

## **1.0 NMAC 19.15.36.8 - INTRODUCTION**

C.K. Disposal, LLC proposes to develop a surface waste management facility consisting of a landfill, liquid processing area, and deep well injection per NMAC 19.15.36. An approved permit will be issued by the Oil Conservation Division (OCD) of the New Mexico Energy, Minerals and Natural Resources Department. The proposed hereon known as "C.K. Facility", is located 0.05-miles south of State Highway 234, approximately 4.16-miles southeast of Eunice, New Mexico, in Lea County. The C.K. Facility will encompass a 316.97-acres broken down into individual sections as listed below in Table 1 – C.K. Facility.

**Table 1 – C.K. FACILITY**

<b>Area</b>	<b>Acres</b>
<b>C.K. Disposal E&amp;P Landfill and Processing Facility</b>	316.97
Landfill	141.5
Liquid Processing	51.75
Saltwater Disposal	5.1

### **1.1 NMAC 19.15.36.8.A – Permit Required**

Prior to construction and use of the proposed C.K. Facility, C.K. Disposal, LLC will submit a permit meeting requirements set forth in NMAC 19.15.36 and the Oil Conservation Division (OCD) of the New Mexico Energy, Minerals, and Natural Resource Department.

### **1.2 NMAC 19.15.36.8.B – Permitting Requirements**

C.K. Disposal, LLC is requesting a permit per NMAC 19.15.36. The new commercial C.K. Facility permit will provide all information on facility design, volume capacity, and operational plans. All activities at the landfill will be pursuant to NMAC 19.15.36. To assist in the review of this permit, each subsection of NMAC 19.15.36 will be answered individually and attachments at the end of the permit will provide documentation backup.

### **1.3 NMAC 19.15.36.8.C – Application Requirements for New Facilities**

OCD form C-137 has been included with the submission of the permit. All documentation requested in form C-137 is included in the permit write-up or as attachments at the end of the permit.

#### **A NMAC 19.15.36.8.C(1) – Applicant Information**

The principal owner of the facility is C.K. Disposal, LLC. There is no other owner that has more than 25% ownership of the site and/or permit. Below is the principal and mailing address for C.K. Disposal, LLC.

Principal Address:  
3 Canjilon Court  
Santa Fe, NM 87508

Mailing Address:  
5909 86th Street  
Lubbock, TX 79424

**B NMAC 19.15.36.8.C(2) – Plat and Topographic Maps**

The following maps are provided in Attachment A - General Facility Maps and Site Drawings. The maps show highways and roads providing 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.

- Figure A.1 – Site Location Map
- Figure A.2 – Site Development Plan
- Figure A.3 – Topographic Map

Figure A.1 – Site Location Map provides the C.K. Facility and a 1-mile offset plotted on the most current United States Geological Survey (USGS) quadrangle map. Figure A.2 – Site Development Plan details the build out of the site and location of the landfill units, processing area, and stabilization and solidification area within the permitted boundary. Figure A.3 – Topographic Map is a detailed existing site topography, land description, easements, and boundary survey. The original survey is provided in Attachment A.

**C NMAC 19.15.36.8.C(3) – Names and Address of Adjacent Land Owners**

Table 2 provides a list of all land owners within 1-mile of the permitted boundary. Information was provided by the Lea County, NM Assessor's Office, New Mexico State Land Office, and Andrews County, TX Appraisal District. Figure A.4, located in Attachment A, provides an adjacent landowners map and list of owners.

**TABLE 2 - Adjacent Landowners (1-Mile from Permit Boundary) and Notification List**

Owner/Office	Mailing Address
Walco Ranch LLC <sup>(1)</sup>	P.O. Box 790 Hobbs, NM 88241
Paddock Buddy Metal <sup>(1)</sup>	1613 Clark Rd Crowley, TX 76036
Lea County Solid Waste Authority <sup>(1)</sup>	Lea County Courthouse Lovington, NM 88260
Waste Control Specialists LLC <sup>(2)</sup>	PO Box 1129 Andrews, TX 79714
Lea County <sup>(1)</sup>	100 North Main Ste 4 Lovington, NM 88260
URENCO USA <sup>(1)</sup>	P.O. Box 1789 Eunice, NM 88231
Louisiana Energy Services LLC <sup>(1)</sup>	P.O. Box 1789 Eunice, NM 88231
Andrews County <sup>(2)</sup>	201 N. Main Andrews, TX 79714

C.K. Disposal, LLC <sup>(1)</sup>	5909 86 <sup>th</sup> Street Lubbock, TX 79424
New Mexico State Land Office	P.O. Box 1148 Santa Fe, NM 87504-1148
New Mexico Bureau of Land Management	620 E. Greene Street Carlsbad, NM 88220
Lea County Commission	100 N. Main Street Lovington, NM 88260
Note: (1) Data for New Mexico properties provided by the Lea County Assessor's Office - <a href="http://emaps.emapsplus.com/standard/leaconm.html">http://emaps.emapsplus.com/standard/leaconm.html</a> & the New Mexico State Land Office - <a href="http://landstatus.nmstatelands.org/LandStatus.aspx">http://landstatus.nmstatelands.org/LandStatus.aspx</a>	
(2) Data for Texas properties provided by the Andrews County Central Appraisal District. <a href="https://propaccess.trueautomation.com/Map/View/Map/53">https://propaccess.trueautomation.com/Map/View/Map/53</a>	

**D NMAC 19.15.36.8.C(4) – Surface Waste Management Facility Diagram**

Figure A.2 - Site Development Plan provides a layout of the C.K. Facility. The figure includes the layouts for the scale and gate house, the location of roads, pipeline crossings, fences, gates, landfill units, liquid processing area, and stabilization and solidification area. Attachment B – Engineered Design Plans provides detailed construction and installation drawings for the C.K. Facility. Plans include details on grading, drainage, liner and leachate collection installation, and final cover.

**E NMAC 19.15.36.8.C(5) – Engineering Designs**

The engineered design plans included in Attachment B are provided to establish the engineered design criteria for the C.K. Facility. The engineer design plans provide a design for the landfill units, liquid processing area and stabilization and solidification areas. Full size (22-inch x 34-inch) drawings are included at the end of the permit and will be submitted along with the permit to OCD. The design plans have been signed and sealed by a Professional Engineer registered in the State of New Mexico.

Nicholas N. Ybarra, P.E.  
New Mexico Professional Engineer #20683  
Parkhill Smith & Cooper, Inc.  
501 W. San Antonio  
El Paso, Texas 79901  
(915) 543-3357 Phone  
(915) 544-2059 Fax

**F NMAC 19.15.36.8.C(6) – Management Plan for Approved Oil Field Waste**

An oil field waste management plan has been included in Attachment K - Site Operating Plan (SOP). The plan covers all requirements listed in NMAC 19.15.36.13, 14, 15, and 17. The plan provides details on-site operation hours, requirements for accepting waste,

prohibited wastes and inspection and management. In addition the oil field waste management plan provides the owner/operator a plan for dealing H<sub>2</sub>S gas on incoming waste.

**G NMAC 19.15.36.8.C(7) – Inspection and Maintenance Plan**

Attachment K - Site Operating Plan covers the operations, inspection and maintenance plan for the C.K. Facility. The operations, inspection, and maintenance cover all requirements listed in NMAC 19.15.36.13.L.

**H NMAC 19.15.36.8.C(8) – Hydrogen Sulfide Prevention and Contingency Plan**

The Hydrogen Sulfide (H<sub>2</sub>S) Prevention and Contingency Plan are included in Attachment K – Site Operating Plan. The plan provides the C.K. Facility operators information to inspect, monitor, and treat hydrogen sulfide on site. The contingency plan provides a plan to evacuate, notify, and treat for excessive levels of H<sub>2</sub>S. Both plans ensure that requirements listed in NMAC 19.15.11 and 19.15.36 are met in Attachment K – Site Operating Plan.

**I NMAC 19.15.36.8.C(9) – Closure and Post-Closure Plan**

The closure and post-closure plan will be included in the permit as Attachment L. The closure plan includes drawings that depict the final cover details and final contour plan for the C.K. Facility. The closure plan includes the procedures to be taken for sequential closure of cells following final acceptance of waste. The plan will include:

- A description of the final cover design, including methods and procedures used to install the cover.
- An estimate of the largest area requiring final cover at any time during the active life of the landfill.
- A schedule for completing all activities
- A detailed, written estimate of the cost of hiring a third party to close the largest area of the landfill during its active life.

The closure plan meets all requirements listed in NMAC 19.15.36.18

**J NMAC 19.15.36.8.C(10) – Contingency Plan**

A contingency plan is included in Attachment K – Site Operating Plan. It follows the requirements listed in NMAC 19.15.36.13. The contingency plan provides the owner a plan to minimize the effects of fires, explosions, and unplanned release of contaminants if these occur. The contingency plan is supplemented with the hydrogen sulfide prevention and contingency plan.

**K NMAC 19.15.36.8.C(11) – Drainage Study**

This drainage study was prepared as a part of the permit application and is located in Attachment J. All drainage analysis and design is in accordance with NMAC regulations.

Existing and proposed hydrologic and hydraulic conditions of the site are detailed herein, as well as hydraulic structures design, erosion stability and the management of storm water run-on and run-off from the C. K. Facility site in the event of a 25-Year, 24-Hour storm event. All hydrologic computations were performed using United States Army Corps HEC-HMS software and SCS unit hydrograph hydrology.

**L NMAC 19.15.36.8.C(12) – Leachate Management Plan**

A leachate management plan is included in Attachment K – Site Operating Plan. It follows the requirements listed in NMAC 19.15.36.13. The leachate management plan provides details on anticipated leachate volumes, leachate collection, storage, treatment and disposal on site. The HELP model was used to determine the amount of leachate that would be generated on site. The HELP model shown in Attachment E supplements the leachate management plan.

**M NMAC 19.15.36.8.C(13) – Gas Safety Management Plan**

The gas safety management plan is provided in Attachment K – Site Operating Plan. The gas safety management plan complies with all requirements listed in NMAC 19.15.36.13. Due to the nature of waste, most gas that will be dealt with on-site will be Hydrogen Sulfide (H<sub>2</sub>S). The gas safety management plan is supplemented with the hydrogen sulfide prevention and contingency plan.

**N NMAC 19.15.36.8.C(14) – Best Management Practice Plan**

Attachment B – Engineered Design Plans design plans provides the best management practice structures and construction methods to provide protection of fresh water, public health, safety, and the environment.

**O NMAC 19.15.36.8.C(15) – Geological/Hydrological Data**

A geology and hydrogeology study was performed for the C.K. Facility by Kevin T. Carel, P.G. The report is provided as Attachment G. The C.K. Facility was selected due to the absence of groundwater within 100-feet of the deepest excavation. In addition, the site rests on a red bed formation with acts as an aquitard minimizing the potential for groundwater contamination. Based on the finding of this report, a Vadose Monitoring Plan and Sampling and Analysis Plan are supplemental to this report and provided in Attachments H and I, respectively.

**i NMAC 19.15.36.8.C(15)(a) – Water Courses Map**

Figure IV.2.2 in Attachment G provides a map showing local streams, springs and water wells.

**ii NMAC 19.15.36.8.C(15)(b) – Groundwater Laboratory Analysis**

During initial site investigation five (5) soil bores were taken on site to a depth of 175-feet below ground surface. No groundwater was observed in the cuttings obtained, nor was there any observed in the bore holes after a 24-hour period. No groundwater is present within the upper 175-feet of the Ogallala Formation or Chinle Formation

because they rise above the saturated zone of the Ogallala Formation. Therefore, no laboratory analysis was done on groundwater samples. Additional information on groundwater is located in Attachment G – Hydrogeology Report.

**iii NMAC 19.15.36.8.C(15)(c) – Shallowest Fresh Water Aquifer**

A well drilled for Waste Control Specialists in 2008 located approximately 580-feet northeast of the proposed Site encountered the Santa Rosa Formation at a depth of 1,092-feet below ground surface (bgs). The depth to which groundwater was first encountered is listed on the well log as 1,092-feet bgs. The well log indicates the Santa Rosa is 292-feet thick and describes it as a gray, fine sandstone with interbedded reddish brown and weak red siltstone and claystone. Additional information on local aquifers is located in Attachment G – Hydrogeology Report.

**iv NMAC 19.15.36.8.C(15)(d) – Soil Types**

A detailed description of soils obtained from the site borings is located in Attachment G – Hydrogeology Report. The soil laboratory testing was conducted in accordance with guidance provided by OCD. The hydrogeology report also includes lithologic descriptions of the soil borings drilled at the site.

**v NMAC 19.15.36.8.C(15)(e) – Geologic Cross-Sections**

Four (4) geologic cross-sections of the site are provided as Figures G.5, G.7, G.8, and G.9 in Attachment G. The cross sections are based on soil bores taken on site and local geologic research.

**vi NMAC 19.15.36.8.C(15)(f) – Geologic Cross-Sections**

The underlying geologic units and groundwater saturations in the vicinity of the C.K. Facility shown in the hydrogeology cross-sections in Attachment G – Hydrogeology Report.

**vii NMAC 19.15.36.8.C(15)(g) – Geologic Cross-Sections**

Hydraulic properties of regional aquifers located below or near the C.K. Facility are located in Table G.2.2 of Attachment G – Hydrogeology Report.

**viii NMAC 19.15.36.8.C(16) – Certification of True, Accurate and Complete Information**

By signing form C-137, the Engineer certifies that all information submitted in the application is true, accurate, and complete to the best of the applicant's knowledge.

**ix NMAC 19.15.36.8.C(17) – Additional Information Per Request**

C.K. Disposal, LLC will provide any applicable information requested by the OCD to demonstrate that the surface waste management facility operation will not adversely impact fresh water, public health, safety, or the environment. In addition, C.K. Disposal, LLC will comply with applicable Rules and Orders issued by OCD.

**1.4 NMAC 19.15.36.8.D – Application Requirements for Minor Modifications**

C.K. Disposal, LLC will submit the C-137 form if a minor modification is ever required. Currently form C-137 is being submitted with this new permit application.

**1.5 NMAC 19.15.36.8.E – Determination that Application is Administratively Complete**

This is the initial submittal of the application. If any changes are required, they will be made per comments provided by OCD and submitted along with form C-137.

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

**1.1 NMAC 19.15.36.9.A – Application for a New Surface Waste Management Facility Permit, Permit Renewal or Major Modification**

Upon receipt of notification of the division’s determination that the application is administratively complete, Parkhill, Smith & Cooper, Inc. (PSC) will send out written notice of the application and determination on behalf of C.K. Disposal, LLC to landowners and other members on the notification list. Table 1 below provides the list of landowners within ½-mile from the permit boundary and other entities to be notified. Information was provided by the Lea County, NM Assessor’s Office, New Mexico State Land Office, and Andrews County, TX Appraisal District. Figure A.4, located in Attachment A, provides an adjacent landowners map and listed of owners.

**TABLE 1 –Landowners (1/2-Mile from Permit Boundary) and Notification List**

Owner/Office	Mailing Address
Walco Ranch LLC <sup>(1)</sup>	P.O. Box 790 Hobbs, NM 88241
Paddock Buddy Metal <sup>(1)</sup>	1613 Clark Rd Crowley, TX 76036
Lea County Solid Waste Authority <sup>(1)</sup>	Lea County Courthouse Lovington, NM 88260
Waste Control Specialists LLC <sup>(2)</sup>	PO Box 1129 Andrews, TX 79714
URENCO USA <sup>(1)</sup>	P.O. Box 1789 Eunice, NM 88231
Louisiana Energy Services LLC <sup>(1)</sup>	P.O. Box 1789 Eunice, NM 88231
C.K. Disposal LLC <sup>(1)</sup>	5909 86th Street Lubbock, TX 79424
Lea County Commission	100 N. Main Street Lovington, NM 88260
Note: (1) Data for New Mexico properties provided by the Lea County Assessor’s Office - <a href="http://emaps.emapsplus.com/standard/leaconm.html">http://emaps.emapsplus.com/standard/leaconm.html</a> & the New Mexico State Land Office - <a href="http://landstatus.nmstatelands.org/LandStatus.aspx">http://landstatus.nmstatelands.org/LandStatus.aspx</a>	

(2) Data for Texas properties provided by the Andrews County Central Appraisal District. <https://propaccess.trueautomation.com/Map/View/Map/53>

**1.2 NMAC 19.15.36.9.B– Division Application Notice**

No major modification, renewals or issuance of a tentative decision is submitted at this time, therefore no action is required.

**1.3 NMAC 19.15.36.9.C – Application Comments**

The facility is aware that 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 at a later date when the applicant mails the notice.

**1.4 NMAC 19.15.36.9.D – Tentative Decision After Comments**

The facility is aware that a tentative decision will be made by the division, by the end of 60 days, and the decision will be made public.

**1.5 NMAC 19.15.36.9.E – Notice of the Tentative Decision**

PSC on behalf of C.K. Disposal, LLC will comply with the notification requirements identified in NMAC 19.15.36.9 upon receiving the division's tentative decision. PSC will coordinate with both the Albuquerque Journal and Hobbs News Sun to publish notification of OCD's tentative decision. Both the Albuquerque Journal and the Hobbs News Sun are in general circulation in the State of New Mexico and Lea County.

**1.6 NMAC 19.15.36.9.F – Application Notice Requirements**

PSC on behalf of C.K. Disposal, LLC will publish notification upon receiving OCD's tentative decision. Notification will have the following items listed.

1. Applicant's name and address;
2. Surface waste management facility's location, including a street address, and sufficient information to locate the surface waste management facility with reference to surrounding roads and landmarks;
3. Brief description of the proposed surface waste management facility;
4. Depth to and TDS concentration of the ground water in the shallowest aquifer beneath the surface waste management facility site;
5. 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. 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. Statement of the comment period and of the procedures for requesting a hearing on the application; and
8. Brief statement of the procedures the division shall follow in making a final decision.

## **1.0 NMAC 19.15.36.10 – COMMENTS AND HEARING ON APPLICATION**

### **1.1 NMAC 19.15.36.10.A – File Comments or Requesting a Hearing**

C.K. Disposal, LLC and Parkhill Smith & Cooper Inc. understand that a person may request a hearing within 30-days after the date public notice is issued on OCD's decision. The division will decide if a hearing is required based on criteria stated in 19.15.36.10.A(1) – (4).

### **1.2 NMAC 19.15.36.10.B – If Scheduled, Hearing Shall be Conducted According to 19.15.14.1206 through 19.15.14.1215 NMAC.**

C.K. Disposal, LLC and Parkhill Smith & Cooper Inc. understand that if a hearing is scheduled it will be conducted according to 19.15.14.1206 through 19.15.14.1215.

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## **1.0 NMAC 19.15.36.11 – FINANCIAL ASSURANCE REQUIREMENTS**

### **1.1 NMAC 19.15.36.11.A – Financial Assurance Requirements for Centralized Facilities**

The C.K. Facility is a proposed commercial facility as defined in NMAC 19.15.36.7.A(2). No response is required.

### **1.2 NMAC 19.15.36.11.B – Financial Assurance Requirements for New Commercial Facilities**

Upon notification by the division that it has approved a permit for the C.K. Facility, C.K. Disposal, LLC shall submit financial assurance for \$2,311,912. This amount covers the estimated closure of one landfill unit, the entire liquid processing area and 30-years of post-closure care for the entire facility. A breakdown of costs is provided in Attachment L - Closure and Post-Closure Care Plan.

### **1.3 NMAC 19.15.36.11.C – Terms of Financial Assurance**

C.K. Disposal, LLC provided the State of New Mexico financial assurance on the prescribed form and made payable to the state. C.K. Disposal, LLC shall notify the State of New Mexico and OCD within 30 days if there is to be a design change that will alter the financial assurance.

### **1.4 NMAC 19.15.36.11.D – Forfeiting Financial Assurance**

C.K. Disposal, LLC understand that the division shall give them 20-days' notice and an opportunity for a hearing prior to forfeiting financial assurance.

### **1.5 NMAC 19.15.36.11.E – Forms of Financial Assurance**

Once the Permit is approved, C.K. Disposal, LLC will select a financial assurance mechanism listed in NMAC 19.15.36.11.E. Financial assurance may be accepted in the following forms: surety bonds, letters of credit, and cash accounts. Documentation of financial insures will be attached to the approved permit. The financial assurance amount covers the estimated closure of one landfill unit, the entire liquid processing area and 30-years of post-closure care for the entire facility. A breakdown of costs is provided in Attachment L - Closure and Post-Closure Care Plan.

### **1.6 NMAC 19.15.36.11.F – Replacement of Financial Assurance**

If C.K. Disposal, LLC decides to replace its financial assurance with another form listed in NMAC 19.15.36.11.E, it will comply with requirements listed in NMAC 19.15.36.11.E.

### **1.7 NMAC 19.15.36.11.G – Review of Adequacy of Financial Assurance**

C.K. Disposal, LLC understands that the division may at any time after five years after initial acceptance review the adequacy of the C.K Facility's financial assurance. C.K. Disposal, LLC will comply with all request made by the division per NMAC 19.15.36.11.F.

## **1.0 NMAC 19.15.36.12 - PERMIT APPROVAL, DENIAL, REVOCATION, SUSPENSION, MODIFICATION OR TRANSFER**

### **1.1 NMAC 19.15.36.12.A – Granting of Permit**

Prior to construction and use of the proposed C.K. Facility, C.K. Disposal, LLC will submit a permit meeting requirements set forth in NMAC 19.15.36 and per the Oil Conservation Division (OCD) of the New Mexico Energy, Minerals, and Natural Resource Department.

#### **A NMAC 19.15.36.12.A(1) Permit Issuance for A New Surface Waste Management Facility or Major Modification**

C.K. Disposal, LLC will adhere to all notice requirements for a new surface waste management facility per NMAC 19.15.36.9. Adjacent landfill owners and notification list recipients, shown in section 19.15.36.9, will be informed of the permit approval. In addition C.K. Disposal, LLC will submit appropriate financial assurance per requirements in NMAC 19.15.36.11. Backup documentation on closure and post-closure costs can be found in Attachment L. Both public notification and financial assurance must be completed and submitted to the division prior to final approval of the permit. The following permit provides Attachment B - Engineered Design Plan and Attachment K - Site Operation Plan, which discuss the protection of fresh water, public health, safety, and the environment.

#### **B NMAC 19.15.36.12.A(2) Permit Effective Time of 10 Years**

When approved, the permit will be effective for 10-years from the date of approval. If a major modification is approved for the C.K. Facility, the updated permit will be effective for 10-years from the major modification date of approval. Permit renewal will be submitted to OCD at least 120-days prior to the expiration date of the permit. Renewal will be completed in per NMAC 13.15.36.

##### **i NMAC 19.15.36.12.A(2)(a) Permit Effective Time Addition for A Successive 10 Years**

The C.K. Facility permit may be renewed for successive 10-year terms. C.K. Disposal, LLC shall submit the permit renewal at least 120-days before the permit expires and the owner/operator shall not be in violation during the renewal or date of expiration. If the facility or owner/operator is in violation, they may be in the process of diligently pursuing procedures to remedy the violation to continue the permit renewal procedure.

##### **ii NMAC 19.15.36.12.A(2)(b) – Application Renewal Information**

If C.K. Disposal, LLC requests the renewal of its permit, it will provide accurate information requested in NMAC 19.15.36.8.

**iii NMAC 19.15.36.12.A(2)(c) – Permit Renewal Public Notice**

If C.K. Disposal, LLC applies for permit renewal it shall comply with notification requirements set forth in NMAC 19.15.36.8 and financial assurance requirements set forth in NMAC 19.15.36.11. Once these two items are met and the permit has been approved, the C.K. Facility may continue operation and ensure fresh water, public health, safety, and the environment will be protected.

**C NMAC 19.15.36.12.A(3) – Facility Permit 10-Year Review**

C.K. Disposal, LLC 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. C.K. Disposal, LLC will respond to OCD requests for updates to address changes in regulatory standards.

**1.2 NMAC 19.15.36.12.B – Denial of Permit**

C.K. Disposal, LLC understand that the division may deny their permit renewal or major modification per 19.15.36.12.B.

**1.3 NMAC 19.15.36.12.C – Additional Requirements**

C.K. Disposal, LLC will comply with any additional requirements or conditions imposed by OCD during the permit renewal process.

**1.4 NMAC 19.15.36.12.D – Revocation, Suspension or Modification of a Permit**

C.K. Disposal, LLC understand that the division may revoke, suspend, or modify the permit at any time per 19.15.36.12.D.

**1.5 NMAC 19.15.36.12.E – Transfer of a Permit**

C.K. Disposal, LLC shall not transfer a permit without the division's prior written approval and review per 19.15.36.12.E.

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

Siting documentation is detailed 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 1-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 C.K. Facility, the location is ideally suited for development as a surface waste management facility.

**1.1 NMAC 19.15.36.13.A. Depth to Ground Water**

Groundwater is demonstrated to be more than 100 -feet below the lowest elevation of the design depth of the landfill where oil field waste will be placed. Additional detail is provided in Attachment G.

**A NMAC 19.15.36.13.(2) Landfarm Soil or Drill Cutting Requirements**

Not Applicable. C.K. Disposal, LLC does not propose to operate a landfarm permitted under 19.15.36.15 NMAC.

**B NMAC 19.15.36.13.(3) Landfarm Soil or Drill Cutting Requirements**

Not Applicable. C.K. Disposal, LLC does not propose to operate a landfarm permitted under 19.15.36.15 NMAC.

**C NMAC 19.15.36.13.(4) Landfarm Ground Water**

Not Applicable.

**D NMAC 19.15.36.13.(5) Waste Management Facility Groundwater**

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 Attachment G.

**1.2 NMAC 19.15.36.13.B. No Surface Waste Management Facility Shall be Located:**

**A NMAC 19.15.36.13.(1) within 200 feet of a watercourse, lakebed, sinkhole or playa lake;**

The Facility is not located within 200-feet of a watercourse, lakebed, and sinkhole or playa lake.

Documentation regarding the locations of watercourses, lakebeds, sinkholes and playa lakes with respect to the C.K. Facility is provided in Attachment J.

**B NMAC 19.15.36.13(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 Attachment J.

**C NMAC 19.15.36.13(3) within, or within 500 feet of, a wetland;**

The Facility is not located within 500-feet of a wetland. Documentation regarding wetlands in the vicinity of the Facility site is provided in Attachment A, Figure A.26.

**D NMAC 19.15.36.13(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 Attachment A, Figure A.20.

**E NMAC 19.15.36.13(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-feet of the nearest permanent residence, school, hospital, institution, or church. Land use setback documentation is provided in Attachment A, Figure A.21.

**F NMAC 19.15.36.13.(6) within an unstable area**

Unstable area means a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Examples of unstable areas are poor foundation conditions, areas susceptible to mass movements, and Karst terrain areas where Karst topography, with its characteristic surface and subterranean features, is developed as a result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in Karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys. Thin lenses or caliche material were encountered onsite, but due to the small nature of the caliche, it is not deemed an unstable area. Based on site visits and borings onsite, there is no evidence of any unstable area within the facility boundary.

**1.3 NMAC 19.15.36.13.C. No Surface Waste Management Facility Shall Exceed 500 Acres**

The C.K. Facility will not exceed 500-acres. Total acreage for the Facility site is 317 ± acres. A copy of the Boundary Survey for the C.K. Facility 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 317 acre ± C.K. Facility. Table I.1 provides details regarding site facilities and acreages.

**1.4 NMAC 19.15.36.13.D. The Operator Shall Not Accept Oil Field Wastes Transported by Motor Vehicle**

C.K. Disposal, LLC will comply with this requirement. The Oil Field Waste Management Plan provided requires that, prior to acceptance of any liquid waste, the transporter must provide the Facility with a Division-approved Form C-138.

**1.5 NMAC 19.15.36.13.E. The Operator Shall Not Place Oil Field Waste Containing Free Liquids in a Landfill or Landfarm Cell**

C.K. Disposal, LLC will comply with this requirement. The Oil Field Waste Management 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 stabilization and solidification area and described in Operation, Inspection, and Maintenance Plan.

**1.6 NMAC 19.15.36.13.F. Surface Waste Management Facilities Shall Accept Only Exempt or Non-Hazardous Waste**

C.K. Disposal, LLC will comply with this requirement. The Oil Field Waste Management Plan provides a detailed description of oil field waste acceptance protocol. Included in this Plan are Form C-138 certification, certification frequency. C.K. Disposal, LLC will maintain and make documentation of this available for OCD inspection.

**A NMAC 19.15.36.13(1) Exempt oil field wastes**

C.K. Disposal, LLC will comply with this requirement. The Oil Field Waste Management 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.

**B NMAC 19.15.36.13(2) Non-exempt, non-hazardous, oil field wastes.**

C.K. Disposal, LLC will comply with this requirement. The Oil Field Waste Management Plan 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 nonhazardous.

**C NMAC 19.15.36.13(3) Emergency non-oil field wastes.**

C.K. Disposal, LLC will comply with this requirement by following Section 4.3 in Attachment K.

**1.7 NMAC 19.15.36.13.G. Operator of a Commercial Facility Records**

C.K. Disposal, LLC will comply with this requirement. The Oil Field Waste Management 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. C.K. Disposal, LLC will make these records available for OCD inspection upon request.

**1.8 NMAC 19.15.36.13.H. Disposal at a Commercial Facility**

Disposal operations at C.K. Disposal, LLC will only be conducted when an attendant is on duty. C.K. Disposal, LLC may 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.

**1.9 NMAC 19.15.36.13.I. Migratory Bird Projection**

C.K. Disposal, LLC herein requests an exception to 19.15.36.13.I NMAC. The Migratory Bird Protection Plan presented as 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 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. Plan can be found in Section NMAC 19.15.36.17, Section 1.3C of this permit application.

**1.10 NMAC 19.15.36.13.J. Surface Waste Management Sign**

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-foot by 8-foot sign with 3-inch lettering will identify the Facility operator as C.K. Disposal, LLC and will include the Facility permit number, location and emergency phone numbers.

**1.11 NMAC 19.15.36.13.K. The Operators Shall Comply with the Spill Reporting and Corrective Action Provisions of 19.15.30 NMAC or 19.15.29 NMAC.**

The C.K. Facility is specifically designed to prevent pollutants from entering surface and groundwater, as demonstrated in Attachments A, B, and C. Successful implementation of the engineering design and operational programs will ensure compliance with 19.15.30 NMAC. The C.K. Disposal Contingency Plan (Appendix B in Attachment K) is designed to comply with the notification and corrective action as required in 19.15.29 NMAC.

**1.12 NMAC 19.15.36.13.L. Operator Inspection and Maintenance Plan**

The Operations, Inspection, and Maintenance Plan for the C.K. Facility is provided. The Plan describes in detail the methods and frequency for inspections, sampling, recordkeeping, and maintenance for the leak detection sumps, and containment berms.

**1.13 NMAC 19.15.36.13.M. Operator Plan to Control Run-On Water onto the Site and Run-Off Water from the Site**

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. C.K. Disposal, LLC 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 in Attachment K, and construction of the detention ponds described in Attachment J. If required after consultation with New Mexico Environment Department (NMED), C.K. Disposal, LLC will obtain a permit under the Multi-Sector General Permit for Stormwater Discharges (promulgated September 29, 2008).

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**1.14 NMAC 19.15.36.13.N. Contingency Plan**

The Contingency Plan included in Attachment K, Appendix B and provides detailed information in response to 19.15.36.13.N.1 through 14 NMAC.

**1.15 NMAC 19.15.36.13.O. Gas Safety Management Plan**

C.K. Disposal, LLC 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 less than 5% degradable organics.

However, a gas monitoring program consisting of testing incoming vehicles during unloading will be utilized to ensure that hydrogen sulfide (H<sub>2</sub>S) 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 H<sub>2</sub>S 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, and the H<sub>2</sub>S Prevention and Contingency Plan.

**1.16 NMAC 19.15.36.13.P. Training Program**

C.K. Disposal, LLC will comply with this requirement. The Operation, Inspection, and Maintenance Plan describes in detail the training programs for site personnel. Training records will be maintained by C.K. Disposal, LLC for OCD inspection for a period of not less than five years.

## **1.0 NMAC 19.15.36.14 - INTRODUCTION**

C.K. Disposal, LLC proposes to develop a commercial surface waste management facility consisting of a landfill, liquid processing area, and deep well injection per NMAC 19.15.36. This section provides the general design and operating requirements as provided in NMAC 19.15.36.14. The proposed C.K. Facility is located 0.05-miles south of State Highway 234, approximately 4.16-miles southeast of Eunice, New Mexico, in Lea County. The C.K. Facility will encompass a 316.97-acres broken down into individual sections as listed below in Table 1 – C.K. Facility.

**Table 1 –C.K. FACILITY**

<b>Area</b>	<b>Acres</b>
<b>C.K. Disposal E&amp;P Landfill and Processing Facility</b>	<b>316.97</b>
Landfill	141.5
Liquid Processing	51.75
Saltwater Disposal	5.1
Buffer Areas, Site Structures and Access Roads	118.62

### **1.1 NMAC 19.15.36.14.A(1) – Working Face and Compaction**

The C.K. Facility will keep its working face to the smallest practical areas while accepting waste on a daily basis. The working face will be minimized, provide a safe unloading area for trucks, and a safe working area for site equipment. To compact the waste to the smallest practical volume, the lifts will be spread in layers approximately 2-foot thick and worked by high ground-pressure bulldozer, compactor, or equivalent.

A minimum 2-foot thick protective cover will be placed over the geomembrane and act as a leachate collection system. The protective cover will be comprised of site soils. Protective cover does not require compaction control; however, it should be stable and capable of supporting site equipment and disposal traffic. Care will be exercised during placement so as not to shift, wrinkle, or damage the underlying geosynthetic layers, and placement methods will be documented. Protective cover will be placed such that the top surface, while spreading, is at least 2-feet above the geosynthetic layers at all times, unless low-ground pressure dozers are used (i.e. track pressure less than 5-psi). At least 1-foot should be retained between the low-ground pressure dozer and the geosynthetic layer. A greater thickness will be maintained to support loaded hauling trucks and trailers and for turning areas. Drivers will proceed with caution when on the overlying soil and prevent spinning of tires on sharp turns. Placement of protective cover is discussed in full detail in Attachment C - Soil Liner Quality Control Plan.

### **1.2 NMAC 19.15.36.14.A(2) - Access Control**

The site employees will control access and monitor all vehicles entering and exiting the site. Access to the landfill is limited to the entrance road on the northeast corner of the facility that connects to State Highway 234. Unauthorized access to the landfill will be controlled by a perimeter fence located along the facility boundary and a gate at the access

road. The perimeter fence will consist of a 4-strand barbed wire fence. Although the facility will operate 24-hours a day, the gate will be locked when no landfill personnel are on site. A cattle guard will be placed at the entrance along with a gate to prevent animals from entering the site. All persons accessing the site, including customers, visitors, and employees will check-in at the scale house area or gate house.

### **1.3 NMAC 19.15.36.14.A(3) – Fire Prevention and Extinguishing**

#### **A Fire Prevention**

If a fire occurs, the landfill manager will be notified immediately. The customer service representatives, inspectors, equipment operators, and spotter will be on alert for signs of hot loads, such as smoke, steam, or heat being released from incoming waste loads. Suspected hot loads will not be allowed at the active working face. The driver will be directed to discharge or unload in an area that is located away from waste, vegetation, other vehicles and structures. The hot load or fire will be quenched or extinguished using soil, extinguishers, water, or other appropriate means. If the fire cannot be extinguished by onsite personnel within 10 minutes of detection, the local fire department will be notified via 911. In addition to these hot load procedures, the following fire prevention measures shall be enforced on-site:

- Smoking on site is not permissible, and smoking cannot occur within 20-feet of an entrance to the C.K. Facility.
- Fuel spills will be contained and cleaned up immediately, regardless of their location.
- Open burning is not allowed.
- Proper compaction will be utilized at the working face.
- Proper cover application will be utilized to create firebreaks within the buried waste mass.
- No landfill equipment will remain on the immediate active area of the site overnight.
- Staff will be trained when hired, as well as annually thereafter, regarding the Fire Prevention, Fire Control, General Rules for Fires, Specific Fire Fighting Procedures, and Notification requirements.

Table 2 provides contact information for reference and use during an emergency.

**Table 2 - Emergency Contacts**

<b>Agency/Organization</b>	<b>Emergency Number</b>
<b>1. Fire</b> Eunice Fire Department	911 or (575) 394-3258
<b>2. Police</b> Eunice County Police Department Lea County Sheriff's Department New Mexico State Police	911 or (575) 394-2112 911 or (575) 396-3611 911 or (575) 392-5580
<b>3. Medical/Ambulance</b> Eunice Fire Department Lea Regional Medical Center 5419. N. Lovington Highway Hobbs, NM 88240	911 or (575) 394-3258 (575) 492-5000
<b>4. Response Firm</b> Phoenix Environmental, LLC. 2113 French Drive Hobbs, NM 88240	(575) 391-9685
<b>5. OCD Emergency Response Contacts</b> Oil Conservation Division - District 1 1625 N. French Drive Hobbs, NM 88240  Oil Conservation Division - Main Office 1220 South St. Francis Drive Santa Fe, NM 87505	(575) 393-6161 (office) (575) 370-3186 (mobile)  (505) 476-3440
<b>6. State Emergency Response Contacts</b> Environmental Emergency 24 hr. (NMED) New Mexico Environment Department Solid Waste Bureau, Santa Fe	(505) 827-9329 (505) 827-0197
<b>7. Local Emergency Response Contacts</b> Lea County Emergency Management	(575) 391-2983
<b>8. Federal Emergency Response Contacts</b> National Emergency Response Center (U.S. Coast Guard) Region VI Emergency Response Hotline (USEPA)	(800) 424-8800 (214) 665-2200

## **B Fire Control**

The City of Eunice Fire Department will be contacted any time a fire occurs which onsite staff cannot extinguish within 10 minutes of detection. The following rules will be implemented in the event of a fire at the proposed facility.

- If fire cannot be extinguished in 10 minutes, call the Fire Department at 911.
- Do not attempt to fight fire alone.
- Be familiar with the use and limitations of firefighting equipment onsite.
- Alert other facility personnel.
- Do not attempt to fight fire without adequate personal protective equipment.
- Assess extent of fire and possibilities for the fire to spread.
- Attempt to contain or extinguish the fire until arrival of the Fire Department if it appears the fire can be safely fought with available firefighting devices.

## **C Specific Fire-Fighting Procedures**

If fire occurs on or within a vehicle or piece of equipment, the equipment operator should bring the vehicle to a safe stop. The vehicle should be parked away from fuels, supplies, uncovered waste, and other vehicles, if safety of personnel will allow. The engine will be shut off and the brake engaged or other methods will be used to prevent subsequent movement of the vehicle. Firefighting methods for fires involving waste material include smothering with soil, separating burning material from other waste, and spraying with water from a water truck (if fire is not oil related). If detected soon enough, a small fire may be fought with an ABC rated hand-held extinguisher. If fire is in the working face, the burning area should be isolated or pushed away from the working face quickly before fire is spread throughout the working face. If this is not possible or unsafe, efforts to cover the working face with soil must be initiated immediately to smother the fire.

## **D Stockpiling Fire-Fighting Materials**

### **i Earthen Material Coverage**

Landfill fires normally will be extinguished by smothering with cover soil material spread by a dozer or other suitable equipment. A minimum of 667-cubic yards of soil or enough soil to cover the working face with at least six inches of compacted soil will be stockpiled within 2,500-feet of the working face for this purpose. Earthen material coverage calculations are included below.

Maximum size of working face= 30,000 square feet

Contingency=20 %

Volume of soil required for a six-inch cover on a 30,000 square foot maximum working face with a 20 percent contingency included is calculated as follows:

Maximum size of working face= 30,000 sq. ft.

Required stockpile= 30,000 sq. ft. x 0.5 ft. ÷ (27 cy/sf) \* 1.2 (20% contingency) = 667-cubic yards

A daily log will be maintained to document the location of the stockpile, the distance of the stockpile from the working face, the volume of the stockpile, the use and replacement of soil for fire control, and demonstration of the amount of stockpiled soil will be adequate to cover the largest working face in use on that day. The operator will, at all times, maintain sufficient equipment for moving the soil stockpile and placing a six-inch soil cover over the working face within one hour of detecting a fire at the working face.

#### **1.4 NMAC 19.15.36.14.A(4) – Litter and Odor Control**

##### **A Litter Control**

Windblown waste and litter will be controlled through several methods, including proper unloading, compaction, and cover procedures. The placement of screening berms, stockpiles, and adequate staffing will also provide control of windblown waste and litter. Personnel will patrol the landfill site, including fences, access roads, and the entrance gate every operating day to pick up and return windblown waste and litter to the active working face and perform other litter control measures as necessary. Daily cover will be placed on top of the waste lift as soon as practical for any portion of the lift that reaches recommended lift height. The working face will be covered daily.

##### **B Odor Control**

Facility personnel will ensure the municipal solid waste facility does not violate any applicable air quality requirements per the NMAC. Odors will be controlled at the site, and if they occur, will be reduced in accordance with the Odor Management Plan. Sources of odor and potential odor sources associated with this landfill facility include wastes containing high levels of hydrogen sulfide (H<sub>2</sub>S) gas, the open working face, and ponded water. All wastes which arrive onsite will undergo visual inspection and be screened for H<sub>2</sub>S. If waste contains concentrations of 10-parts per million (ppm) or higher of H<sub>2</sub>S, the load will be treated with calcium hypochlorite (Ca(ClO)<sub>2</sub>), also referred to as bleach powder, until H<sub>2</sub>S concentration is below 1-ppm. If the hauler refuses to comply with this treatment, the load will be rejected and taken offsite.

The size of the working face will be minimized thereby exposing as little waste as possible to open air. Waste transported to the facility for disposal will be spread and compacted promptly into the working face of the landfill. Waste will be covered on a daily basis with 6-inches of clean soil or an alternate daily cover. If landfill closes for more than 24 hours, the working face will be covered with a minimum of 6-inches of clean soil. Leachate generated by this landfill will be placed in the produced water tanks for separation and then evaporation ponds. If H<sub>2</sub>S levels in the evaporation ponds exceed 10-ppm, bleach will be added until H<sub>2</sub>S concentration is below 1-ppm. Leachate risers are constructed with caps to minimize exposure to open air and diffusion of gas.

#### **1.5 NMAC 19.15.36.14.A(5) – Prohibited Excavation of Closed Cells**

Closed cells onsite will remain closed and not excavated without approval from the Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department.

**1.6 NMAC 19.15.36.14.A(6) – Daily Cover Requirements**

The C.K. Facility will apply an alternate daily cover or 6-inches of well-compacted earthen material not previously mixed with rubbish or other solid waste at the end of each day to control dust, debris, odors, other nuisances, fires, windblown litter or waste, and scavenging, unless a more frequent interval is required.

**1.7 NMAC 19.15.36.14.A(7) – Intermediate Cover Requirements**

The C.K. Facility will cover all areas that have received waste but will be inactive for longer than 30-days, and have not reached the final waste elevation with intermediate or final cover. Intermediate cover will be placed over existing daily cover, and will include 6-inches of suitable earthen material capable of sustaining native plant growth and will be seeded or sodded following its application in order to control erosion. This intermediate cover will be graded to prevent ponding of water. Plant growth or other erosion control features will be inspected and maintained as needed. Placement of intermediate and final cover are discussed in Attachment C and Attachment D.

**1.8 NMAC 19.15.36.14.A(8) – Closure Requirements**

As each landfill unit reaches its final top of waste elevation, the unit will undergo the closure process. The operator shall notify the division's environmental bureau at least three working days prior to landfill unit closure. Closure plan is provided in the NMAC 19.15.36.18 section below. The plan provides detailed procedures for closure and post-closure care.

**1.9 NMAC 19.15.36.14.B(1)&(2) – Vadose Monitoring Program**

**A Proposed Vadose Zone Monitoring System**

During initial site investigation five (5) soil bores were taken onsite to a depth of 175-feet below ground surface. No groundwater was observed in the cuttings, nor in the bore holes after a 24-hour period. No groundwater was present within the upper 175-feet of the Ogallala Formation or Chinle Formation because they rise above the saturated zone of the Ogallala Formation. Therefore, a vadose monitoring system has been designed for the facility based on onsite specific technical information. The design considered the thickness, stratigraphy, lithology, and hydraulic characteristics of the geologic units, as well as the depth to groundwater, TDS concentration, critical receptors, and the contaminant migration pathway analysis.

The presence of groundwater in the vadose zone monitoring wells may not be the result of leakage from the facility. Other sources such as infiltration of surface water during excavation of the landfill cells or infiltration from proximal storm water detention ponds may cause temporary saturation and water to be detected in down-slope vadose zone wells. Chemical analysis of water samples and comparison to leachate samples and/or samples from a leak detection system will be used to determine if the water is a result of a release from the facility.

## **B Proposed Monitoring Well Locations**

Nine (9) vadose zone monitoring wells have been designed and identified along a point of compliance on the site perimeter. The compliance monitoring well locations are generally located down-slope of the leachate collection sumps. In addition, two background (up-slope) monitoring wells have been designed along the north side of the facility. The background wells represent the quality of background or up-slope water not affected by leakage from a landfill.

During initial construction of the landfill unit, wells VW-1, VW-2 and VW-3 will be constructed. An initial sample of water, if present, will be collected prior to acceptance of any waste at the facility. Other vadose zone monitoring wells will be installed upon progression of the landfill units and samplings will be collected prior to acceptance of waste in these stated landfill units. The hydrogeology study, vadose monitoring plan and sampling and analysis plan can be found in Attachments D, E and F.

## **1.10 NMAC 19.15.36.14.C – Landfill Design Specifications**

### **A Introduction**

The C.K. Facility will encompass 316.97-acres, with a landfill footprint of 141.50-acres. The six (6) waste cells will have a combined disposal capacity of approximately 24,585,056-cubic yards. Volume and Site Life Calculations are provided in Attachment K. The landfill method will be below-grade fill with 4H:1V side slopes and aerial fill with 5H:1V final cover side slopes, with a maximum 3.5% final cover top slope. The drainage system as described in Attachment J – Drainage Study, will be designed to meet or exceed NMAC requirements for run-on and runoff.

Per NMAC 19.15.36.14.C(1), the landfill will have an alternate liner design due to no groundwater present within 100-feet of the deepest excavation. The site also has a red bed clay layer that acts like a barrier between the site and groundwater. The alternate liner system will consist of, from bottom to top.

- 6-inches of compacted subgrade
- A Geosynthetic Clay Liner (GCL)
- 60-mil High Density Polyethylene (HDPE) Geomembrane Liner
- 200-mil HDPE Geonet (floor)/200-mil HDPE Geocomposite (side slopes)
- 60-mil HDPE Geomembrane Liner
- 200-mil HDPE Geocomposite (floor/slope)
- 24-inches of Protective Soil Layer

Engineered site drawings and liner cross sections can be found in Attachment B – Engineering Design Plans.

## **1.11 NMAC 19.15.36.14.C(1) – Base Layer**

The base layer of the landfill liner will consist of 6-inches of compacted subgrade overlain by a geosynthetic clay liner (GCL). The GCL will comprise of a uniform layer of granular sodium bentonite encapsulated between two geotextile layers. The GCL will have a maximum hydraulic conductivity of  $5 \times 10^{-9}$  cm/sec, which is below the  $1 \times 10^{-7}$  cm/sec allowed in the NMAC. The GCL shall be BENTOLINER products as produced by GSE Environmental or an equivalent pre-approved by the Geotechnical Professional. Details on quality control, storage, installation, and reporting can be found in Attachment C - Soil Liner Quality Control Plan.

**1.12 NMAC 19.15.36.14.C(2) – Lower Geomembrane Liner**

The lower geomembrane liner will consist of a 60-mil HDPE material.

**1.13 NMAC 19.15.36.14.C(3) – Geonet/Geocomposite**

A geonet (floor) and geocomposite (sideslopes) will comprise the leak detection of the liner system at the C.K. Facility. The geonet component will be used on the floor and the geocomposite will be placed on the side slopes. The geocomposite consists of a geonet heat laminated on both sides with an 8-ounce nonwoven geotextile. The geocomposite will be used on the side slopes to provide a higher interface friction with the textured HDPE liner. The geonet/geocomposite are designed to transfer fluid horizontally through the anticipated landfill loads. The geonet and geocomposite have a transmissivity of  $2 \times 10^{-3}$ -m/s and  $1 \times 10^{-2}$ -m/s, respectively. Since soil will not be used, leachate will be transported through the geonet/geocomposite layers at the rate listed above. The geonet and geocomposite materials shall be as manufactured by GSE Environmental or an equivalent pre-approved by the Geotechnical Professional. Additional information on installation, testing and reporting can be found in Attachment C - Soil Liner Quality Control Plan.

The geonet/geocomposite system will channel leachate directly to the sump and leak detection piping. The slope of the landfill sub-grade, drainage pipes and laterals will be at 2% as shown in Attachment B – Engineered Design Plans. The leachate collection system will be comprised of 6 & 24-inch SDR 11 pipe. The SDR 11 pipe has a larger wall thickness than the minimum schedule 80 pipe in the NMAC. The operator shall seal a solid drainage pipe to transport collected liquids to a corrosion-proof sump or sumps located outside the landfill's perimeter for observation, storage, treatment or disposal. The sump and pipe layout is shown in Attachment B – Engineering Design Plans.

**1.14 NMAC 19.15.36.14.C(4) – Upper Geomembrane Liner**

The upper geomembrane liner will consist of a 60-mil HDPE material.

**1.15 NMAC 19.15.36.14.C(5) – Leachate Collection and Removal System**

A leachate collection system (LCS) will be placed above the upper geomembrane liner. The LCS will consist of a heat bonded HDPE geonet/geotextile drainage composite (geocomposite) on the floor and side slopes with granular (gravel) embedded leachate collection pipes in the sump and pipe trench areas. The leachate collection pipes will consist of six-inch diameter pipe with 3/8-inch diameter holes on six-inch centers. To avoid gravel entering into the collection pipes, the granular drainage layer shall consist of rounded, river-run gravel meeting the requirements of ASTM C-33 for coarse aggregate.

Crushed material will not be acceptable. The gravel should meet gradation requirements of No. 6 (Nominal size  $\frac{3}{4}$  inch to  $\frac{3}{8}$  inch) or coarser. The maximum gravel size shall not exceed two-inches.

“Leachate chimneys” will be installed through the protective cover to allow a direct hydraulic conduit between the lowest waste layers and the LCS. A minimum 8-ounce geotextile will completely encase the pipe embedment gravel layer with a full-width geotextile overlap where the chimney daylight through the protective cover. The geotextile overlap will be covered by a maximum six-inch thick layer of the granular material used as the pipe embedment. Leachate pipes will be placed at a minimum slope of 2% to aid in leachate removal.

The geotextile materials will include an 8-ounce fabric around the leachate chimneys and a minimum 8-ounce nonwoven fabric on both sides of the geonet forming the geocomposite layer. The geotextile will be bonded on both sides of the geonet. Additional information on installation, testing and reporting is located in the Attachment C - Soil Liner Quality Control Plan.

Leachate will be pumped out of sumps into tanker trucks and transferred to the produced water receiving tanks and then evaporation ponds.

#### **1.16 NMAC 19.15.36.14.C(6) – Protective Soil Layer**

A minimum 2-foot thick protective cover will be placed above the LCS. The protective cover will consist of site soils in combination with the leachate chimneys described above. The maximum gravel size shall not exceed two inches. Pre-construction and conformance testing for the protective cover soils will include gradation analysis with a minimum conformance testing frequency of one grain-size analysis (ASTM D422) per 5,000-cubic yards (or fraction thereof) of in-place material. Protective cover does not require compaction control; however, it should be stable and capable of supporting site equipment and disposal traffic. A greater thickness will be maintained to support loaded hauling trucks and trailers, and for turning areas. Additional information on installation, testing and reporting is located in the Attachment C – Soil Liner Quality Control Plan.

#### **1.17 NMAC 19.15.36.14.C(7) – Placement of Waste**

Upon approval of construction of the landfill liner system, the Owner/Operator shall place oil field waste over the leachate collection and removal system protective layer.

#### **1.18 NMAC 19.15.36.14.C(8) & (9) – Landfill Final Cover Design**

As each cell progresses through aerial fill and reaches its final top of waste elevations, final cover will be applied, as shown in Attachment B – Engineered Design Plans. The final cover will be placed in phases as a cell reaches its designed top of waste elevation. Final cover application will generally consist of the following:

- Reach approved final waste elevation with solid waste, place 6-inches of daily cover and 6-inches of intermediate cover.
- Perform a baseline topographic survey to act as the control for thickness verification during the placement of the final cover.

- Construct the final cover layers, and perform testing in accordance with the Attachment D - Final Cover Quality Control Plan (FCQCP).
- Final cover evaluation report and as-built survey will be prepared by an independent licensed professional engineer in the State of New Mexico and will be maintained in the site operating records and the final cover log will be updated to reflect the area where the final cover has been placed.

The final cover system will be a combination two performance based liner systems. One design is for the top cap and the other for the side slopes.

The top cap design will follow the design outlined in the NMAC but will replace the drainage layer with a geocomposite drainage layer. Water collected by the geocomposite will be transported to articulated block channels which run around the perimeter of the cap diverting runoff from the side slopes. The perimeter channels will discharge to one (1) of four (4) articulated block channels of the landfill corner. Although collecting water from the geocomposite, the articulated blocks do not encroach into the overall thickness of final cover on either the cap or side slopes. Drainage design is shown in Attachment B – Engineered Design Plans and backup information in Attachment J – Drainage Study. The design for the cap is as follows from bottom to top:

- 12-inch Foundation Layer
- 60-mil High Density Polyethylene (HDPE) Geomembrane Liner
- Geocomposite Drainage Layer
- 24-inch Infiltration Layer
- 12-inch Soil Erosion Layer

The side slope final cover design will be a performance based water balance cover. With the assistance of 5 to 1 slopes, the majority of water will run off the side slopes to drainage channels around the perimeter of the landfill base. The design of the side slope final cover is as follows from bottom to top:

- 12-inch Foundation Layer
- 24-inch Infiltration Layer
- 12-inch Soil Erosion Layer

Both performance final covers have been modeled using the Hydrologic Evaluation of Landfill Performance (HELP) Model. The final covers demonstrate meeting permeability criteria listed in the NMAC. The two cap designs will not create a “bathtub effect” since the final cover has an equivalent or lower permeability than the liner system installed. The HELP model results can be found in Attachment E.

The final cover system will be maintained consistent with those defined in Attachment D – Final Cover Quality Control Plan. All soil placed on the final cap will be compacted to a minimum of 80 percent Standard Proctor Density. The Owner/Operator shall install the top landfill cover within one year of achieving the final landfill cell waste elevation. Prior to

installation of the final cover, the Owner/Operation will provide three (3) working days' notice to the division, to allow a member of the division to witness the final cover installation. Additional information on installation, testing and reporting is located in Attachment D - Final Cover Quality Control Plan.

### **1.19 NMAC 19.15.36.14.C(10) – External Piping**

The C.K. Facility has been designed to use HDPE pipe based on its ability to resist chemical attack and degradation. The leachate collection and sump removal systems will not penetrate the liner but will run along the landfill side slopes placed against the geocomposite liner. The geotextile layer of the geocomposite along with the 2-foot protective cover will protect the pipes and liner system from accidental damage from landfill waste or landfilling activities.

The leak detection pipe will be the only pipe penetrating the liner system. The leak detection pipe will be placed between the upper geomembrane and leak detection geonet/geocomposite. An HDPE boot with pipe clamps will be placed around the pipe at the penetration. The HDPE boot will be welded to the upper geomembrane, to create a leak-free seal. The location of the pipe in the sump allows inspection of the leak detection system by the Owner/Operator, while maintaining the integrity of the liner system. Design drawings of the pipe penetration can be found in Attachment B – Engineered Design Plans.

### **1.20 NMAC 19.15.36.14.D(1)(a)-(c) – Liner Specifications and Requirements**

The 60-HDPE liner has a hydraulic conductivity less than the maximum  $1 \times 10^{-7}$ -cm/sec allowed in the NMAC. The HDPE material has chemical and ultraviolet resistance properties, listed in Attachment F, and is compatible with and resistant to chemical attack from the oil field waste and leachate. The 2-feet of protective cover will assist the HDPE liner to withstand the projected loading stresses, setting and disturbances from oil field waste, and cover material and equipment. The geomembrane liner (GML) materials shall be as manufactured by GSE Environmental or an equivalent pre-approved by the Geotechnical Professional. Details on quality control and storage can be found in Attachment C - Soil Liner Quality Control Plan.

When installed on the floor, the HDPE liner will be placed at a minimum of 2% slope to promote positive drainage for leachate collection and leak detection. The side slopes are designed at a 4 to 1 slope to minimize tensile stresses on the liner material. Interface friction test reports are provided in Attachment F, which provide a maximum friction angle of 19.4-degrees, well above the 4 to 1 slope being used on side slopes.

Field seams between sheets of GML material will be made using approved fusion welding systems, equipment, and techniques. Approved fusion welding systems include fillet welds using extrudate, lap welds using extrudate, and lap welds using single or double wedge (double track) welder. The welds will either be pressure or vacuum tested. Additional information on installation, testing, and reporting is located in Attachment C - Soil Liner Quality Control Plan.

### **1.21 NMAC 19.15.36.14.E – Requirements for the Soil Component**

#### **A NMAC 19.15.36.14.E(1) – (2) – Subgrade Placement**

The subgrade shall be prepared in a manner consistent with proper subgrade preparation techniques for the installation of geosynthetic materials and as recommended by the GCL manufacturer. The subgrade shall be compacted to 90-percent standard proctor density or greater (if required by GCL manufacturer). The subgrade shall be properly compacted so as to prevent post construction settlement, causing excessive strains in the GCL or other synthetic liner materials. Prior to installation, ensure a surface free of debris, roots, or angular stones larger than ½-inch. The subgrade must be rolled with a smooth-wheeled roller. During installation, ensure rutting or raveling is not caused by installation equipment. Additional information on installation, testing and reporting is located in Attachment C - Soil Liner Quality Control Plan.

**B NMAC 19.15.36.14.E(3) – Clay Soil Component Placement**

The alternate liner designed for the C.K. Facility will use a GCL instead of compacted clay soil. The GCL has a uniform layer of sodium bentonite encase between two geotextile fabrics. The sodium bentonite clay utilized in the GCL is a naturally occurring clay mineral that swells as liquid enters between its clay platelets. During installation, the needle-punched fibers hold the bentonite in place and prevent the GCL from separating. The GCL, at minimum, will have 0.75-lb/ft<sup>2</sup> of sodium bentonite. Each GCL panel will have an overlay of 6-inches to create a uniform clay layer. Additional information on installation, testing, and reporting is located in the Attachment C - Soil Liner Quality Control Plan.

**1.22 NMAC 19.15.36.14.F – Leachate Collection and Removal System Placement**

The leachate collection and removal system is comprised of 2-foot protective cover overlaying a geocomposite. The protective soil layer is comprised of excavated onsite soils. Prior to placement, the soil will be screened to remove organic material. The geocomposite will consist of a heat bonded HDPE geonet/geotextile drainage composite. The geotextile fabric acts as a barrier between the soil and geonet to prevent clogging of the geonet. The geocomposite has a transmissivity of  $1 \times 10^2$ -cm/s. This transmissivity will provide transport of the leachate to the sumps for removal. The geonet is made from the same HDPE material as the geomembrane liner and provides the same chemical resistivity properties. Chemical resistivity property documentation is provided in Attachment F.

Sumps will have high water level sensors which will inform the operator if leachate is reaching unauthorized levels. The operator will drain the sumps and transfer the leachate to the produced water tanks for disposal.

**1.23 NMAC 19.15.36.14.G – Landfill Gas Control System**

Typically landfill gas is generated during the natural process of bacterial decomposition of organic material. Numerous factors influence the quantity of gas generated at a landfill. The factors include types and age of waste, the quantity and types of organic compounds in the waste, moisture content and waste temperature. Organic wastes include food, garden waste, street sweepings, textiles, and wood and paper products. Oil field wastes do not contain significant amounts of organic compounds. Factoring the type of waste and the arid climate in the area, no landfill gas monitoring is proposed at the C.K. Facility.

The C.K. Facility will monitor gas by inspection of vehicles with incoming waste and evaporation ponds. Incoming loads will be inspected at either the scale or gate house. Loads will be monitored for hydrogen sulfide (H<sub>2</sub>S). H<sub>2</sub>S monitors will be placed throughout the site. This includes the scale and gate houses, landfill working face, evaporation ponds, liquid processing area, stabilization and solidification area, and the saltwater disposal area. Monitors will alarm staff if concentrations of H<sub>2</sub>S exceed 10-parts per million (ppm). If H<sub>2</sub>S levels exceed 10-ppm on incoming waste and evaporation ponds, loads will be treated with calcium hypochlorite (Ca(ClO)<sub>2</sub>), aka chlorine or bleach powder, until H<sub>2</sub>S concentration is below 1-ppm. A minimum of 1,000-gallons of calcium hypochlorite will be kept onsite for H<sub>2</sub>S treatment.

Habitable onsite buildings and structures will be monitored at a minimum quarterly with either a portable combustible gas indicator or a continuous LFG monitor/alarm that will provide an audible alarm if methane concentration exceed 1.25 percent by volume. In the event allowable methane concentration limits are exceeded, the building will be immediately evacuated and ventilated by opening doors and windows. Immediate necessary steps to be taken include notifying the respective officials listed in Table 2.

#### **1.24 NMAC 19.15.36.14.H(1)-(4) – Landfill Gas Response Plan**

The purpose of the response plan is to address necessary procedures to be taken if methane concentrations exceed allowable concentrations in structures or facility boundary matrices, to ensure protection of fresh water, public health, safety and the environment. The response plan will include initial response measures and notification procedures. The emergency response differs between buildings and facility boundaries as will be discussed.

#### **A Emergency Action**

##### **i Buildings/Structures**

If the monitoring device in a facility structure is triggered and/or gas monitoring equipment indicates H<sub>2</sub>S concentrations have exceeded allowable concentrations, the facility will be evacuated of all personnel immediately and the site manager notified. Personnel will not be allowed to reenter the affected structure until additional measures are taken. Only authorized monitoring personnel will be allowed reentry into the structure.

##### **ii Facility Boundary**

The site manager will be notified if H<sub>2</sub>S concentrations exceed allowable concentrations. The immediate course of action for the site manager will be to determine if any nearby structures (including off-site) are at risk and if evacuation of the structures is required.

#### **B Notification Procedures**

When H<sub>2</sub>S concentrations exceed allowable concentrations in monitoring points, or within any onsite structure, the monitoring personnel will notify the site manager who will immediately take all necessary steps to ensure the protection of human health. Notification will be made to New Mexico Environmental Department (NMED),

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OCD district office and the appropriate city, county, and local government and emergency officials; and any residents, tenants and owners of the property within ¼-mile (1,320 feet) of the reading. Within seven days of detection, the site manager will place in the site operating record the concentration of H<sub>2</sub>S levels detected and a description of the steps taken to protect human health. Also, within seven days, written notification will be sent to the OCD district office. Within 30 days of detection, the Owner/Operator will submit a remediation plan for the H<sub>2</sub>S release(s), which is described below. Within 60 days of detection, implement a remediation plan for the H<sub>2</sub>S release(s) as discussed in the Remediation Plan.

### **C Remediation Plan**

If H<sub>2</sub>S concentrations exceed allowable concentrations in monitoring points or within any onsite structures, remediation actions will be implemented within 60 days of detection. The Remediation Plan will begin by investigating the cause of these levels. Authorized personal will continue monitoring downstream of the exceedance. Once the source of the exceedance is determined, the affected area will be treated with calcium hypochlorite until H<sub>2</sub>S concentrations are <1-ppm.

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**1.0 NMAC 19.15.36.15 – SPECIFIC REQUIREMENTS  
APPLICABLE TO LANDFARMS**

The permit submitted by Parkhill, Smith & Cooper, Inc. on behalf of C.K. Disposal, LLC. does not propose to permit or operate a landfarm.

**1.0 NMAC 19.15.36.16 – SMALL LANDFARMS**

The permit submitted by Parkhill, Smith & Cooper, Inc. on behalf of C.K. Disposal, LLC. does not propose to permit or operate a small landfarm.

## **1.0 NMAC 19.15.36.17 - INTRODUCTION**

C.K. Disposal, LLC. proposes to develop a Commercial surface waste management facility consisting of a landfill, liquid processing area, and deep well injection per NMAC 19.15.36. This section provides the general design and operating requirements as provided in NMAC 19.15.36.14. The proposed C.K. Facility is located 0.05-miles south of State Highway 234, and approximately 4.16-miles southeast of Eunice, New Mexico, in Lea County. The C.K. Facility will encompass 316.97-acres broken down into individual sections as listed below in Table 1 – 19.15.36.14 – C.K. Facility Acreage.

**Table 1 – 19.15.36.14: C.K. FACILITY ACREAGE**

<b>Area</b>	<b>Acres</b>
<b>C.K. Disposal E&amp;P Landfill and Processing Facility</b>	<b>316.97</b>
Landfill	141.50
Liquid Processing	51.75
Saltwater Disposal	5.10
Buffer Areas, Site Structures and Access Roads	118.62

### **1.1 NMAC 19.15.36.17.A – Engineered Design Plans**

Plans for the C.K. Facility evaporation ponds, tank holding area, stabilization, and solidification area have been designed by Parkhill, Smith and Cooper, Inc. (PSC) under New Mexico Registered Professional Engineer, Nicholas Ybarra. The sections listed below provide backup documentation for design, operation, construction, and closure of the above mentioned structures designed per requirements listed in NMAC 19.15.36.17.

- Attachment B - Engineered Design Plans
- Attachment C - Soil Liner Quality Control Plan
- Attachment G - Hydrogeology Report
- Attachment H - Vadose Monitoring Plan
- Attachment K - Operating and Maintenance Procedures
- Attachment L - Closure and Post-Closure Plan

The site operating plan provides a plan to prevent the H<sub>2</sub>S accumulation in the evaporation ponds and a contingency plan if the levels go above critical levels listed in the NMAC.

### **1.2 NMAC 19.15.36.17.B – Construction Standards**

#### **A. NMAC 19.15.36.17.B(1) – General Liner**

The C.K. Facility will have evaporation ponds, receiving and processing tanks, containment areas, and a stabilization and solicitation area. Each has an individual liner design based on requirement listed in NMAC 19.15.36.17. Although each liner system is different, Attachment C – Soil Liner Quality Control Plan (SLQCP) provides construction details for each layer of the liner system. The SLQCP also provides

requirements for manufacture quality control testing and third party testing. Below are the liner systems for each area at the C.K. Facility.

The evaporation pond liner system will consist of (from bottom to top):

- 6-inch compacted soil subgrade.
- GCL under the leak detection sumps.
- 60-mil HDPE primary upper liner.
- 200-mil HDPE geonet leak detection layer.
- 60-mil HDPE secondary liner.

The receiving tank liner system will consist of (from bottom to top):

- 6-inches compacted soil subgrade.
- 60-mil HDPE liner.
- 6- to 12-inches of gravel.

The stabilization and solidification area liner system will consist of (from bottom to top):

- 6-inch compacted soil subgrade.
- GCL under the leak detection sumps.
- 60-mil HDPE secondary liner.
- 200-mil HDPE geonet leak detection layer.
- 60-mil HDPE primary liner.

#### **B. NMAC 19.15.36.17.B(2) – Liner Requirements**

The evaporation ponds and stabilization and solidification area liner system each have a lower and upper liners systems as required by NMAC 19.15.36.17.B(2). The lower and upper geomembrane liner will consist of a HDPE 60-mil liner.

#### **C. NMAC 19.15.36.17.B(3) – Liner Specifications**

The 60-HDPE liner has a hydraulic conductivity less than the maximum  $1 \times 10^{-9}$ -cm/sec allowed in the NMAC. The HDPE material has chemical and ultraviolet resistance properties, listed in Attachment F, and is compatible with and resistant to chemical attack from the oilfield waste and leachate. The 2-feet of protective cover will assist the HDPE liner to withstand the projected loading stresses, setting, and disturbances from oilfield waste, cover material, and equipment. The GML materials shall be as manufactured by GSE Environmental or an equivalent pre-approved by the Geotechnical Professional (GP). Details on quality control and storage can be found in the Attachment C - Soil Liner Quality Control Plan.

#### **D. NMAC 19.15.36.17.B(4) – Alternate Liner Media**

The C.K. Facility will only be permitted to use 60-mil HDPE geomembrane liner. The GML materials shall be as manufactured by GSE Environmental or an equivalent pre-approved by the GP. Details on quality control and storage can be found in the Attachment C - Soil Liner Quality Control Plan.

**E. NMAC 19.15.36.17.B(5) – Pit Construction**

The subgrade shall be prepared in a manner consistent with proper subgrade preparation techniques for the installation of geosynthetic materials and as recommended by the GCL manufacturer. The subgrade shall be compacted to 90% standard proctor density or greater (if required by GCL manufacturer). The subgrade shall be properly compacted so as to prevent post construction settlement, causing excessive strains in the GCL or other synthetic liner materials. Prior to installation, ensure a surface free of debris, roots, or angular stones larger than 0.5-inch. The subgrade must be rolled with a smooth-wheeled roller. During installation, ensure that rutting or raveling is not caused by installation equipment. Additional information on installation, testing and reporting is located in the Attachment C - Soil Liner Quality Control Plan.

The alternate liner designed for the C.K. Facility will use a GCL instead of compacted clay soil. The GCL has a uniform layer of sodium bentonite encase between two (2) geotextile fabrics. The sodium bentonite clay utilized in the GCL is a naturally occurring clay mineral that swells as liquid enters between its clay platelets. During installation, the needle-punched fibers hold the bentonite in place and prevent the GCL from separating. The GCL, at minimum, will have 0.75-lb/ft<sup>2</sup> of sodium bentonite. Each GCL panel will overlay each other 6-inches to create a uniform clay layer. Additional information on installation, testing and reporting is located in the Attachment C - Soil Liner Quality Control Plan.

The GML shall be placed to minimize seams during placement. Field seams between sheets of GML material will be made using approved fusion welding systems, equipment, and techniques. Approved fusion welding systems include fillet welds using extrudate, lap welds using extrudate, and lap welds using single or double wedge (double track) welder. The welds will either be pressure or vacuum tested. Additional information on installation, testing and reporting is located in the Attachment C - Soil Liner Quality Control Plan.

**F. NMAC 19.15.36.17.B(6) – Point of Discharge**

At a point of discharge 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.

**G. NMAC 19.15.36.17.B(7) – Primary Liners**

The C.K. Facility will only be permitted to use 60-mil HDPE geomembrane liner. The GML materials shall be as manufactured by GSE Environmental or an equivalent preapproved by the GP. Details on quality control and storage can be found in the Attachment C - Soil Liner Quality Control Plan.

**H. NMAC 19.15.36.17.B(8) – Secondary Liners**

The secondary liner will consist of a 60-mil HDPE liner. The GML materials shall be as manufactured by GSE Environmental or an equivalent preapproved by the GP. Details

on quality control and storage can be found in the Attachment C - Soil Liner Quality Control Plan.

The liner will be laid upon a GCL layer. The GCL acts as a compacted clay reducing the hydraulic conductivity at the base of the liner system. Both GML and GCL have a hydraulic conductivity less than  $1 \times 10^{-9}$ -cm/s. Documentation for both materials is provided in Attachment F. Additional information on installation, testing and reporting is located in the Attachment C - Soil Liner Quality Control Plan.

**I. NMAC 19.15.36.17.B(9) – Leak Detection System**

A geonet will comprise the leak detection system of the liner system for the evaporation ponds and stabilization and solidification areas. The geonet component will be used on both floor and side slopes of the liner systems. The geonet is designed to transfer fluid horizontally through the anticipated site loads. The geonet has a transmissivity of  $2 \times 10^{-3}$ -m/s. Since soil will not be used, leachate will be transported through the geonet at the rate listed above. The geonet material shall be as manufactured by GSE Environmental or an equivalent preapproved by the GP. Additional information on installation, testing and reporting is located in the Attachment C - Soil Liner Quality Control Plan.

The geonet will channel leachate directly to the sump and leak detection piping. The slope of the ponds and stabilization and solidification area will be a minimum of a 2% slope as shown in Attachment B – Engineered Design Plans. The leachate collection system be comprised of 6-inch HDPE SDR 11 pipe. The SDR 11 pipe has a larger wall thickness than the minimum schedule 80 pipe required in the NMAC. The operator shall seal a solid drainage pipe to convey collected liquids to a corrosion-proof sump or sumps located outside the landfill perimeter for observation, storage, treatment or disposal. The sump and pipe layout is shown in Attachment B – Engineering Design Plans.

**J. NMAC 19.15.36.17.B(10) – Notification of Installation**

The C.K. Facility will notify the division a minimum of three (3) days prior to the installation of the leak detection system. The division may inspect all installation procedures on the leak detection system.

**K. NMAC 19.15.36.17.B(11) – Pond and Pit Freeboard**

The ponds have been sized to maintain a minimum of 3-feet of freeboard at all times during operation. The owner/operator must remove excess water if water reaches above this level.

**L. NMAC 19.15.36.17.B(12) – Pond Sizing**

All evaporation ponds onsite have a minimum sizing of 9.73-acre/feet in capacity. Pond grading and cross sections are provided in Attachment B – Engineered Design Drawings.

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**1.3 NMAC 19.15.36.17.C – Operating Standards**

**A. NMAC 19.15.36.17.C(1) – Operating Standards**

The operator at the C.K. Facility shall ensure that only produced water that has gone through the processing tanks is discharged in to the evaporation ponds. All oil should be removed during the separation process within the four (4) produced water tanks. Any visible oil in the evaporation pond tanks will be removed immediately and returned to either an oil recovery tank or produced water tank for treatment. Tank and evaporation pond inspection are provided in Attachment K – Site Operating Plan.

**B. NMAC 19.15.36.17.C(2) – Leak Detection Monitoring**

The operator at the C.K. Facility shall monitor the leak detection system per NMAC requirements. All monitoring records will be kept onsite and readily available for review by OCD. Monitoring and maintenance is outlined in Attachment K – Site Operating Plan. If leaks are detected in the system, the C.K. Facility operator will notify OCD of findings.

**C. NMAC 19.15.36.17.C(3) – Fencing and Netting**

The C.K. Facility will construct and maintain perimeter fencing around the site. The 4-strand barbed wire fencing will run along the permit boundary and keep prevent trespassers. In addition, a cattle guard and gate will be placed at the entrance to assist in managing animals from entering the site. The C.K. Facility requests an exemption to not place screening material over ponds for migratory bird protection. The C.K. Facility will inspect the evaporation ponds daily for birds and if a recurring problem, the C.K. Facility with either submit a migratory bird plan or place screening over the ponds.

**D. NMAC 19.15.36.17.C(4) – Spray System**

The C.K. Facility proposes installing a spray system to each of the evaporation ponds. The spray system will utilize mechanical evaporators to aid in the evaporation of liquids in the proposed ponds. The proposed mechanical evaporator system is designed to maintain spray-borne suspended and dissolved solids within the liner boundary of the ponds. The site maintenance plan will contain the inspection schedule for all evaporators. Documentation and evaporation calculations are provided in Attachment K, Appendix D.

**E. NMAC 19.15.36.17.C(4) – Jet Out Pits and Tanks**

The C.K. Facility is designed to use both jet out pits and settling tanks. The setting tanks will receive produced water, leachate, and oil containing excessive water. After arriving onsite, the liquid will be placed in a receiving tank which drains into a series of four (4) setting tanks. The liquid will have up to five (5) days to settle in the tanks with one (1) day having heat introduced to assist in settling. Oil removed from the setting tanks will be transferred to either the oil recovery tanks or oil sales tanks. Water will be transferred through a mechanical separator to the evaporation ponds.

The jet out pits will be used to collect waste from tanks and allow it to separate within the settling pits. Oil removed from the setting tanks will be transferred to either the oil

recovery tanks or oil sales tanks. Water will be transferred through a mechanical separator to the evaporation ponds.

The process diagram for tanks and pit is shown in Attachment A. The layout of the setting tanks and pit is shown in Attachment B – Engineered Design Plans.

**1.4 NMAC 19.15.36.17.D – Below-grade Tanks and Sumps**

The C.K. Facility does not propose to construct or operate below-grade tanks and sumps.

**1.5 NMAC 19.15.36.17.E – Closure Required**

The C.K. Facility shall properly close all pits, tanks, and ponds within six (6) months after cessation of use. Attachment L - Closure and Post-Closure Plan provides instructions and costs for closure of the operation.

## **1.0 NMAC 19.15.36.18 - INTRODUCTION**

C.K. Disposal LLC., proposes to develop a commercial surface waste management facility consisting of a landfill, liquid processing area and deep well injection per NMAC 19.15.36. This section provides the general design and operating requirements as provided in NMAC 19.15.36.14. The proposed C.K. Facility is located 0.05-miles south of State Highway 234, approximately 4.16-miles southeast of Eunice, New Mexico, in Lea County. The C.K. Facility will encompass 316.97-acres broken down into individual sections as listed below in Table 1 – C.K Facility.

**TABLE 1 – C.K. Facility**

<b>Area</b>	<b>Acres</b>
<b>C.K. Disposal E&amp;P Landfill and Processing Facility</b>	316.97
Landfill	141.5
Liquid Processing	51.75
Saltwater Disposal	5.1
Buffer Areas, Site Structures and Access Roads	118.62

Based on the daily tonnage received, the C.K. Facility landfill will have an active life between 38 – 115-years. Table 2 – Site Life, below provides the expected site life based on three different daily tonnages.

**TABLE 2 – Site Life**

<b>Estimated Incoming Waste</b>	<b>Years</b>
500 cubic yards per day	115 years
1,000 cubic yards per day	57 years
1,500 cubic yards per day	38 years

Once the landfill has reached its maximum capacity closure procedures will commence per NMAC 19.15.36.18. A closure and post-closure plan is provided in Attachment L providing instructions on closure procedures for the site including the landfill, liquid processing area, and saltwater injection.

### **1.1 NMAC 19.15.36.18.A – Surface Waste Management Facility Closure by Operator**

#### **A NMAC 19.15.36.18.A(1) – Notification to the Division**

C.K. Disposal, LLC will notify the division's environmental bureau a minimum of 60-days prior to the cessation of operations at the facility. Attached to the notification will be a schedule for closure activities. C.K. Disposal, LLC will not proceed with closure until 60-days after the division has received the notice for closure, allowing time for comments.

**B NMAC 19.15.36.18.A(2) – Division’s Notification to the Owner**

The division’s environmental bureau will notify the owner/operator, C.K. Disposal, LLC, within 60-days after it receives notice of cessation of operations with any additional requirements for closure of the facility. C.K. Disposal, LLC will proceed with closure if no notice or additional requirements are received within 60-days of notice to the division.

**C NMAC 19.15.36.18.A(3) – No Additional Requirements or Notification**

If the division’s environmental bureau does not notify C.K. Disposal, LLC of additional requirements within 60-days of receiving notification, C.K. Disposal, LLC will proceed with closure activities.

**D NMAC 19.15.36.18.A(4) – No Additional Requirements**

C.K. Disposal, LLC acknowledges that it is entitled to a hearing concerning a modification to its closure plan or additional requirements the division is requesting. The owner/operator must submit the request within 10-days of receiving notice from the division.

**E NMAC 19.15.36.18.A(5) – Closure by Approved Plan**

C.K. Disposal, LLC will close the facility based on the approved closure plan to ensure the protection of fresh water, public health, safety and the environment.

**F NMAC 19.15.36.18.A(6) – Site Revegetation**

Upon closure the operator will revegetate the site, although vegetation does not affect the performance of our final cap. The cap will be seeded with native grasses and bushes.

**1.2 NMAC 19.15.36.18.B – Release of Financial Assurance**

**A NMAC 19.15.36.18.B(1) – Release of Financial Assurance**

The owner/operator understands that when the division deems the site closed per the closure plan, the division will release the financial assurance except for the amount needed to maintain post-closure activities.

**B NMAC 19.15.36.18.B(2) – Release of Financial Assurance**

After the applicable post-closure care period is completed the division will release the remainder financial assurance to the owner.

**C NMAC 19.15.36.18.B(3) – Revegetation of Site**

The owner understand that the division shall not release financial assurance until it determines the site has been successfully revegetated.

**1.3 NMAC 19.15.36.18.C – Closure Initiated by Division & Forfeiture of Financial Assurance**

**A NMAC 19.15.36.18.C(1) – Closure Initiated by Division & Forfeiture of Financial Assurance**

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.

**B NMAC 19.15.36.18.C(2) – Closure Initiated by Division & Forfeiture of Financial Assurance**

The C.K. Facility will be operated to maintain the protection of fresh water, public health, safety, and the environment. If any anytime the division has a concern on operations, the owner/operator will work with the division to improve their operations. The owner understands that the division can at any time cease operations at the facility.

**C NMAC 19.15.36.18.C(3) – Division Allow Surety to Perform Closure**

C.K. Facility is aware the division may allow a surety to perform closure if the surety can demonstrate the ability to timely complete the closure and post closure in accordance with the approved plan.

**D NMAC 19.15.36.18.C(4) – Closure Initiated by Division & Forfeiture of Financial Assurance**

The C.K. Facility will be operated to maintain the protection of fresh water, public health, safety, and the environment. The owner understands the rules listed in this section.

**E NMAC 19.15.36.18.C(5) – Abandonment of Facility or Unable to Meet Operation Requirements**

The C.K. Facility is aware that if it abandons 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. This includes 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 surface waste management facilities operation, termination and closure in accordance with the surface waste management facility permit and to conduct post-closure monitoring.

**1.4 NMAC 19.15.36.18.D – Cell Closure and Post-Closure**

**A NMAC 19.15.36.18.D(1)(a) – (c)– Oil Treatment Plant Closure**

C.K. Disposal, LLC will perform closure and post-closure procedures provided in Attachment D – Final Cover Quality Control Plan and Attachment L – Closure and Post-Closure Plan. The plans follows all requirements listed in NMAC 19.15.36.

**B NMAC 19.15.36.18.D(2)(a) – Closure of Landfill Units**

C.K. Disposal, LLC will perform closure and post-closure procedures provided in Attachment D – Final Cover Quality Control Plan and Attachment L – Closure and Post-Closure Plan. The plans follows all requirements listed in NMAC 19.15.36. The closure system will be comprised of two final covers. The top cap grades will have a minimum slope of 2% with the maximum being approximately 4%. The top cap final cover will consist of the following:

- 12" Foundation Layer
- 60-mil High Density Polyethylene (HDPE) Liner
- Geocomposite Liner
- 24" Infiltration Layer
- 12" Soil Erosion Layer

The side slopes will have a maximum slope of 25% or 4H to 1V slopes. The side slope final cover will consist of the following:

- 12" Foundation Layer
- 24" Infiltration Layer
- 12" Soil Erosion Layer

**C NMAC 19.15.36.18.D(2)(b) – Vegetation**

C.K. Disposal, LLC will perform closure and post-closure procedures provided in Attachment D – Final Cover Quality Control Plan and Attachment L – Closure and Post-Closure Plan. The plans follows all requirements listed in NMAC 19.15.36. The site will be vegetated with native grasses and bushes. The post-closure costs included in the attachment provide funds to maintain grasses and reseeding if necessary.

**D NMAC 19.15.36.18.D(3)(a) – (b) – Post-Closure Care**

C.K. Disposal, LLC will perform closure and post-closure procedures provided in Attachment D – Final Cover Quality Control Plan and Attachment L – Closure and Post-Closure Plan. The plans follows all requirements listed in NMAC 19.15.36.

**E NMAC 19.15.36.18.D(4) – Landfarm Closure**

C.K. Disposal, LLC does not propose to have a landfarm on its facilities. These requirements are not applicable.

**1.5 NMAC 19.15.36.18.E – Pond and Pit Closure**

C.K. Disposal, LLC will perform closure and post-closure procedures provided in Attachment L – Closure and Post-Closure Plan. The plans follows all requirements listed in NMAC 19.15.36.

**1.6 NMAC 19.15.36.18.F – Landfarm, Pond and Pit Post-Closure**

C.K. Disposal, LLC will perform closure and post-closure procedures provided in Attachment L – Closure and Post-Closure Plan. The plans follows all requirements listed in NMAC 19.15.36.

**1.7 NMAC 19.15.36.18.G – Alternates to Revegetation**

C.K. Disposal, LLC will revegetate the site until vegetation is established to requirements listed in 19.15.36.18.

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## **1.0 NMAC 19.15.36.19 - EXCEPTIONS AND WAIVERS**

### **1.1 NMAC 19.15.36.19.A - Alternatives to Requirements**

C.K. Disposal, LLC. requests alternatives to the requirements consistent with the flexibility provided for:

- LFG control requirements per NMAC 19.15.36.13.O.
- Groundwater monitoring per NMAC 19.15.36.14.B(1-2).
- Geonet detection and drainage layers per NMAC 19.15.36.14.C.
- Final cover per NMAC 19.15.36.14.C(9).
- Bird control alternatives per NMAC 19.15.36.19.

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

### **1.2 19.15.36.19.B - Exceptions to, Waivers of, or Approved Alternatives to Requirements in an Emergency without Notice or Hearing**

C.K. Disposal, LLC. will comply and is aware 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 major, the operator shall provide notice of the request in accordance with 19.15.36.9 NMAC.

**1.0 NMAC 19.15.36.20 - TRANSITIONAL PROVISIONS**

The C.K. Facility is a proposed new Surface Waste Management Facility. No response required.