



May 05, 2015

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 PFCC Estimate Number – 1105-117**
Review of Form 28 and supporting documentation for Centralized E&P Waste
Management Facility Permit Application prepared by Oxy USA WPT LT and
Olsson Associates, Inc.

Facility ID: **#436570** – Oxy USA WPT LT - Pond 13 East/West Water Storage Facility –
Garfield County, Colorado

Dear Mr. Fischer,

Western Project Management (WPM) is pleased to provide the following review narrative and Estimate of Probable Facility Closure Costs for the above referenced water storage facility. Per your request, we have reviewed the available project documentation including a closure estimate that was prepared by Oxy USA WPT LT.

The WPM Estimate of Probable Facility Closure Costs is attached for your use. The general basis for this estimate includes the following assumptions:

1. The WPM total cost estimate for the scope of work is \$891,920 for the full closure and reclamation of the site. This is considerably more cost than detailed in the operator's estimate. Please note that Oxy assumed the majority of the work would be completed with their own labor/crews. The basis of our estimate includes the assumption that in the event of the closure of this facility the operator will be unable or unavailable to perform closure and reclamation work. Therefore, we have not included cost savings for any work proposed by the operator in this estimate.
2. Takeoff quantities, labor rates, manhours, and markups are all detailed in the attached estimate tabs.
3. 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.
4. 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.
5. WPM suggests that this estimate be updated every five years to capture inflation or escalation impacts to probable costs.

The following is a summary of the estimate basis:

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 one week of demobilization as well.
2. Soils sampling
 - a. WPM has included additional cost for soils sampling on site for an estimated 5 locations (hand auger).
 - b. Surface to 2 feet below will be sampled.
 - c. The focus will be on the pond walls and in places where load in/load out activities have taken place.
 - d. 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 will be sampled and tested for evaluation.
 - b. 12 samples total are included with this estimate for surface water and seeps or springs including:
 - i. Three (3) existing 2" diameter monitoring wells drilled to 50 feet below grade will be sampled.
 - ii. No domestic wells have been identified near the site.
 - iii. Three (3) seeps or springs in the area will be sampled.
 - iv. Six (6) samples are included in this estimate for stored water.
4. Monitoring well abandonment
 - a. The three (3) existing 2" inch monitoring wells that are drilled to 50 ft 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. Equipment to be decommissioned and removed from the site includes any remaining pump station equipment and other miscellaneous equipment.
 - 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.

6. Demolition and disassembly of site improvements and other equipment.
 - a. Truckloads of demolished metal / waste will be trucked to a recycle center, scrap yard or landfill location.
 - b. Concrete slabs will be crushed and placed on site for additional fill material. Concrete from the bird netting anchors will be hauled off site as waste.
 - c. Steel / metal waste will be recycled or sold for scrap metal if possible. Some metal will be hauled as waste.
 - d. All onsite culverts, fence and gates as shown on the construction drawings will be removed as a part of the closure work.
 - e. Any additional equipment not shown on the construction drawings is assumed to have been removed by the operator prior to the closure work.
7. Fluids disposal
 - a. Storage tank capacities are assumed to be 90% full at the time of decommissioning.
 - b. 4.1 MM gallons of fluids will be pumped into a local injection well. The remaining 459,194 gallons of fluids will be hauled to a process and disposal site.
8. Liner removal
 - a. Pond and containment liners will be removed and hauled to a waste facility.
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 6 road base will be 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 performance data per the Caterpillar Performance Handbook was utilized:
 - i. Caterpillar 627F scrapers
 - ii. Caterpillar D8T dozers
 - iii. Caterpillar 140H motor grader
 - iv. Caterpillar 815F vibratory compactor
 - v. Water truck

11. Site Management

- a. Site personnel and contractor general conditions are included for the scope.

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 Garfield 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 attached to this document.

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 Facility Closure Costs