

October 06, 2016

Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801
Denver, CO 80203

Attn: Mr. Alex Fischer, P.G.
Environmental Supervisor – Western Colorado

Re: **WPM EPCC Estimate Number – 1105-119**
Review of submitted documentation for Centralized E&P Waste
Management Facility Permit Application prepared by OXY USA WPT LP and
other Consultants

Facility ID: **#159504** – Laramie Energy, LLC (formerly OXY USA WTP LP) – Pond 10
Centralized E&P Waste Facility - Garfield County, Colorado

Dear Mr. Fischer,

Western Project Management (WPM) is pleased to provide the following review narrative and attached Estimate of Probable Closure Costs (EPCC) for the above referenced impoundment facility. Per your request, we have reviewed the available project documentation including a closure estimate that was prepared by OXY USA WTP LP and other Consultants. The ownership and control of this site was changed to Laramie Energy, LLC. Therefore all mention of the Operator in this report will be intended to reference the current owner (Laramie) as well as any past information that is relevant to this review which was generated by the previous owner (OXY) or their consultants.

The Operator's estimated cost for site reclamation, as proposed, totals \$443,000. The WPM total cost estimate for the scope of work is **\$642,120** for the full closure and reclamation of the site. Noted differences between the WPM estimate and the Operator's submitted basis are as follows:

1. A summary level estimate was submitted to COGCC and it is unclear whether pond fluid removal, tank removal, soils and water sampling, above and underground pipe removal and other similar work was included in the Operator's estimate.

Differences noted in comparison to the Operator's estimate are as follows:

1. Since WPM did not have access to a detailed cost estimate differences in scope could not be verified.

The general basis for this estimate includes the following assumptions:

1. Takeoff quantities, labor rates, manhours, and markups are all detailed in the attached document estimate tabs.

2. The proposed operating life of the referenced facility is anticipated to be twenty years therefore, we cannot assume that any waste disposal or municipal water treatment plant will be available at their current locations when closure is initiated.
3. Due to the fact that it is difficult to accurately plan for escalation for this reclamation project over the next twenty years, WPM has not included escalation or an inflation factor within this estimate.
4. WPM suggests that this estimate be updated every five years to capture inflation or escalation impacts to probable costs.
5. The scope of this estimate includes the decommissioning and demolition of all existing equipment shown on the project drawings.
6. The planned site grading and restoration work includes the removal of miscellaneous piping, fence, and erosion control measures as well as re-seeding of disturbed areas as required.

The following includes summary descriptions of the estimate by section:

1. Mobilization and demobilization
 - a. For the purposes of this estimate, WPM assumed using the services of a local contractor will be used and have included rates and costs for mobilization and demobilization consistent with that market.
 - b. WPM anticipated that it will take one week to accomplish the mobilization efforts which include transportation of all equipment to the site as well as set up of the field office and erosion control measures.
 - c. WPM has included costs for contractor demobilization as well.
2. Soils sampling
 - b. WPM has included additional cost for soils sampling on site for an estimated four (4) locations (hand auger).
 - c. Surface to 2 feet below will be sampled.
 - d. The focus will be near the tanks and where any apparent load in/load out activities have taken place.
 - e. The shallow soils testing will occur prior to the reclamation efforts initiating.
3. Storage / surface water sampling
 - a. WPM assumed that the existing stored water (in ponds, tanks, equipment) and wells will be sampled and tested for evaluation.
 - b. One (1) sample is included in this estimate for stored water.
 - c. One (1) seep or spring and one (1) domestic well will be sampled.
 - d. Two (2) surface samples are included for sampling in this estimate.
 - e. WPM has assumed that four (4) existing 2" diameter monitoring wells drilled to 90 feet below grade will be sampled.
4. Monitoring well abandonment
 - a. The four (4) existing 2" inch monitoring wells that are drilled to 90 feet in depth will be abandoned in accordance with the State of Colorado State Engineers Monitoring Well Abandonment Requirements.

5. Pre-job decommissioning and removal of equipment
 - a. Pre-job decommissioning is included in this estimate.
 - b. Equipment will be disconnected from electrical source, fluids removed and piping cleaned, blind flanges placed on open end connections, loaded on trucks and hauled off site for sale, recycle or disposal as required.

6. Fluids disposal
 - a. Onsite ponds are assumed to be 90% full the time of closure which yields an estimated 82,574 barrels of fluids. WPM has accounted for an additional 937 barrels of fluids stored in the onsite tanks and miscellaneous equipment and piping.
 - b. Most of the fluids will be disposed of at local injection wells. A small percentage of fluids will be loaded and hauled to an approved and licensed fluids process and disposal site as detailed in the estimate.

7. Demolition of site improvements and other equipment.
 - a. Demolished metal / waste will be trucked to a recycle center, scrap yard or landfill location as appropriate.
 - b. Steel / metal waste will be recycled, sold for scrap metal or disposed as waste.
 - c. All onsite culverts, fence and gates will be removed and disposed as a part of the closure work.
 - d. Any additional equipment not shown or detailed in the Pre-job Decommissioning section is assumed to have been removed by the operator prior to the closure work.

8. Liner removal
 - a. The removal and disposal of two (2) 60 mil HDPE liners and one (1) 300 mil geo-composite liner are included in this estimate.

9. Treated soils and solids disposal
 - a. WPM assumes that the soils and materials to be treated on site will be in accordance with the air quality permitting requirements at the time of closure.

10. Earthwork
 - a. All soils will be used onsite in the existing condition. No import of off site soils is required for the closure.
 - b. No soil will be classified as hazardous. No cost provisions for removal or treatment of hazardous soils have been included.
 - c. Assume that the class 5/6 road base will be tilled into filled material and wasted on site.
 - d. Final earthwork grade is assumed to be +/- 3 /10ths of a foot therefore, bluetop grading is not included in the scope of this work.
 - e. Seeding consistent with a typical reclamation project is included.
 - f. For the purposes of this estimate the following classes of heavy equipment or similar (performance data per the Caterpillar Performance Handbook) was utilized:
 - i. Caterpillar D8T dozer

- ii. Caterpillar 140H motor grader
- iii. Caterpillar 815F vibratory compactor
- iv. Water truck

11. Site Management

- a. Site personnel and contractor general conditions are included for the scope.
- b. Storm water management is included in this section of the estimate.

12. Labor Rates

- a. Labor classifications and burden is detailed in the estimate tabs. Most of the labor rates have been taken from the recent and local county, Colorado Davis Bacon Wage Determination. RS Means is quoted in several areas as well.

Additional estimate backup and assumptions are detailed on the corresponding estimate tabs.

This concludes WPM's efforts for a third party review and estimate for the above referenced project. Thank you for the opportunity to provide this service to the State of Colorado. Please contact me via email at jag@western-pm.com or by phone at 970-674-1618 for further clarification or with questions.

Best regards,

via email

John Goad, Jr.
Senior Project Manager
Western Project Management

Attachments - (1) WPM Estimate of Probable Closure Costs #1105-119