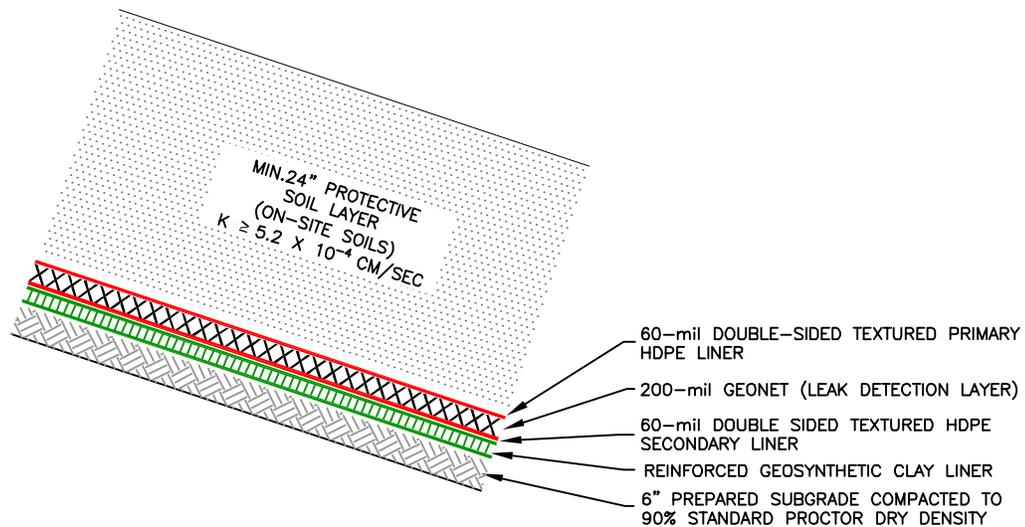
*DNCS is proposing to install the primary synthetic liner on a 6-inch-thick subgrade, compacted to 90% standard proctor density followed by a geosynthetic clay liner (GCL) with a hydraulic conductivity of 5×10^{-9} centimeters per second (cm/sec) or less as the alternative base layer design. Calculations and technical properties of the compacted subgrade system and GCL are included in **Volume III**. The **Permit Plans (Volume III.1)** provide design elements of the subgrade component of the composite liner. The proposed alternative liner*

subgrade was evaluated with the HELP Model (Volume III.4) in conjunction with the proposed liner system and confirmed to provide protection equivalent or greater as to the prescriptive liner system.

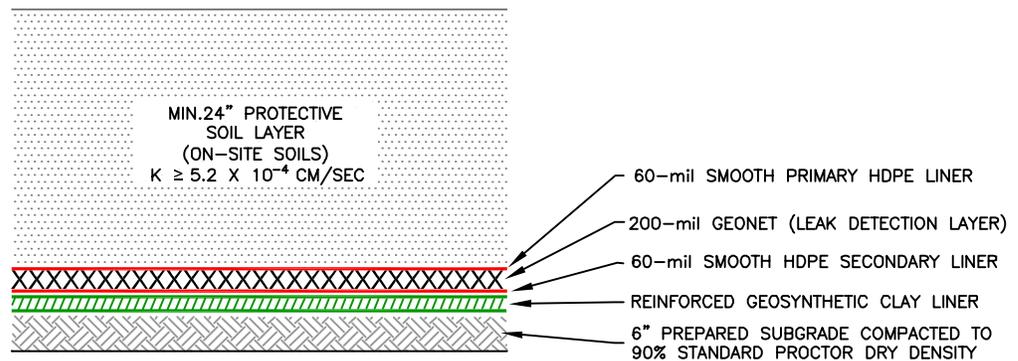
- (2) The lower geomembrane liner shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division.**

*The proposed liner design for the DNCS Landfill will employ the prescriptive 60-mil high-density polyethylene (HDPE) liner as the lower component of the liner system. HDPE has proven itself over numerous years to provide vastly superior performance to the 30-mil flexible polyvinylchloride (PVC) material that is also prescribed. The ease of seaming and testing HDPE also enhance its use in this application. The liner system is shown on **Figure I.5** and in the **Permit Plans (Volume III.1)**. The **Liner CQA Plan (Volume II.7)** provides geosynthetics specifications; and compatibility documentation is demonstrated in **Volume III.6**.*

- (3) The operator shall place the leak detection system, which shall consist of two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-5} cm/sec or greater, between the lower and upper geomembrane liners. The leak detection system shall consist of a drainage and collection system placed no more than six inches above the lower geomembrane liner in depressions and sloped so as to facilitate the earliest possible leak detection at designated collection points. Drainage piping shall be designed to withstand chemical attack from oil field waste and leachate and structural loading and other stresses and disturbances from overlying oil field waste, cover materials, equipment operation, expansion or contraction, and to facilitate clean-out maintenance. The material placed between the pipes and laterals shall be sufficiently permeable to allow the transport of fluids to the drainage pipe. The slope of the landfill sub-grade and drainage pipes and laterals shall be at least two percent grade; *i.e.*, two feet of vertical drop per 100 horizontal feet. The piping collection network shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. The operator shall seal a solid drainage pipe to convey collected liquids to a corrosion-proof sump or sumps located outside the landfill's perimeter for observation, storage, treatment or disposal. The operator may install alternative designs as approved by the division.**



SIDEWALL LINER SYSTEM



FLOOR LINER SYSTEM

LINER SCHEMATIC

DNCS ENVIRONMENTAL SOLUTIONS
LEA COUNTY, NEW MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

DATE: 10/22/2013	CAD: LINER SCHEM.dwg	PROJECT #: 542.01.01
DRAWN BY: DMI	REVIEWED BY: DRT	FIGURE I.5
APPROVED BY: IKG	gei@gordonenvironmental.com	

DNCS proposes to install a leak detection system consisting of a 200-mil geonet between the lower (primary) and upper (secondary) liners, as the preferred alternative to the prescriptive 2-ft of compacted soil with a saturated hydraulic conductivity (k_{sat}) of 1×10^{-5} cm/sec. The geonet will have a minimum hydraulic conductivity (k) of 10 cm/sec. Calculations, compatibility, demonstrations and technical properties of the leak detection system are included in **Volume III** which document superior performance vs. the prescriptive design. The **Permit Plans (Volume III.1)** provide design elements of the leak detection system including:

- Minimum 2.8% slope on the liner and leak detection system vs. $\geq 2\%$ standard
- Sump and riser pipe details
- Composite liner (i.e., FML/GCL) beneath the entire double-lined footprint

The Engineering Design (**Volume III.1**) and the **Permit Plans** provide detailed specifications demonstrating that the performance of the materials exceed the prescriptive standards. This use of the geonet in this alternative liner cross-section was evaluated with the HELP Model (**Volume III.4**) and confirmed to provide protection superior to the prescriptive liner system.

- (4) **The operator shall place the upper geomembrane liner, which shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division, over the leak detection system.**

DNCS will construct a liner design that will employ the prescriptive 60-mil high-density polyethylene (HDPE) liner as the upper component of the liner system. The liner system is shown on **Figure I.5** and the **Permit Plans (Volume III.1)**; and the Liner CQA Plan (**Volume II.7**) provides geosynthetics specifications; and compatibility documentation is demonstrated in **Volume III.6**.

- (5) **The operator shall place the leachate collection and removal system, which shall consist of at least two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-2} cm/sec or greater, over the upper geomembrane liner to facilitate drainage. The leachate collection and removal system shall consist of a drainage and collection and removal system placed no more than six inches above the upper geomembrane liner in depressions and sloped so as to facilitate the maximum leachate collection. Piping shall be designed to withstand chemical attack from oil field waste or leachate and structural loading and other stresses and disturbances from overlying oil field waste, cover materials, equipment operation, expansion or contraction and to facilitate clean-out maintenance. The material placed between the pipes and laterals shall be sufficiently permeable to allow the**

transport of fluids to the drainage pipe. The slope of the upper geomembrane liner and drainage lines and laterals shall be at least two percent grade; i.e., two feet of vertical drop per 100 horizontal feet. The piping collection network shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. The operator shall seal a solid drainage pipe to convey collected fluids outside the landfill's perimeter for storage, treatment and disposal. The operator may install alternative designs as approved by the division.

This collection zone will consist of a 2-ft thick uncompacted soil layer with a hydraulic conductivity of at least 5.2×10^{-4} cm/sec. This component of the alternative liner cross-section was evaluated with the HELP Model (Volume III.4) and confirmed to provide protection and performance superior to the prescriptive liner system. Drainage piping consisting of minimum 6 inch dia. SDR 11 HDPE piping will be installed to collect fluids from the liner surface. Calculations, compatibility, demonstrations and technical properties of the leak detection system are provided in Volume III. The Permit Plans (Volume III.1) provides design elements of the leachate collection and removal system including:

- *Minimum 2.8% slope on the liner and leak detection system*
- *Solid (risers) and perforated pipe details*
- *Sump and riser pipe configuration*
- *Composite liner (i.e., FML/GCL) as the secondary liner system*

The Engineering Design (Volume III.1) and the Permit Plans provide detailed specifications for the piping collection systems demonstrating that the materials exceed the prescriptive standards.

- (6) The operator shall place the leachate collection and removal system protection layer, which shall consist of a soil layer at least one foot thick with a saturated hydraulic conductivity of 1×10^{-2} cm/sec or greater, over the leachate collection and removal system.**

DNCS is proposing to install 2-ft of uncompacted soil with a minimum k_{sat} of 5.2×10^{-4} cm/sec, or greater, as the protection layer over the leachate collection and removal system. This component of the alternative liner cross-section was evaluated with the HELP Model (Volume III.4) and confirmed to provide protection and performance superior to the prescriptive liner

system. *HELP Modeling results indicate a maximum head of 5.2 inches on the liner vs. the design standard of ≤ 12 inches.*

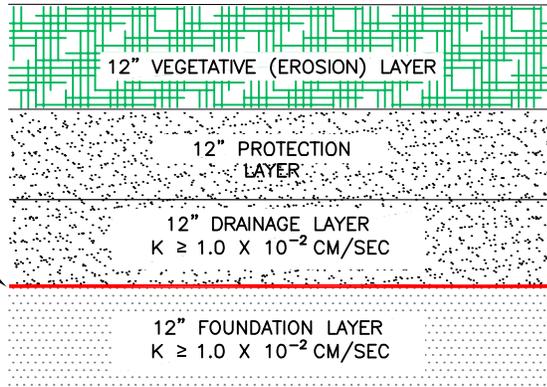
- (7) The operator shall place oil field waste over the leachate collection and removal system protective layer.**

DNCS proposes to place oil field waste over the PSL for the leachate collection and removal system. The first lift, up to 5 ft in thickness, will consist of select uncompacted materials screened for items that could damage the liner (i.e., pipes, metal, etc.).

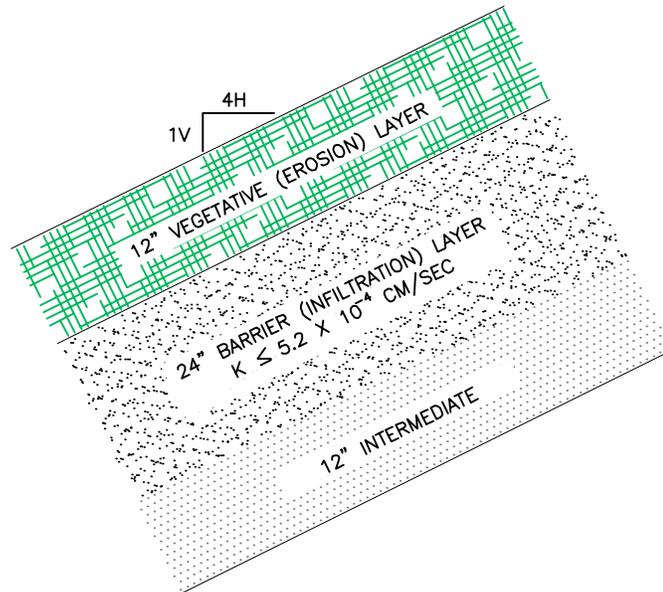
- (8) The top landfill cover design shall consist of the following layers (top to bottom): a soil erosion layer composed of at least 12 inches of fertile topsoil re-vegetated in accordance with the post closure provisions of Subparagraph (b) of Paragraph (2) of Subsection D of 19.15.36.18 NMAC; a protection or frost protection layer composed of 12 to 30 inches of native soil; a drainage layer composed of at least 12 inches of sand or gravel with a saturated hydraulic conductivity of 1×10^{-2} cm/sec or greater and a minimum bottom slope of four percent, a hydraulic barrier-layer-geomembrane (minimum of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division); and a gas vent or foundation layer composed of at least 12 inches of sand or gravel above oil field waste with soils compacted to the minimum 80 percent Standard Proctor Density. The operator shall install the top landfill cover within one year of achieving the final landfill cell waste elevation. The operator shall ensure that the final landfill design elevation of the working face of the oil field waste is achieved in a timely manner with the date recorded in a field construction log. The operator shall also record the date of top landfill cover installation to document the timely installation of top landfill covers. The operator shall provide a minimum of three working days notice to the division in advance of the top landfill cover's installation to allow the division to witness the top landfill cover's installation.**

*DNCS proposes a prescriptive cover for the crown per 19.15.36.14.C(8) NMAC; and proposes an alternative final cover system for the sideslopes as described in 19.15.36.14.C.(9) NMAC. The crown or top deck of the finished landfill complies with the prescriptive standards for final covers, with a double-sided textured HDPE liner as the geosynthetic component; and a 5% design slope (**Figure I.6**).*

60-mil DOUBLE-SIDED TEXTURED HDPE LINER



**FINAL COVER DETAIL CROWN
PRESCRIPTIVE DESIGN**



**FINAL COVER DETAIL SIDESLOPE
EVAPOTRANSPIRATION DESIGN**

**FINAL COVER
PROFILE**

DNCS ENVIRONMENTAL SOLUTIONS
LEA COUNTY, NEW MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
Bernallillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

DATE: 10/22/2013	CAD: FINAL COVER.dwg	PROJECT #: 542.01.01
DRAWN BY: DMI	REVIEWED BY: DRT	FIGURE I.6
APPROVED BY: IKG	gei@gordonenvironmental.com	

The sidewall final cover design is an evapotranspiration (ET) cap consisting of on-site soils. This is a more sustainable design than the prescriptive standard, as it does not require importation of off-site materials (i.e., HDPE from Houston). In addition, the prescriptive design is not stable on sideslopes, as soils above the geosynthetic layer will have a tendency to slide at 4:1, requiring extensive maintenance.

- (9) Alternatively, the operator may propose a performance-based landfill design system using geosynthetics or geocomposites, including geogrids, geonets, geosynthetic clay liners, composite liner systems, etc., when supported by EPA’s “hydrologic evaluation of landfill performance” (HELP) model or other division-approved model. The operator shall design the landfill to prevent the “bathtub effect”. The bathtub effect occurs when a more permeable cover is placed over a less permeable bottom liner or natural subsoil.**

*DNCS has undertaken an evaluation of the materials and climate of the Facility based on the United States Environmental Protection Agency’s (USEPA) HELP Model and is proposing an alternative final cover system for the sideslopes (**Figure I.6**) based on the ET technology. The proposed sideslope final cover will include 1 ft of vegetation cover on top of a 2-ft barrier layer as demonstrated in **Volume III.4**.*

- (10) External piping, e.g., leachate collection, leak detection and sump removal systems shall be designed for installation of a sidewall riser pipe. Pipes shall not penetrate the liner with the exception of gas vent or collection wells where the operator shall install a flexible clamped pipe riser through the top landfill cover liner that will accommodate oil field waste settling and will prevent tears.**

DNCS proposes to install the necessary piping to transfer liquids collected in the leak detection and leachate collection sumps up the sideslope and through the proposed alternative final cover system on the sideslope. This will allow for the measurement and removal of liquids that accumulate in either system. Risers for both systems will be constructed of 12 in dia. HDPE; and there are no pipe penetrations of either the primary or secondary liners.

D. Liner specifications and requirements.

(1) General requirements.

- (a) Geomembrane liner specifications. Geomembrane liners shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division. Geomembrane liners**

shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. Geomembrane liners shall be composed of impervious, geosynthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Liners shall also be resistant to ultraviolet light, or the operator shall make provisions to protect the material from sunlight. Liner compatibility shall comply with EPA SW-846 method 9090A.

*DNCS proposes a landfill liner design that will employ the prescriptive 60-mil HDPE liner as the upper component and the lower component of the liner system. The liner system is shown on the **Permit Plans (Volume III.1)**; the Liner CQA Plan (**Volume II.7**) provides geosynthetics specifications and installation standards; and compatibility documentation is demonstrated in **Volume III.6**.*

- (b) **Liners shall be able to withstand projected loading stresses, settling and disturbances from overlying oil field waste, cover materials and equipment operations.**

*The liner system will be able to withstand projected loading stresses, settling, and disturbances from overlying oil field waste, cover materials and equipment operations as demonstrated in the Liner Stress Analysis (**Volume III.7**), and Settlement Calculations (**Volume III.9**).*

- (c) **The operator shall construct liners with a minimum of two percent slope to promote positive drainage and to facilitate leachate collection and leak detection.**

*DNCS will construct the liner with a 2.8% slope to promote positive drainage and to facilitate leachate collection and leak detection. The liner system design is shown on the **Permit Plans (Volume III.1)**.*

- (2) **Additional requirements for geomembranes.**
 - (a) **Geomembranes shall be compatible with the oil field waste to be disposed. Geomembranes shall be resistant to chemical attack from the oil field waste or leachate. The operator shall demonstrate this by means of the manufacturer's test reports, laboratory analyses or other division-approved method.**

The liner system geosynthetics specifications are provided in the CQA Plan (Volume II.7); and compatibility documentation is demonstrated in Volume III.6.

- (b) **Geosynthetic material the operator installs on a slope greater than 25 percent shall be designed to withstand the calculated tensile forces acting upon the material. The design shall consider the maximum friction angle of the geosynthetic with regard to a soil-geosynthetic or geosynthetic-geosynthetic interface and shall ensure that overall slope stability is maintained.**

There are no liner systems designed for slopes greater than 25%. The liner system will be able to withstand calculated tensile forces acting upon the material as demonstrated in the Liner Stress Analysis (Volume III.7), and Settlement Calculations (Volume III.9).

- (c) **The operator shall thermally seal (hot wedge) field seams in geosynthetic material with a double track weld to create an air pocket for non-destructive air channel testing. In areas where double-track welding cannot be achieved, the operator may propose alternative thermal seaming methods. A stabilized air pressure of 35psi, plus or minus one percent, shall be maintained for at least five minutes. The operator shall overlap liners four to six inches before seaming, and shall orient seams parallel to the line of maximum slope; *i.e.*, oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. The operator shall use factory seams whenever possible. The operator shall not install horizontal seams within five feet of the slope's toe. Qualified personnel shall perform all field seaming.**

The Engineering Design (Volume III.1) and Liner CQA Plan (Volume II.7) provide detailed specifications for the installation of geosynthetics in compliance with this section, including:

- *Foundation preparation*
- *Maximum (4:1) and minimum slopes (5%)*
- *Thermal seaming and testing procedures*
- *Field seams that will be oriented parallel to the line of maximum slope.*
- *Minimizing the number of field seams in corners and irregularly shaped areas.*
- *No horizontal seams within 5 ft of the toe of slope.*

All liner systems will be installed by qualified contractors with a least 10 million square ft of geosynthetic installation experience.

E. Requirements for the soil component of composite liners.

- (1) The operator shall place and compact the base layer to 90 percent standard proctor density on a prepared sub-grade.**

DNCS is proposing to place and compact the base layer to 90% Standard Proctor Density on a prepared subgrade of in situ soils per the CQA Plan (Volume II.7). Calculations and technical properties of the subgrade are included in Volume III, the Permit Plans provides design elements of the subgrade component of the composite liner.

- (2) The soil surface upon which the operator installs a geosynthetic shall be free of stones greater than one half inch in any dimension, organic matter, local irregularities, protrusions, loose soil and abrupt changes in grade that could damage the geosynthetic.**

DNCS will install the geosynthetic liner on a surface that is free of angular stones, organic matter, local irregularities, protrusions, loose soil or abrupt changes in grade that could potentially damage the geosynthetic (Volume II.7). Technical properties of the geosynthetic are provided in the CQA Plan, Volume II.7. The Permit Plans (Volume III.1) provide installation guidance for the geosynthetic component of the composite liner.

- (3) The operator shall compact a clay soil component of a composite liner to a minimum of 90 percent standard proctor density, which shall have, unless otherwise approved by the division, a plasticity index greater than 10 percent, a liquid limit between 25 and 50 percent, a portion of material passing the no. 200 sieve (0.074 mm and less fraction) greater than 40 percent by weight; and a clay content greater than 18 percent by weight.**

DNCS proposes to install a GCL below the synthetic liner. The soil subgrade below the GCL will be in situ materials with superior foundation characteristics to the fine-grained soils specified. Calculations and technical properties of the GCL and compacted soil subgrade system are included in Volume III. The Permit Plans (Volume III.1) provide design elements of this component of the composite liner. This component of the alternative liner system was evaluated with the HELP Model (Volume III.4) and confirmed to provide protection and performance equivalent to the prescriptive liner system.

- F. The leachate collection and removal system protective layer and the soil component of the leak detection system shall consist of soil materials that shall be free of organic matter, shall have a portion of material passing the no. 200 sieve no greater than five percent by weight and shall have a uniformity coefficient (Cu) less than 6, where Cu is defined as D_{60}/D_{10} . Geosynthetic materials or geocomposites including geonets and geotextiles, if used as components of the leachate collection and removal or leak detection system, shall have a hydraulic conductivity, transmissivity and chemical and physical qualities that oil field waste placement, equipment operation or leachate generation will not adversely affect. These geosynthetics or geocomposites, if used in conjunction with the soil protective cover for liners, shall have a hydraulic conductivity designed to ensure that the liner's hydraulic head never exceeds one foot.**

DNCS proposes to install a leak detection system consisting of a 200-mil geonet between the primary and secondary liners. The geocomposite has a minimum k value of 10 cm/sec. Calculations, compatibility, demonstrations and technical properties of the leak detection system are included in Volume III. The Permit Plans provide design elements of the leak detection system including:

- *Minimum 2.8% slope on the liner and leak detection system*
- *Sump and riser pipe detail*
- *Composite liner (i.e., FML/GCL) under each leak detection sump*

This component of the alternative liner cross-section was evaluated with the HELP Model (Volume III.4) and confirmed to provide protection and performance equivalent to the prescriptive liner system.

- G. Landfill gas control systems. If the gas safety management plan or requirements of other federal, state or local agencies require the installation of a gas control system at a landfill, the operator shall submit a plan for division approval, which shall include the following:**
- (1) the system's design, indicating the location and design of vents, barriers, collection piping and manifolds and other control measures that the operator will install (gas vent or collection wells shall incorporate a clamped and seamed pipe riser design through the top cover liner);**

Not Applicable. LFG is generated from the decomposition of readily degradable organic material, such as paper and other organic household and commercial wastes. The primary by-products, typically comprising over 99% of LFG by volume, are methane and carbon dioxide as stated in USEPA's AP-42 "Emission Factor Documentation" (08/19/97):

AP 42 – 2.4 Municipal Solid Waste Landfills

2.4.4 Emissions

Methane (CH₄) and CO₂ are the primary constituents of landfill gas, and are produced by microorganisms within the landfill under anaerobic conditions. Transformations of CH₄ and CO₂ are mediated by microbial populations that are adapted to the cycling of materials in anaerobic environments.

LFG is produced when there is a significant supply of readily putrescible organic material and moisture; plus a lack of oxygen. Oil field wastes do not provide a suitable environment for LFG production, and over 95% of the projected waste types would be subtracted from the decomposition equation used to demonstrate compliance with air quality requirements. Typical oil field wastes will not generate significant quantities of LFG, or the requisite pressure to promote migration. Conventional landfill gas monitoring and control systems are not necessary or effective, and the waste matrix itself would inhibit migration or collection if it contained < 5% degradable organics.

In addition, the New Mexico Environment Department (NMED) and USEPA do not mandate the installation of LFG controls until the landfill reaches a design capacity of over 3.2 million cubic yards (cy); or if migration is confirmed. Of this volume, typically over 75% is assumed to be organic waste subject to decomposition (as opposed to <5% of oil field waste). A surface waste management facility would need a design capacity of 64 million cy to qualify for landfill gas controls under NMED and USEPA standards, and DNCS has a design capacity of 33.6 million ± cubic yards.

- (2) if gas recovery is proposed, the design of the proposed gas recovery system and the system's major on-site components, including storage, transportation, processing, treatment or disposal measures required in the management of generated gases, condensates or other residues;**

DNCS does not proposing to conduct gas recovery or processing, as it will not be practical.

- (3) if gas processing is proposed, a processing plan designed in a manner that does not interfere or conflict with the activities on the site or required control measures or create or cause danger to persons or property;**
- (4) if gas disposal is proposed, a disposal plan designed:**
 - (a) in a manner that does not interfere or conflict with the activities on the site or with required control measures;**

- (b) so as not to create or cause danger to persons or property; and
- (c) with active forced ventilation, using vents located at least one foot above the landfill surface at each gas vent's location;
- (5) physical and chemical characterization of condensates or residues that are generated and a plan for their disposal;
- (6) means that the operator will implement to prevent gas' generation and lateral migration such that
 - (a) the concentration of the gases the landfill generates does not exceed 25 percent of the lower explosive limit for gases in surface waste management facility structures (excluding gas control or recovery system components); and
 - (b) the concentration of gases does not exceed the lower explosive limit for gases at the surface waste management facility boundary; and

Not Applicable. H₂S does not have an upper or lower explosive limit. In addition the following factors which inhibit the potential generation of other explosive gases (i.e., CH₄):

- *The oil field waste proposed to be accepted by DNCS is primarily non-putrescible (i.e., < 5%).*
- *The semi-arid climate characteristics of Lea County (low precipitation e.g., 12 inch of annual rainfall) (Volume IV.1).*
- *Low potential for moisture contribution from other sources, due to the installation of engineered control systems that divert run-on away from the disposal area.*
- *The vadose zone monitoring wells will be tested for the potential presence of methane, as described in Vadose Zone Monitoring Plan (Volume II.8). These wells are capable of detecting gas in the flow zone before it reaches the property line.*

- (7) a routine gas monitoring program providing for monitoring at least quarterly; the specific type and frequency of monitoring to be determined based on the following:
 - (a) soil conditions;
 - (b) the hydrogeologic and hydraulic conditions surrounding the surface waste management facility; and
 - (c) the location of surface waste management facility structures and property lines.

DNCS will implement a routine gas monitoring program for H₂S as outlined in Volume II.3; Hydrogen Sulfide Prevention and Contingency Plan and Volume II.1; Operations, Inspection, and Maintenance Plan. Vadose Zone Monitoring Plan (Volume II.8) describes LFG monitoring in the vadose zone wells.

H. Landfill gas response. If gas levels exceed the limits specified in Paragraph (6) of Subsection G of 19.15.36.14 NMAC, the operator shall:

- (1) immediately take all necessary steps to ensure protection of fresh water, public health, safety and the environment and notify the division;**
- (2) within seven days of detection, record gas levels detected and a description of the steps taken to protect fresh water, public health, safety and the environment;**
- (3) within 30 days of detection, submit a remediation plan for gas releases that describes the problem's nature and extent and the proposed remedy; and**
- (4) within 60 days after division approval, implement the remediation plan and notify the division that the plan has been implemented.**

DNCS will comply with this section in the event that landfill gas is detected in the vadose zone monitoring system; and emergency response to elevated H₂S levels is addressed in Volume II.3; Hydrogen Sulfide Prevention and Contingency Plan.

19.15.36.15 SPECIFIC REQUIREMENTS APPLICABLE TO LANDFARMS:

Not Applicable. DNCS does not propose to operate an OCD regulated landfarm.

19.15.36.16 SMALL LANDFARMS:

Small landfarms as defined in Paragraph (5) of Subsection A of 19.15.36.7 NMAC are exempt from 19.15.36 NMAC except for the requirements specified in 19.15.36.16 NMAC.

Not Applicable.

19.15.36.17 SPECIFIC REQUIREMENTS APPLICABLE TO EVAPORATION, STORAGE, TREATMENT AND SKIMMER PONDS:

A. Engineering design plan. An applicant for a surface waste management facility permit or modification requesting inclusion of a skimmer pit; an evaporation, storage or treatment pond; or a below-grade tank shall submit with the surface waste management facility permit application a detailed engineering design plan, certified by a registered profession engineer, including operating and maintenance procedures; a closure plan; and a hydrologic report that provides sufficient information and detail on the site's topography, soils, geology, surface hydrology and ground water hydrology to enable the division to evaluate the actual and potential effects on soils, surface water and ground water. The plan shall include detailed information on dike protection and structural integrity; leak

detection, including an adequate fluid collection and removal system; liner specifications and compatibility; freeboard and overtopping prevention; prevention of nuisance and hazardous odors such as H₂S; an emergency response plan, unless the pit is part of a surface waste management facility that has an integrated contingency plan; type of oil field waste stream, including chemical analysis; climatological factors, including freeze-thaw cycles; a monitoring and inspection plan; erosion control; and other pertinent information the division requests.

*The proposed DNCS Facility includes both a Processing Area and a Landfill. The Processing Area design includes (at full build-out) 12 evaporation ponds. **Volume III** (Engineering Design and Calculations), certified by I. Keith Gordon, P.E., provides the detailed engineering design plan for the proposed surface waste management facility, including:*

- *liner details*
- *calculations detailing dike protection and structural integrity*
- *leak detection system*
- *liner specifications and compatibility documentation*
- *freeboard and overtopping (wave action) analysis*
- *erosion control*
- *fluid collection and removal system*

***Volume II** (Facility Management Plans) describes:*

- *operation and maintenance procedures*
- *Closure/Post-closure Plan*
- *H₂S Prevention and Contingency Plan*
- *emergency response plan*
- *monitoring and inspection plan*
- *oil field waste management plan*
- *Contingency Plan*
- *chemical analysis*

***Volume IV** (Siting and Hydrogeology) describes:*

- *site topography*
- *soils*
- *geology*
- *surface hydrology*
- *groundwater hydrology*
- *climatology*

B. Construction, standards.

- (1) In general. The operator shall ensure each pit, pond and below-grade tank is designed, constructed and operated so as to contain liquids and solids in a manner that will protect fresh water, public health, safety and the environment.**

The Liner CQA Plan (Volume II.7) provides detailed procedures for the proper construction of the berms and liner system in compliance with the Permit Plans (Volume III.1). The Processing Area, including pits, and ponds, is designed and will be constructed and operated so as to protect fresh water, safety, and the environment.

- (2) Liners required. Each pit or pond shall contain, at a minimum, a primary (upper) liner and a secondary (lower) liner with a leak detection system appropriate to the site's conditions.**

DNCS will comply with this requirement. Volume III.1 provides the detail for the primary liner, secondary liner, and leak detection system that will be installed for each evaporation pond in compliance with these requirements.

- (3) Liner specifications. Liners shall consist of a 30-mil flexible PVC or 60-mil HDPE liner, or an equivalent liner approved by the division. Synthetic (geomembrane) liners shall have a hydraulic conductivity no greater than 1×10^{-9} cm/sec. Geomembrane liners shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salts and acidic and alkaline solutions. Liner materials shall be resistant to ultraviolet light, or the operator shall make provisions to protect the material from sunlight. Liner compatibility shall comply with EPA SW-846 method 9090A.**

The liner system design for the Processing Area ponds has been designed consistent with Section 19.15.36.17.B.(3) NMAC. The liner design will employ the prescriptive 60-mil HDPE liner as the upper component and the lower component of the liner system. The leak detection system will consist of a 200-mil HDPE geonet installed between the upper and secondary liner system that will drain to the sump areas. HDPE is the preferred material for waste containment based on over 30 years of successful applications.

The liner system is shown on the Permit Plans (Volume III.1); and the Liner CQA Plan (Volume II.7) provides geosynthetics specifications; and compatibility documentation is demonstrated in Volume III.6.

- (4) **Alternative liner media.** The division may approve other liner media if the operator demonstrates to the division's satisfaction that the alternative liner protects fresh water, public health, safety and the environment as effectively as the specified media.

The liner design will employ the prescriptive 60-mil HDPE liner as the upper component and lower component of the liner system. The alternative leak detection system will consist of a 200-mil geonet installed between the upper and secondary liner system draining towards the sump areas.

- (5) **Each pit or pond shall have a properly constructed foundation or firm, unyielding base, smooth and free of rocks, debris, sharp edges or irregularities, in order to prevent rupture or tear of the liner and an adequate anchor trench; and shall be constructed so that the inside grade of the levee is no steeper than 2H:1V. Levees shall have an outside grade no steeper than 3H:1V. The levees' tops shall be wide enough to install an anchor trench and provide adequate room for inspection and maintenance. The operator shall minimize liner seams and orient them up and down, not across a slope. The operator shall use factory seams where possible. The operator shall ensure field seams in geosynthetic material are thermally seamed (hot wedge) with a double track weld to create an air pocket for non-destructive air channel testing. A stabilized air pressure of 35 psi, plus or minus one percent, shall be maintained for at least five minutes. The operator shall overlap liners four to six inches before seaming, and orient seams parallel to the line of maximum slope, i.e., oriented along, not across, the slope. The operator shall minimize the number of field seams in corners and irregularly shaped areas. There shall be no horizontal seams within five feet of the slope's toe. Qualified personnel shall perform field seaming.**

The Engineering Design (Volume III.1) and Liner CQA Plan (Volume II.7) provide detailed specifications for the installation of geosynthetics in compliance with this section, including:

- *Foundation preparation*
- *Maximum (3:1) and minimum slopes (2%)*
- *Thermal seaming and testing procedures*
- *Field seams that will be oriented parallel to the line of maximum slope*
- *Minimizing the number of field seams in corners and irregularly shaped areas*
- *No horizontal seams within five ft of the toe of slope*

All liner systems will be installed by qualified contractors with a least 10 million square ft of geosynthetics installation experience.

- (6) **At a point of discharge into or suction from the lined pit, the liner shall be protected from excessive hydrostatic force or mechanical damage, and external discharge lines shall not penetrate the liner.**

*The liner details shown on the **Permit Plans (Volume III.1)** indicate the methods used to protect the liner. To address the hydrostatic forces and potential mechanical damage to the primary liner as a result of pumping into or suction out of the lined ponds; an additional sheet of 60-mil HDPE liner will be welded overtop of the primary liner in the areas that these activities are expected to occur. The **Permit Plans, Sheet 3** shows the location of the additional 60-mil HDPE layer. There are no liner pipe penetrations in the facility design with the exception of the leak detection riser at the top of the slope.*

- (7) **Primary liners shall be constructed of a synthetic material.**

See response to 19.15.36.17.B.(3) NMAC.

- (8) **A secondary liner may be a synthetic liner or an alternative liner approved by the division. Secondary liners constructed with compacted soil membranes, i.e., natural or processed clay and other soils, shall be at least three feet thick, placed in six-inch lifts and compacted to 95 percent of the material's standard proctor density, or equivalent. Compacted soil membranes used in a liner shall undergo permeability testing in conformity with ASTM standards and methods approved by the division before and after construction. Compacted soil membranes shall have a hydraulic conductivity of no greater than 1×10^{-8} cm/sec. The operator shall submit results of pre-construction testing to the division for approval prior to construction.**

DNCS is not proposing a secondary alternate liner constructed of a soil component. DNCS proposes to utilize a secondary liner option consisting of 60-mil HDPE. See response to 19.15.36.17.B.(4) NMAC.

- (9) **The operator shall place a leak detection system between the lower and upper geomembrane liners that consists of two feet of compacted soil with a saturated hydraulic conductivity of 1×10^{-5} cm/sec or greater 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 so as to facilitate the earliest possible leak detection. Piping used shall be designed to withstand chemical attack from oil field waste or leachate; structural loading from stresses and**

disturbances from overlying oil field waste, cover materials, equipment operation or expansion or contraction; and to facilitate clean-out maintenance. The material placed between the pipes and laterals shall be sufficiently permeable to allow the transport of fluids to the drainage pipe. The slope of the interior sub-grade and of drainage lines and laterals shall be at least a two percent grade, i.e., two feet vertical drop per 100 horizontal feet. The piping collection system shall be comprised of solid and perforated pipe having a minimum diameter of four inches and a minimum wall thickness of schedule 80. The operator shall seal a solid sidewall riser pipe to convey collected fluids to a collection, observation and disposal system located outside the perimeter of the pit or pond. The operator may install alternative methods as approved by the division.

DNCS is proposing to install an alternative leak detection system consisting of a 200-mil geonet between the primary and secondary liners. The geocomposite will have a minimum k value of 10 cm/sec. Calculations, compatibility, demonstrations and technical properties of the leak detection system are included in Volume III. The Permit Plans (Volume III.1) provide design elements of the leak detection system including:

- *Minimum 2% slope on the liner and leak detection system*
- *Sump and riser pipe details*
- *Composite liner (i.e., FML/GCL) under each leak detection sump*

The Engineering Design and the Permit Plans (Volume III.1) provide detailed specifications for the piping collection systems demonstrating that the materials exceed the prescriptive standards.

- (10) **The operator shall notify the division at least 72 hours prior to the primary liner's installation so that a division representative may inspect the leak detection system before it is covered.**

DNCS will provide a milestone schedule to OCD in advance of liner construction, and notify OCD at least 72 hours prior to the primary liner installation.

- (11) **The operator shall construct pits and ponds in a manner that prevents overtopping due to wave action or rainfall, and maintain a three foot freeboard at all times.**

DNCS will comply with this requirement. Volume III provides detailed calculations demonstrating compliance with wave action, rainfall, and freeboard standards.

- (12) **The maximum size of an evaporation or storage pond shall not exceed 10 acre-feet.**

DNCS will comply with this requirement. The proposed ponds are each approximately 9.5 acre-ft in capacity, not including freeboard.

C. Operating standards.

- (1) **The operator shall ensure that only produced fluids or non-hazardous waste are discharged into or stored in a pit or pond; and that no measurable or visible oil layer is allowed to accumulate or remain anywhere on a pit's surface except an approved skimmer pit.**

The Oil Field Waste Management Plan (Volume II.2) provides detailed procedures to ensure that only produced fluids or non-hazardous waste are placed into or stored in a pit or pond. This Plan also addresses measurable or visible oil layer and load rejection procedures.

- (2) **The operator shall monitor leak detection systems pursuant to the approved surface waste management facility permit conditions, maintain monitoring records in a form readily accessible for division inspection and report discovery of liquids in the leak detection system to the division within 24 hours.**

DNCS will comply with this requirement. The Operations, Inspection, and Maintenance Plan (Volume II.1) provides a more detailed description of monitoring, recordkeeping and procedures for management of liquids in the leak detection system.

- (3) **Fencing and netting. The operator shall fence or enclose pits or ponds to prevent unauthorized access and maintain fences in good repair. Fences are not required if there is an adequate perimeter fence surrounding the surface waste management facility. The operator shall screen, net, cover or otherwise render non-hazardous to migratory birds tanks exceeding eight feet in diameter and exposed pits and ponds. Upon written application, the division may grant an exception to screening, netting or covering requirements upon the operator's showing that an alternative method will adequately protect migratory birds or that the tank or pit is not hazardous to migratory birds.**

The perimeter of the DNCS Facility (i.e., the Processing Area and the Landfill) will be enclosed with barbed wire fencing and locking gates. The Permit Plans, Sheet 3 (Volume III.1) graphically describes the proposed locations of the existing and proposed perimeter fencing.

DNCS requests an alternate method to the prescriptive migratory bird screening requirement. The Migratory Bird Protection Plan (Volume II.6) describes the proposed alternate methodology to the screening requirement of the storage ponds. This Plan describes visual inspections and migratory bird retrieval and clean-up procedures in the unlikely event that birds require decontamination.

- (4) The division may approve spray systems to enhance natural evaporation. The operator shall submit engineering designs for spray systems to the division's environmental bureau for approval prior to installation. The operator shall ensure that spray evaporation systems are operated so that spray-borne suspended or dissolved solids remain within the perimeter of the pond's lined portion.**

DNCS proposes to install a spray system utilizing mechanical evaporators to enhance natural evaporation in the proposed ponds. The Operations, Inspection, and Maintenance Plan (Volume II.1) provides the design, operation and maintenance of the proposed system. The proposed mechanical evaporation system is designed to prevent spray-borne suspended or dissolved solids from exiting the perimeter of the pond's liner area. In addition, this system will not be operated when wind velocity exceeds fourteen miles per hour (sustained) via automatic shut-off mechanisms. There is also a minimum setback between the ponds and the property line of 450 ft.

- (5) The operator shall use skimmer pits or tanks to separate oil from produced water prior to water discharge into a pond. The operator shall install a trap device in connected ponds to prevent solids and oils from transferring from one pond to another unless approved in the surface waste management facility permit.**

DNCS will utilize receiving and settling tanks to process water accepted at the Facility that requires separation of oil from water as described in the Operations, Inspection, and Maintenance Plan (Volume II.1). No oil processing is proposed in open pits, and oil residues will be removed from water prior to discharging into the evaporation ponds.

D. Below-grade tanks and sumps.

- (1) The operator shall construct below-grade tanks with secondary containment and leak detection. The operator shall not allow below-grade tanks to overflow. The operator shall install only below-grade tanks of materials resistant to the tank's particular contents and to damage from sunlight.**

DNCS does not propose to construct or operate below-grade tanks at the proposed Facility.

- (2) The operator shall test sumps' integrity annually, and shall promptly repair or replace a sump that does not demonstrate integrity. The operator may test sumps that can be removed from their emplacements by visual inspection. The operator shall test other sumps by appropriate mechanical means. The operator shall maintain records of sump inspection and testing and make such records available for division inspection.**

The DNCS Facility design includes below-grade sumps. The tank farm, landfill and evaporation pond containment will include leak detection systems and sumps which will be monitored in compliance with 19.15.36.17.D(2) NMAC.

E. Closure required. The operator shall properly close pits, ponds and below-grade tanks within six months after cessation of use.

DNCS will comply with this requirement. The Closure/Post-closure Plan (Volume II.4) describes closure timeframes in detail.

19.15.36.18 CLOSURE AND POST CLOSURE:

A. Surface waste management facility closure by operator.

- (1) The operator shall notify the division's environmental bureau at least 60 days prior to cessation of operations at the surface waste management facility and provide a proposed schedule for closure. Upon receipt of such notice and proposed schedule, the division shall review the current closure plan for adequacy and inspect the surface waste management facility.**

DNCS will comply with this requirement. The Closure/Post-closure Plan (Volume II.4) describes closure notification requirements in detail.

- (2) **The division shall notify the operator within 60 days after the date of cessation of operations specified in the operator's closure notice of modifications of the closure plan and proposed schedule or additional requirements that it determines are necessary for the protection of fresh water, public health, safety or the environment.**

No response required.

- (3) **If the division does not notify the operator of additional closure requirements within 60 days as provided, the operator may proceed with closure in accordance with the approved closure plan; provided that the director may, for good cause, extend the time for the division's response for an additional period not to exceed 60 days by written notice to the operator.**

DNCS will comply with this requirement.

- (4) **The operator shall be entitled to a hearing concerning a modification or additional requirement the division seeks to impose if it files an application for a hearing within 10 days after receipt of written notice of the proposed modifications or additional requirements.**

DNCS will comply with this requirement.

- (5) **Closure shall proceed in accordance with the approved closure plan and schedule and modifications or additional requirements the division imposes. During closure operations the operator shall maintain the surface waste management facility to protect fresh water, public health, safety and the environment.**

DNCS will comply with this requirement.

- (6) **Upon completion of closure, the operator shall re-vegetate the site unless the division has approved an alternative site use plan as provided in Subsection G of 19.15.36.18 NMAC. Re-vegetation, except for landfill cells, shall consist of establishment of a vegetative cover equal to 70 percent of the native perennial vegetative cover (un-impacted by overgrazing, fire or other intrusion damaging to native vegetation) or scientifically documented ecological description consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintenance of that cover through two successive growing seasons.**

DNCS will comply with this requirement. The Closure/Post-closure Plan (Volume II.4) describes in detail revegetation and maintenance plans for the Facility.

B. Release of financial assurance.

- (1) When the division determines that closure is complete it shall release the financial assurance, except for the amount needed to maintain monitoring wells for the applicable post closure care period, to perform semi-annual analyses of such monitoring wells and to re-vegetate the site. Prior to the partial release of the financial assurance covering the surface waste management facility, the division shall inspect the site to determine that closure is complete.**

The Closure/Post-closure Plan (Volume II.4) provides the estimated amount, in current dollars, required for the Post-closure care and maintenance.

- (2) After the applicable post closure care period has expired, the division shall release the remainder of the financial assurance if the monitoring wells show no contamination and the re-vegetation in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC is successful. If monitoring wells or other monitoring or leak detection systems reveal contamination during the surface waste management facility's operation or in the applicable post closure care period following the surface waste management facility's closure the division shall not release the financial assurance until the contamination is remediated in accordance with 19.15.30 NMAC and 19.15.29 NMAC, as applicable.**

DNCS will comply with this requirement.

- (3) In any event, the division shall not finally release the financial assurance until it determines that the operator has successfully revegetated the site in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC, or, if the division has approved an alternative site use plan, until the landowner has obtained the necessary regulatory approvals and begun implementation of the use.**

No response required.

C. Surface waste management facility closure initiated by the division. Forfeiture of financial assurance.

- (1) For good cause, the division may, after notice to the operator and an opportunity for a hearing, order immediate cessation of a surface waste management facility's operation when it appears that cessation is necessary to protect fresh water, public health, safety or the environment, or to assure compliance with statutes or division rules and orders. The division may order closure without notice and an opportunity for hearing**

in the event of an emergency, subject to NMSA 1978, Section 70-2-23, as amended.

No response required.

- (2) If the operator refuses or is unable to conduct operations at a surface waste management facility in a manner that protects fresh water, public health, safety and the environment; refuses or is unable to conduct or complete an approved closure plan; is in material breach of the terms and conditions of its surface waste management facility permit; or the operator defaults on the conditions under which the division accepted the surface waste management facility's financial assurance; or if disposal operations have ceased and there has been no significant activity at the surface waste management facility for six months the division may take the following actions to forfeit all or part of the financial assurance:**
- (a) send written notice by certified mail, return receipt requested, to the operator and the surety, if any, informing them of the decision to close the surface waste management facility and to forfeit the financial assurance, including the reasons for the forfeiture and the amount to be forfeited, and notifying the operator and surety that a hearing request or other response shall be made within 10 days of receipt of the notice; and**
 - (b) advise the operator and surety of the conditions under which they may avoid the forfeiture; such conditions may include but are not limited to an agreement by the operator or another party to perform closure and post closure operations in accordance with the surface waste management facility permit conditions, the closure plan (including modifications or additional requirements imposed by the division) and division rules, and satisfactory demonstration that the operator or other party has the ability to perform such agreement.**

DNCS will cooperate with OCD concerning this requirement and does not foresee any instance in which the Facility will not be operated in compliance with the Permit or Permit Conditions.

- (3) The division may allow a surety to perform closure if the surety can demonstrate an ability to timely complete the closure and post closure in accordance with the approved plan.**

No response required.

- (4) **If the operator and the surety do not respond to a notice of proposed forfeiture within the time provided, or fail to satisfy the specified conditions for non-forfeiture, the division shall proceed, after hearing if the operator or surety has timely requested a hearing, to declare the financial assurance's forfeiture. The division may then proceed to collect the forfeited amount and use the funds to complete the closure, or, at the division's election, to close the surface waste management facility and collect the forfeited amount as reimbursement.**
- (a) **The division shall deposit amounts collected as a result of forfeiture of financial assurance in the oil and gas reclamation fund.**
 - (b) **In the event the amount forfeited and collected is insufficient for closure, the operator shall be liable for the deficiency. The division may complete or authorize completion of closure and post closure and may recover from the operator reasonably incurred costs of closure and forfeiture in excess of the amount collected pursuant to the forfeiture.**
 - (c) **In the event the amount collected pursuant to the forfeiture was more than the amount necessary to complete closure, including remediation costs, and forfeiture costs, the division shall return the excess to the operator or surety, as applicable, reserving such amount as may be reasonably necessary for post closure monitoring and re-vegetation in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC. The division shall return excess of the amount retained over the actual cost of post closure monitoring and re-vegetation to the operator or surety at the later of the conclusion of the applicable post closure period or when the site re-vegetation in accordance with Paragraph (6) of Subsection A of 19.15.36.18 NMAC is successful.**

No response required. The conditions listed are not anticipated.

- (5) **If the operator abandons the surface waste management facility or cannot fulfill the conditions and obligations of the surface waste management facility permit or division rules, the state of New Mexico, its agencies, officers, employees, agents, contractors and other entities designated by the state shall have all rights of entry into, over and upon the surface waste management facility property, including all necessary and convenient rights of ingress and egress with all materials and equipment to conduct operation, termination and closure of the surface waste management facility, including but not limited to the temporary storage of equipment and materials, the right to borrow or dispose of materials and all other rights necessary for the surface waste management facility's operation, termination and closure in accordance with the surface waste management facility permit and to conduct post closure monitoring.**

No response required. The conditions listed are not required.

D. Surface waste management facility and cell closure and post closure standards. The following minimum standards shall apply to closure and post closure of the installations indicated, whether the entire surface waste management facility is being closed or only a part of the surface waste management facility.

- (1) Oil treating plant closure. The operator shall ensure that:**
 - (a) tanks and equipment used for oil treatment are cleaned and oil field waste is disposed of at a division-approved surface waste management facility (the operator shall reuse, recycle or remove tanks and equipment from the site within 90 days of closure);**
 - (b) the site is sampled, in accordance with the procedures specified in chapter nine of EPA publication SW-846, test methods for evaluating solid waste, physical/chemical methods, for TPH, BTEX, major cations and anions and RCRA metals, in accordance with a gridded plat of the site containing at least four equal sections that the division has approved; and**
 - (c) sample results are submitted to the environmental bureau in the division's Santa Fe office.**

DNCS will implement the Closure/Post-closure Plan (Volume II.4) for closure activities in compliance with 19.15.36.18.D NMAC.

- (2) Landfill cell closure.**
 - (a) The operator shall properly close landfill cells, covering the cell with a top cover pursuant to Paragraph (8) of Subsection C of 19.15.36.14 NMAC, with soil contoured to promote drainage of precipitation; side slopes shall not exceed a 25 percent grade (four feet horizontal to one foot vertical), such that the final cover of the landfill's top portion has a gradient of two percent to five percent, and the slopes are sufficient to prevent the ponding of water and erosion of the cover material.**
 - (b) The operator shall re-vegetate the area overlying the cell with native grass covering at least 70 percent of the landfill cover and surrounding areas, consisting of at least two grasses and not including noxious weeds or deep rooted shrubs or trees, and maintain that cover through the post closure period.**

DNCS will implement the Closure/Post-closure Plan (Volume II.4) for the Landfill cells. The Permit Plans, Sheet 5 provides the engineering design for the overall final grading contours for the Landfill. DNCS proposed to install a prescriptive cover on the crown of the Landfill per 19.15.36.14.C(8) NMAC; and an alternate cover on the sideslopes per 19.15.36.14.C(9) NMAC. The side slopes will be no greater than 25% (4 horizontal to 1 vertical) and the top crown will be constructed to a design grade of 5%. The alternate sideslope final cover includes

12-inches of compacted impermeable materials (intermediate cover) overlain with a 2-ft thick barrier (infiltration layer; $k \leq 5.0 \times 10^{-5}$ cm/sec) that is capped with a 12-inch vegetative (erosion) layer, all graded to drain. The Landfill final cover details are shown in **Figure II.4.3** and on the **Permit Plans, Sheet 8**. DNCS proposes to utilize the prescriptive final cover configuration on the finished Landfill crown. The final cover, as well as other disturbed areas of the site, will be seeded with native vegetation. Vegetation on the site will be established during the optimum planting period, whenever possible. Examples of seed types have been identified and recommended by the NRCS.

- (3) Landfill post closure. Following landfill closure, the post closure care period for a landfill shall be 30 years.**
 - (a) A post closure care and monitoring plan shall include maintenance of cover integrity, maintenance and operation of a leak detection system and leachate collection and removal system and operation of gas and ground water monitoring systems.**
 - (b) The operator or other responsible entity shall sample existing ground water monitoring wells annually and submit reports of monitoring performance and data collected within 45 days after the end of each calendar year. The operator shall report any exceedance of a ground water standard that it discovers during monitoring pursuant to 19.15.29 NMAC.**

DNCS will implement the Closure/Post-closure Plan, (Volume II.4) for the post-closure care and monitoring required.

- (4) Landfarm closure. The operator shall ensure that:**

Not applicable; DNCS is not proposing landfarm facilities.

E. Pond and pit closure. The operator shall ensure that:

- (1) liquids in the ponds or pits are removed and disposed of in a division-approved surface waste management facility;**
- (2) liners are disposed of in a division-approved surface waste management facility;**
- (3) equipment associated with the surface waste management facility is removed;**
- (4) the site is sampled, in accordance with the procedures specified in chapter nine of EPA publication SW-846, test methods for evaluating solid waste, physical/chemical methods for TPH, BTEX, metals and other inorganics listed in Subsections A and B of 20.6.2.3103 NMAC, in accordance with a**

- gridded plat of the site containing at least four equal sections that the division has approved; and**
- (5) sample results are submitted to the environmental bureau in the division's Santa Fe office.**

DNCS will comply with this requirement. The Closure/Post-closure Plan (Volume II.4) describes in detail facility decommissioning, including liquid, liner and equipment disposal; as well as sampling, testing, and reporting when closure of the Facility is implemented.

- F. Landfarm and pond and pit post closure. The post-closure care period for a landfarm or pond or pit shall be three years if the operator has achieved clean closure. During that period the operator or other responsible entity shall regularly inspect and maintain required revegetation. If there has been a release to the vadose zone or to ground water, then the operator shall comply with the applicable requirements of 19.15.30 NMAC and 19.15.29 NMAC.**

No response required.

- G. Alternatives to re-vegetation. If the landowner contemplates use of the land where a cell or surface waste management facility is located for purposes inconsistent with re-vegetation, the landowner may, with division approval, implement an alternative surface treatment appropriate for the contemplated use, provided that the alternative treatment will effectively prevent erosion. If the division approves an alternative to re-vegetation, it shall not release the portion of the operator's financial assurance reserved for post-closure until the landowner has obtained necessary regulatory approvals and begun implementation of such alternative use.**

If applicable, DNCS will comply with this requirement.

19.15.36.19 EXCEPTIONS AND WAIVERS:

- A. In a surface waste management facility permit application, the applicant may propose alternatives to requirements of 19.15.36 NMAC, and the division may approve such alternatives if it determines that the proposed alternatives will provide equivalent protection of fresh water, public health, safety and the environment.**

DNCS is requesting alternatives to the requirements consistent with the flexibility provided for:

- *LFG Control requirements per 19.15.36.13.O NMAC (this Volume)*
- *Groundwater monitoring per 19.15.36.14.B(1-2) NMAC (Volumes II.8 and IV.2)*
- *Geonet Detection and Drainage Layers per 19.15.36.14.C (Volume III.4)*

- *Final Cover per 19.15.36.14.C(9) NMAC (Volume III.4)*
- *Bird Control Alternatives per 19.15.36.19 NMAC (Volume II.6)*

Demonstrations and justifications have been provided in the referenced sections and associated technical documentation.

B. The division may grant exceptions to, or waivers of, or approve alternatives to requirements of 19.15.36 NMAC in an emergency without notice or hearing. The operator requesting an exception or waiver, except in an emergency, shall apply for a surface waste management facility permit modification in accordance with Subsection C of 19.15.36.8 NMAC. If the requested modification is a major modification, the operator shall provide notice of the request in accordance with 19.15.36.9 NMAC.

DNCS will comply with this requirement.

19.15.36.20 TRANSITIONAL PROVISIONS:

DNCS is a proposed new Surface Waste Management Facility. No response required.

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

**VOLUME I: PERMIT APPLICATION TEXT
PART 36: SURFACE WASTE MANAGEMENT FACILITIES**

**ATTACHMENT I.A
PUBLIC NOTIFICATION**

NOTICE OF APPLICATION
DNCS ENVIRONMENTAL SOLUTIONS (DNCS) – SURFACE WASTE MANAGEMENT FACILITY

Pursuant to 19.15.36, Oil Conservation Division Surface Waste Management Facilities regulations, DNCS Environmental Solutions (DNCS) is providing notice that the Oil Conservation Division (OCD) has deemed administratively complete an Application for Permit for a new Surface Waste Management Facility (DNCS Facility). The Application for Permit was originally submitted to OCD by DNCS on 11/07/2013. Comments regarding the Application may be submitted to OCD within 30 days of Notice.

1. **Applicant's name and address:** DNCS Properties, LLC, 2028 E. Hackberry Place, Chandler, AZ 85286; Telephone: 480.437.0044.
2. **Facility location and address:** The proposed DNCS Facility is located approximately 10.5 miles east of the US 82/NM 529 intersection and 6.5 miles south of Maljamar, in unincorporated Lea County, New Mexico. The site is comprised of 562 acres \pm ; and the Surface Waste Management Facility will comprise 495 acres \pm of the DNCS site.
3. **Brief description of surface waste management facility:** The proposed DNCS Facility will include a liquid oil field waste Processing Area (177 acres \pm) and an oil field waste Landfill (318 acres \pm). At full build-out, the Processing Area will include: 9 produced water load-out points; 12 produced water receiving tanks; 48 produced water settling tanks; 12 evaporation ponds; 1 stabilization and solidification area, 1 oil treatment plant, 5 crude oil receiving tanks; 5 oil sales tanks; and 1 customer jet wash (6 bays). The Landfill disposal footprint is 234 acres \pm with a waste capacity airspace of approximately 33.7 million cubic yards. In addition, various support facilities, including: a Processing Area Gatehouse, Landfill Scalehouse, waste acceptance/security features, roads, emergency shower and eyewash station, and stormwater detention basins are proposed for the new Facility.
4. **Depth and quality of shallowest aquifer:** Based upon information projected from nearby petroleum wells, the shallowest potential water-bearing zone in the vicinity is the Santa Rosa Sandstone (lower Triassic Chinle), which is approximately 550 feet (ft) below ground surface (bgs) at the DNCS site. In addition, the DNCS site characterization boring investigation results demonstrate that no shallow groundwater is present above a depth of 150 ft bgs at any of the boring locations. The nearest water supply well to the DNCS site (at a distance of about 8 miles) is completed in Triassic bedrock, presumed to be Santa Rosa Sandstone. A chemical analysis of this well, reported by others, indicates a total dissolved solids concentration of 3,680 milligrams per liter (mg/L) and a sulfate concentration of 1,680 mg/L.

Interested parties may contact Mr. Brad Jones, Environmental Engineer, OCD at (505) 476-3487 for further information.

TABLE I.A-1
Surface Owners of Record within 1/2-mile of the DNCS Site¹
DNCS Environmental Solutions

OWNER	UPC	ADDRESS	CITY	STATE	ZIP
Concho Land, LLC ²	4971005094433	P.O. Box 1567	Lovington	NM	88260
	4991030150851				
XTO Energy, Inc. ²	4930502122422	810 Houston St.	Fort Worth	TX	76102
	4930502120551				
Angell #2 Family LTD Partnership ²	4000352490010	P.O. Box 190	Lovington	NM	88260
Ross Caviness ²	4971011152409	3718 NM 114	Causey	NM	88113
	4000352460008				
	4000352460004				
Olane Caswell ²	4000031390002	1702 Gillham Dr.	Brownfield	TX	79316
	4000031390001				
Bureau of Land Management ²	NA ⁴	620 E. Greene St.	Carlsbad	NM	88220
New Mexico State Land Office ²	NA ⁴	P.O. Box 1148	Santa Fe	NM	87504-1148
Lea County Commission ³	NA ⁴	100 N. Main St.	Lovington	NM	88260
Lea County Manager ³	NA ⁴	100 N. Main St.	Lovington	NM	88260

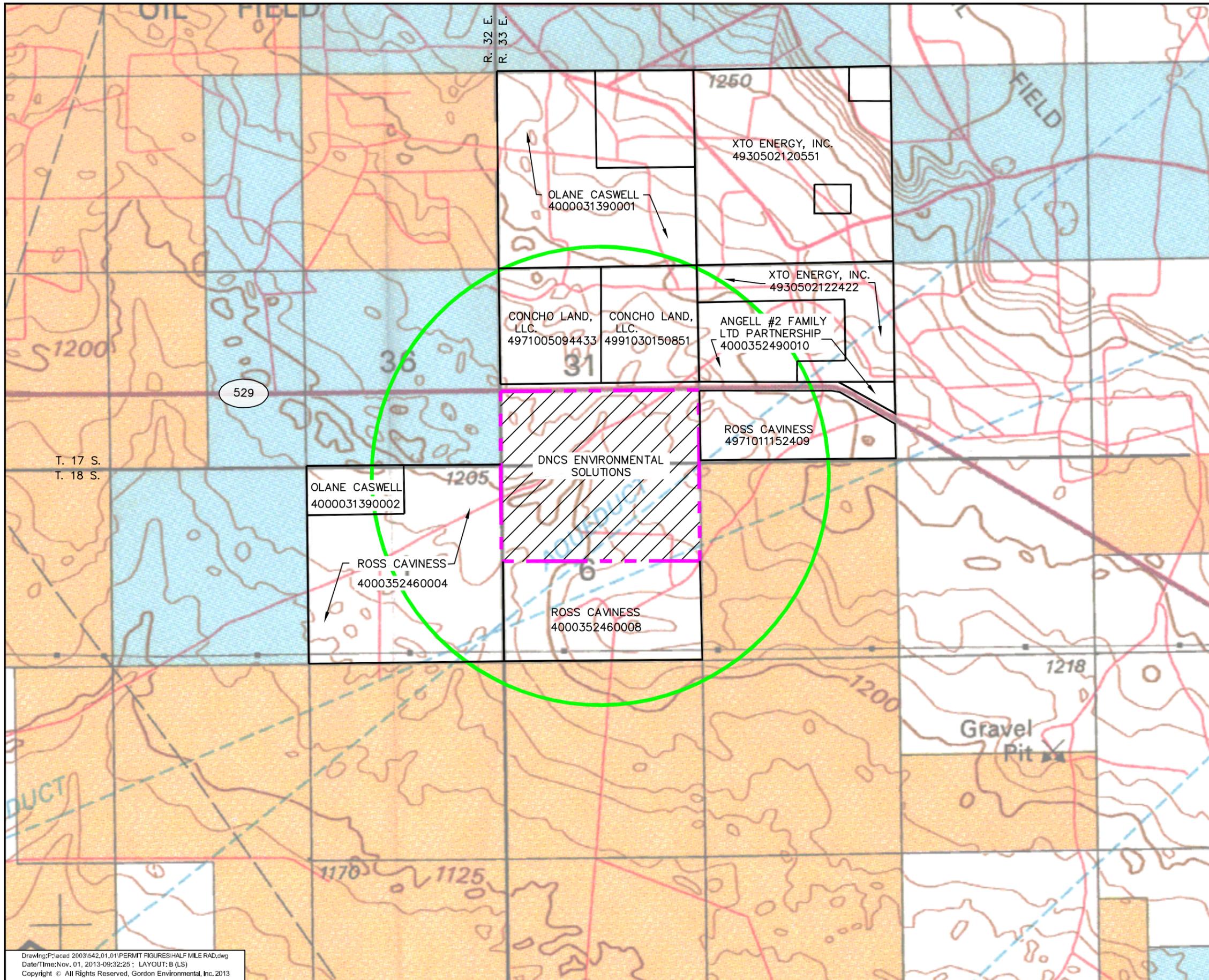
Notes:

¹ Data provided by Lea County Assessor's Office.

² Surface owner of record within 1/2-mile of DNCS site.

³ County Government of the county in which DNCS is located (Lea County).

⁴ NA - Notified party is not associated with a specific Parcel Code (i.e., UPC).



LEGEND

-  SITE LOCATION
-  PRIVATE LANDS
-  PUBLIC LANDS (ADMINISTERED BY BUREAU OF LAND MANAGEMENT)
-  STATE LANDS
-  1/2 MILE RADIUS

ROSS CAVINESS 4971011152409 OWNER NAME
UPC CODE

NOTE:

- 1) LAND OWNERSHIP DATA PROVIDED BY THE LEA COUNTY ASSESSORS OFFICE AND IS CURRENT AS OF OCTOBER 8, 2013. ([HTTP://EMAPS.EMAPSPPLUS.COM/STANDARD/LEACONM.HTML](http://EMAPS.EMAPSPPLUS.COM/STANDARD/LEACONM.HTML)).
- 2) LAND OWNERSHIP MAP DERIVED FROM THE HOBBS 2001 SURFACE MANAGEMENT STATUS 1:100,000 BLM TOPOGRAPHIC MAP.



1/2 MILE RADIUS MAP

DNCS ENVIRONMENTAL SOLUTIONS
LEA COUNTY, NEW MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

DATE: 11/01/2013	CAD: HALF MILE RAD.dwg	PROJECT #: 542.01.01
DRAWN BY: DMI	REVIEWED BY: GEI	FIGURE I.A-1
APPROVED BY: IKG	gei@gordonenvironmental.com	

**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

**VOLUME I: PERMIT APPLICATION TEXT
PART 36: SURFACE WASTE MANAGEMENT FACILITIES**

**ATTACHMENT I.B
FINANCIAL ASSURANCE
TO BE PROVIDED UPON PERMIT APPROVAL**

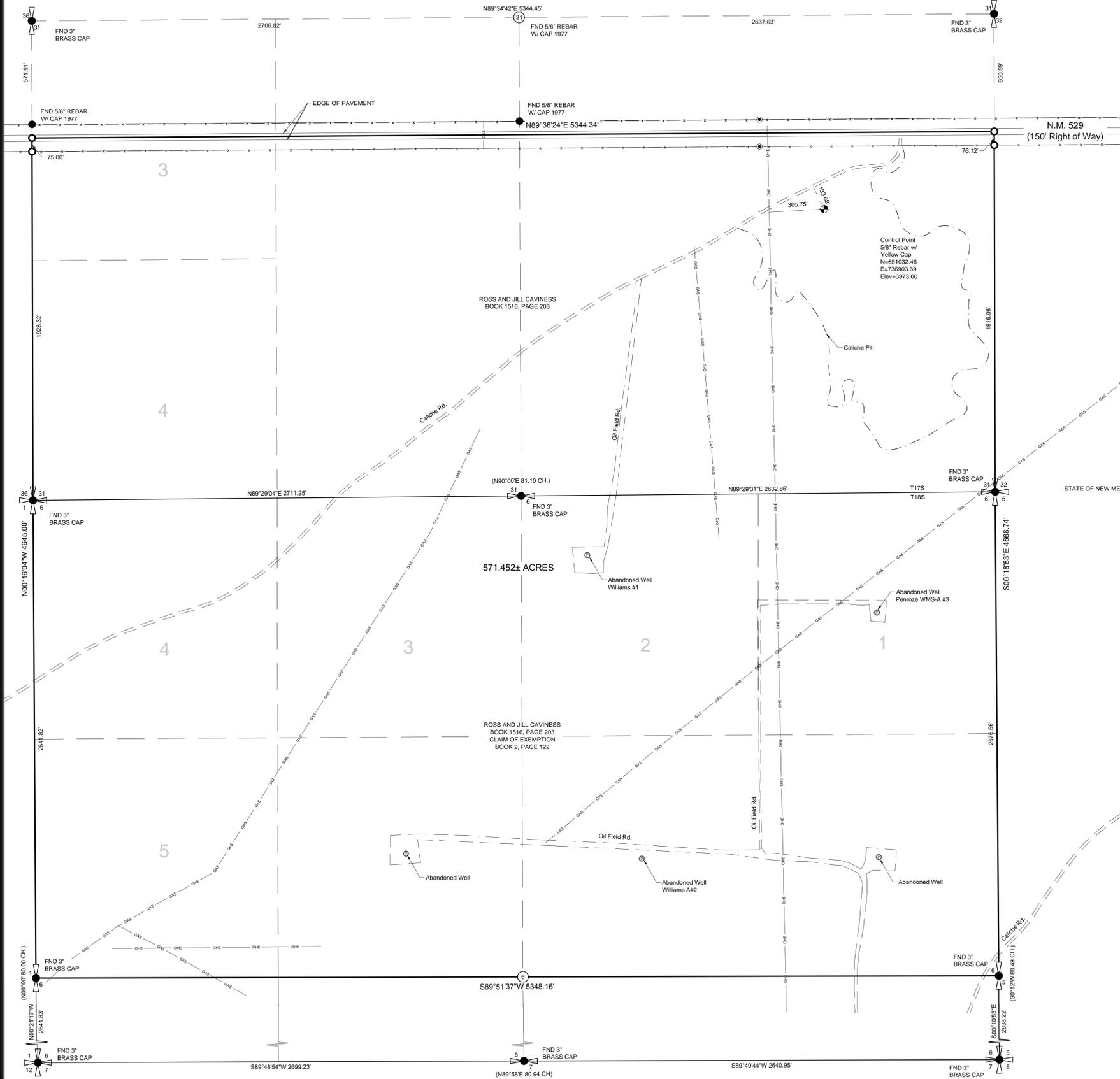
**APPLICATION FOR PERMIT
DNCS ENVIRONMENTAL SOLUTIONS**

**VOLUME I: PERMIT APPLICATION TEXT
PART 36: SURFACE WASTE MANAGEMENT FACILITIES**

**ATTACHMENT I.C
BOUNDARY SURVEY
(PETTIGREW & ASSOCIATES PA, 12/13/2012)**

BOUNDARY SURVEY

LOCATED IN PART OF THE S1/2, OF SECTION 31, T17S, R33E, AND N1/2 SECTION 6, T18S, R33E, N.M.P.M., LEA COUNTY, NEW MEXICO



RECORD DESCRIPTION AS RECORDED IN BOOK 1516, PAGE 203, LEA COUNTY RECORDS

The Southwest Quarter of the Southwest Quarter (SW/4SW/4), the Northwest Quarter of the Northwest Quarter (NW/4NW/4), the East Half of the Northwest Quarter (E2NW/4), the West Half of the Northeast Quarter (W/2NE/4) of Section 15 and All of Section 16, all in Township 18 South, Range 33 East, N.M.P.M., Lea County, New Mexico.

The East Half (E/2), the Southwest Quarter (SW/4) and the South Half of the Northwest Quarter (S/2NW/4) of Section 1; the Southwest Quarter (SW/4) of Section 14; the Northeast Quarter (NE/4) of Section 22; the Northwest Quarter (NW/4) of Section 23; and the East Half of the Northeast Quarter (E/2NE/4) of Section 34, all in Township 18 South, Range 32 East, N.M.P.M., Lea County, New Mexico.

The North Half (N/2) of Section 9; all of Section 6, all in Township 18 South, Range 33 East, N.M.P.M., Lea County, New Mexico.

Section 31, 32 & 33, Township 17 South, Range 33 East and Section 3, 4, 10 & 11, Township 18 South, Range 33 East, N.M.P.M., Lea County, New Mexico, lying South of the pavement centerline of State Highway #529.

SURVEYED DESCRIPTION

A tract of land located in the Section 31, T17S, R33E, and Section 6, T18S, R33E, N.M.P.M., Lea County, New Mexico and being more particularly described as follows:

That part of the S1/2 of Section 31, T17S, R33E, lying south of the centerline of the pavement in New Mexico State Highway 529 and the North 1/2 of Section 6, T18 S, R33 E, N.M.P.M., Lea County, New Mexico, as shown on an exemption plat recorded in Book 2, Page 122, Lea County Records, and containing 562.367 acres, more or less.

BASIS OF BEARING

The basis of bearing for this survey is Grid North based on the New Mexico State Plane Coordinate System East Zone, as determined by an OPUS solution at the control point shown on survey plat. Coordinates are based on the New Mexico State Plane Coordinate System East Zone. Ground coordinates are modified by scaling about a control point located at N32°47'17.17235", W103°41'49.02833" by a combined scale factor of 0.99976629. All drawing coordinates are scaled to ground. Elevations shown hereon are referenced to NAVD 1988. This map complies with the National Map Accuracy Standards.

CERTIFICATE OF SURVEY

I, William M. Hicks III, New Mexico Professional Surveyor, hereby certify that this Boundary Survey Plat was prepared from an actual ground survey performed by me or under my supervision, that this survey is true and correct to the best of my knowledge and belief, that this Boundary Plat and the field survey upon which it is based meet the Minimum Standards for Surveying in New Mexico.

William M. Hicks III
 William M. Hicks, III NMPS #12348
 Date December 13, 2012

NOTE

Boundary Survey was performed without Title Commitment.

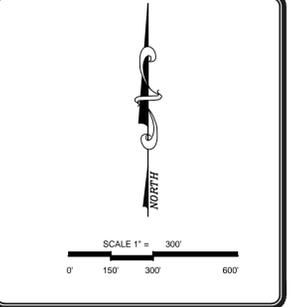
LEGEND	
●	Found as noted
○	Set 5/8" rebar with red plastic cap marked "HICKS NMPS 12348"
○	Calculated point
⊕	Section corner
⊕	Quarter section corner
⊕	Found section corner
⊕	Found quarter section corner
⊕	Section section corner
— x —	Right of way fence
— x —	Barbed wire fence
XX'XXX" XX'XX"	Measured bearing and distance
(X'XX' XX'XX CH.)	Record GLO bearing and distance

State of New Mexico, County of _____
 I hereby certify that this instrument was filed for record on:
 The _____ Day of _____,
 20 _____ A.D.
 At _____ O'Clock _____ M.
 Cabinet _____ Slide _____
 Book _____ Page _____
 By _____
 County Clerk
 By _____
 Deputy

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



PROJECT SURVEYOR: M. Ivey
 DRAWN BY: C. Johnson



INDEXING INFORMATION FOR COUNTY CLERK
 OWNER: ROSS CAVINESS
 LOCATION: PART OF THE S1/2, SECTION 31, T17S, R33E, SOUTH OF HWY. 529, AND N1/2, SECTION 6, T18S, R33E, N.M.P.M., LEA COUNTY, NEW MEXICO

REVISIONS		
No.	DATE	DESCRIPTION

BOUNDARY SURVEY
 OF
 Part of the S1/2, Sec 31
 T17S, R33E, & N1/2, Sec 6
 T18S, R33E, N.M.P.M.
 FOR
 DNCS PROPERTIES

PROJECT NUMBER: 2012.1258

SHEET: 1 of 1
SU - 101