

**TR 34-16-597 Pad  
Waste Management Plan &  
Harpoon Tank Sundry**

**INTRODUCTION**

TEP Rocky Mountain LLC (“TEP”) respectfully requests approval of a revised Waste Management Plan for the TR 34-16-597 Pad (ECMC Loc ID: 335924), including the proposed use of Modular Large Volume Tanks (MLVTs) to store recycled produced water in support of well completion operations associated with the thirty-five (35) proposed wells located on the following Oil and Gas Locations:

1. TR 32-28-597 Pad (ECMC Loc ID: 324040): seventeen (17) Proposed Wells.
2. TR 43-32-597 Pad (ECMC Loc ID: 324411): eighteen (18) Proposed Wells.

The TR 34-16-597 Pad was approved for use as a remote well completions location for the proposed wells on the TR 32-28-597 Pad and TR 43-32-597 Pad on March 19, 2024 (Form 4 Doc #403640277). The sundry included a design package for MLVTs manufactured by Think Tank Products Inc called Minion Tanks. These tanks are not currently available. Therefore, TEP is submitting a revised Waste Management Plan via sundry (Form 4) to document the new MLVTs that will be utilized on the TR 34-16-597 during remote frac operations, as required by the ECMC Policy on the use of Modular Large Volume Tanks in Colorado dated June 13, 2014.

The TR 34-16-597 pad is an existing Oil and Gas Location located on private surface (Chevron USA Inc) in the SE¼ of Section 16, Township 5 South, Ranch 97 West, 6<sup>th</sup> P.M. The existing Oil and Gas Location would not require any additional site construction prior to installing and operating the proposed tanks. Minor pad grading and gravel application to the existing Working Pad Surface would be required prior to installation of the proposed Harpoon Tanks. All proposed activities would be conducted within the existing limit of disturbance and no new disturbance would be required.

TEP is proposing to install four (4) 15,000bbl Harpoon Tanks, designed and manufactured by Hydrera Energy Services, within a lined secondary containment structure to provide adequate storage of recycled water during remote well completion operations. Each Harpoon Tank consists of a rigid steel frame structure with double locking telehandler connection points and a thermoplastic polyurethane liner system with a floating cover.

The Harpoon Tanks will be installed along the northeast edge of the Working Pad Surface within a secondary containment structure consisting of a four foot (4') high Muscle Wall and a forty-three mil (43mil) linear low density polyethylene liner. The secondary containment has been sized to hold one hundred and fifty percent (150%) of the volume of the largest Harpoon Tank (15,000bbls). The proposed use of Harpoon Tanks will replace the use of the previously approved ten-thousand-barrel (10,000bbl) Minion Tank to manage recycled water storage for hydraulic completions operations.

Utilizing MLVTs as a replacement for the traditional open top frac tanks reduces the impact of oil and gas operations and providing several net benefits to the Oil and Gas Development Plans:

- Minimizes footprint and provides more access to recycled water storage for use in completions operations.
- Reduces pump and standby time during completions operations thus reducing engine hours on hydraulic fracturing equipment and reducing Pre-Production Emissions estimates included in the Form 2Bs associated with the Oil and Gas Locations.

- 97% reduction of potential leak points. Eliminates the need to manifold individual frac tanks (up to 120) together with piping.
- External steel wall with internal liner provides extra containment in addition to the required secondary containment.
- Reduced personnel exposure. External level gauges eliminate the need for field personnel to strap traditional frac tanks, decreasing the risk of a safety incident.
- Reduced trucking and hauling. A single Harpoon Tank requires four (4) trucks to haul to location, which totals sixteen (16) total trucks, versus one hundred and twenty (120) trucks to haul typical five-hundred-barrel (500bbl) frac tanks to equal the same storage volume of sixty thousand barrels (60,000bbls).

Installation of the proposed secondary containment and Harpoon Tanks will occur prior to well completion operations associated with the proposed wells on the TR 32-28-597 Pad and TR 43-32-597 Pad, which is currently scheduled to begin in August 2025. Table 1 below provides TEP's current estimate on planned drilling and well completion activities for these locations. The Harpoon Tanks and secondary containment system may be demobilized and reinstalled as necessary based on TEP's completion schedule.

**Table 1. Estimated Development Schedule<sup>1</sup>**

Pad Name	Drilling Activities	Completion Activities
TR 32-28-597	February 2025 – July 2025	August 2025 – November 2025
TR 43-32-597	August 2026 – December 2026	December 2026 – March 2027

<sup>1</sup>Estimated schedule as of January 3, 2025. The estimated schedule is subject to change based on company constraints and market conditions.

## **EVALUATION OF ECMC POLICY ON THE USE OF MLVTs**

### **Appropriate Use of MLVT Technology**

The Policy states that MLVTs are only to be used for storage of freshwater in support of Oil and Gas Operations and that “this policy does not allow for E&P waste to be stored in MLVTs at this time.” However, the Policy provide for further consideration regarding the use of MLVTs for E&P waste on a “case by case basis” though the submittal and subsequent approval of a “waste management plan under Rule 907.a.(3).”

TEP is requesting approval to utilize the MLVTs for storage of E&P Waste (recycled produced water). Included in this sundry is a revised Waste Management Plan and the additional documentation required as described in the Policy.

As described in the Policy, “MLVTs shall not be situated within the Buffers” established in Rule 317B (Public Water System Protection buffers or buffers described in Rule 411.a under ECMC Rules effective December 15, 2024). The TR 34-16-597 pad is not located within any of the Public Water System Protection Buffers. The Oil and Gas Location is located greater than 15 miles upstream of the nearest Public Water System intake. Even though operations on this location will not impact public water systems TEP will implement Best Management Practices (“BMPs”) that will minimize the potential for off-site discharge of produced water during operation of the proposed MVLTS.

### **Notice Requirements**

The Policy states that the “[o]perator must notify the ECMC prior to placing a MLVT into service at an Oil and Gas Location as follows:

1. *For use on a new Oil and Gas Location (as defined in Rule 303.b.(1)), an Operator must indicate such use on the Form 2A, Oil and Gas Location Assessment.*
2. *For use on an existing Oil and Gas Location with an approved Form 2A, an Operator may submit a Form 4, Sundry Notice, indicating its intent to use a MLVT and requesting a modification of the listed Oil and Gas Facilities. However, consistent with Rule 303.b.(1).B., modification or expansion of an existing Oil and Gas Location to accommodate the MLVT would require a new Form 2A and consistent with Rule 303.d substantive changes would also require a new Form 2A.*

The TR 34-16-597 pad is an existing Oil and Gas Location that will not require any site expansion for the installation of the MLVTs or associated operations; therefore, a Form 2A is not required per ECMC Rule 304.a. Operators are however required under the Policy to submit a Form 4, Sundry Notice, indicating the intent to use MLVTs on an existing Oil and Gas Location. Therefore, TEP has submitted for approval this Form 4, Sundry Notice for the TR 34-16-597 pad, including the revised Waste Management Plan and additional documentation required under the Policy.

#### Sundry Notice Requirements:

1. Manufacturer or Vendor of the MLVT: Hydrera Energy Services
2. Number of MLVT: Four (4)
3. Size of MLVTs: 15,000 barrel per tank
4. Anticipated Timeframe MLVTs will be Onsite: TEP anticipates that these tanks will be in use for approximately 10 months over a 2 – 3 year period beginning in July 2025. Please see Table 1, Estimated Development Schedule, further details on timing. Timing is dependent on availability of completions crews. Tanks may be mobilized and demobilized multiple times depending on planned completion operations.
5. Location drawing indicating where the MLVTs will be located: Please see the TR 34-16-597 Pad – Preliminary Well Completion & Stimulation Layout Drawing attached to the Form 4 for depictions of the proposed tank locations and secondary containment proposed on this Oil and Gas Location.
6. Property Boundaries: The TR 34-16-597 pad is located on private surface (Chevron USA Inc.) in the SE¼ of Section 16, Township 5 South, Ranch 97 West, 6<sup>th</sup> P.M. Please see the Cultural Distance Map and Table attached to the Form 4 for additional details on the proximity to the nearest property boundary lines.
7. Operators Certification of Compliance with the Policy: Please see the TR 34-16-597 Pad – Self Certification document attached to the Form 4.
8. Designated Setback Location / Proximity to Building Units: The TR 34-16-597 pad is not located within 2,000 feet of a Building Unit or High Occupancy Building Unit, and there are no Building Units located down gradient from the proposed MLVTs. Please see the Cultural Distance Table and Map attached to the Form 4 for a depiction of cultural features within 2,000 feet of the existing Working Pad Surface of the Oil and Gas Location.

#### Design Criteria

As required by ECMC Policy On The Use Of Modular Large Volume Tanks in Colorado, dated June 13, 2014, a MLVT design package has been prepared, certified, and sealed by a Licensed Professional Engineer, and the design specifications are adequate to withstand the loads resulting from using the tank for produced water storage. The design criteria components are outlined below, including references to the applicable attachments included in the Form 4 Sundry notice for further review:

1. Detailed Tank Designs: The following Tank Design Drawings have been attached to the Form 4 Sundry as required by the Policy.
  - a. H15P Harpoon Frac Tank - Transmittal (CO): Includes PE Stamp
  - b. RF21046 - H15P Harpoon Tank - Sales Drawing
  - c. RF22001 - H15P Harpoon Tank - Manifolds Option 3 (IFC Rev 0)
2. Specific Tank Installation and Assembly Procedures:
  - a. Harpoon SOP - 0001 Setup
  - b. Harpoon SOP - 0002 Teardown
3. Documentation of appropriate site conditions for installation, which includes grades, bedding material, and potential weather impact:
  - a. Harpoon SOP – 0001 Setup (page 4 – 5)
  - b. Harpoon Ground Preparation
4. Appropriate site preparation:
  - a. Harpoon SOP – 0001 Setup (page 4 – 5)
5. The required liner material and minimum thickness for the application along with applicable standards:
  - a. SPI TDS\_15P & 20P-TPU (1250 gsm) Panama weaving
  - b. Muscle Wall Liner Specs Dura-Skrim-N45BT1 (Secondary Containment Liner)
6. Liner installation procedures and quality control measures.
  - a. Harpoon SOP – 0001 Setup (page 14 – 17)
7. Periodic testing or reinspection requirements including what to perform, when to perform, and testing guidelines/protocols.
  - a. Harpoon Ground Preparation
  - b. Harpoon Install Report
  - c. Harpoon Daily Inspection Checklist
  - d. Harpoon Teardown Report
8. Detailed Standard Operating Procedures (SOP) for all the above items.
  - a. Harpoon SOP - 0001 Setup
  - b. Harpoon SOP - 0002 Teardown
  - c. TEP Internal Harpoon Tank SOP

### **Site Preparation & Installation**

*The Operator is responsible for maintaining records from the contractor who installed the MLVT of verification that the site was prepared and the MLVT was installed in accordance with the above design package specifications and associated SOPs, and that the MLVT is being used for its intended purpose.”*

TEP will maintain a copy of all records from the contractor installing and operating the MLVTs. Records may include verification of site preparation to ensure compliance with manufacturer's recommended site conditions, installation and testing procedures and checklists, documentation of any repairs to the tank structure or liner, and documentation of all tank inspection performed during operations.

*MLVTs must be located in compliance with the following safety setbacks:*

- *Seventy-five (75) feet from a wellhead, fired vessel, heater-treater, or a compressor with a rating of 200 horsepower or more;*
- *Fifty (50) feet from a separator, well test unit, or other non-fired equipment.*

All MLVTs located on the TR 34-16-597 pad will be installed in compliance with the required safety setback described above. Please see the Preliminary Well Completion & Stimulation Layout Drawing attached to the Form 4 for a depiction of proposed MLVT locations including setback distances to the equipment described above.

The TR 34-16-597 pad is an existing Oil and Gas Location that has not yet been reclaimed due to its use as a remote well completions support location. There will be no additional grading or site disturbance requiring the removal of topsoil or subgrade materials. Final leveling of the area to be used for installation of the Harpoon Tanks will be completed prior to installation of the tanks.

*All liner seams must be welded and tested in accordance with applicable ASTM International standards. Any repairs to liners must be made using acceptable practices and applicable standards.*

Please see the SPI TDS 15P & 20P TPU (1250gsm) Panama Weaving document attached to the Form 4 for details on the proposed liner and the applicable ASTM standards. Any repairs to the liner will be made in accordance with applicable standards.

*The Oil and Gas Operator must be present during the initial filling of a MLVT but the contractor who installed the MLVT, with stop work authority, would supervise, and inspect the MLVT for leaks during filling. If leaks are observed, filling must cease, the leaks must be repaired, and the integrity of the tank must be evaluated prior to continuing to fill or otherwise use the MLVT. Contractors can observe all future fillings without an Operator present, provided they are granted the authority to stop work if unsafe or upset conditions are observed.*

A TEP representative will be present during the initial filling of the MLVTs. TEP and the contractor who will be installing and operating the MLVTs will both have stop work authority. The contractor will supervise and monitor for leaks during initial fill up and during ongoing operation of the MLVTs. Filling of an MLVT will immediately cease upon discovery of a leak in the liner or associated manifolds containing fluids. The integrity of the liner system and tank structure will be evaluated by the contractor and any leak points or mechanical joints will be repaired prior to using the MLVT. The contractor will be granted authorization from TEP to observe further fillings and operate the MLVTs per standard operating procedures following completion of initial filling.

### **MLVT Operations and Contingency Planning**

*Operators employing MLVTs on their Oil and Gas Locations must comply with the testing and reinspection requirements and associated written standard operating procedure (SOP) listed in the design package above. However, testing and reinspection SOPs must be implemented at least every 50 set-ups regardless of what the design package states. Records of these inspections and action items must be maintained for a period of at least 5 years per Rule 205 and must be provided to the ECMC upon request.*

Testing and reinspection procedures will be conducted in accordance with the SOP and the Policy. All records will be maintained by TEP for a minimum of 5 years or otherwise required by applicable ECMC Rules and will be provided to ECMC upon request.

*Signs must be posted on each MLVT to indicate that the contents are fresh water and that no E&P waste fluids are allowed. Location and additional signage must include name of Operator, Operator's emergency contact telephone number, tank capacity, and tank contents.*

TEP is requesting approval to utilize MLVTs for produced water. A sign will be posted on each MLVT with the labeling requirements listed under Rule 605.h.

*MLVTs will be operated with a minimum of 1 foot freeboard at all times.*

A minimum 1-foot freeboard will be maintained at all times during operation of the MLVTs. The total maximum capacity of the MLVTs is 15,000 barrels; however, TEP will be operating the MLVTs at a capacity no greater than 14,200 barrels, which equates to approximately 2-feet of freeboard.

*Access to the tanks must be limited to operational personnel and authorized regulatory agency personnel.*

Access to the Oil and Gas Location is limited to operational personnel and authorized regulatory agency personnel. Any unauthorized access is strictly prohibited. Only operational personnel and authorized regulatory agency personnel will be allowed on site during active operation of the MLVTs.

*Operator, contractor, or MLVT owner must conduct daily visual inspections of the exterior wall of a MLVT and the surrounding area for any integrity deficiencies. If deficiencies are noted, they must be repaired as soon as practicable. Records of repairs made must be maintained per Rule 205 and must be provided to the ECMC upon request.*

Daily inspections will be completed by the contractor during active operations (while the tanks are in use and holding fluids). All inspection records will be maintained by TEP as required by ECMC Rule.

*Each Operator must develop a contingency plan/emergency response plan for any MLVT leak or catastrophic failure of the tank integrity and resulting loss of fluid. The contingency plan should include procedures for notifying all required regulatory agencies, and local emergency authority (municipality, county, or both). This includes filing a Form 22-Accident Report within 10 days after discovery, conducting a "root cause analysis", and providing it to the ECMC on a Form 4-Sundry Notice within 30 days of the failure. Best Management Practices (BMPs) must be employed to prevent injuries, property damage or environmental impacts, such as erosion of onsite sediment into nearby surface water. The contingency plan must be made available to the ECMC upon request.*

TEP's *Spill Prevention and Response Plan* describes the general procedures and processes to be followed for spill containment, notification, response, and remediation of any spill occurring at TEP locations / operations. This field-wide plan is included as an attachment to this Form 4.

The following site-specific procedures and emergency response actions will be implemented during the event of a leak or catastrophic failure of tank integrity and the resulting loss of fluid from the MLVT operations being conducted at the TR 34-16-597 pad:

- Regardless of the size or volume, all spills, leaks, or releases of fluids associated with MLVT operations will be reported immediately upon discovery to TEP's Drilling and Completions Superintendent and TEP's environmental staff. Each report must include the exact location of the spill, the estimated volume of fluids released, the time the spill occurred, and a description of the efforts taken to stop / contain the spill. This information will help to determine if additional response actions are required, and what cleanup actions may be needed.

- In the event of a minor spill or leak, qualified personnel familiar with the equipment and operations will attempt to immediately stop the source of the leak – provided it is safe to do so.
- Routine spills, drips, leaks associated with MLVT operations will be recovered and cleaned up using spill response materials and supplies that are maintained in the dedicated spill response trailer that is located on pad. If needed, a vac-truck may be used to recover larger volumes of spilled fluids.
- The internal design of the MLVTs, the Muscle Wall secondary containment structure, and the earthen berming (i.e., tertiary containment) around the perimeter edge of the TR 34-16-597 location itself should contain any potential release that may be associated with MLVT operations.
- Any fluids recovered from impoundments / catchment points will be collected and transported to one of TEPs approved Centralized Water Management Facilities for subsequent treatment and re-use.
- For any spill or release that impact live water, TEP personnel / representatives will assess impacts to surface waters by collecting water quality samples at varying points both up-gradient and down-gradient from the initial point of impact.

For any spill or release that impacts live water, TEP will immediately initiate the emergency spill notifications to the following agencies:

Agency	Phone Number	Contact
CDPHE Spill Response Hotline	(877) 518-5608	
ECMC	(970) 787-0029	John Heil
Garfield County Energy Liaison	(970) 987-2557	Kirby Wynn
Garfield County Emergency Manager	(970) 625-8095	Chris Bornholdt
Grand Valley Fire Protection District	(970) 285-9119	Chief Dave Blair
Colorado Parks and Wildlife	(970) 986-9767	Taylor Elm

Emergency contacts for key TEP personnel and supporting contractor personnel are as follows:

Contact	Phone Number	Contact
TEP Drilling / Completions Superintendent	(970) 216-4556	Dustin Welsh
TEP Production Supervisor	(970) 260-8361	Brandon Baker
TEP Production Supervisor	(970) 948-4275	Nate Lenard
TEP Environmental Lead	(970) 623-4875	Mike Gardner
Moody Construction	(970) 986-7244	Shawn Moody
Moody Construction	(970) 309-4738	Scott Gordon
H&K Trucking	(970) 309-8010	Pete Dimarco
H&K Trucking	(970) 309-6095	Tim Ligon

Due to the inherent safety of the Harpoon Tank design, implementation of the on-site containment BMPs, and the topographical isolation of where the Harpoon Tanks will be used, TEP believes that the likelihood of a catastrophic failure of the Harpoon Tanks and any off-site release of fluids is extremely unlikely. However, if such an unlikely event were to occur, TEP is fully prepared to effectively respond to, and manage any type and size of potential release. TEP has implemented both on- and off-site BMPs and has ample equipment and resources available at a moment's notice to respond to any type of potential release. TEP will maintain a fully stocked spill response trailer and support trailer that will be stored on location. Please see the TR 34-16-57 Pad Spill Response Map attached to the Form 4 for additional details. TEP will have a full assortment of heavy equipment and trucks readily available in the immediate area that will respond to and support any spill response needs.

As required by ECMC's MLVT guidance document, TEP will report any failure of the MLVT system by submitting a Form 22 – Accident Report within 10 days after discovery of the incident, as well as performing a root-cause analysis of the event and providing that information to ECMC on a Form 4 – Sundry Notice, within 30 days of the failure. In compliance with ECMC Rule 912.b-c, ECMC will be notified of any reportable spills / releases associated with this facility / operations. Any areas impacted by a spill or release of fluids from this facility will be cleaned up / remediated in accordance with ECMC Rule 913. Any impacted soils that exceed ECMC cleanup concentrations as found in ECMC Rule 915 will be excavated and transported to an off-site commercial facility that is authorized to treat, manage, and dispose of E&P waste materials. On-site treatment / land-farming of contaminated materials will not be allowed.

#### **FORM 4 SUNDRY ATTACHMENTS**

Please see the following attachments for additional details regarding the proposed installation and operation of Harpoon Tank on the TR 34-16-597 Pad:

1. Waste Management Plan
2. As-built Constructed Layout Drawing
3. Preliminary Well Completion & Stimulation Layout Drawing
4. Well Completions and Flowline Map
5. Harpoon Tank 15K Product Brochure
6. H15P Harpoon Frac Tank – Transmittal (CO)
7. Harpoon Standard operating Procedures – 0001 Setup
8. Harpoon Standard operating Procedures – 0002 Teardown
9. RF21046 – H15P Harpoon Tank – Sales Drawing
10. RF220011 – H15P Harpoon Tank – Manifolds Option 3 (IFC Rev 0)
11. Floating Lid Drawings
12. Floating Lid System
13. SPI TDS 15P & 20P TPU (1250gsm) Panama Weaving
14. SPI Inspection Report 15P-008
15. AST Leak Detection
16. Harpoon Ground Preparation
17. Harpoon Installation Report
18. Harpoon Daily Inspection Checklist
19. Harpoon Teardown Report
20. TEP Internal Harpoon Tank SOP
21. Muscle Wall Oil and Gas Applications
22. Muscle Wall Setup Diagram
23. Muscle Wall Specification Sheet
24. Muscle Wall Liner Specs Dura-Skrim-N45BT1
25. Water Analysis Report
26. Cultural Distance Table and Map
27. Chevron Frac Pad Letter Agreement
28. TEP Piceance Basin Spill Prevention and Response Plan 04-2022
29. Spill Response Map
30. Self-Certification Statement