District I 1625 N French Dr , Hobbs, NM 88240 District II
1301 W Grand Avenue, Artesia, NM 88210 District III 1000 Rio Brazos Road, Aztec, NM 87410 District IV 1220 S. St. Francis Dr , Santa Fe, NM 87505

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

For temporary pits, closed-loop systems, and below-grade tanks, submit to the appropriate NMOCD District Office.

For permanent pits and exceptions submit to the Santa Fe Environmental Bureau office and provide a copy to the appropriate NMOCD District Office.

| 4531 | |
|------|--|
| 4001 | |

| Pit, Closed-Loop System, Below-Grade Tank, or | | | | |
|--|--|--|--|--|
| Proposed Alternative Method Permit or Closure Plan Application | | | | |
| Type of action: Permit of a pit, closed-loop system, below-grade tank, or proposed alternative method Closure of a pit, closed-loop system, below-grade tank, or proposed alternative method Modification to an existing permit Closure plan only submitted for an existing permitted or non-permitted pit, closed-loop system, | | | | |
| below-grade tank, or proposed alternative method | | | | |
| Instructions: Please submit one application (Form C-144) per individual pit, closed-loop system, below-grade tank or alternative request | | | | |
| Please be advised that approval of this request does not relieve the operator of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve the operator of its responsibility to comply with any other applicable governmental authority's rules, regulations or ordinances. | | | | |
| Operator: EnerVest Operating, LLC OGRID #: 143199 | | | | |
| Address:1001 Fannin St Ste 800 Houston, Texas 77002 | | | | |
| Facility or well name:Nordhaus 713 | | | | |
| API Number:30-045-27655OCD Permit Number:1346 | | | | |
| U/L or Qtr/Qtr L Section 11 Township 31N Range 09W County: San Juan | | | | |
| Center of Proposed Design: Latitude36.910261 Longitude107.755314 NAD: □1927 ☑ 1983 | | | | |
| Surface Owner: X Federal X State Tribal Trust or Indian Allotment | | | | |
| 2. | | | | |
| Pit: Subsection F or G of 19.15.17.11 NMAC | | | | |
| Temporary: Drilling Workover | | | | |
| Permanent Emergency Cavitation P&A | | | | |
| Lined Unlined Liner type: Thicknessmil LLDPE HDPE PVC Other | | | | |
| String-Reinforced String-Reinforced Company Compa | | | | |
| Liner Seams: Welded Factory Other Volume: bbl Dimensions: L X X V X D | | | | |
| 3. Closed-loop System: Subsection H of 19.15.17.11 NMAC | | | | |
| Pit: Subsection F or G of 19.15.17.11 NMAC | | | | |
| ☐ Drying Pad ☐ Above Ground Steel Tanks ☐ Haul-off Bins ☐ Other | | | | |
| Lined Unlined Liner type: Thickness mil LLDPE HDPE PVC Other | | | | |
| Liner Seams: Welded Factory Other | | | | |
| 4. | | | | |
| ⊠ Below-grade tank: Subsection I of 19.15.17.11 NMAC | | | | |
| Volume:120bbl Type of fluid:Primarily produced water w/ compressor skid precipitation & incidental lubricating oil | | | | |
| Tank Construction material:Steel Open-top w/ expanded metal cover | | | | |
| ☐ Secondary containment with leak detection ☐ Visible sidewalls, liner, 6-inch lift and automatic overflow shut-off | | | | |
| | | | | |
| □ Visible sidewalls and liner □ Visible sidewalls only ☑ Other Visible sidewalls, 6" lift & electronic monitoring Liner type: Thickness mil ☑ HDPE □ PVC □ Other | | | | |

Alternative Method:

Submittal of an exception request is required. Exceptions must be submitted to the Santa Fe Environmental Bureau office for consideration of approval.

| Fencing: Subsection D of 19.15.17.11 NMAC (Applies to permanent pits, temporary pits, and below-grade tanks) Chain link, six feet in height, two strands of barbed wire at top (Required if located within 1000 feet of a permanent residence, school, institution or church) Four foot height, four strands of barbed wire evenly spaced between one and four feet Alternate. Please specify42" Hog-wire fence with 2 strands barbed-wire on top | hospital, |
|---|-----------------------------|
| Netting: Subsection E of 19.15.17.11 NMAC (Applies to permanent pits and permanent open top tanks) Screen Netting Other Monthly inspections (If patting or screening is not physically feesible) | |
| Monthly inspections (If netting or screening is not physically feasible) | |
| Signs: Subsection C of 19.15.17.11 NMAC ☐ 12"x 24", 2" lettering, providing Operator's name, site location, and emergency telephone numbers ☐ Signed in compliance with 19.15.3.103 NMAC | |
| 9. Administrative Approvals and Exceptions: Justifications and/or demonstrations of equivalency are required. Please refer to 19.15.17 NMAC for guidance. Please check a box if one or more of the following is requested, if not leave blank: Administrative approval(s): Requests must be submitted to the appropriate division district or the Santa Fe Environmental Bureau consideration of approval. □ Exception(s): Requests must be submitted to the Santa Fe Environmental Bureau office for consideration of approval. | office for |
| Siting Criteria (regarding permitting): 19.15.17.10 NMAC Instructions: The applicant must demonstrate compliance for each siting criteria below in the application. Recommendations of acceptant material are provided below. Requests regarding changes to certain siting criteria may require administrative approval from the approoffice or may be considered an exception which must be submitted to the Santa Fe Environmental Bureau office for consideration of a Applicant must attach justification for request. Please refer to 19.15.17.10 NMAC for guidance. Siting criteria does not apply to dry above-grade tanks associated with a closed-loop system. | priate district pproval. |
| Ground water is less than 50 feet below the bottom of the temporary pit, permanent pit, or below-grade tank. - NM Office of the State Engineer - iWATERS database search; USGS; Data obtained from nearby wells | ☐ Yes ⊠ No |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other significant watercourse or lakebed, sinkhole, or playa lake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☑ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to temporary, emergency, or cavitation pits and below-grade tanks) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☑ No ☐ NA |
| Within 1000 feet from a permanent residence, school, hospital, institution, or church in existence at the time of initial application. (Applies to permanent pits) - Visual inspection (certification) of the proposed site; Aerial photo; Satellite image | ☐ Yes ☐ No ☑ NA |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that less than five households use for domestic or stock watering purposes, or within 1000 horizontal feet of any other fresh water well or spring, in existence at the time of initial application. - NM Office of the State Engineer - iWATERS database search; Visual inspection (certification) of the proposed site | ☐ Yes ☑ No |
| Within incorporated municipal boundaries or within a defined municipal fresh water well field covered under a municipal ordinance adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approval obtained from the municipality | ☐ Yes ☑ No |
| Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Visual inspection (certification) of the proposed site | ☐ Yes ☑ No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Mining and Mineral Division | ☐ Yes ⊠ No |
| Within an unstable area. - Engineering measures incorporated into the design; NM Bureau of Geology & Mineral Resources; USGS; NM Geological Society; Topographic map | ☐ Yes ⊠ No |
| Within a 100-year floodplain FEMA map | ☐ Yes ⊠ No |

| Temporary Pits, Emergency Pits, and Below-grade Tanks Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Mattached: Hydrogeologic Report (Below-grade Tanks) - based upon the requirements of Paragraph (4) of Subsection B of 19.15.17.9 NMAC Hydrogeologic Data (Temporary and Emergency Pits) - based upon the requirements of Paragraph (2) of Subsection B of 19.15.17.9 NMAC |
|--|
| |
| Previously Approved Design (attach copy of design) API Number: or Permit Number: |
| 12. Closed-loop Systems Permit Application Attachment Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are |
| attached. Geologic and Hydrogeologic Data (only for on-site closure) - based upon the requirements of Paragraph (3) of Subsection B of 19.15.17.9 Siting Criteria Compliance Demonstrations (only for on-site closure) - based upon the appropriate requirements of 19.15.17.10 NMAC Design Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Closure Plan (Please complete Boxes 14 through 18, if applicable) - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| Previously Approved Design (attach copy of design) API Number: |
| Previously Approved Operating and Maintenance Plan API Number:(Applies only to closed-loop system that use |
| above ground steel tanks or haul-off bins and propose to implement waste removal for closure) |
| Permanent Pits Permit Application Checklist: Subsection B of 19.15.17.9 NMAC Instructions: Each of the following items must be attached to the application. Please indicate, by a check mark in the box, that the documents are attached. Hydrogeologic Report - based upon the requirements of Paragraph (1) of Subsection B of 19.15.17.9 NMAC Siting Criteria Compliance Demonstrations - based upon the appropriate requirements of 19.15.17.10 NMAC Climatological Factors Assessment Certified Engineering Design Plans - based upon the appropriate requirements of 19.15.17.11 NMAC Dike Protection and Structural Integrity Design - based upon the appropriate requirements of 19.15.17.11 NMAC Leak Detection Design - based upon the appropriate requirements of 19.15.17.11 NMAC Liner Specifications and Compatibility Assessment - based upon the appropriate requirements of 19.15.17.11 NMAC Quality Control/Quality Assurance Construction and Installation Plan Operating and Maintenance Plan - based upon the appropriate requirements of 19.15.17.12 NMAC Preeboard and Overtopping Prevention Plan - based upon the appropriate requirements of 19.15.17.11 NMAC Nuisance or Hazardous Odors, including H ₂ S, Prevention Plan Emergency Response Plan Oil Field Waste Stream Characterization Monitoring and Inspection Plan Erosion Control Plan Closure Plan - based upon the appropriate requirements of Subsection C of 19.15.17.9 NMAC and 19.15.17.13 NMAC |
| Instructions: Please complete the applicable boxes, Boxes 14 through 18, in regards to the proposed closure plan. Type: Drilling Workover Emergency Cavitation P&A Permanent Pit Below-grade Tank Closed-loop System Alternative Proposed Closure Method: Waste Excavation and Removal Waste Removal (Closed-loop systems only) On-site Closure Method (Only for temporary pits and closed-loop systems) In-place Burial On-site Trench Burial |
| Alternative Closure Method (Exceptions must be submitted to the Santa Fe Environmental Bureau for consideration) |
| Waste Excavation and Removal Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of the following items must be attached to the closure plan. Please indicate, by a check mark in the box, that the documents are attached. ☐ Protocols and Procedures - based upon the appropriate requirements of 19.15.17.13 NMAC ☐ Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Subsection F of 19.15.17.13 NMAC ☐ Disposal Facility Name and Permit Number (for liquids, drilling fluids and drill cuttings) ☐ Soil Backfill and Cover Design Specifications - based upon the appropriate requirements of Subsection H of 19.15.17.13 NMAC ☐ Re-vegetation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC ☐ Site Reclamation Plan - based upon the appropriate requirements of Subsection G of 19.15.17.13 NMAC |

| Waste Removal Closure For Closed-loop Systems That Utilize Above Ground Instructions: Please indentify the facility or facilities for the disposal of liquids facilities are required. | | |
|--|---|-----------------------|
| Disposal Facility Name: | Disposal Facility Permit Number: | |
| Disposal Facility Name: | | |
| Will any of the proposed closed-loop system operations and associated activities of Yes (If yes, please provide the information below) ☐ No | | vice and operations? |
| Required for impacted areas which will not be used for future service and operate Soil Backfill and Cover Design Specifications based upon the appropriat Re-vegetation Plan - based upon the appropriate requirements of Subsectio Site Reclamation Plan - based upon the appropriate requirements of Subsection | te requirements of Subsection H of 19.15.17.13 NMA(n I of 19.15.17.13 NMAC | C |
| Siting Criteria (regarding on-site closure methods only): 19.15.17.10 NMAC Instructions: Each siting criteria requires a demonstration of compliance in the provided below. Requests regarding changes to certain siting criteria may requested an exception which must be submitted to the Santa Fe Environment demonstrations of equivalency are required. Please refer to 19.15.17.10 NMAC | ire administrative approval from the appropriate disti al Bureau office for consideration of approval. Justi | rict office or may be |
| Ground water is less than 50 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Database search; USG | ata obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is between 50 and 100 feet below the bottom of the buried waste - NM Office of the State Engineer - iWATERS database search; USGS; Da | ata obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Ground water is more than 100 feet below the bottom of the buried waste. - NM Office of the State Engineer - iWATERS database search; USGS; Database search; US | ata obtained from nearby wells | ☐ Yes ☐ No ☐ NA |
| Within 300 feet of a continuously flowing watercourse, or 200 feet of any other stake (measured from the ordinary high-water mark). - Topographic map; Visual inspection (certification) of the proposed site | ignificant watercourse or lakebed, sinkhole, or playa | ☐ Yes ☐ No |
| Within 300 feet from a permanent residence, school, hospital, institution, or churchy Visual inspection (certification) of the proposed site; Aerial photo; Satellia | | ☐ Yes ☐ No |
| Within 500 horizontal feet of a private, domestic fresh water well or spring that le watering purposes, or within 1000 horizontal feet of any other fresh water well or - NM Office of the State Engineer - iWATERS database; Visual inspection | spring, in existence at the time of initial application. | ☐ Yes ☐ No |
| Within incorporated municipal boundaries or within a defined municipal fresh was adopted pursuant to NMSA 1978, Section 3-27-3, as amended. - Written confirmation or verification from the municipality; Written approx | • | ☐ Yes ☐ No |
| Within 500 feet of a wetland. - US Fish and Wildlife Wetland Identification map; Topographic map; Vis | ual inspection (certification) of the proposed site | ☐ Yes ☐ No |
| Within the area overlying a subsurface mine. - Written confirmation or verification or map from the NM EMNRD-Minim | ng and Mineral Division | ☐ Yes ☐ No |
| Within an unstable area. Engineering measures incorporated into the design; NM Bureau of Geolo Society; Topographic map | gy & Mineral Resources; USGS; NM Geological | ☐ Yes ☐ No |
| Within a 100-year floodplain FEMA map | | ☐ Yes ☐ No |
| On-Site Closure Plan Checklist: (19.15.17.13 NMAC) Instructions: Each of a by a check mark in the box, that the documents are attached. Siting Criteria Compliance Demonstrations - based upon the appropriate requirements Construction/Design Plan of Burial Trench (if applicable) based upon the Construction/Design Plan of Temporary Pit (for in-place burial of a drying Protocols and Procedures - based upon the appropriate requirements of 19. Confirmation Sampling Plan (if applicable) - based upon the appropriate requirements of Disposal Facility Name and Permit Number (for liquids, drilling fluids and Soil Cover Design - based upon the appropriate requirements of Subsection Re-vegetation Plan - based upon the appropriate requirements of Subsection Site Reclamation Plan - based upon the appropriate requirements of Subsection | equirements of 19.15.17.10 NMAC of Subsection F of 19.15.17.13 NMAC appropriate requirements of 19.15.17.11 NMAC pad) - based upon the appropriate requirements of 19.15.17.13 NMAC equirements of Subsection F of 19.15.17.13 NMAC of Subsection F of 19.15.17.13 NMAC drill cuttings or in case on-site closure standards cannot H of 19.15.17.13 NMAC on I of 19.15.17.13 NMAC | 15.17.11 NMAC |

| Operator Application Certification: | |
|---|--|
| I hereby certify that the information submitted with this application is true, acc | |
| Name (Print): Ronnie L. Young | Title:Compliance Supervisor |
| Signature: Tome L. Loung | Date: 12.07.09 |
| e-mail address:ryoung@enervest.net | Telephone:713-495-6530 |
| OCD Approval: Permit Application (including closure plan) Closure | e Plan (only) OCD Conditions (see attachment) |
| | Approval Date: /- //-/ \ |
| Title: Ensiro/spec | OCD Permit Number: |
| Closure Report (required within 60 days of closure completion): Subsection Instructions: Operators are required to obtain an approved closure plan prior The closure report is required to be submitted to the division within 60 days a section of the form until an approved closure plan has been obtained and the | or to implementing any closure activities and submitting the closure report. of the completion of the closure activities. Please do not complete this |
| | Closure Completion Date: |
| 22. Closure Method: Waste Excavation and Removal On-Site Closure Method Alte If different from approved plan, please explain. | ernative Closure Method Waste Removal (Closed-loop systems only) |
| Closure Report Regarding Waste Removal Closure For Closed-loop System Instructions: Please indentify the facility or facilities for where the liquids, at two facilities were utilized. | |
| Disposal Facility Name: | Disposal Facility Permit Number: |
| Disposal Facility Name: | |
| Were the closed-loop system operations and associated activities performed on ☐ Yes (If yes, please demonstrate compliance to the items below) ☐ No | |
| Required for impacted areas which will not be used for future service and oper Site Reclamation (Photo Documentation) | rations: |
| Soil Backfilling and Cover Installation Re-vegetation Application Rates and Seeding Technique | |
| 24. Closure Report Attachment Checklist: Instructions: Each of the following | g items must be attached to the closure report. Please indicate, by a check |
| mark in the box, that the documents are attached. Proof of Closure Notice (surface owner and division) | |
| Proof of Deed Notice (required for on-site closure) | |
| ☐ Plot Plan (for on-site closures and temporary pits) ☐ Confirmation Sampling Analytical Results (if applicable) | |
| ☐ Waste Material Sampling Analytical Results (required for on-site closure ☐ Disposal Facility Name and Permit Number | re) |
| ☐ Soil Backfilling and Cover Installation | |
| Re-vegetation Application Rates and Seeding Technique Site Reclamation (Photo Documentation) | |
| On-site Closure Location: Latitude Lon | ngitude NAD: |
| 25. Operator Closure Certification: | |
| I hereby certify that the information and attachments submitted with this closure belief. I also certify that the closure complies with all applicable closure requires. | re report is true, accurate and complete to the best of my knowledge and rements and conditions specified in the approved closure plan. |
| Name (Print): | |
| Signature: | Date: |
| e-mail address: | Telephone: |

EnerVest Operating, LLC (EV)

BELOW-GRADE TANK DESIGN AND CONSTRUCTION SPECIFICATIONS

Rule 19.15.17.11

- C. Enervest Operating is the official operator of record for all wells which have below-grade tanks to be addressed in this specification. All below-grade tanks are located on these leases and will be in full compliance with 19.15.16.8 regarding signage.
- D. EV will ensure a fence shall be constructed and maintained in good repair with gates that are closed and locked when responsible personnel are not on site. EV shall insure that all gates are closed and locked when responsible personnel are not on-site.

If the below-grade tank is located within 1,000 feet of a permanent residence, school, hospital, institution or church, the fence shall be a chain link security fence at least 6 feet in height with at least two strands of barbed wire on top.

If the below-grade tank is not within 1,000 feet of the above mentioned structures, the fence shall constructed to exclude livestock with at least four strands of barbed wire evenly spaced between one foot from the ground and four foot above the ground.

EV is requesting administrative approval to use a 42" Hog wire fence with 2 strands barbed-wire on top in lieu of the required four strand barbed wire fence. This will be supported with iron posting at the corners and 10 - 12 feet apart. EV believes this will offer better protection for wildlife in these tank areas.

- E. EV shall ensure an open top tank is screened with expanded 3/16" metal screen or a fully closed top, both of which are welded on the top of the tank. Such screening will be painted to blend with the below-grade tank. EV believes this is sufficient strength to protect migratory birds or other wildlife.
- I. EV will ensure all below-grade tanks will be constructed of 3/16" steel, resistant to the tank's contents and to damage from sunlight. Based on water production and road condition for access during the winter months there are a choice of three different sizes which could be used:

CAPACITY DIAMETER HEIGHT 125 bbl 15' 4' 120 bbl 12' 6' 100 bbl 12' 5'

This tank will contain liquids and should prevent contamination of fresh water to protect the public health and environment.

The below-grade system will include a excavated area for the tanks which will be dependent upon the size of the tank used:

18' x 18' x 4' High Square excavated area 18' Diameter x 4' High Circular excavated area 18' Diameter x 5' High Circular excavated area

Most of our below-grade tank systems were installed prior to June 16, 2008 and are 16.5' x 16.5' x 4' square excavated area design. As tanks are retro fitted, this will be changed to one of the above. The particular area and well conditions will determine which design best for that particular well. EV will ensure that there will be room to walk around the tank inside the containment area which will better enable our field personnel to inspect for damage to liners or incidental leaks. Please refer to tank diagram under Appendix 8 for details.

All excavated areas will be reinforced with metal walls to prevent collapse. There will be sufficient open area on all sides of the tank to witness any incidental release that may occur. Please refer to tank diagram under Appendix 8.

EV will ensure the base of any excavated area containing a below-grade tank will be level and free of rocks, debris, sharp edges or irregularities to prevent punctures, cracks or indentations of the liner or tank bottom.

EV will ensure that any geomembrane liner used shall consist of 30-mil flexible PVC or 60-mil HDPE liner or equivalent liner material. The liner shall be composed of an impervious, synthetic material that is resistant to petroleum hydrocarbons, salt and acidic and alkaline solutions and shall be resistant to ultraviolet light. The liner shall have a hydraulic conductivity no greater than 1 x 10 -9 cm/sec. The liner shall be compatible with EPA SW-846 method 9090A. EV will install the liner in such a manner as to divert any possible leak for visual inspection. EV will demonstrate to the OCD that the liner complies with the specifications within Subparagraph (a) of Paragraph (4) of Section I of 19.156.17.11 NMAC and obtain approval from the division prior to the installation of the new design.

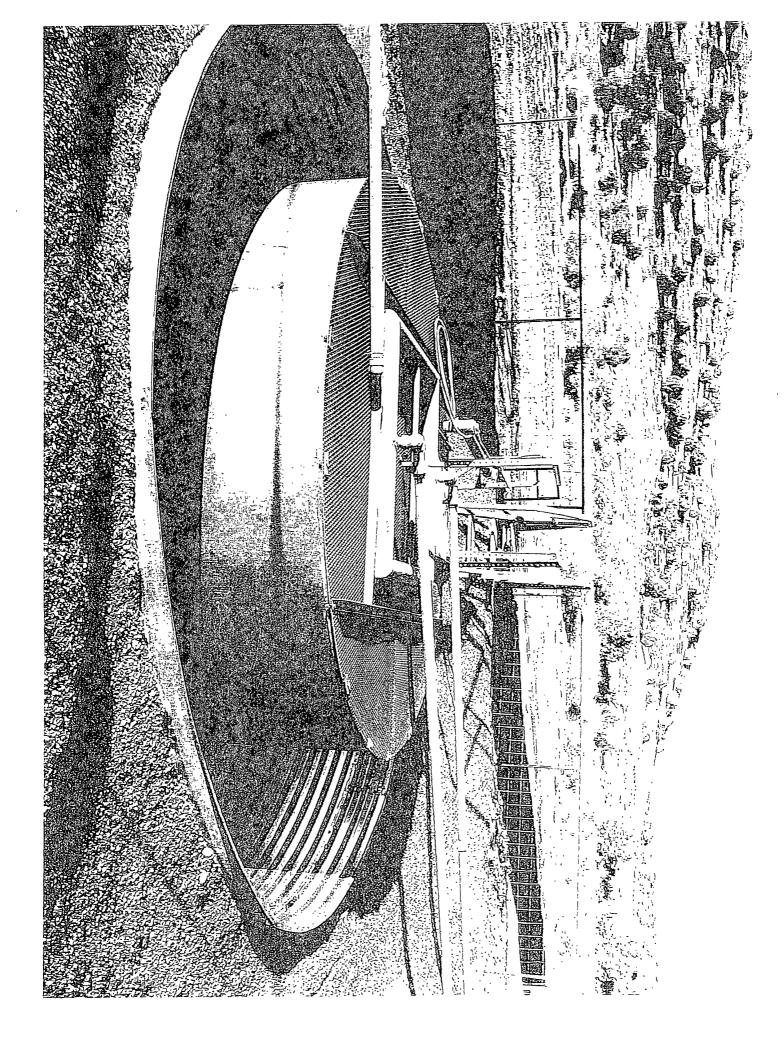
EV will ensure the fluid levels of tanks will be monitored by automatic high level alarms at 24" from the top and shut-off devise at 10 1/2 inches from the top of the tank. The tanks will be also equipped with a manual shut-off valve in the event it is needed. Please see design specification sheet of this system in this section. The majority of our below-grade tanks are within the berm around our tank battery and as so are protected from run-on water. Those outside this berm will be protected with an earthen berm which will extend at least 6" above surface ground level to divert run-on around the tank. The side walls of the excavated

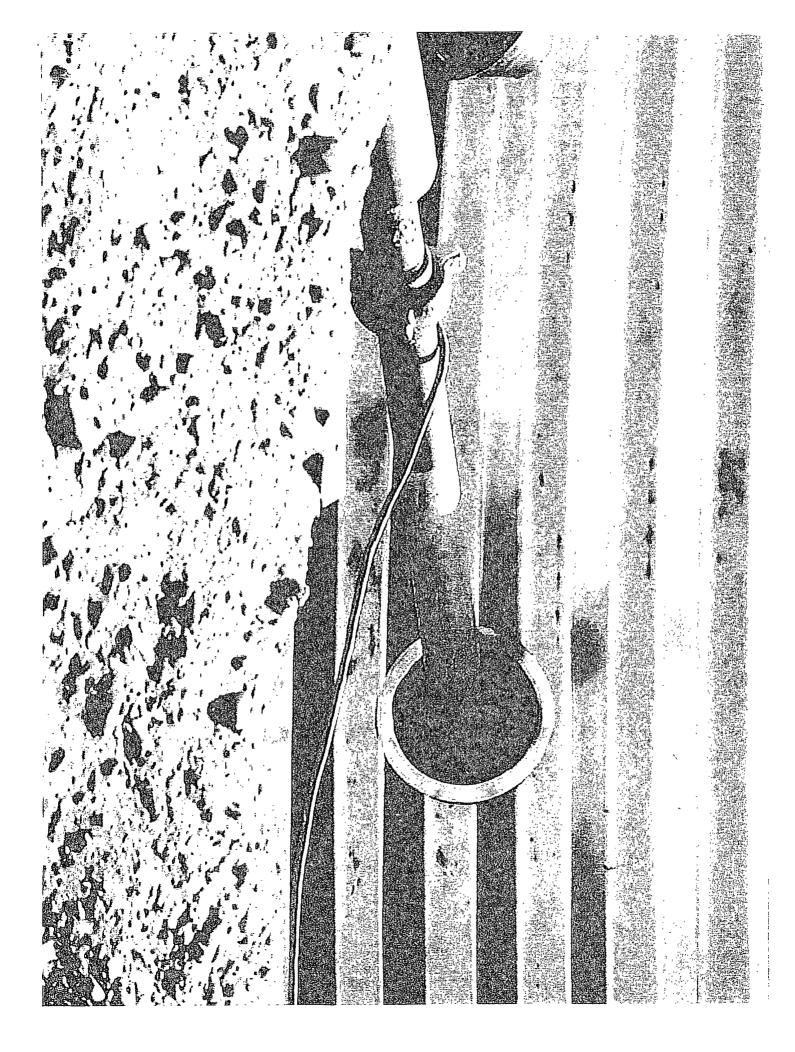
area will extend at least 6" above the ground level to divert run-on water around the tank. Any possible leak will be diverted, on the liner, in such a way can be visually inspected.

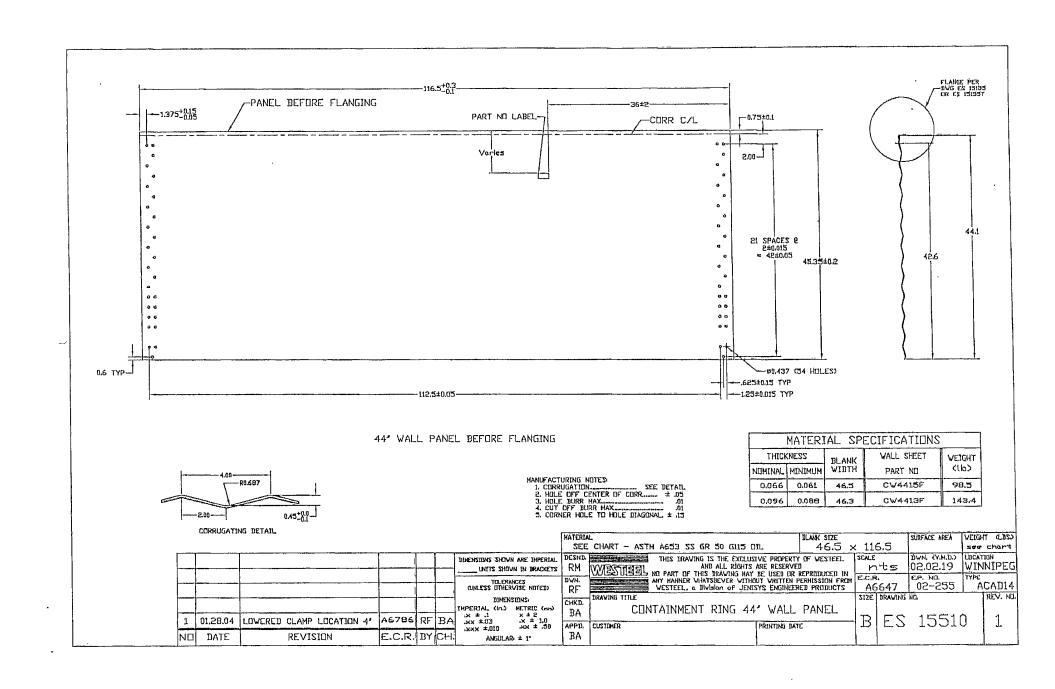
EV tank design will be a single walled tank constructed to ensure that the side walls are open for visual inspection for leaks; the bottom will be elevated six inches above the ground surface and will contain a geomembrane liner, as described above, directly on the ground level of the containment area.

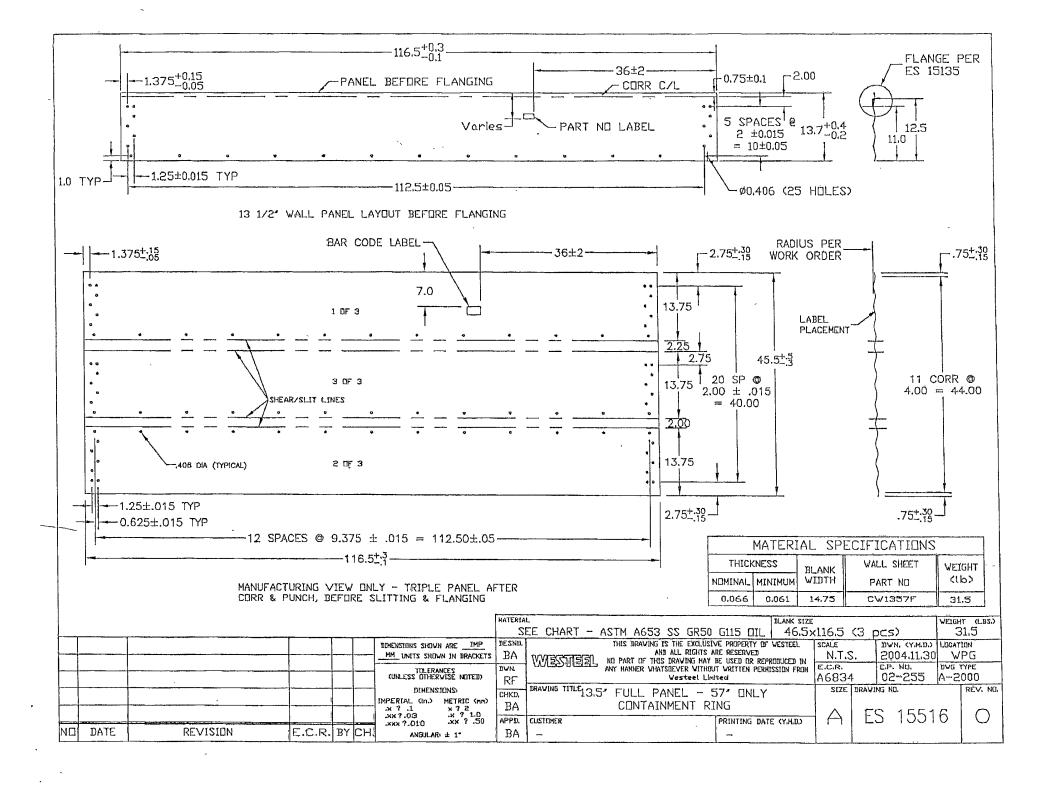
Once a below-grade tank which was installed prior to June 16, 2008 does not demonstrate integrity, EV shall promptly repair or remove that below-grade tank and close the tank or install a below-grade tank that is in full compliance with Paragraph 1 thru 4 of Section I of 19.15.17.11 NMAC. EV shall comply with the operational requirements of 19.15.17.12 NMAC. Please refer to tank diagram under Appendix 8 for details

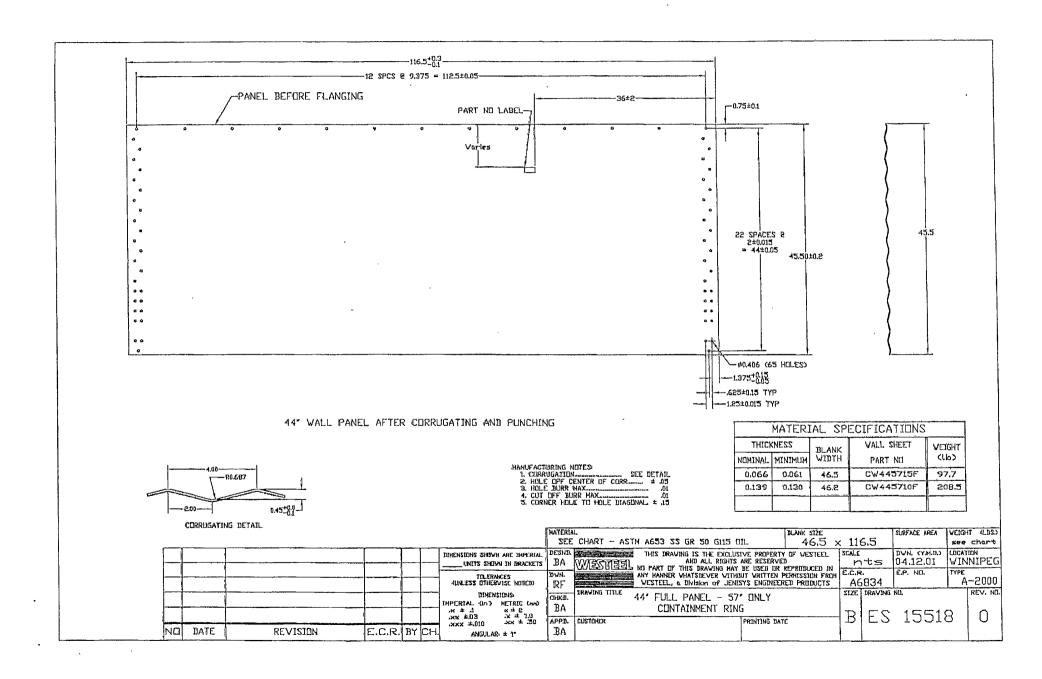
Any single walled below-grade tank installed before June 16, 2008 where any portion of the tank sidewall is below the ground surface and not totally visible shall be closed, retrofited or replaced before June 15, 2013. EV will fully comply with Paragraph 1 thru 4 of Section I of 19.15.17.11 NMAC for all retrofitting or replacement of below-grade tanks.

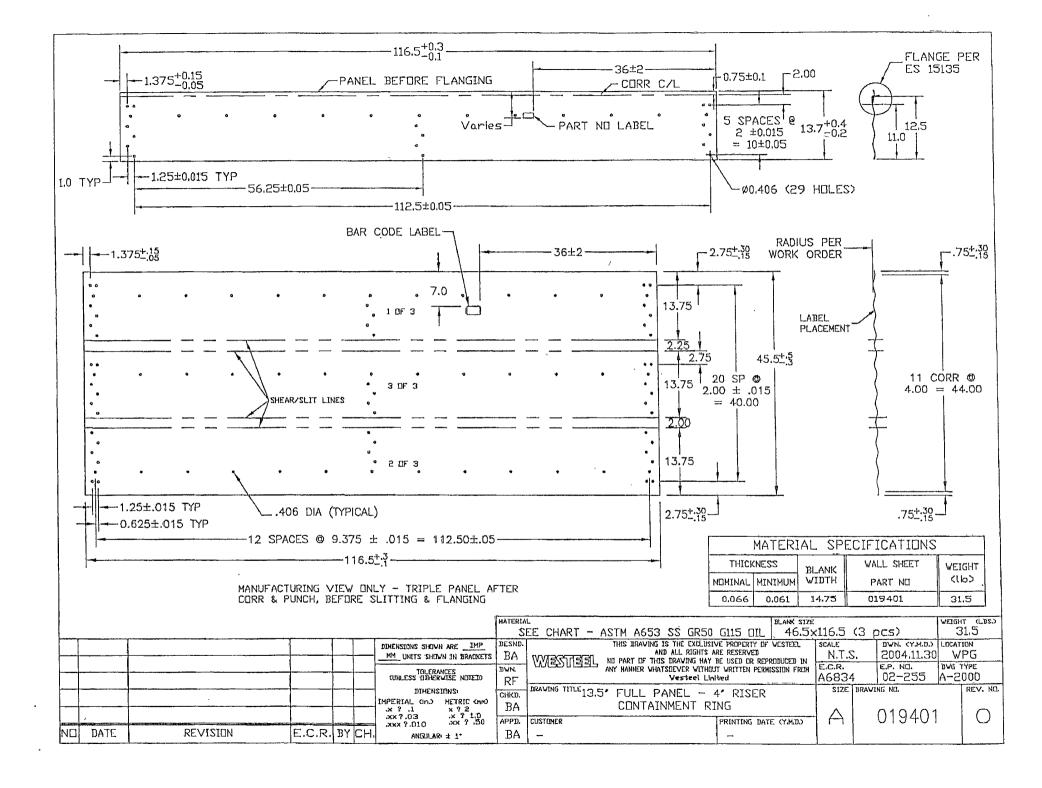


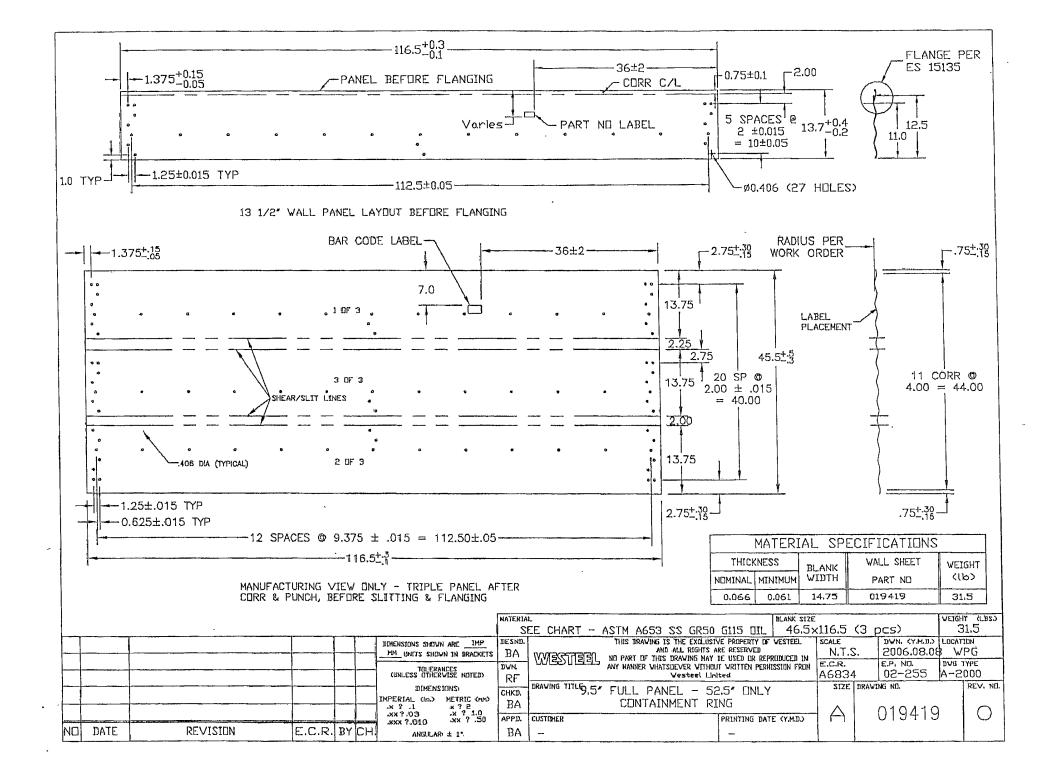


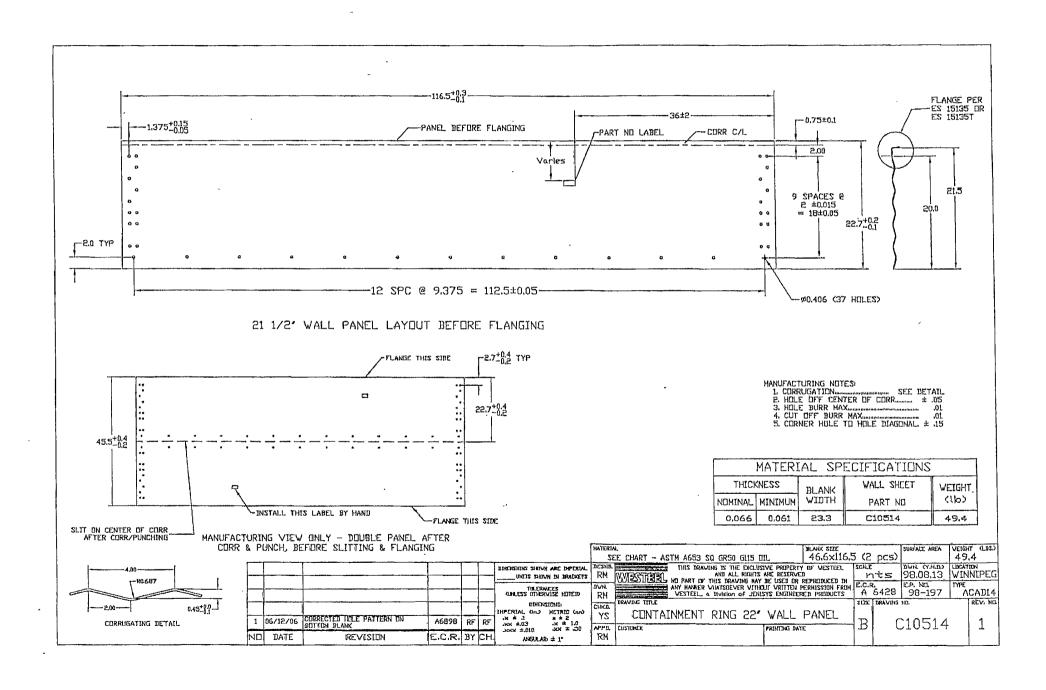


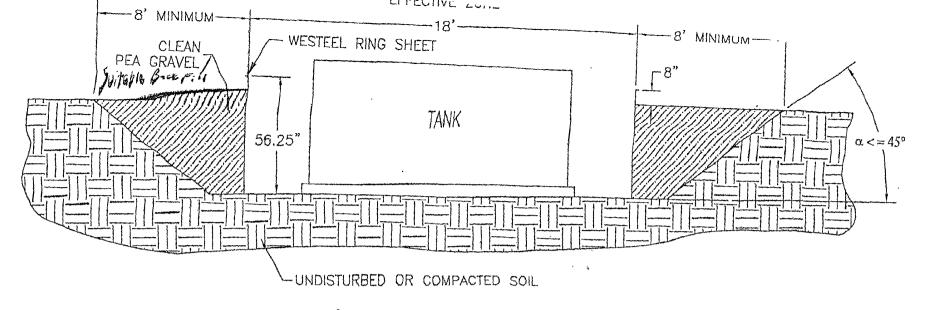








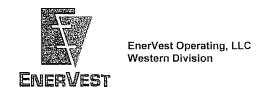




INSTALLATION INSTRUCTIONS & SITE REQUIREMENTS

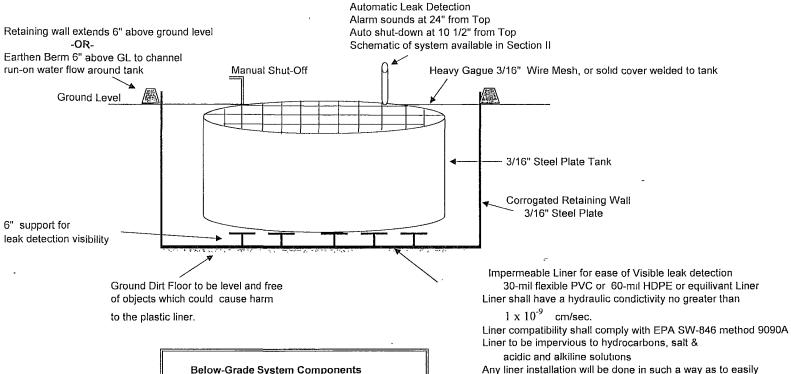
- 1. EXCAVATE AS PER ABOVE
- 2. FOR BEST RESULTS, BACKFILL WITH CLEAN PEA GRAVEL (OR EQUIVALENT FREE FLOWING MATERIAL) EVENLY AROUND THE STRUCTURE, TAKING CARE NOT TO FILL IN ANY ONE AREA VERY HIGH RELATIVE TO OTHER AREAS, SO AS TO MAINTAIN THE STRUCTURE AS ROUND. WORKING AROUND THE STRUCTURE IN APPROXIMATELY 6" LIFTS IS RECOMMENDED. (NOTE: ALTERNATIVE MATERIALS CAN BE USED BUT CARE MUST BE TAKEN TO INSURE THAT THE EXTERNAL PRESSURES ACTING ON THE STRUCTURE REMAIN UNIFORM. IF NATIVE SOIL IS USED AS A BACKFILL MATERIAL, IT SHOULD BE UNIFORM IN CONSISTENCY, AND BE FREE OF LARGE ROCKS OR UNBROKEN CLUMPS, WHICH COULD RESULT IN UNEVEN LOADING).
- 3. THE COMPLETED STRUCTURE SHOULD EXTEND APPROXIMATELY 8" ABOVE GRADE
- 4. TO INSURE STRUCTURAL INTEGRITY, UNEVEN EXTERNAL WALL PRESSURE IS TO BE AVOIDED. NO VEHICLES OR OTHER SOURCES OF POINT LOADING SHOULD BE PERMITTED WITHIN THE EFFECTIVE ZONE (AS ILLUSTRATED).
- 5. WESTEEL IS NOT LIABLE FOR ANY DAMAGES OR INJURIES RESULTING FROM ANY FAILURE DUE TO IMPROPER INSTALLATION, IMPROPER SITE CONDITIONS, OR INADEQUATE MAINTENANCE OF THE SITE.

NOTE: THIS SYSTEM IS NOT DESIGNED FOR THE SECONDARY CONTAINMENT OF LIQUIDS, RATHER, TO ALLOW FOR INSPECTION OF THE TANK.



Below-Grade Tank System

Gravity Fed - Produced Water



| | Below | -Grade System C | Components | | | | |
|---|---------------------|-----------------|-----------------------|--|--|--|--|
| | Tank | Size | Excavation Areas | | | | |
| l | Capacity 125 Bbl | Dia x Height | | | | | |
| l | 125 Bbl | 15' x 4' | 18' x 18' x 4' Square | | | | |
| l | 120 Bbl | 12' x 6' | 18' x 4' Circular | | | | |
| l | 100 Bbl | 12' x 5' | 18' x 5' Circular | | | | |
| ı | | | | | | | |

Tank size dependent upon water production & road conditions Excavation Area size dependent upon tank size

30-mil flexible PVC or 60-mil HDPE or equilivant Liner

detect any possible leak.

EnerVest Operating, LLC (EV)

BELOW-GRADE TANK OPERATIONAL REQUIREMENTS

Rule 19.15.17.12

A. EV will operate and maintain Below-Grade Tanks to insure the integrity of the below-grade tank, liner, liner system or berms to prevent contamination of fresh water and protect public health and the environment.

EV will not discharge or store any hazardous waste material of any kind in any Below-Grade Tank.

Any penetration of the below-grade below the liquid's surface that may occur, EV shall remove all liquid above the damage or leak line within 48 hours of the discovery. EV shall notify the appropriate district office within 48 hours of the discovery and repair the damage or replace the liner or below-grade tank.

EV will insure the metal retaining walls of the below-grade system around each tank will extend at least 6" above ground level or be equipped with a 6" earthen berm in an effort to divert run-on water around the below-grade system.

D. EV will insure that a below-grade tank constructed and installed prior to June 16, 2008 that does not meet the requirements of 19.15.17.11 NMAC and does not demonstrate integrity or that the below-grade tank develops any conditions as identified in 19.15.17.12 NMAC shall close the existing below-grade tank pursuant to the closure requirements of 19.15.17.13 NMAC and install a below-grade tank that is in full compliance with our approved design. Please see below-grade system diagram in Appendix 8 for details.

EV will insure all Below-grade tanks will be equipped with automatic high-level alarm which sounds at 24" and than shut off devise to insure that flow will shut off at the freeboard height of 10 1/2 inches.

The majority of our below-grade tanks are within the berm around our tank battery and as so are protected from run-on water. Those outside this berm will be protected with an earthen berm which will extend at least 6" above surface ground level to divert run-on around the tank.

EV will remove any visible or measurable layer of oil from the fluid surface of a below-grade tank.

With any below-grade tank, installed before June 16, 2008, that is retrofitted or replaced with another tank, EV will insure that the soil beneath the removed soil is inspected for wet, discolored, or any other evidence of release, with photographic evidence. EV will report the results of all testing to the division on form C-141 and demonstrate to the division whether the evidence of contamination indicates at an imminent threat to fresh water, public health, safety of the environmental exists. If the division determines that the contamination does not pose an imminent threat to fresh water, public health, safety or the environment, EV shall complete the retrofit or the replacement of the below-grade tank as per our approved design program as indicated in Appendix 8. If EV or the division determines that the contamination poses an imminent threat to fresh water, public health, safety or the environment, then EV shall close the existing below-grade tank pursuant to the closure requirements of 19.17.15.13 NMAC prior to initiating the retrofit or replacement.

EnerVest Operating, LLC (EV)

BELOW-GRADE TANK CLOSURE REQUIREMENTS

Rule 19.15.17.13

Before June 15, 2013, EV shall close, retrofit, or replace an existing below-grade tank that has not demonstrated integrity.

EV shall close a below-grade tank within the time periods provided in 19.15.17.13 NMAC, or by an earlier date that the division requires because of imminent danger to fresh water, public health or the environment.

A. EV shall close an existing below-grade tank that does not meet the requirements of Subsection I, paragraphs (1) through (4), of 19.15.17.11 NMAC if not retrofitted to comply with said requirements prior to any sale or change of operator to 19.15.9.9 NMAC.

Any below-grade tank installed prior to June 16, 2008 that is single walled and where any portion of the tank sidewall is below the ground surface and not visible shall equip or retrofit the below-grade tank to comply with paragraphs (1) through (4) of Subsection I of 19.15.17.11 NMAC, or close it, within 5 years after June 16, 2008.

Within 60 days of cessation of the permitted below-grade tanks operation or as required by Subsection B of 19.15.17.17 NMAC, EV shall close the below-grade tank in accordance with a closure plan that the appropriate division district office approves.

J. Prior to implementing any closure operations EV shall research county tax records to determine the name and address of the surface owner of the properties involved. EV shall notify this surface owner via Certified U.S. Mail, return receipt requested, of their intent to close said below-grade tank.

Upon determination, EV will notify the appropriate district office prior to any closure operations beginning. Such notification shall be at least 72 hours, via U.S. Mail, prior to beginning work but not more than one week prior to beginning work. Such notice shall contain at a minimum the following:

Operators Name Unit letter, Section, Township, & Range of well Well name and well number API Number of well E. .All free standing liquids and sludge will be removed at the start of the below-grade tank closure process from the below-grade tank and disposed of in one of the below division-approved facility as indicated below:

TNT Land Farm Permit # NM-01-0008 Liquids & Sludge Environtech Land Farm Permit # NM-01-0011 Solids AguaMoss Permit # 247130 Liquids

EV will obtain prior approval from the division to dispose, recycle, reuse, or reclaim the below-grade tanks and provide documentation of the final disposition of the below-grade tank in the closure report.

Existing liners that are removed as a result of closure will be wiped cleaned and disposed of at a solid waste facility listed below in compliance with Subparagraph (M) of Paragraph (I) of Subsection C 19.15.35.8 NMAC..

San Juan Regional Landfill Permit # SWM 052426 or "Special Waster Permit # SWM052433 "sp"

If there is any on-site equipment associated with a below0grade tank, EV shall remove the equipment, unless the equipment is required for some other purpose.

Upon removal of the below-grade tank, EV will take, at a minimum, a five point composite sample from where the tank was sitting. EV shall collect individual grab samples will be taken from any area that is wet, discolored or showing other evidence of a release. All samples will be analyzed for the following:

| Components | Test Method | Limits (mg/Kg) | | |
|------------|---------------------------|----------------------|--|--|
| Benzene | EPA SW-846 8021B or 8260B | 0.2 | | |
| BTEX | EPA SW-846 8021B or 8260B | 50 | | |
| TPH | EPA SW-846 418.1 | 100 | | |
| Chlorides | EPA 300.1 | 250 or background, | | |
| | | whichever is greater | | |

EV will insure that the results of all sampling shall be reported to the division on approved form C-141. EV understands that the division may require additional delineation upon review of the results.

If sampling demonstrates that concentrations specified above have NOT been exceeded, or that a release has NOT occurred, EV will backfill the excavation with compacted, non-waste containing, earthen material, construct a division prescribed soil cover, and recontour and re-vegetate the site. The division prescribed soil cover, recontouring, and re-vegetation shall comply with 19.15.17.13.

If EV or the division determines that a release has occurred, EV shall fully comply with 19.15.29 NMAC and 19.15.30 NMAC as appropriate.

G. Once EV has closed a below-grade tank, we shall reclaim the site to a safe and stable condition that blends with the surrounding undisturbed area. When possible, EV will restore the impacted surface area to the condition that existed prior to oil and gas operations by the placement of soil cover.

If the closed area is within the confines of the pad location EV will blend the site to match the pad location as much as possible. Such activities shall prevent erosion, protect fresh water, human health and the environment. EV will obtain written agreement from the surface owner for any alternate re-vegetation proposals and submit to the division for final approval.

- H. The soil cover design will be consistent with the requirements of 19.15.17.13(H)(1) and (3). The soil cover will consist of the background thickness of topsoil or one foot of suitable material to establish vegetation at the site, whichever is greater. The soil cover will be constructed to the site's existing grade and prevent ponding of water and erosion of the cover material.
- I. EV will seed the disturbed areas the first growing season after closing the below grade tank. Seeding will be accomplished via drilling on the contour whenever practical or by other division-approved methods. BLM or Forest Service stipulated seed mixes will used on federal lands. Vegetative cover will equal 70% of the native perennial vegetative cover (un-impacted) consisting of at least three native plant species, including at least one grass, but not including noxious weeds, and maintain that cover through two successive growing seasons. Repeat seeding or planting will be continued until successful vegetative growth occurs. During the two growing seasons that prove viability, there shall be no artificial irrigation of the vegetation.

EV shall notify the division when it has seeded or planted and when it successfully achieves re-vegetation by U.S. Mail.

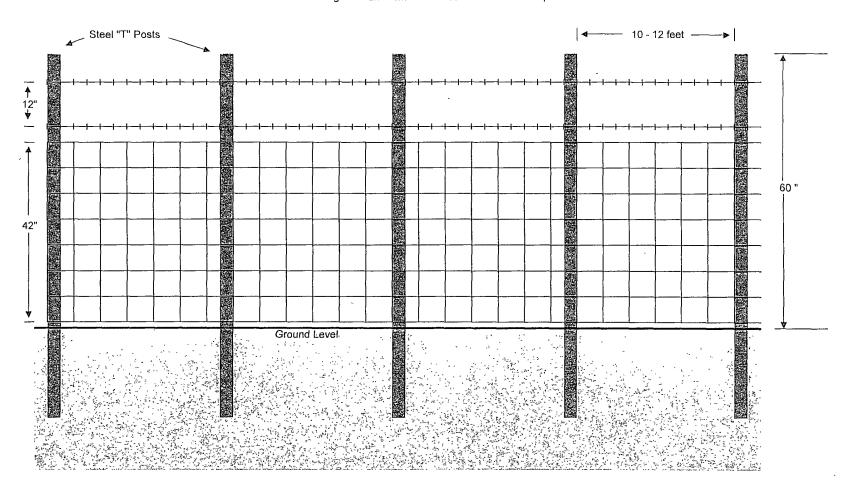
K. Within 60 days of completion of closure operations, EV will file Form C-144, with attachments, outlining the detailed operations of the closing operations. Such attachments shall include, but not limited to, proof of surface owner and division notifications, confirmation of sampling analysis, disposal facility names and permit numbers, soil backfilling and cover installation, re-vegetation application rates and seeding techniques, and photo documentations.

ENERVEST OPERATING, LLC

Proposed Alternative Fencing

Below-Grade Tank Construction

42" Hogwire Fence with 2 strands barbed-wire on top



| Table DE ROSENDAM | notes Composition and the | | _ | | | | |
|---|--|---------------|-------------------------------------|----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| TESTED PROPERTY | (1) 19 19 19 19 19 19 19 19 19 19 19 19 19 | FREQUENCY | 30 mil | MINIMUM 40 mil | AVERAGE 60 mil | 在 是整排列。"生"一点, | 100 mil |
| Thickness, (minimum average) mil (mm) Lowest individual reading (-10%) | ASTM D 5199 | every roll | 30 (0.75) 27 (0. 6 9) | 40 (1.00) 36 (0.91) | 60 (1.50) 54 (1.40) | 80 (2.00) 72 (1.80) | 100 (2.50) 90 (2.30) |
| Density, g/cm ³ | ASTM D 1505 | 200,000 lb | 0.94 | 0.94 | 0.94 | 0.94 | 0.94 |
| Tensile Properties (each direction) Strength at Break, lb/in-width (N/mm) Strength at Yield, lb/in-width (N/mm) Elongation at Break, % Elongation at Yield, % | ASTM D 6693, Type IV Dumbell, 2 ipm G.L. 2.0 in (51 mm) G.L. 1.3 in (33 mm) | 20,000 ib | 120 (21) 66 (11) 700 13 | 152 (26) 84 (14) 700 13 | 243 (42) 132 (23) 700 13 | 327 (57) 177 (30) 700 13 | 410 (71) 212 (37) 700 13 |
| Tear Resistance, lb (N) | ASTM D 1004 | 45,000 lb | 21 (93) | 28 (124) | 42 (186) | 58 (257) | 73 (324) |
| Puncture Resistance, lb (N) | ASTM D 4833 | 45,000 lb | 65 (289) | 85 (378) | 125 (556) | 160 (711) | 195 (867) |
| Carbon Black Content, % (Range) | ASTM D 1 603*/421 8 | 20,000 lb | 2.0 - 3.D | 2.0 - 3.0 | 2.0 - 3.0 | 2.0 - 3.0 | 2.0 - 3.0 |
| Carbon Black Dispersion | ASTM D 5596 | 45,000 lb | Note ⁽¹⁾ | Note ⁽¹⁾ | Note ⁽¹⁾ | Note ⁽¹⁾ | Note ⁽¹⁾ |
| Notched Constant Tensile Load, hr | ASTM D 5397, Appendix | 200,000 lb | 1000 | 1000 | 1000 | 1000 | 1000 |
| Oxidative Induction Time, min | ASTM D 3895, 200°C; O ₂ , 1 atm | 200,000 lb | >140 | >140 | >140 | >140 | >140 |
| | TYP | ICAL ROLL DIN | ENSIONS | 1 | | ž | |
| Roll Length ⁽²⁾ , ft (m) | | | 1,120 (341) | 870 (265) | 560 (171) | 430 (131) | 340 (104) |
| Roll Width ⁽²⁾ , ft (m) | | | 22.5 (6.9) | 22.5 (6.9) | | ,22.5 (6.9) | 22.5 (6.9) |
| Roll Area, ft ² (m ²) | ۲ | | 25,200 (2,341) | 19,575 (1,819) | 12,600 (1,171) | - 9,675 - (899) | 7,650 (711) |

- NOTES:

 "Dispersion only applies to near spherical agglomerates 9 of 10 views shall be Category 1 or 2. No more than 1 view from Category 1
- (2)Roll lengths and widths have a tolerance of ± 1%,
- SSE HD is available in rolls weighing approximately 3,900 lb (1,769 kg).

 All GSE geomembranes have dimensional stability of ±2% when tested according to ASTM D 1204 and LTB of <-77° C when tested according to ASTM D 746.
- "Modified.

O.R.E. SYSTEMS P.O. Box 3677 Farmington, NM 87499 (505) 327-2161

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