

2016 Annual Plan and 5-Year Plan

**Administrative Order on Consent
Regarding Impacts Relating to
Wastewater Facilities Comprising the Closed-Loop System**

**Colstrip Steam Electric Station
August 16, 2016**

Background

On August 3, 2012, PPL Montana and Montana Department of Environmental Quality (MDEQ) entered into an Administrative Order on Consent to address groundwater seepage from wastewater facilities at the Colstrip Steam Electric Station. Under Section X of this Order, PPL Montana (Talen Montana) is obligated to submit for MDEQ review and approval annually an Annual and 5-Year Plan. The following document provides the 2016 Annual and 5-Year Plan under this Order.

AOC Related to Wastewater Facilities at Colstrip

2016 Annual Plan – provide a status of activities underway and detailed schedule for scope of work for projects in current year, including a schedule of completion of Site Reports.

Activities specifically identified in the AOC. Note that timely review of the work plans and reports identified below help maintain this schedule, but it is understood that each activity may require additional time for review and to address comments before it can be approved. The approval of precedent activities could affect the dates of submittal of subsequent activities.

- Submit proposed 2016 Annual Plan and 5-Year Plan to MDEQ for review. Target 6/15/16.
- Submit revised 3&4 EHP Site Report to MDEQ by 6/20/16, including an updated 3&4 EHP groundwater model report.
- Submit 1&2 SOEP/STEP Remedy Evaluation work plan to MDEQ by 7/29/16.
- Submit revised Plantsite Cleanup Criteria & Risk Assessment work plan to MDEQ by 8/5/16.
- Conduct 2016 Annual Meeting with MDEQ, finalize Annual & 5-year plans. Target 8/11/16.
- Submit Plantsite Cleanup Criteria (CC) & Risk Assessment (RA) Report and Remedy Evaluation Report to MDEQ by 9/30/16.
 - Submit the Remedy Evaluation Report in conjunction with the CC & RA Report as per Section C of Article VI of the AOC.
- Submit 3&4 EHP Remedy Evaluation work plan to MDEQ by 9/30/16.
- Submit 1&2 SOEP/STEP Cleanup Criteria & Risk Assessment work plan to MDEQ by 11/4/16.
- Submit 1&2 STEP Cleanup Criteria (CC) & Risk Assessment (RA) Report and Remedy Evaluation Report to MDEQ by 12/31/16.
 - Final approval of the 1&2 STEP Site Report is a threshold for this work.
 - Submit the Remedy Evaluation Report in conjunction with the CC & RA Report as per Section C of Article VI of the AOC.
- Submit 3&4 EHP Cleanup Criteria & Risk Assessment work plan to MDEQ by 2/3/17.
- Submit 3&4 EHP Cleanup Criteria (CC) & Risk Assessment (RA) Report and Remedy Evaluation Report to MDEQ by 3/31/17.
 - Final approval of the 3&4 EHP Site Report is a threshold for this work.
 - Submit the Remedy Evaluation Report in conjunction with the CC & RA Report as per Section C of Article VI of the AOC.

The following activities are activities not specifically identified in the AOC or interim response actions for the 2016 annual plan period. While the AOC provides for work to be done as an interim response action, the examples provided in the AOC are not exhaustive, and the prompt action described below is to respond to circumstances that will be identified in the respective work plans and not because of an acute threat to human health or a recent spill.

- Install a new 3&4 Bottom Ash Dewatering System in 2016. (CCR Rule)
- Begin collection of groundwater monitoring data per the CCR Rule in 2016.
- Submit 2016 Armells Creek Synoptic Run Report to MDEQ by 7/15/16.
- Submit North 1&2 STEP Area Investigation Work Plan by 7/25/2016.
- Submit 368D area evaluation report by 7/29/2016.
- Submit Soil Investigation North of the Plantsite Report (in support of Plantsite Risk Assessment) by 7/31/16.
- Submit 3&4 EHP Cell A area report by 8/1/2016.
- Submit Moose Lodge Area Investigation Work Plan by 8/12/16.
- Submit 6M area report by 8/15/2016.
- Submit SW 3&4 EHP Area Well Investigation Work Plan by 8/19/16.
- Submit 1120C area report by 9/1/2016.
- Submit 1123A/1172D Trench report by 9/1/2016.
- Submit East of North Sediment Retention Investigation Work Plan by 9/2/16.
- Evaluate the effectiveness of capture in the 1116/1117 area in 2016. Memo of results by 9/15/2016.
- 800 Series groundwater monitoring and reporting.
- Construct cap and compliant liner in the 3&4 EHP J1 Cell in 2016. (CCR Rule)
- Conduct independent Dam Structural Stability Assessment by 10/17/16. (CCR Rule)
- Conduct Dam Safety Factor Assessment by 10/17/16. (CCR Rule)
- Conduct Dam Hazard Potential Classification Assessment by 10/17/16. (CCR Rule)
- Prepare Inflow Design Flood Control System Plan by 10/17/16. (CCR Rule)
- Develop Initial Written Closure Plan for CCR Rule by 10/17/16.
- Montana Department of Highway well abandonment by 10/31/16.
- Prepare annual CCR Fugitive Dust Control report by 12/19/16. (CCR Rule)
- Conduct annual vegetation study for SOEP/STEP/EHP areas and submit report by 4/1/17.
- Update Emergency Action Plan by 4/17/17. (CCR Rule)
- Conduct 2017 annual Armells Creek synoptic run by 4/30/17.

2016 5-Year Plan – provide a projection of long-term schedules for actions related to Article VI Investigation and Remediation

- Submit Annual Plan & 5-Year Plans to MDEQ by 5/15 of each year.
- Conduct Annual Meeting with MDEQ by 7/15 of each year.
- Submit Facility Closure Plan for each area to MDEQ by 8/1/17.
 - o This date is appropriate because both the Site Reports and Cleanup Criteria & Risk Assessment Reports for each area need to be completed prior to drafting the Facility Closure Plan, including the time frames for public participation, as required in Section V of the AOC.
- Submit with each Annual Plan a proposed revision, as needed, to the Financial Assurance that has been established for ongoing obligations under the AOC including monitoring. This is the Second Phase of the Financial Assurance as provided in Article VIII.
- Provide financial assurance for Facility Closure for each area to MDEQ by 8/1/17.
- Other subsequent plans identified in the AOC will likely occur in the 2017 – 2018 time frame but are dependent upon approval of the plans identified above and will be included in future annual 5-year plans as they become better defined.
 - o These dates cannot yet be identified, given the thresholds of a Site Report, followed by a Cleanup Criteria & Risk Assessment Report and Remedy Evaluation Report, including the public participation phase for both. It is likely that these plans will relate to the necessary Cleanup Criteria, the details of which are not known until the two Reports are complete.

Other activities that are planned for the 5-year period but not specifically identified in the AOC are identified below. Note that the proposed schedules are based on current conditions and subject to change because of unanticipated changes in pond conditions, CCR regulations, or approved budgets.

- Submit Annual Water Monitoring Reports by 4/15 of each year.
 - o This time frame allows adequate time for testing, analysis and data evaluation, which cannot reasonably be completed sooner than this date each year. When weather and other variables allow for a consolidation of this schedule without compromising the report's integrity, Talen Montana will submit this report earlier than the date above.
- Conduct annual pond embankment inspections by a qualified professional engineer. (CCR Rule)
- Conduct annual EAP review with local emergency responders. (CCR Rule)
- Conduct independent Dam Structural Stability Assessment every 5 years. (CCR Rule)
- Conduct Dam Safety Factor Assessment every 5 years. (CCR Rule)
- Continue with yearly dewatering efforts at the ash impoundments including forced evaporation.
- Finish installation and begin operation of the 3&4 Bottom Ash Dewatering System in 2017. (CCR Rule)
- Install a composite liner in the 3&4 EHP Clearwell in 2017. (CCR Rule)
- Finalize CCR groundwater sampling and analysis Plan by October 2017. (CCR Rule)
- Complete baseline groundwater monitoring data collection and statistical analysis per the CCR Rule by October 2017.
- Complete CCR Rule annual groundwater monitoring report by January 2018.
- Install a new 1&2 B Pond with composite liner in 2018. (CCR Rule)
- Install a new 1&2 Bottom Ash Dewatering System in 2018. (CCR Rule)
- Install a composite liner in the 3&4 EHP G Cell in 2018. (CCR Rule)
- Install a cap and close the current 1&2 A Pond in 2019.
- Install a cap and close the current 1&2 B Pond in 2019. (CCR Rule)
- Install a cap and close the current 3&4 C Cell in 2019. (CCR Rule)
- Install a cap and close the 3&4 EHP A Cell in 2020. (CCR Rule)
- Install a cap and close the 3&4 Bottom Ash Pond in 2020. (CCR Rule)
- Install a cap and close the 1&2 STEP A Cell in 2020.
- Construct Dry Disposal System for 3&4 EHP in 2021.
- Install a cap and close the 1&2 Bottom Ash Pond in 2021. (CCR Rule)

Financial Assurance Plan – provides for the first and second phase (addressing obligations for current and continuing remedial actions including monitoring).

- Plantsite Groundwater Monitoring activities, \$100,000
- 1&2 General Groundwater Monitoring activities, \$200,000
- 3&4 Groundwater Monitoring activities, \$200,000
- Plantsite Groundwater Collection System maintenance, \$100,000
- 1&2 STEP Groundwater Collection System maintenance, \$100,000
- 3&4 EHP Groundwater Collection System maintenance, \$100,000
- 3&4 EHP Stipulation Monitoring activities, \$150,000
- Pond-related Vegetation Studies, \$50,000
- Forced Evaporation System O&M, \$200,000
- Collection System Water Treatment O&M, \$300,000

These phases of financial assurance cover 5 years of current and continuing remedial actions including monitoring. The third phase will provide financial assurance to address the Facility Closure Plan which is to be completed within five years (by August 1, 2017).

Talen Montana has provided DEQ with a Liberty Mutual Insurance Company Surety Bond for \$7.5 million to cover current obligations as identified.