

**NM1-63**

**Minor Modification**

**application dated**

**May 28, 2025**

**and approval**



May 28, 2025

Mr. Joe Kennedy  
EMNRD Oil Conservation Division  
1220 S. Saint Francis Dr.  
Santa Fe, NM 87505

Re: OWL Landfill Services  
Minor Modification Request to Permit NM 1-63

Dear Mr. Kennedy:

Revisions to the Minor Modification Request for Permit NM 1-63 are enclosed with this letter. The revised modification submittal has been updated to address comments provided by the Oil Conservation Division (OCD) in their letter dated May 27, 2025. Detailed responses to each request for additional information are included in the following section.

These revisions are being submitted via the OCD Permitting Portal. Please contact us if you have any questions or require additional information.

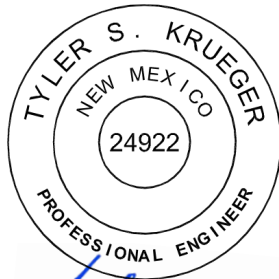
## 1.0 Request for Additional Information

- Section 2.0 Operation: State how water will be transported to and from the new ASTs.
  - Section 2.0 has been revised to show that water following mechanical oil/water separation will enter a pipeline controlled by a valve to divert flow to either deep well injection, above-ground storage tanks, or evaporation pond.
- Section 4.0 Closure/Post-Closure: "...site sampling will be performed under Section 2.6." This should be Section 2.7. Also, submit updated figure II.4.2 to show sampling grid that covers these tanks.
  - Section 4.0 has been revised to include the correct section for sampling under Section 2.7. Figure II.4.2 has been updated to show sampling grid points and H2S monitoring locations for the AST area.
- In accordance with 19.15.36.8.C(5) NMAC, submit PE stamped, detailed elevation drawings for ASTs, including secondary containment and berms.
  - Figure C-501 has been included, which shows tank elevations and secondary containment berm elevations for each AST. Containment berms were sized to hold the capacity of the tank plus an additional 30%.
- Traffic Flow maps Figures II.1.4A and II.1.4B need to change to reflect these tanks since they are situated in the application/permit flow pattern.
  - Figures II.1.4A and III.1.4B have been updated to show revised traffic patterns due to the ASTs.
- Water going to these ASTs needs to be shown as part of process flow diagram, figures II.1.5.A & B.
  - Figures II.1.5.A and III.1.5.B have been updated to show the process flow with the addition of the ASTs.
- Submit an updated Figure II.3.3 to show the ASTs and new H2S monitor locations.
  - Figure II.3.3 has been updated to show H2S monitoring locations for the ASTs.

- Attachment II.4.D.5: Quantity, and therefore costs for Liner Removal/Transport (4.1.1.5) and Liner Disposal (4.1.1.6) did not increase due to ASTs being added. These costs must be updated.
  - Updated closure costs in regard to liner removal for the addition of the tank area and secondary containment are provided in the revised Attachment II.4.D.5.

We believe the additional information and figures provided address all your comments. The revised minor modification to Permit NM 1-63 is located in Attachment 1.

If you have any questions or need additional information, please do not hesitate to contact Tyler Krueger at (806) 473-3656 or [tkrueger@parkhill.com](mailto:tkrueger@parkhill.com).



5/28/2025

Sincerely,

PARKHILL

By

Tyler S. Krueger, P.E.  
Project Manager

TSK/enc

Enclosures:

Attachment 1: Minor Modification Request to Permit NM 1-63

cc:

Mr. Roger Johnson

Mr. Zach Ramos

**Parkhill**

ATTACHMENT 1: MINOR MODIFICATION REQUEST TO PERMIT NM 1-63



# Parkhill

May 28, 2025

Mr. Joe Kennedy  
EMNRD Oil Conservation Division  
1220 S. Saint Francis Dr.  
Santa Fe, NM 87505

Re: OWL Landfill Services / Minor Modification

Dear Mr. Kennedy:

On behalf of OWL Landfill Services, we are submitting this application for a minor modification to their existing surface waste management facility (SWMF). This modification adds two above-ground storage tanks (ASTs), with nominal capacities of 40,000 BBL and 60,000 BBL, respectively. These tanks are intended to serve as additional temporary storage for clean, processed water during periods when deep well injection or pond capacity is unavailable. This modification does not increase the facility's permitted operational capacity for liquids processing. Additional information regarding the proposed tanks is provided below

## 1.0 Construction

Each AST is constructed of heavy-duty steel and features internal secondary containment, consisting of dual 40-mil white LLDPE liners installed over a 10-ounce geotextile along the tank floor. Additionally, an external secondary containment system is located beneath the tanks, comprised of a containment berm lined with 60-mil HDPE.

## 2.0 Operation

The ASTs will only store clean, processed water that has passed through the liquids processing train. Typically, produced water is delivered by truck into heated receiving tanks, then directed to gravity-settling tanks for initial separation. The water is subsequently processed through mechanical oil/water separators, with recovered oil routed to dedicated oil recovery tanks, and clean water processed through dissolved air flotation (DAF) treatment to remove any residual oils. After the DAF process, water will be routed through a pipeline with a valve that allows it to be diverted either to deep well injection, ASTs, or evaporation ponds. During times when deep well injection or evaporation ponds are unavailable, the ASTs will be used for additional temporary storage.

## 3.0 Monitoring

The ASTs will be inspected in accordance with the permit, Table II.I.10 – Facility Inspections, at the same frequency as other tanks located within the liquids processing area and evaporation ponds. If any leaks, spills, or liquid releases are observed during inspections or routine operations, OWL will follow the procedures outlined in Volume II, Section 3: H<sub>2</sub>S Prevention and Contingency Plan, and Section 5: Contingency Plan. OWL will keep records of the inspections in accordance with Volume II Section 9.0 Record Keeping Requirements. Additionally, four stationary H<sub>2</sub>S monitors will be installed around each AST and monitored in accordance with Volume II, Section 3: H<sub>2</sub>S Prevention and Contingency Plan.

#### 4.0 Closure/Post Closure

As with other tanks in the liquids processing area, the ASTs will be closed in accordance with the procedures outlined in Volume II, Section 4: Closure/Post-Closure Plan. The secondary containment liners will be removed following Section 2.3, tanks will be removed per Section 2.4, and required site sampling will be performed under Section 2.7. Post-closure activities will be conducted in accordance with Section 3.0 of the Closure/Post-Closure Plan.

We appreciate your review regarding this minor modification application. Please feel free to contact us with any questions or comments. If this transmittal is acceptable, a brief confirmation of receipt and approval would be appreciated.

Sincerely,

PARKHILL

By

  
Tyler S. Krueger, P.E.  
Project Manager

TSK/enc

Enclosures:

Appendix A: OCD Required Forms

Appendix B: Permit Modification – Figure Updates

Appendix C: Permit Modification – Narrative Updates

cc:

**Parkhill**

## APPENDIX A: OCD REQUIRED FORMS

Santa Fe Main Office  
Phone: (505) 476-3441  
General Information  
Phone: (505) 629-6116

Online Phone Directory Visit:  
<https://www.emnrd.nm.gov/ocd/contact-us/>

State of New Mexico  
Energy Minerals and Natural Resources

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

For State Use Only:

Form C-137A  
Revised October 11, 2022

File via OCD Permitting with any  
associated permit fee


## APPLICATION FOR MINOR MODIFICATION TO SURFACE WASTE MANAGEMENT FACILITY

1. Operator: OWL Landfill Services, LLC  
Address: 3889 Maple Ave, Suite #300, Dallas, Texas 75219  
Contact Person: Roger Johnson Phone: 214-206-3940
2. Location:        /4        /4 Section 23 Township 24 South Range 33 East NMPM
3. Provide permit number NM1-63
4. Attach a description of the proposed minor modification(s) to the surface waste management facility.
5. If the Minor Modification involves changes to a treatment, remediation, or disposal method, attach engineering designs, certified by a registered professional engineer, including technical data on the design elements of each applicable treatment, remediation, and disposal method and detailed designs of surface impoundments.
6. If the Minor Modification will affect the closure and post-closure plan, attach an updated closure and post closure plan, including a responsible third party contractor's cost estimate, sufficient to close the surface waste management facility in a manner that will protect fresh water, public health, and the environment (the closure and post closure plan shall comply with the requirements contained in 19.15.36.18 NMAC).
7. If the Minor Modification will affect the contingency plan, attach an updated contingency plan that complies with the requirements of Subsection N of 19.15.36.13 NMAC and with NMSA 1978, Sections 12-12-1 through 12-12-30, as amended (the Emergency Management Act).
8. If the Minor Modification will affect the control of run-on or run-off water at the site, attach an updated plan to control run-on water onto the site and run-off water from the site that complies with the requirements of Subsection M of 19.15.36.13 NMAC.
9. If the Minor Modification will affect the best management practice plan, attach a best management practice plan to ensure protection of fresh water, public health, and the environment.
10. The division may require additional information to demonstrate that the surface waste management facility's operation will not adversely impact fresh water, public health, or the environment and that the surface waste management facility will comply with division rules and orders.

### 11. CERTIFICATION

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

Name: Chris Cooper

Signature: 

E-mail Address: ccopper@owlinv.com

Title: Managing Partner

Date: 5/8/2025

**Parkhill**

## APPENDIX B: PERMIT MODIFICATION – FIGURE UPDATES

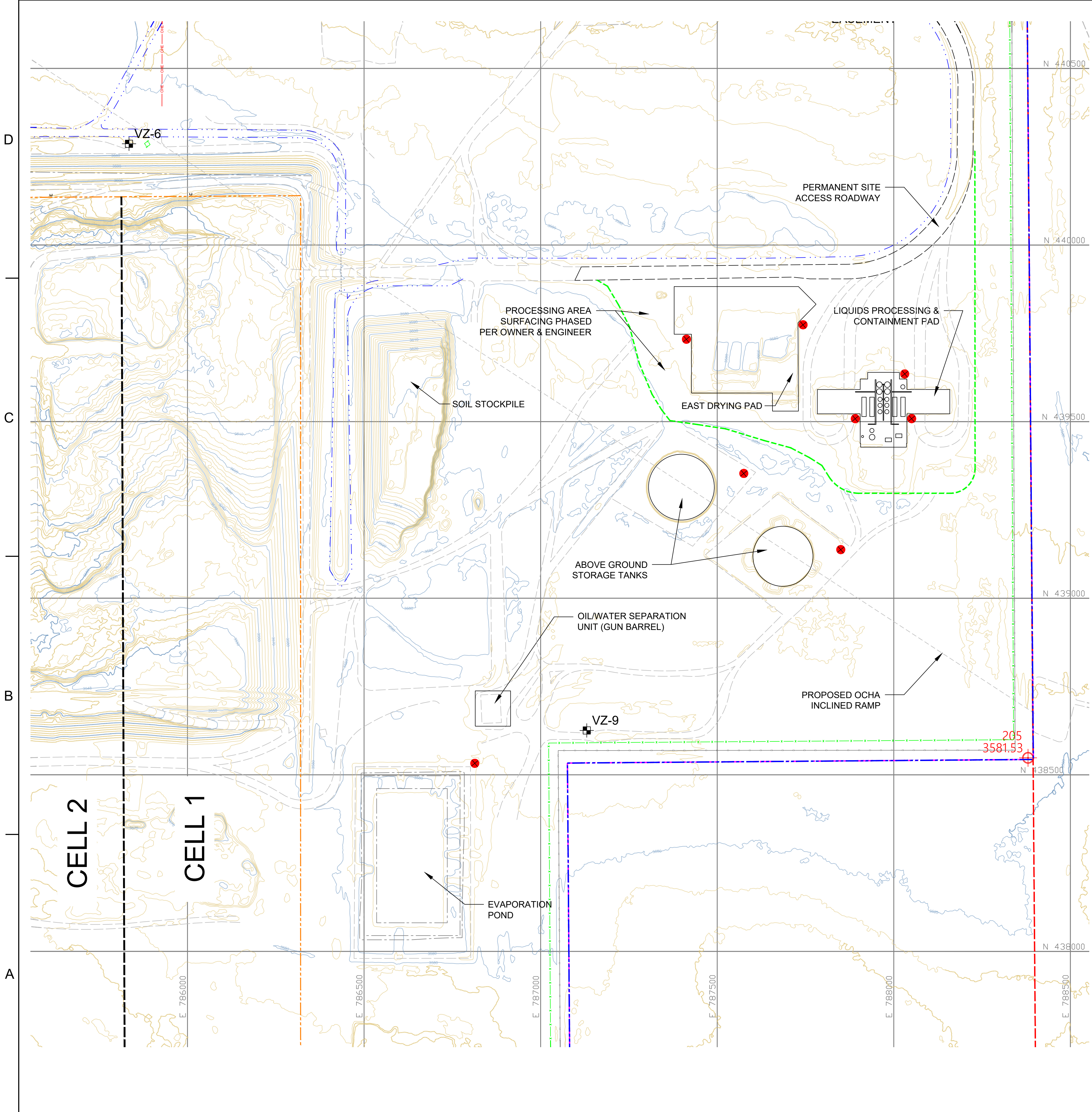




# C-101

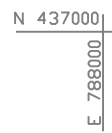


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- LEGEND**
- PROPERTY BOUNDARY
  - FACILITY BOUNDARY
  - SECTION BOUNDARY
  - SOLID WASTE DISPOSAL BOUNDARY
  - PROCESSING AREA BOUNDARY
  - CELL BOUNDARY
  - EXISTING FENCE
  - EXISTING PIPELINE
  - EXISTING CONTOUR - INDEX (10')
  - EXISTING CONTOUR - INTERMEDIATE (2')
  - EXISTING UNPAVED ROAD
  - EXISTING SITE ACCESS ROADWAY
  - EXISTING DRAINAGE CHANNEL
  - EXISTING CULVERT

205  
3581.53



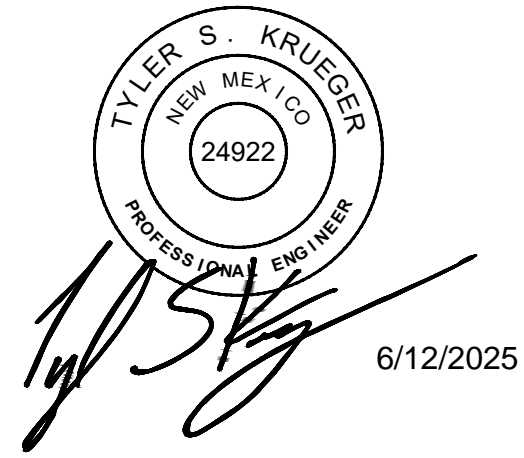
- CONTROL POINT
- SITE GRID
- PPE AND EMERGENCY EQUIPMENT

- NOTES:**
- AERIAL TOPOGRAPHIC SURVEY BY PARKHILL 333 RIO RANCHO BLVD. RIO RANCHO, NM PHONE: (505-867-6990)
  - SURVEY CONTROL POINTS BY JOHN WEST SURVEYING CO., 412 N. DAL PASO ST., HOBBS, NM 88240 PHONE: (575-393-3117)

CONTROL POINT DATA				
POINT	NORTHING	EASTING	PANEL ELEVATION	DESCRIPTION
201	441163.39	783161.32	3588.64	HPV #1 NAIL
202	441171.30	785684.93	3587.72	HPV #2 NAIL
203	441197.04	788237.32	3583.84	HPV #3 NAIL
205	438548.06	788380.09	3581.53	HPV #5 NAIL
206	438531.77	783105.77	3569.08	HPV #6 NAIL
207	435829.79	783137.03	3543.57	HPV #7 NAIL
208	435824.12	785721.58	3554.93	HPV #8 NAIL

- NOTES:**
- THE COORDINATES FOR THE PROJECT WERE ESTABLISHED BY RUNNING A STATIC OBSERVATION ON A SINGLE CONTROL POINT (CP DUKE) FOR 4.5 HOURS, RTK SURVEY METHODS ON 9 PANEL POINTS SET BY JOHN WEST SURVEYING CO. AND 5 EXISTING POINTS SET BY HARCROW SURVEYING, INC. (SURVEY DATE AUGUST 7, 2020).
  - THE 9 SET HPV CONTROL POINTS WERE OBSERVED FOR 3 MINUTES EACH.
  - THE PROJECT WAS THEN ADJUSTED USING THE OPUS SOLUTION PROVIDED BY NATIONAL GEODETIC SURVEY ON AUGUST 10, 2020.
  - THE COORDINATE SYSTEM FOR THE PROJECT: STATE PLANE, NAD 83, NEW MEXICO EAST ZONE (3001), NAVD 88.
  - UNITS FOR COORDINATES AND ELEVATIONS ARE US SURVEY FEET.
  - NM EAST ZONE, NAVD 88, NAD 83 SURFACE COORDINATES, CGF = 0.999810779110 AT PT. #204

**Parkhill**



ALL REPORTS, DRAWINGS, SPECIFICATIONS, COMPUTER FILES, FIELD DATA, NOTES AND OTHER DOCUMENTS PREPARED BY THE ENGINEER AS INSTRUMENTS OF SERVICE SHALL REMAIN THE PROPERTY OF THE ENGINEER. THE ENGINEER SHALL RETAIN ALL COMMON LAW, STATUTORY AND OTHER RESERVED RIGHTS, INCLUDING THE COPYRIGHT THEREOF.  
**Parkhill.com**

**OWL LANDFILL SERVICES,LLC  
NORTHERN DELWARE BASIN LANDFILL  
MINOR PERMIT MODIFICATION**

**CLIENT**  
**OWL LANDFILL SERVICES, LLC.**  
2029 W. NM Hwy 128  
JAL, NM 88252  
LEA COUNTY

**PROJECT NO.**  
45067.25

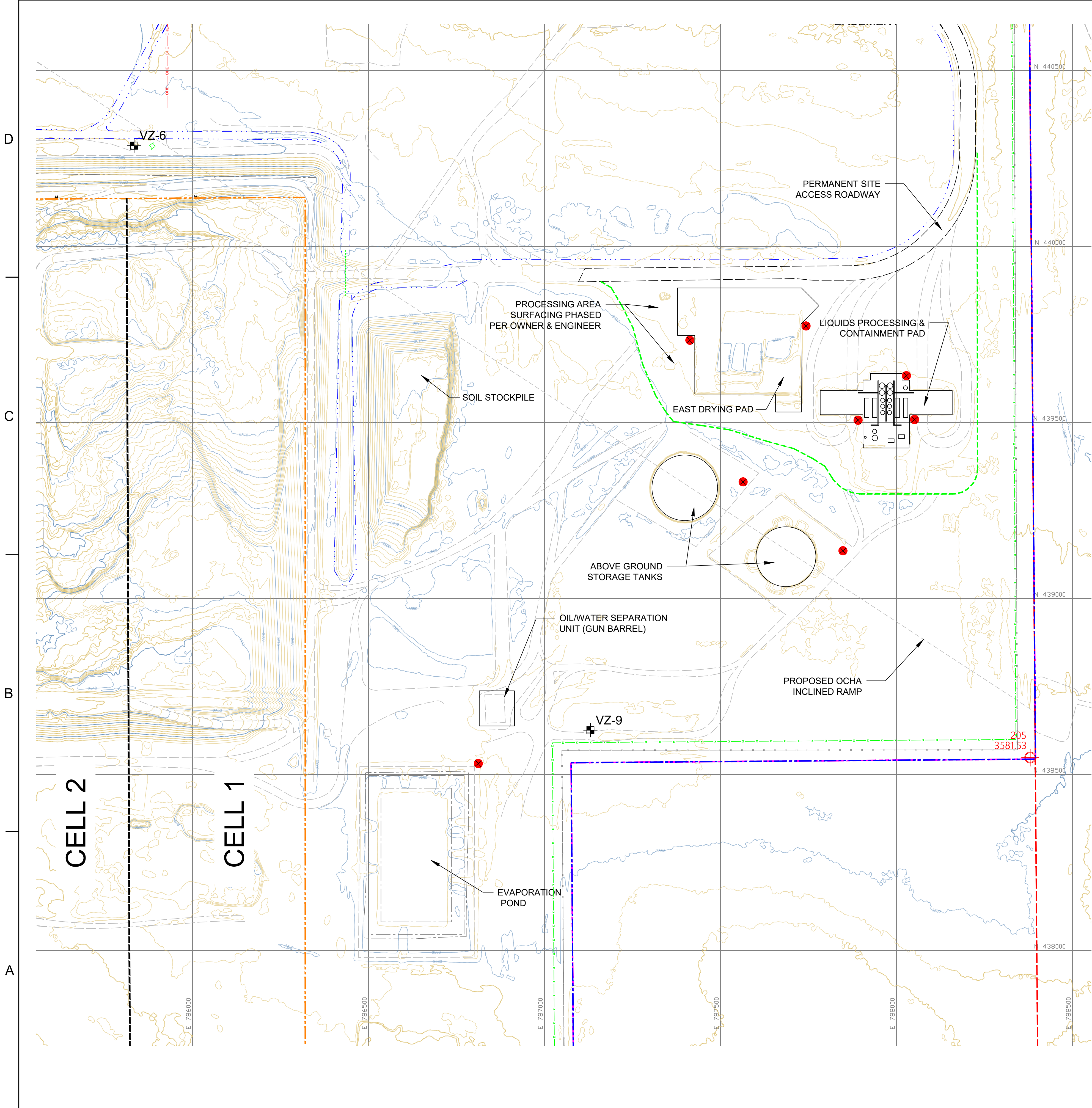
-	03/31/25	Client Review
#	DATE	DESCRIPTION

**SITE PLAN  
EXISTING CONDITIONS  
PROCESSING AREA**

**C-102**



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- LEGEND
- PROPERTY BOUNDARY
  - FACILITY BOUNDARY
  - SECTION BOUNDARY
  - SOLID WASTE DISPOSAL BOUNDARY
  - PROCESSING AREA BOUNDARY
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  - EXISTING SITE ACCESS ROADWAY
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  - EXISTING CULVERT
  - PPE AND EMERGENCY EQUIPMENT

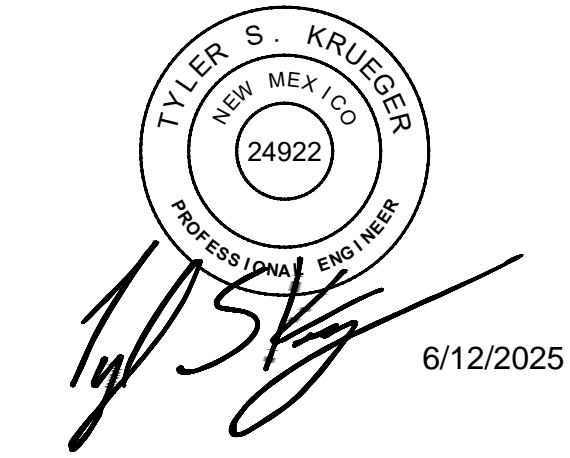
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OWL LANDFILL SERVICES,LLC  
NORTHERN DELAWARE BASIN LANDFILL  
MINOR PERMIT MODIFICATION

CLIENT  
OWL LANDFILL SERVICES, LLC.  
2029 W. NM Hwy 128  
JAL, NM 88252  
LEA COUNTY

PROJECT NO.  
45067.25

03/31/25 Client Review  
# DATE DESCRIPTION

PROPOSED  
PROCESSING AREA  
UPDATES

C-103



Parkhill



*[Signature]*

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OWL LANDFILL SERVICES, LLC  
NORTHERN DELLAWARE BASIN LANDFILL  
MINOR PERMIT MODIFICATION

CLIENT

OWL LANDFILL  
SERVICES, LLC.  
2029 W. NM Hwy 128  
JAL, NM 88252  
LEA COUNTY

PROJECT NO.

45067.25

- 03/31/25 Client Review

# DATE DESCRIPTION

TANK ELEVATION  
BERM DETAILS

C-501

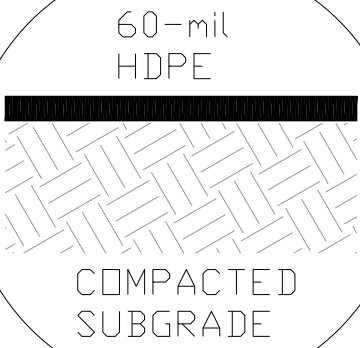
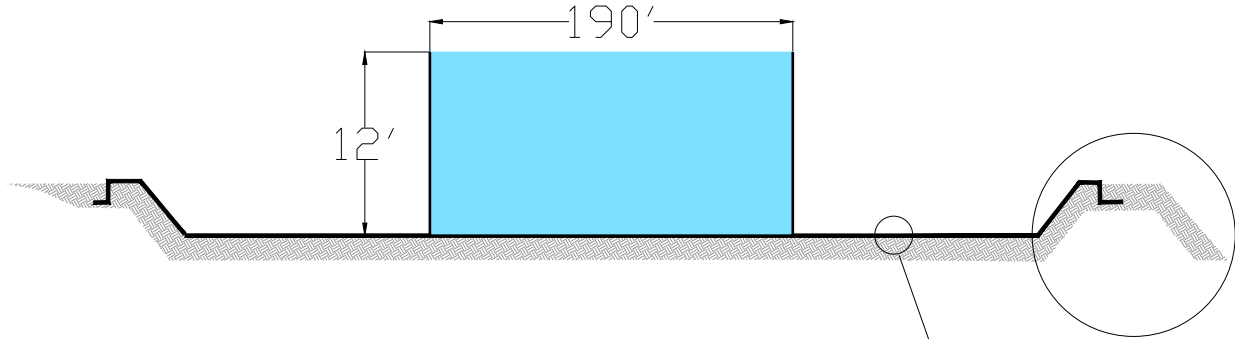
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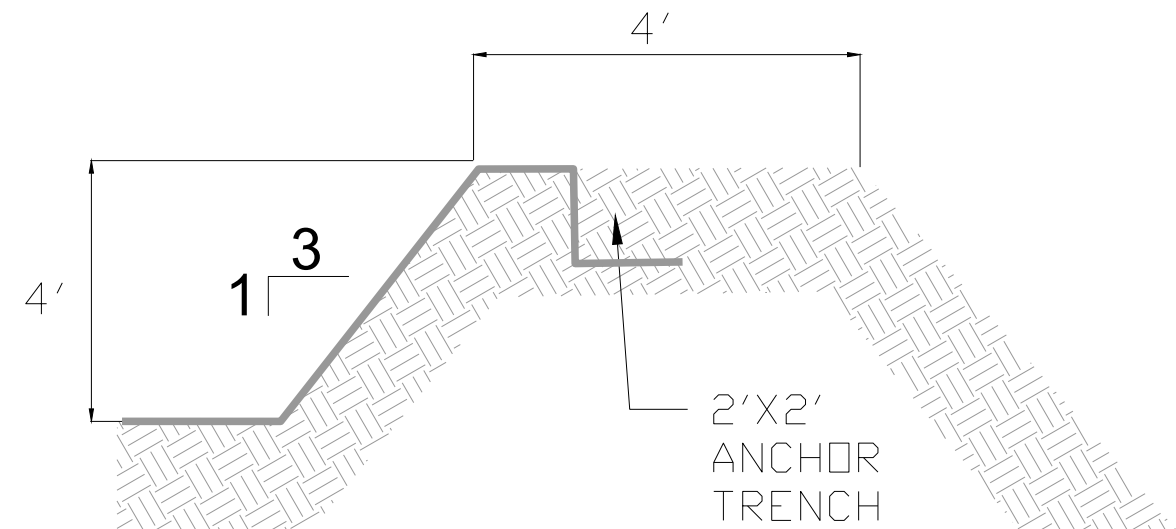
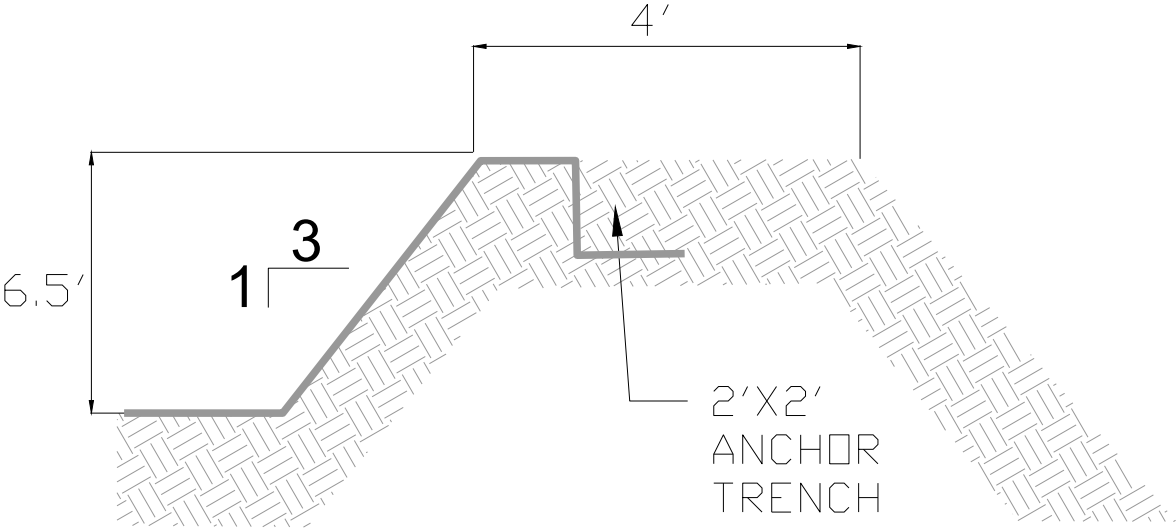
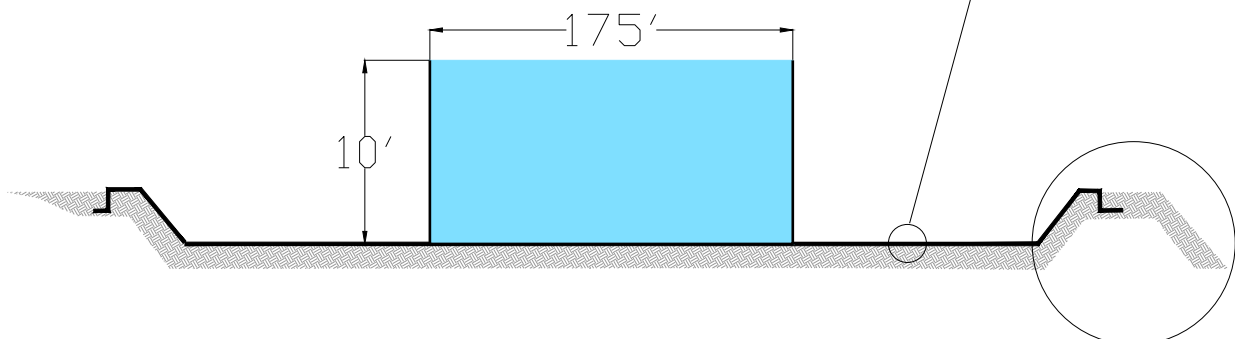
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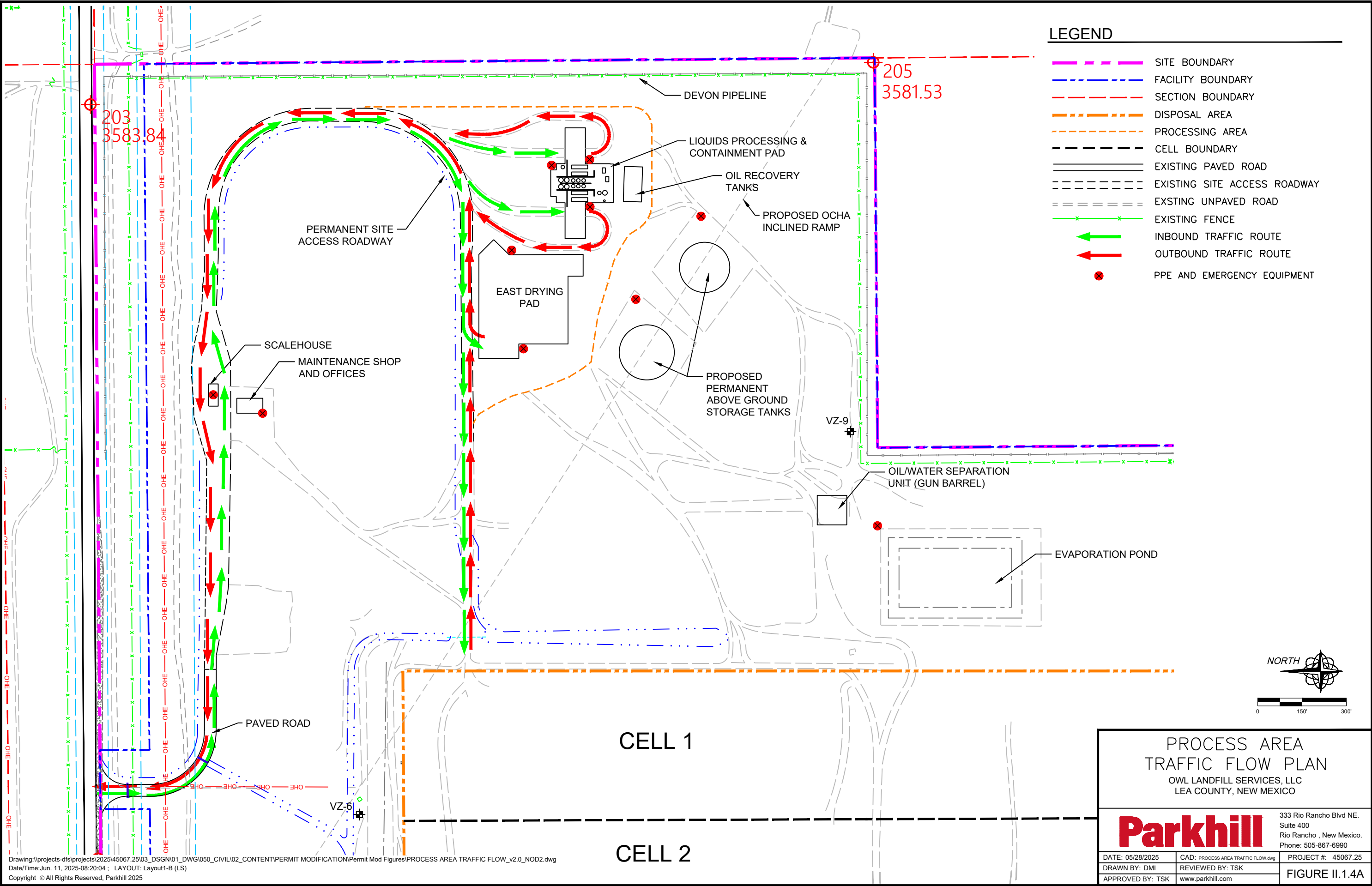
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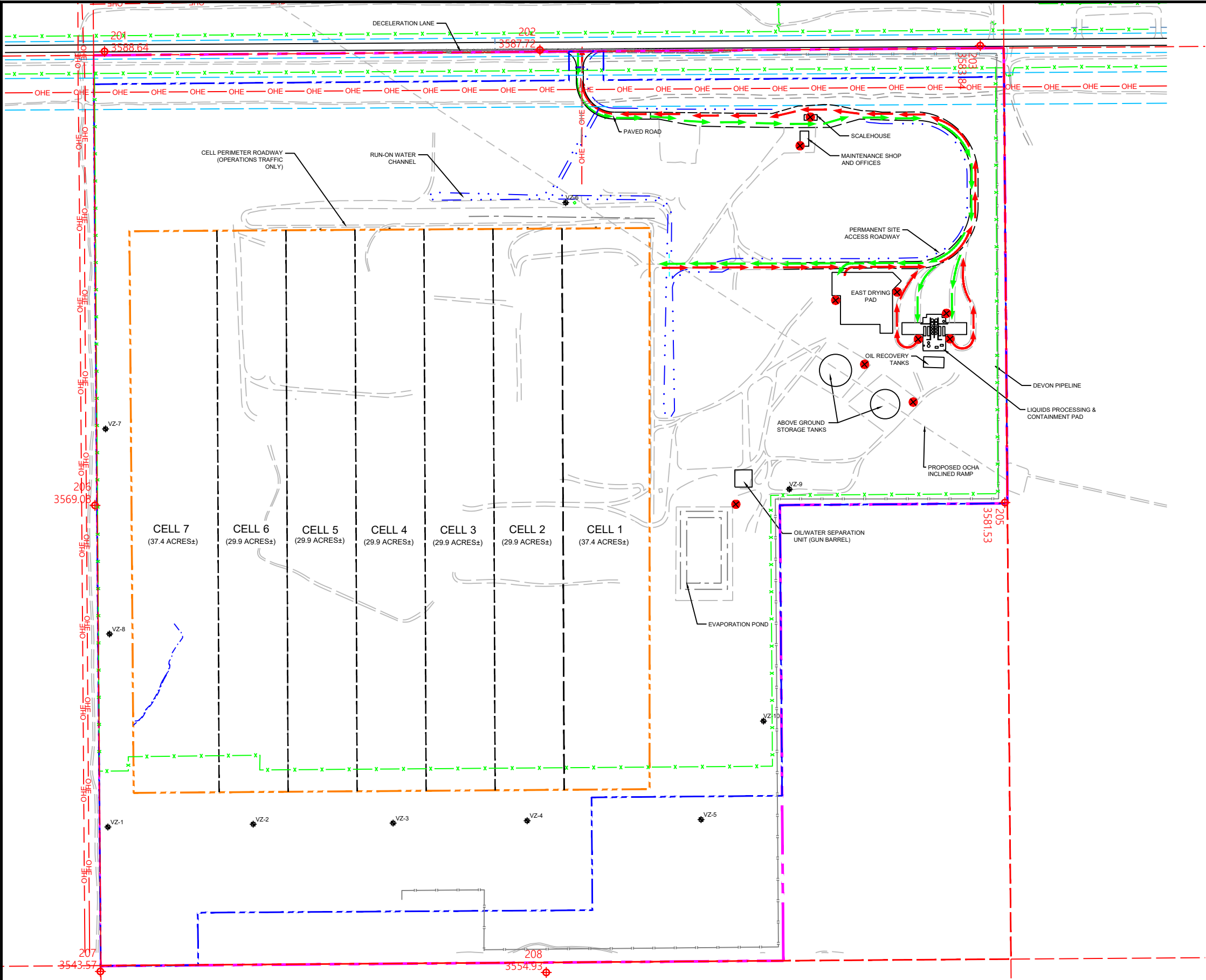
60,000 BBL ABOVE-GROUND STORAGE TANK & BERM DETAIL



40,000 BBL ABOVE-GROUND STORAGE TANK & BERM DETAIL







LEGEND

SITE BOUNDARY

FACILITY BOUNDARY

SECTION BOUNDARY

DISPOSAL AREA

PROCESSING AREA

CELL BOUNDARY

EXISTING PAVED ROAD

EXISTING SITE ACCESS ROADWAY

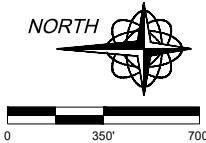
EXISTING UNPAVED ROAD

EXISTING FENCE

INBOUND TRAFFIC ROUTE

OUTBOUND TRAFFIC ROUTE

PPE AND EMERGENCY EQUIPMENT

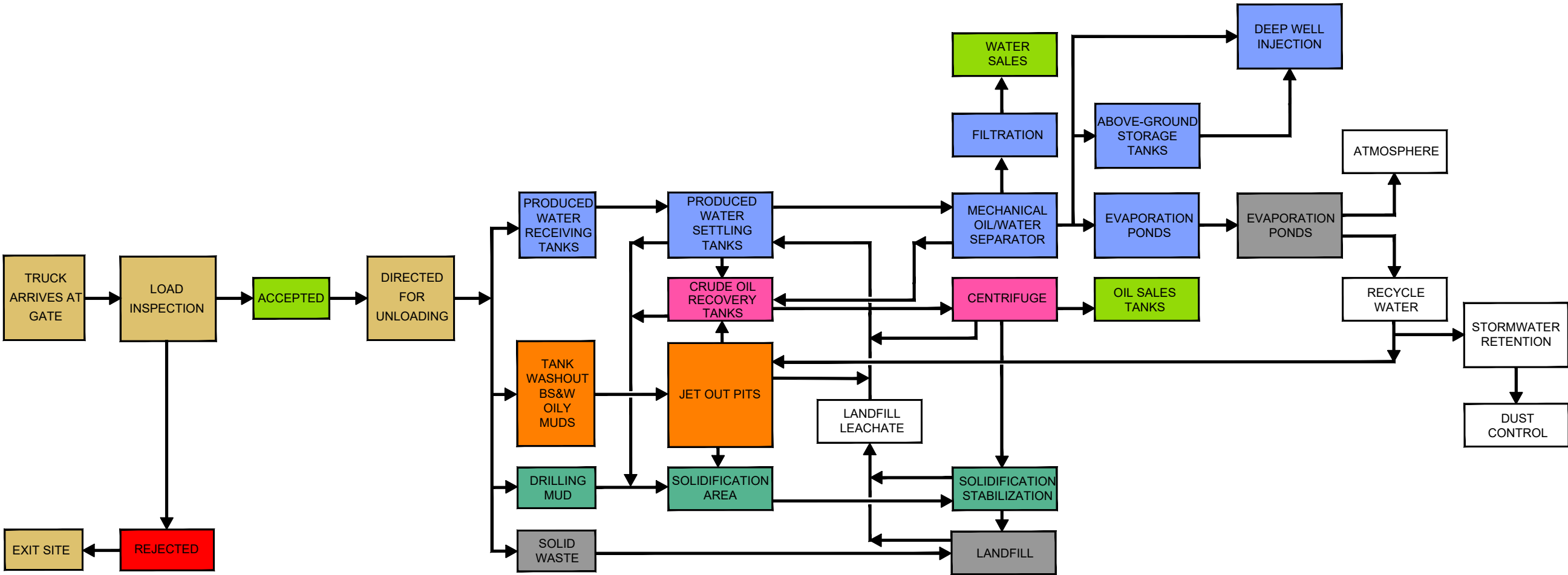


PROCESS AREA  
TRAFFIC FLOW PLAN  
OWL LANDFILL SERVICES, LLC  
LEA COUNTY, NEW MEXICO

**Parkhill**

333 Rio Rancho Blvd NE.  
Suite 400  
Rio Rancho , New Mexico.  
Phone: 505-867-6990

DATE: 05/28/2025	CAD: PROCESS AREA TRAFFIC FLOW.dwg	PROJECT #: 45067.25
DRAWN BY: DMI	REVIEWED BY: TSK	FIGURE II.14B
APPROVED BY: TSK	www.parkhill.com	



PROCESS FLOW DIAGRAM

OWL LANDFILL SERVICES, LLC  
LEA COUNTY, NEW MEXICO

**Parkhill**

333 Rio Rancho Blvd NE.  
Suite 400  
Rio Rancho , New Mexico.  
Phone: 505-867-6990

DATE: 05/28/2025	CAD: PROCESS FLOW.dwg	PROJECT #: 45067.25
DRAWN BY: DMI	REVIEWED BY: TSK	
APPROVED BY: TSK	gei@gordonenvironmental.com	FIGURE II.1.5A

PROCESS DESCRIPTION:

- 1. A WASTE VEHICLE ARRIVES AT THE GATE.
- 2. PAPERWORK IS CHECKED AGAINST SUNDANCE WEST RECORDS TO CONFIRM ACCEPTABLE DOCUMENTATION.
- 3. THE WASTE LOAD IS VISUALLY AND PHYSICALLY INSPECTED, AND EITHER ACCEPTED TO PROCEED FOR UNLOADING, OR REJECTED AND RETURNED TO THE GENERATOR.
- 4. ACCEPTED LOADS ARE DIRECTED TO ONE OF FOUR LOCATIONS:

TANKERS CONTAINING PRODUCED WATER ARE DIRECTED TO ONE OF TWELVE LOAD OUT POINTS AT THE PRODUCED WATER TANKS MANIFOLD. PRODUCED WATER IS DISCHARGED INTO A 1,000 BBL TANK FOR INITIAL SETTLING AND SEPARATION. OIL ACCUMULATING AT THE TOP OF THE TANKS IS TRANSFERRED TO THE CRUDE OIL RECOVERY TANKS IF ADDITIONAL PROCESSING IS REQUIRED. PRODUCED WATER MAY BE TRANSFERRED TO ONE OF TWO ABOVE GROUND STORAGE TANKS FOR FLOW EQUALIZATION. DURING PERIODS OF WET WEATHER AND DEMAND WHICH EXCEEDS THE FACILITIES PERMITTED TREATMENT CAPACITY. UP TO FIVE DAYS TOTAL SETTLING TIME IS PROVIDED FOR THE PRODUCED WATER WITH AT LEAST ONE DAY HEATED. LIQUIDS ARE REMOVED FROM THE PRODUCED WATER TANKS AND TRANSFERRED TO FILTRATION FOR WATER SALE OR THROUGH A MECHANICAL OIL/WATER SEPARATOR TO A PIPELINE FOR EITHER STORAGE IN EVAPORATION PONDS, ABOVE-GROUND STORAGE TANKS, OR SENT TO DEEP WELL INJECTION. SLUDGE AND SEDIMENT SETTLING TO THE BOTTOM OF THE TANK IS TRANSFERRED TO THE SOLIDIFICATION AND STABILIZATION AREA. MECHANICAL EVAPORATORS CIRCULATE THE WATER WITHIN THE EVAPORATION PONDS TO ENHANCE EVAPORATION TO THE ATMOSPHERE. SOME WATER IS RECYCLED TO THE TANKER JET OUT FOR TANK CLEANING.

TANKERS CONTAINING BS&W PROCESS WATER AND LIQUID TANK BOTTOMS ARE DIRECTED TO THE JET OUT PIT. ALL BS&W TANK BOTTOM LIQUIDS RECEIVED ARE DISCHARGED INTO THE JET OUT PIT. TANK TRUCKS ACCEPTED FOR WASHOUT ARE DIRECTED TO ONE OF SIX JET OUT PITS. APPROXIMATELY 10 BBLS OF FRESH/RECYCLED WATER ARE PROVIDED TO RINSE OUT THE INTERIOR OF THE TANKS. THE CLEANED TANK TRAILER IS RETURNED FOR SERVICE. OIL THAT ACCUMULATES AT THE TOP OF THE JET OUT PITS IS TRANSFERRED TO THE CRUDE OIL RECOVERY TANK FOR PROCESSING, IF REQUIRED. WATER THAT SETTLES TO THE BOTTOM OF THE TANKS IS TRANSFERRED TO THE PRODUCED WATER TANKS. SLUDGES AND SEDIMENT SETTLING TO THE BOTTOM OF THE TANK IS TRANSFERRED TO THE SOLIDIFICATION AND STABILIZATION AREA.

THE CRUDE OIL RECOVERY TANKS FEED THE CENTRIFUGE WHICH SEPARATES THE OIL FROM ANY REMAINING WATER. WATER IS RETURNED TO THE PRODUCED WATER TANKS. SOLIDS RECOVERED FROM THE CRUDE OIL RECOVERY TANKS AND CENTRIFUGE ARE REMOVED TO THE STABILIZATION/SOLIDIFICATION PROCESSING AREA. OIL RECOVERED FROM THE CRUDE OIL RECOVERY TANKS AND CENTRIFUGE IS TRANSFERRED TO THE OIL SALES TANKS.

TANKERS CONTAINING DRILLING MUD AND CUTTINGS ARE DIRECTED TO THE SOLIDIFICATION AND STABILIZATION AREA. SLUDGES AND SEDIMENT COLLECTED FROM THE BOTTOM OF THE TANKS ARE SOLIDIFIED WITH A BULKING MATERIAL LIKE SAND OR FLY ASH. DRILLING MUDS ARE SOLIDIFIED AND STABILIZED USING THREE PARTS SOIL TO ONE PART MUD PRIOR TO LANDFILLING. LIQUIDS RECOVERED FROM THE SOLIDIFICATION/STABILIZATION PROCESS ARE TRANSFERRED TO THE PRODUCED WATER TANKS.

LOADS OF CONTAMINATED SOIL AND SOLID WASTE ARE DIRECTED TO THE LANDFILL FOR DISPOSAL. LEACHATE GENERATED BY LANDFILL OPERATION MAY BE TRANSFERRED TO PRODUCED WATER TANKS.

PROCESS FLOW DESCRIPTION

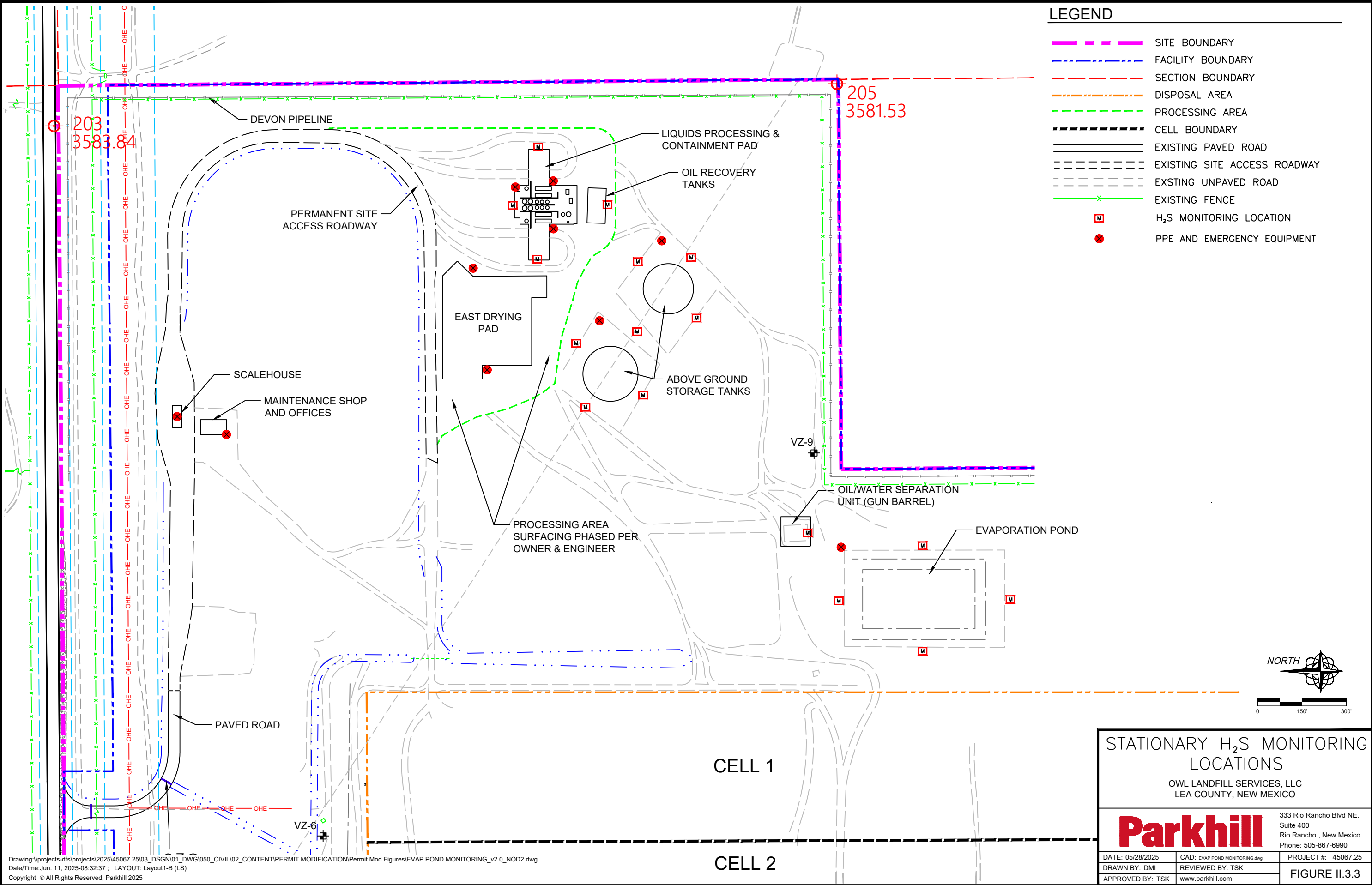
OWL LANDFILL SERVICES, LLC  
LEA COUNTY, NEW MEXICO

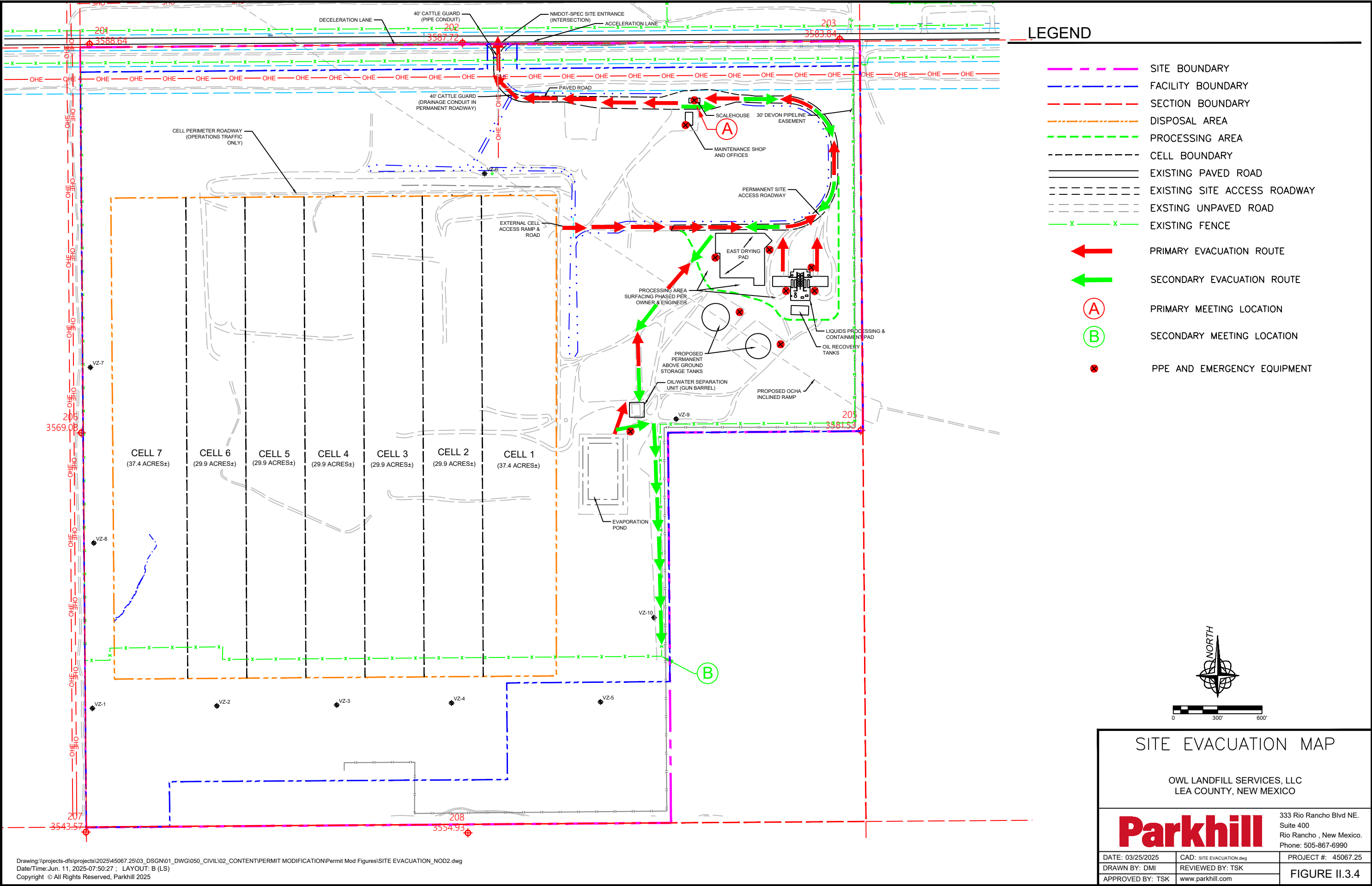


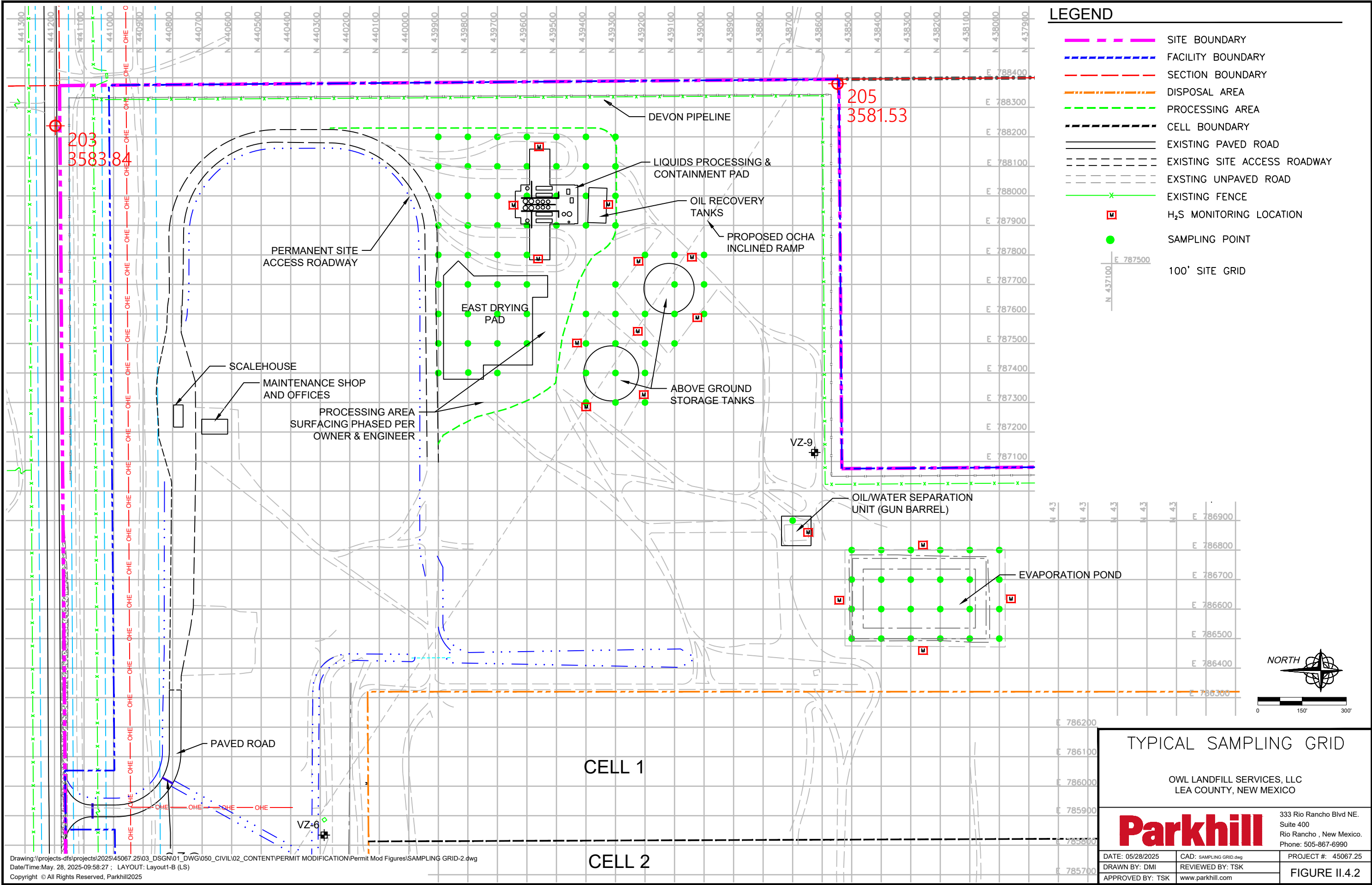
333 Rio Rancho Blvd NE.  
Suite 400  
Rio Rancho , New Mexico.  
Phone: 505-867-6990

DATE: 05/28/2025	CAD: PROCESS FLOW DESCRIPTION.dwg	PROJECT #: 45067.25
DRAWN BY: DMI	REVIEWED BY: TSK	
APPROVED BY: TSK	gei@gordonenvironmental.com	FIGURE II.1.5B











**Parkhill**

## APPENDIX C: PERMIT MODIFICATION – NARRATIVE UPDATES

<b>Description of Change</b>	<b>Volume</b>	<b>Page</b>
Update Facility Table; <i>Table I.3</i>	I	I-6
Update Development Sequence; <i>Table I.4</i>	I	I-7
Permit Body; <i>Section 1.3</i>	I	I-8
Update Facility Table; <i>Table II.1.2</i>	II.1	II.1-5
Update Development Sequence; <i>Table II.1.3</i>	II.1	II.1-6
Update Processing Equipment; <i>Table II.1.9</i>	II.1	II.1-27
Permit Body; <i>Section 6.2</i>	II.1	II.1-29
Update Facility Table; <i>Table II.3.1</i>	II.3	II.3-3
Update Development Sequence; <i>Table II.4.1</i>	II.4	II.4-2
Updated Closure Costs; <i>Table II.4.D.1-6</i>	II.4.D	II.4.D
Update Facility Table; <i>Table II.5.1</i>	II.5	II.5-3
Permit Body; <i>Section 2.2</i>	II.6	II.6-4

**TABLE I.3**  
**Proposed Facilities<sup>1</sup>**  
**OWL Landfill Services, LLC**

<b>Description</b>	<b>No.</b>
Oil field waste disposal landfill	1
Produced water load-out points	9
Produced water receiving tanks	12
Produced water settling tanks	48
Mechanical oil/water separation unit	4
Above-ground storage tanks	2
Evaporation ponds	12
Stabilization and Solidification Area	1
Oil treatment plant	1
Crude oil recovery tanks	5
Oil sales tanks	5
Customer jet wash – bays	6

*Note:*

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

The improvements identified in **Table I.3** are discussed in detail in this Application. In addition, various support facilities, may include: an office, scale(s), waste acceptance/security, maintenance building, roads, break room, emergency shower & eyewash station, and stormwater detention basins are proposed for the new Facility (see **Engineering Design, Volume III.1**).

### **1.3 Development Sequence**

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

**TABLE II.4.1**  
**OWL Development Sequence<sup>1</sup>**  
**OWL Landfill Services, LLC**

Description	Summary	Year No. <sup>2</sup>
<b>Phase I - Initial Landfill &amp; Produced Water Processing Operation.</b>		
<ul style="list-style-type: none"> <li>Initial Landfill Cell (13.5-acres)</li> <li>Produced water load-out points (4)</li> <li>Tank farm berm (complete)</li> <li>Boiler (75 HP) running a heat transfer fluid tank farm</li> <li>Produced Water Receiving Tanks (4), 1,000 bbl capacity<sup>3</sup></li> <li>Settling Tanks (16), 1,000 bbl capacity</li> <li>Crude Oil Recovery Tank (1), 1,000 bbl capacity</li> <li>Oil Sale Tank (1), 1,000 bbl capacity</li> <li>Mechanical Oil/Water Separation Unit</li> <li>Above-ground storage tanks (2), 40,000 bbl and 60,000 bbl</li> <li>Ponds (4) capable of evaporating 4,000 bbl of liquid per day</li> </ul>	The oil recovered from the Produced Water Processing Operations process is anticipated to be 6 bbl per day. This material will be pumped to the heated Crude Oil Recovery Tank for further processing before being pumped to the Oil Sale Tank.	1
<b>Phase II - Jet-Out Pit Operation.</b>		
<ul style="list-style-type: none"> <li>Jet-Out Pit (six-station) for handling basic sediment and water (BS&amp;W), tank bottoms, oily drilling muds and tank wash-outs</li> <li>Additional crude oil recovery tank (1), 1,000 bbl capacity</li> <li>Install 5-acre Stabilization and Solidification Area</li> </ul>	The oil recovered from the top of the Jet-Out Pit will be pumped to a heated Crude Oil Recovery Tank installed in the Tank Farm. Oil recovered from the Produced Water Tanks will also be pumped to this tank. Water recovered from the Pit will be pumped to the Produced Water Receiving Tanks. Sediments from the Pit will be bucket-loaded out of the Pit and transferred to the Stabilization and Solidification Area for processing prior to landfilling.	2
<b>Phase III - Expanded Produced Water Processing Operation.</b>		
<ul style="list-style-type: none"> <li>Produced water load-out points (4)</li> <li>Additional Produced Water Receiving Tanks (4), 1,000 bbl capacity</li> <li>Additional Settling Tanks (16), 1,000 bbl capacity</li> <li>Additional Crude Oil Recovery Tanks (3), 1,000 bbl capacity</li> <li>Additional Oil Sales Tanks (2), 1,000 bbl capacity</li> <li>Additional (2) Mechanical Oil/Water Separation Units</li> <li>Additional ponds (4) capable of evaporating an additional 4,000 bbl per day of liquid</li> </ul>	The additional oil recovered from the expanded Produced Water Processing Operation process, anticipated to be 6 bbl per day (for a total of 12 bbls per day), will be pumped to the Crude Oil Recovery tanks for further processing.	3
<b>Phase VI - Ultimate Produced Water Processing Facility.</b>		
<ul style="list-style-type: none"> <li>Additional Produced Water Receiving Tank (4), 1,000 bbl capacity</li> <li>Additional Settling Tanks (16), 1,000 bbl capacity</li> <li>Additional Oil Sales Tanks (1), 1,000 bbl capacity</li> <li>Additional Mechanical Oil/Water Separation Unit</li> <li>Additional ponds (4) capable of evaporating an additional 4,000 bbl per day of liquid</li> </ul>	The additional oil recovered from the ultimate Produced Water Processing Facility will be pumped to the Crude Oil Recovery Tank for further processing.	4

Notes:

<sup>1</sup> The OWL site development sequence is subject to change. Different combinations of these improvements may be constructed at any time. OCD will be notified in advance of construction.

<sup>2</sup> Estimated number of years after OCD Surface Waste Management Facility Permit issued

<sup>3</sup> bbl = barrels of oil

**Phase I - Initial Landfill and Produced Water Processing Operation.** This Phase will include an initial 34.8-acre cell (**Figure I.2**) of the Land Disposal Area where landfilling of materials will be conducted. This Phase will also include:

- The installation of four Produced Water Load-Out points
- The complete tank farm berm
- The 75 horsepower (HP) boiler circulating a heat transfer fluid to the four 1,000 barrel (bbl) heated Produced Water Receiving Tanks
- Sixteen 1,000 bbl Produced Water Settling Tanks
- A heated 1,000 bbl Crude Oil Recovery Tank
- A 1,000 bbl Oil Sale Tank
- A mechanical oil/water separation unit
- Above-ground storage tanks (2), 40,000 bbl and 60,000 bbl capacity
- Four Evaporation Ponds with a capacity of 9.5 acre-feet each, capable of evaporating 4,000 bbl per day of liquid.
- The Stabilization and Solidification area

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

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

**Phase III - Expanded Produced Water Processing Operation.** This Phase will include the installation of an additional four Produced Water Load-Out points, four additional 1,000 bbl heated Produced Water Receiving Tanks, sixteen additional 1,000 bbl Produced Water Settling Tanks, three additional Crude Oil Recovery Tanks, an additional mechanical oil/water separator unit and four additional 9.5 acre-foot ponds capable of evaporating an additional 4,000 bbl per day of liquid. It is estimated that this Phase will be completed within approximately three years of permitting.

**TABLE II.1.2**  
**Proposed Facilities<sup>1</sup>**  
**OWL Landfill Services, LLC**

<b>Description</b>	<b>No.</b>
Oil field waste disposal landfill	1
Produced water load-out points	8
Produced water receiving tanks	12
Produced water settling tanks	48
Mechanical oil/water separation unit	4
Above-ground storage tanks	2
Evaporation ponds	12
Stabilization and Solidification Area	1
Oil treatment plant	1
Crude oil recovery tanks	5
Oil sales tanks	5
Customer jet wash - bays	6

*Note:*

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

**TABLE II.1.3**  
**OWL Development Sequence<sup>1</sup>**  
**OWL Landfill Services, LLC**

Description	Summary	Year No. <sup>2</sup>
<b>Phase I - Initial Landfill &amp; Produced Water Processing Operation.</b>		
<ul style="list-style-type: none"> <li>Initial Landfill Cell (13.5-acres)</li> <li>Produced water load-out points (4)</li> <li>Tank farm berm (complete)</li> <li>Boiler (75 HP) running a heat transfer fluid tank farm</li> <li>Produced Water Receiving Tanks (4), 1,000 bbl capacity<sup>3</sup></li> <li>Settling Tanks (16), 1,000 bbl capacity</li> <li>Crude Oil Recovery Tank (1), 1,000 bbl capacity</li> <li>Oil Sale Tank (1), 1,000 bbl capacity</li> <li>Mechanical Oil/Water Separation Unit</li> <li>Above-ground storage tanks (2), 40,000 bbl and 60,000 bbl</li> <li>Ponds (4) capable of evaporating 4,000 bbl of liquid per day</li> </ul>	The oil recovered from the Produced Water Processing Operations process is anticipated to be 6 bbl per day. This material will be pumped to the heated Crude Oil Recovery Tank for further processing before being pumped to the Oil Sale Tank.	1
<b>Phase II - Jet-Out Pit Operation.</b>		
<ul style="list-style-type: none"> <li>Jet-Out Pit (six-station) for handling basic sediment and water (BS&amp;W), tank bottoms, oily drilling muds and tank wash-outs</li> <li>Additional crude oil recovery tank (1), 1,000 bbl capacity</li> <li>Install 5-acre Stabilization and Solidification Area</li> </ul>	The oil recovered from the top of the Jet-Out Pit will be pumped to a heated Crude Oil Recovery Tank installed in the Tank Farm. Oil recovered from the Produced Water Tanks will also be pumped to this tank. Water recovered from the Pit will be pumped to the Produced Water Receiving Tanks. Sediments from the Pit will be bucket-loaded out of the Pit and transferred to the Stabilization and Solidification Area for processing prior to landfilling.	2
<b>Phase III - Expanded Produced Water Processing Operation.</b>		
<ul style="list-style-type: none"> <li>Produced water load-out points (4)</li> <li>Additional Produced Water Receiving Tanks (4), 1,000 bbl capacity</li> <li>Additional Settling Tanks (16), 1,000 bbl capacity</li> <li>Additional Crude Oil Recovery Tanks (3), 1,000 bbl capacity</li> <li>Additional Oil Sales Tanks (2), 1,000 bbl capacity</li> <li>Additional (2) Mechanical Oil/Water Separation Units</li> <li>Additional ponds (4) capable of evaporating an additional 4,000 bbl per day of liquid</li> </ul>	The additional oil recovered from the expanded Produced Water Processing Operation process, anticipated to be 6 bbl per day (for a total of 12 bbls per day), will be pumped to the Crude Oil Recovery tanks for further processing.	3
<b>Phase VI - Ultimate Produced Water Processing Facility.</b>		
<ul style="list-style-type: none"> <li>Additional Produced Water Receiving Tank (4), 1,000 bbl capacity</li> <li>Additional Settling Tanks (16), 1,000 bbl capacity</li> <li>Additional Oil Sales Tanks (1), 1,000 bbl capacity</li> <li>Additional Mechanical Oil/Water Separation Unit</li> <li>Additional ponds (4) capable of evaporating an additional 4,000 bbl per day of liquid</li> </ul>	The additional oil recovered from the ultimate Produced Water Processing Facility will be pumped to the Crude Oil Recovery Tank for further processing.	4

Notes:

<sup>1</sup> The OWL site development sequence is subject to change. Different combinations of these improvements may be constructed at any time. OCD will be notified in advance of construction.

<sup>2</sup> Estimated number of years after OCD Surface Waste Management Facility Permit issued

<sup>3</sup> bbl = barrels of oil

Drilling Mud waste will also be accepted for stabilization and solidification. The average operational rate for the fully developed stabilization and solidification area is estimated at 2,000 bbl/day depending on market conditions.

## 6.2 Processing

The equipment that anticipated to be used for liquid oil field waste processing is listed in **Table II.1.9**. Oil field waste receiving and processing activities will take place within the fenced Facility (**Figures II.1.2 and II.1.6**). A description of the liquid waste processing operation is provided on the Process Flow Diagram (**Figures II.1.5A and II.1.5B**). The location of the liquid waste processing facilities at OWL is provided on the Processing Facility Layout provided as **Figure II.1.6** and detailed in the **Permit Plans (Volume III.1)**.

**TABLE II.1.9**  
**Processing Equipment**  
**OWL Landfill Services, LLC**

<b>Description</b>	<b>Number</b>	<b>Capacity</b>
<b>Stationary</b>		
Produced Water Tanks	60	1,000 bbl
Crude Oil Receiving Tanks	5	1,000 bbl
Oil Sales Tanks	5	1,000 bbl
Mechanical oil/water separation unit	4	100 bbl
Above-ground storage tank	1	40,000 bbl
Above-ground storage tank	1	60,000 bbl
Evaporation Ponds (1-12)	12	73,700 bbl
Mechanical Evaporation Units	130	340 bbl/day/unit
Jet-Out Pit	1	1,200 bbl
Stabilization and Solidification Area	-	10 Acres
Boiler/Heat exchanger	1	Each
Burner fuel tanks	1	238 bbl
<b>Mobile</b>		
Rubber Tired Loader	1	CAT 950 or equivalent
Floatation Track-Dozer	1	CAT D-6 or equivalent
Off Road Dump Truck	1	CAT 725 or equivalent
Roll-off Boxes	5	5-40 cy
Roll-off Tilt-frames	1	Up to 40 cy boxes

*Note: The number, type, and capacity of the processing may be adjusted in response to changes in waste receipts, waste types, new technologies, etc.*



The produced water processing rate is highly dependent upon evaporation, which is also influenced by climate and seasonal fluctuations (Evaporation Calculations, **Volume III.8**). When tanks and ponds are approaching capacity, acceptance of liquid oil field waste may be temporarily suspended. Specifications for the proposed treatment plant equipment, including the produced water processing tanks, boilers, centrifuge, the diffused air floatation system, and mechanical evaporation systems are included in **Attachment II.1.B**. Receiving and storage tanks used at the Facility will be leak-proof; compatible with the proposed waste stream; and manufactured of non-biodegradable materials (e.g., fiber reinforced plastics or steel).

Produced Water will be received through the Produced Waste Load-Out stations and transferred to the heated Produced Water Receiving Tanks. Oil, water and sediments will be removed as the Produced Water passes through a series of these tanks and the Treatment Plant. Water discharge from the tanks will flow through a diffused air flotation (DAF) system to remove residual oils. After DAF, water will either be directed into a pipeline for deep well injection, sent to evaporation ponds, or transferred to above-ground storage tanks (ASTs). Two ASTs will serve as additional temporary storage during periods when deep well injection or pond capacity is unavailable. The ponds and ASTs will be monitored to confirm that the DAF is adequately removing oil from the discharged water. Oil that accumulates in the ponds or ASTs will be skimmed and removed for additional processing. Oil collected from the Produced Water Receiving Tanks will be transferred to the Crude Oil Receiving Tanks for final dewatering prior to storage in the Oil Sales Tanks. Liquids within the ponds will be pumped through mechanical evaporators to dissipate the liquid to the atmosphere.

BS&W waste will be discharged to the Jet-Out Pit where solids will be allowed to settle and liquids will be removed for processing through the Produced Water processing system. Solids removed from the Jet-Out Pit will be transferred to the Stabilization and Solidification Area for processing prior to landfilling. Fresh water or recycled water will be available to flush out the tankers after they discharge their contents.

Drilling Muds and other wet solids will be deposited in the Stabilization and Solidification Area. Dry soil will be mixed with the deposited materials to solidify them to a level that will pass the Paint Filter Test (**Attachment II.1.F**). Once solidified, the resulting material will be

southeastern NM and west Texas. The **Permit Plans (Attachment III.1.A)** identify the locations of the Processing Area and Landfill facilities. The Site Plan provided as **Figure II.3.2** identifies the locations of the Processing Area and Landfill facilities. The proposed facilities are detailed in **Table II.3.1**, and are planned to be developed in four primary phases.

**TABLE II.3.1**  
**Proposed Facilities<sup>1</sup>**  
**OWL Landfill Services, LLC**

<b>Description</b>	<b>No.</b>
Oil field waste disposal landfill	1
Produced water load-out points	8
Produced water receiving tanks	12
Produced water settling tanks	48
Mechanical oil/water separation unit	4
Above-ground storage tanks	2
Evaporation ponds	12
Stabilization and Solidification Area	1
Oil treatment plant	1
Crude oil receiving tanks	5
Oil sales tanks	5
Customer jet wash – bays	6

*Note:*

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

### 1.3 Purpose

The purpose of this Hydrogen Sulfide (H<sub>2</sub>S) Prevention and Contingency Plan (the Plan) is to enhance awareness and establish measures to protect employees from occupational exposure to H<sub>2</sub>S while allowing them to perform their assigned duties. The Plan is also designed to protect customers and visitors to the OWL Facility, as well as the general public and nearby land users in conformance with 19.15.36.13.O NMAC.

This Plan prescribes measures for:

- Providing routine H<sub>2</sub>S monitoring of incoming wastes.
- Installation of monitoring points at the Facility evaporation ponds.
- Routine perimeter monitoring, and the potential for permanent monitoring stations.
- Regular monitoring in and around incoming oil field waste transportation vehicles.
- Augmenting the monitoring procedures in the event that H<sub>2</sub>S is detected at  $\geq 1$  part per million (ppm).

**TABLE II.4.1**  
**OWL Development Sequence<sup>1</sup>**  
**OWL Landfill Services, LLC**

Description	Summary	Year No. <sup>2</sup>
<b>Phase I - Initial Landfill &amp; Produced Water Processing Operation.</b>		
<ul style="list-style-type: none"> <li>Initial Landfill Cell (13.5-acres)</li> <li>Produced water load-out points (4)</li> <li>Tank farm berm (complete)</li> <li>Boiler (75 HP) running a heat transfer fluid tank farm</li> <li>Produced Water Receiving Tanks (4), 1,000 bbl capacity<sup>3</sup></li> <li>Settling Tanks (16), 1,000 bbl capacity</li> <li>Crude Oil Recovery Tank (1), 1,000 bbl capacity</li> <li>Oil Sale Tank (1), 1,000 bbl capacity</li> <li>Mechanical Oil/Water Separation Unit</li> <li>Above-ground storage tanks (2), 40,000 bbl and 60,000 bbl</li> <li>Ponds (4) capable of evaporating 4,000 bbl of liquid per day</li> </ul>	The oil recovered from the Produced Water Processing Operations process is anticipated to be 6 bbl per day. This material will be pumped to the heated Crude Oil Recovery Tank for further processing before being pumped to the Oil Sale Tank.	1
<b>Phase II - Jet-Out Pit Operation.</b>		
<ul style="list-style-type: none"> <li>Jet-Out Pit (six-station) for handling basic sediment and water (BS&amp;W), tank bottoms, oily drilling muds and tank wash-outs</li> <li>Additional crude oil recovery tank (1), 1,000 bbl capacity</li> <li>Install 5-acre Stabilization and Solidification Area</li> </ul>	The oil recovered from the top of the Jet-Out Pit will be pumped to a heated Crude Oil Recovery Tank installed in the Tank Farm. Oil recovered from the Produced Water Tanks will also be pumped to this tank. Water recovered from the Pit will be pumped to the Produced Water Receiving Tanks. Sediments from the Pit will be bucket-loaded out of the Pit and transferred to the Stabilization and Solidification Area for processing prior to landfilling.	2
<b>Phase III - Expanded Produced Water Processing Operation.</b>		
<ul style="list-style-type: none"> <li>Produced water load-out points (4)</li> <li>Additional Produced Water Receiving Tanks (4), 1,000 bbl capacity</li> <li>Additional Settling Tanks (16), 1,000 bbl capacity</li> <li>Additional Crude Oil Recovery Tanks (3), 1,000 bbl capacity</li> <li>Additional Oil Sales Tanks (2), 1,000 bbl capacity</li> <li>Additional (2) Mechanical Oil/Water Separation Units</li> <li>Additional ponds (4) capable of evaporating an additional 4,000 bbl per day of liquid</li> </ul>	The additional oil recovered from the expanded Produced Water Processing Operation process, anticipated to be 6 bbl per day (for a total of 12 bbls per day), will be pumped to the Crude Oil Recovery tanks for further processing.	3
<b>Phase VI - Ultimate Produced Water Processing Facility.</b>		
<ul style="list-style-type: none"> <li>Additional Produced Water Receiving Tank (4), 1,000 bbl capacity</li> <li>Additional Settling Tanks (16), 1,000 bbl capacity</li> <li>Additional Oil Sales Tanks (1), 1,000 bbl capacity</li> <li>Additional Mechanical Oil/Water Separation Unit</li> <li>Additional ponds (4) capable of evaporating an additional 4,000 bbl per day of liquid</li> </ul>	The additional oil recovered from the ultimate Produced Water Processing Facility will be pumped to the Crude Oil Recovery Tank for further processing.	4

Notes:

<sup>1</sup> The OWL site development sequence is subject to change. Different combinations of these improvements may be constructed at any time. OCD will be notified in advance of construction.

<sup>2</sup> Estimated number of years after OCD Surface Waste Management Facility Permit issued

<sup>3</sup> bbl = barrels of oil

**ATTACHMENT II.4.D.1**  
**CLOSURE/POST-CLOSURE**  
**COST ESTIMATE SUMMARY - 2025 Update**  
**OWL Landfill Services, LLC**

<b>TASK</b>	<b>COST ESTIMATE</b>
<b>1.0 LANDFILL CLOSURE CONSTRUCTION</b>	<b>\$1,278,742</b>
<b>2.0 LANDFILL MAINTENANCE</b>	<b>\$412,494</b>
<b>3.0 ENVIRONMENTAL MONITORING</b>	<b>\$148,959</b>
<b>4.0 POND AND PROCESSING AREA CLOSURE (see Att. II.4.D.5)</b>	<b>\$540,993</b>
<b>5.0 POND AND PROCESSING AREA MAINTENANCE</b>	<b>\$31,360</b>
2023 TOTAL COST ESTIMATE w/addition of 15 acres in Cells 1B/2B	\$2,568,264
CPI-U Increase Dec 2023-April 2025	4.26%
<b>2024 TOTAL COST ESTIMATE</b>	<b>\$2,677,552</b>

**ATTACHMENT II.4.D.2**  
**PHASE I LANDFILL CLOSURE CONSTRUCTION**  
**CLOSURE COST ESTIMATE - 2025 Update**  
**OWL Landfill Services, LLC Landfill (Cells 1A-5A & 1B/2B) = Total 57.8 acres**

<b>TASK 1.0</b>	<b>Unit Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost</b>
<b>1.1 Final Cover Installation (See Note 5)</b>				
1.1.1 Install and compact 12" Intermediate Cover Layer	93,251	CY	\$2.99	\$278,819
1.1.2 Install and compact 6" Barrier Layer	46,625	CY	\$4.10	\$191,164
1.1.3 Install 24" Vegetative Layer	186,501	CY	\$2.93	\$546,449
1.1.4 Vegetative Layer Seeding (Class A)	42.8	AC	\$1,747.40	\$74,789
<b>Task Subtotal</b>				<b>\$1,091,221</b>
<b>1.2 Final Cover CQA</b>				
1.2.1 Inspection and Testing	1	LS	\$59,393	\$59,393
1.2.2 Certification	1	LS	\$11,879	\$11,879
<b>Task Subtotal</b>				<b>\$71,272</b>
<b>TASK TOTALS</b>				<b>\$1,162,493</b>
<b>Independent Project Manager and Contract Administration Cost (10% of Task Totals)</b>				<b>\$116,249</b>
<b>TOTAL COST</b>				<b>\$1,278,742</b>

**Notes:**

1. Phase I closure costs (Now 57.8 ac) are based on contracting with a qualified third party to complete and certify closure. The activities included in this cost estimate are based on current dollars, previous experience with landfills located in arid climates, and current subcontractor costs.
2. Final cover installation costs assume that: The greatest area requiring final cover is 42.8 acres and all soils necessary for closure are available on-site
3. CY = Cubic Yard, AC = Acre, LS = Lump Sum
4. Due to the perimeter location there is no final cover "crown" and related geosynthetic layers in Unit 1.
5. Previous year yardage calculations were overestimated and corrected this year

**ATTACHMENT II.4.D.3**  
**PHASE I LANDFILL MAINTENANCE**  
**POST-CLOSURE COST ESTIMATE - 2023 Update**  
**OWL Landfill Services, LLC**

<b>TASK 2.0</b>	<b>Unit Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost Per Year</b>	<b>Total Cost For 30 Years</b>
<b>2.1 Final Cover Inspection and Reporting</b>					
2.1.1 Inspection	2	events/yr	\$1,188	\$2,376	\$71,273
2.1.2 Recordkeeping and Reporting	2	events/yr	\$475	\$950	\$28,510
<b>Task Subtotals</b>				<b>\$3,326</b>	<b>\$99,783</b>
<b>2.2 Final Cover Maintenance</b>					
2.2.1 Cover Maintenance	1	AC/yr	\$1,188	\$1,188	\$35,637
2.2.2 Vegetation	2	AC/yr	\$1,747	\$3,495	\$104,844
<b>Task Subtotals</b>				<b>\$4,683</b>	<b>\$140,481</b>
<b>2.3 Leachate System</b>					
2.3.1 Inspection/Repair	1	events/yr	\$475	\$475	\$14,255
2.3.2 Disposal	1	events/yr	\$1,165	\$1,165	\$34,948
<b>Task Subtotals</b>				<b>\$1,640</b>	<b>\$49,203</b>
<b>2.4 Surface Water Management Systems</b>					
2.4.1 Inspection/Repairs	2	events/yr	\$713	\$1,425	\$42,764
<b>Task Subtotals</b>				<b>\$1,425</b>	<b>\$42,764</b>
<b>2.5 Fencing</b>					
2.5.1 Inspection/Repairs	2	events/yr	\$713	\$1,425	\$42,764
<b>Task Subtotals</b>				<b>\$1,425</b>	<b>\$42,764</b>
<b>TASK TOTALS</b>				<b>\$12,500</b>	<b>\$374,994</b>
<b>Independent Project Manager and Contract Administration Cost (10% of Task Totals)</b>				<b>\$1,250</b>	<b>\$37,499</b>
<b>TOTAL COST</b>				<b>\$12,500</b>	<b>\$412,494</b>

**Notes:**

1. Phase I post-closure maintenance costs are based on contracting with a qualified third party to conduct post-closure car maintenance for the landfill. The activities included in this cost estimate are based on current dollars, previous experience with landfills located in arid climates, and current subcontractor costs.
2. AC = Acre  
LS = Lump Sum

**ATTACHMENT II.4.D.4**  
**PHASE I ENVIRONMENTAL MONITORING**  
**POST-CLOSURE COST ESTIMATE - 2023 Update**  
**OWL Landfill Services, LLC**

<b>TASK 3.0</b>	<b>Unit Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost Per Year</b>	<b>Total Cost</b>
<b>3.1 Vadose Zone Monitoring</b>					
3.1.1 Field Services/Lab Analysis/Reporting (30 years)	1	events/yr	\$2,732	\$2,732	\$81,963
<b>Task Subtotal</b>				<b>\$2,732</b>	<b>\$81,963</b>
<b>3.2 NPDES Monitoring</b>					
3.2.1 Field Services/Reporting (30 years)	1	events/yr	\$1,782	\$1,782	\$53,455
<b>Task Subtotal</b>				<b>\$1,782</b>	<b>\$53,455</b>
<b>TASK TOTALS</b>				<b>\$4,514</b>	<b>\$135,418</b>
<b>Independent Project Manager and Contract Administration Cost (10% of Task Totals)</b>				<b>\$451</b>	<b>\$13,542</b>
<b>TOTAL COST</b>				<b>\$4,965</b>	<b>\$148,959</b>

**Notes:**

1. Phase I closure costs are based on contracting with a qualified third party to conduct post-closure monitoring for the landfill. The activities included in this cost estimate are based on current dollars, previous experience with landfills located in arid climates, and current subcontractor costs.
2. Assume no water in vadose wells (i.e., sampling and analysis costs not included).

**ATTACHMENT II.4.D.5**  
**PHASE I POND AND PROCESSING AREA CLOSURE CONSTRUCTION**  
**CLOSURE COST ESTIMATE - 2023 Update**  
**OWL Landfill Services, LLC**

Task 4.0	Units	Unit Cost	Total (28 acres)	
			Quantity	Cost
<b>4.1 Evaporation Pond</b>				
<b>4.1.1 Liquids Transport/Disposal</b>				
4.1.1.1 Transport Liquid	bbl	\$2.10	340	\$ 714
4.1.1.2 Disposal Liquids	bbl	\$1.15	340	\$ 391
4.1.1.3 Remove/Transport Sludge	ton	\$7.75	4,840	\$ 37,510
4.1.1.4 Disposal Sludge	ton	\$17.84	4,840	\$ 86,346
4.1.1.5 Liner Removal/Transport	CY	\$4.77	235	\$ 1,121
4.1.1.6 Disposal Liner	CY	\$5.07	235	\$ 1,191
		<b>Task Subtotal</b>		<b>\$ 127,273</b>
<b>4.1.2 Pond Backfill and Contouring</b>				
4.1.2.1 Soil On-site	CY	\$1.23	0	\$ -
4.1.2.2 Place and Compact Soil	CY	\$3.58	21,500	\$ 76,970
		<b>Task Subtotal</b>		<b>\$ 76,970</b>
<b>4.1.3 Sampling</b>	each	\$238	319	\$ 75,794
<b>4.1.4 Seeding</b>	acres	\$1,782	28	\$ 49,891
		<b>Task Subtotal</b>		<b>\$ 125,685</b>
<b>Pond Closure Subtotal:</b>				<b>\$ 329,928</b>
<b>4.2 Site Work</b>				
4.2.1 Tank Removal	LS			\$ 50,000
4.2.2 Building Removal	LS			\$ 29,697
4.2.3 Process Equipment Removal	LS			\$ 29,697
4.2.4 Earthwork	LS			\$ 11,879
<b>Site Work Subtotal:</b>				<b>\$ 121,272</b>
<b>4.3 Engineering</b>				
4.3.1 CQA/Certification	LS			\$ 47,514
<b>Engineering Subtotal:</b>		LS		<b>\$ 47,514</b>
<b>4.4 Totals</b>				
<b>4.4.1 Subtotal</b>				\$ 498,715
<b>4.4.2 Adminstration Cost (10%)</b>				\$ 49,871
<b>Total:</b>				<b>\$ 548,586</b>

**Notes:**

1. Phase I closure costs are based on contracting with a qualified third party to complete and certify closure.
2. Assume 1,000 gallons of residual water in each pond transported up to 50 miles for disposal.
3. Assume 6" of sludge remaining in each pond at closure transported up to 50 miles for disposal.
4. Site Sampling is conducted during the CQA phase.
5. CY = Cubic Yard  
LS = Lump Sum

**ATTACHMENT II.4.D.6**  
**PHASE I POND AND PROCESSING AREA MAINTENANCE**  
**POST-CLOSURE COST ESTIMATE - 2023 Update**  
**OWL Landfill Services, LLC**

<b>TASK 5.0</b>	<b>Unit Quantity</b>	<b>Unit</b>	<b>Unit Cost</b>	<b>Total Cost Per Year</b>	<b>Total Cost For 3 Years</b>
<b>5.1 Surface Inspection and Reporting</b>					
5.1.1 Inspection	2	events/yr	\$1,188	\$2,376	\$7,127
5.1.2 Recordkeeping and Reporting	2	events/yr	\$475	\$950	\$2,851
<b>Task Subtotals</b>				<b>\$3,326</b>	<b>\$9,978</b>
<b>5.2 Surface Maintenance</b>					
5.2.1 Cover Maintenance	1	AC/yr	\$1,188	\$1,188	\$3,564
5.2.2 Vegetation	2	AC/yr	\$1,782	\$3,564	\$10,691
<b>Task Subtotals</b>				<b>\$4,752</b>	<b>\$14,255</b>
<b>5.3 Fencing</b>					
5.3.1 Inspection/Repairs	2	events/yr	\$713	\$1,425	\$4,276
<b>Task Subtotals</b>				<b>\$1,425</b>	<b>\$4,276</b>
<b>TASK TOTALS</b>				<b>\$9,503</b>	<b>\$28,509</b>
<b>Independent Project Manager and Contract Administration Cost (@ 10%)</b>				<b>\$950</b>	<b>\$2,851</b>
<b>TOTAL COST</b>				<b>\$9,503</b>	<b>\$31,360</b>

**Notes:**

1. Phase I post-closure maintenance costs are based on contracting with a qualified third party to conduct post-closure care/maintenance for the Processing Area. The activities included in this cost estimate are based on current dollars, previous experience with closures located in arid climates, and current subcontractor costs.
2. AC = Acre  
LS = Lump Sum



to be delivered to the OWL Facility from oil and gas exploration and production operations in southeastern NM and west Texas. The Permit Plans (**Attachment III.1.A**) identify the locations of the Processing Area and Landfill facilities. The Site Plan provided as **Figure II.5.2** identifies the locations of the Processing Area and Landfill facilities. The proposed facilities are detailed in **Table II.5.1**, and are anticipated to be developed in four primary phases.

**TABLE II.5.1**  
**Proposed Facilities<sup>1</sup>**  
**OWL Landfill Services, LLC**

<b>Description</b>	<b>No.</b>
Oil field waste disposal landfill	1
Produced water load-out points	8
Produced water receiving tanks	12
Produced water settling tanks	48
Mechanical oil/water separator unit	4
Above-ground storage tanks	2
Evaporation ponds	12
Stabilization and Solidification Area	1
Oil treatment plant	1
Crude oil receiving tanks	5
Oil sales tanks	5
Customer jet wash – bays	6

*Note:*

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

### 1.3 Purpose

This document has been prepared to address the requirements of 19.15.36.13.N NMAC which specify that each operator of a surface waste management facility must prepare and have available a Contingency Plan (the Plan). This Plan is designed to minimize hazards to fresh water, public health, safety or the environment from fires, explosions or an unplanned sudden or non-sudden release of contaminants or oil field waste to air, soil, surface water or ground water in conformance with 19.15.36.13.N NMAC. Applicable provisions of this Plan will be implemented immediately whenever there is a fire, explosion or release of contaminants or oil field waste constituents that could threaten fresh water, public health, safety or the environment. This Plan is supplemented by the H<sub>2</sub>S Prevention and Contingency Plan (**Volume II.3**), as a cross-reference.

portion of a depressional feature located 500 ft to the southeast of the facility, which is inundated only intermittently based on site reconnaissance.

## **2.2 Human and Mechanical Intervention**

OWL Processing Area operations, as proposed in this Application, have been designed to eliminate oil from accumulation on the evaporation ponds (**Volume II.1**). This will be accomplished utilizing tanks and equipment that separate the oil from the water prior to discharge into the evaporation ponds. The anticipated absence of oil in the evaporation ponds eliminates the concerns typically associated with migratory birds being endangered if they land on the evaporation ponds. In the unlikely event that oil is found on an evaporation pond, the following actions will be implemented. Operations at the Processing Area Facility will be manned by at least two employees, typically 24 hours per day. The Facility Manager, operators and employees will conduct periodic (every fifteen minutes) inspection rounds making note of migratory bird activity in or surrounding the evaporation ponds. Should migratory bird activity be discovered at the Facility, inspection and scare tactic frequency will be increased to alleviate the roosting of the birds.

In order to prevent oil sheen accumulation on the surface of the ponds (19.15.36.17.C(1) NMAC), Facility personnel will work continually throughout each day to ensure the Produced Water Settling Tanks are functioning properly, removing the oil from the water prior to discharging to the evaporation ponds. If oil is observed on the evaporation ponds, effort will be made to remove the visible oil layer from the evaporation ponds immediately. This will be accomplished by using booms to bring the oil sheen to the banks of the ponds where the oil will be removed by vacuum trucks and returned to the Produced Water Receiving Tanks. The above-ground storage tanks, used as additional temporary clean water storage, have heavy-duty nets placed over the top to block access into the tanks, which would inhibit any potential bird interaction

Operations will not lend the Facility to migratory bird congregation, with proposed operations 24 hours per day, 7 days per week, and 365 days per year. During this time, the mechanical evaporation systems will be in full operation, truck traffic will be consistently entering and leaving the Facility, and pumps will be transferring waters to and from the evaporation ponds.

State of New Mexico  
Energy, Minerals and Natural Resources Department

**Michelle Lujan-Grisham**  
Governor

**Melanie A. Kenderdine**  
Cabinet Secretary

**Benjamin Shelton**  
Deputy Secretary

**Erin Taylor**  
Deputy Secretary

**Gerasimos Razatos**  
Division Director (Acting)  
Oil Conservation Division



**ELECTRONIC MAIL ONLY**

June 12, 2025

Mr. Zach Ramos  
3889 Maple Avenue  
Suite 300  
Dallas, TX 75219  
[zramos@ndblandfill.com](mailto:zramos@ndblandfill.com)

**RE: Approval of Permit Minor Modification**  
**Permit NM1-63, OWL Landfill Services LLC**  
**Location: Section 23, Township 24 South, Range 33 East, NMPM Lea County, NM**

Dear Mr. Ramos:

The Oil Conservation Division(OCD) has completed its review of the Minor Modification request application submitted by OWL Landfill Services, LLC (OWL), dated May 28, 2025, for the commercial surface waste management facility permit, NM1-63. OWL has requested the following minor modification:

- To add two above-ground storage tanks (ASTs), with nominal capacities of 40,000 BBL and 60,000 BBL, respectively. These tanks are intended to serve as additional temporary storage for clean, processed water during periods when deep well injection or pond capacity is unavailable. This modification does not increase the facility's permitted operational capacity for liquids processing.

OCD hereby grants OWL approval of the minor modification to permit NM1-63 recognized above, with the following conditions:

1. OWL shall comply with all applicable requirements of the Oil and Gas Act (Chapter 70, Article 2 NMSA 1978), the existing permit NM1-63, as modified, the transitional provisions of 19.15.36.20 NMAC, and all conditions specified in this approval.
2. OWL shall obtain written approval from OCD prior to implementing any changes to this approval.

Furthermore, permit NM1-63, General Provisions, Condition H, Financial Assurance states: "On an annual basis, or should unforeseen conditions arise, the operator will update the closure/post-closure estimate and thus the amount of financial assurance." OWL must submit a replacement Surety Bond, or rider, in the amount of \$2,677,552 as Financial Assurance for Closure/Post-closure costs provided in this application.

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

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 549-5583 or [Joseph.Kennedy@emnrd.nm.gov](mailto:Joseph.Kennedy@emnrd.nm.gov).

Respectfully,

A handwritten signature in black ink, appearing to read "Joe Kennedy", with a stylized flourish at the end.

**Joe Kennedy** • Environmental Scientist Specialist - Advanced

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
Phone: (505) 629-6116

Online Phone Directory  
<https://www.emnrd.nm.gov/oed/contact-us>

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

CONDITIONS

Action 469255

CONDITIONS

Operator: OWL LANDFILL SERVICES, LLC 3889 Maple Avenue Dallas, TX 75219	OGRID: 371820
	Action Number: 469255
	Action Type: [C-137] SWMF Minor Modification (C-137A)

CONDITIONS

Created By	Condition	Condition Date
joseph.kennedy	Please see email sent to Zach Ramos of OWL on June 12, 2025. A copy is attached here.	6/12/2025