

Talen Energy
Colstrip Steam Electric Station (CSES)
Coal Combustion Residuals (CCR)
Fugitive Dust Control Plan (FDCP)
October 19, 2015

The purpose of this plan is to comply with the Air Criteria requirements specified in 40 CFR Part §257.80(b), pertaining to the preparation and implementation of a Fugitive Dust Control Plan. This plan describes the CCR fugitive dust control activities at the Colstrip Steam Electric Station.

CCR are solid waste by-products leftover from the combustion of coal. These materials consist of Fly Ash and Bottom Ash and must be handled and stored according to Montana and Federal EPA regulations (40 CFR §257, Subpart D).

CCR Areas

The following CSES areas have been designated as CCR impoundments:

- A. Colstrip Units 1&2
 - B Flyash Pond (see Figure 1)
 - Bottom Ash Pond (see Figure 1)
 - Stage Two Evaporation Pond (STEP) area (see Figure 2)

- B. Colstrip Units 3&4
 - Bottom Ash Pond (see Figure 1)
 - Effluent Holding Pond (EHP) area (see Figure 3)

1. **CCR Dust Control Measures**

Colstrip Units 1&2

1&2 'B' Pond

The Units 1&2 'B' Pond is used for storage of scrubber return water from the STEP and occasionally alternative storage of bottom and fly ash slurry from other evaporation ponds. Roads on plantsite are watered as necessary to minimize dusting.

Bottom Ash Ponds

Bottom ash from the Units 1&2 boilers is sluiced with water in pipelines to these ponds. This prevents dust from being produced during transport of the CCR materials. The ash settles out and the water used for conveyance is sent to a clearwell for re-use in the bottom ash system. The dewatered bottom ash is pushed out of the settling ponds, loaded into large haul trucks, and taken to the 3&4 EHP for disposal. The bottom ash is dewatered in a manner that ensures adequate moisture in the material to prevent dusting during loading, transport, and unloading operations.

1&2 STEP

Flyash and Sulfur Dioxide generated during the combustion of coal are removed from the boiler flue gas by wet venturi scrubber systems. The scrubber systems are designed to remove both particulate matter (fly ash) and sulfur dioxide (SO₂). The fly ash contained in the scrubber slurry is pumped in a pipeline to the STEP Paste Plant. This prevents dust from being produced during the transport of this CCR material.

The Paste Plant utilizes a “thickening” process that removes excess water from the scrubber slurry. This process increases the solids of the scrubber slurry from ~15% to ~65%. The paste product, containing ~35% moisture, is transported by pipeline to the STEP disposal area. This moisture level in the paste product minimizes dusting. Due to pozzolonic characteristics of the flyash, the paste product hardens to a “concrete-like” material in the impoundment which minimizes dusting conditions.

Roads in the STEP area are watered as necessary to minimize dusting.

Colstrip Units 3&4

Bottom Ash Ponds

Bottom ash from the Units 3&4 boilers is sluiced with water in pipelines to these ponds. This prevents dust from being produced during transport of the CCR materials. The ash settles out and the water used for conveyance is sent to a clearwell for re-use in the bottom ash system. The dewatered bottom ash is pushed out of the settling ponds, loaded into large haul trucks, and taken to the 3&4 EHP for disposal. The bottom ash is dewatered in a manner that ensures adequate moisture in the material to prevent dusting during loading, transport, and unloading operations.

3&4 EHP

Units 3&4 utilize wet venturi scrubber systems similar to Units 1&2. The fly ash contained in the scrubber slurry is pumped in a pipeline to the 3&4 EHP Paste Plant. This prevents dust from being produced during the transport of the CCR material.

The Paste Plant utilizes a “thickening” process that removes excess water from the scrubber slurry. This process increases the solids of the scrubber slurry from ~15% to ~65%. The paste product, containing ~35% moisture, is transported by pipeline to the EHP disposal area. This moisture level in the paste product minimizes dusting. Due to pozzolonic characteristics of the flyash, the paste product hardens to a “concrete-like” material in the impoundment which minimizes dusting conditions.

The roads and dikes in the 3&4 EHP area are watered as necessary to minimize dusting.

2. Citizen Complaint Log Procedure

Citizens can contact CSES Security by telephone at (406)748-5023 at any time to complain of dusting from the plant's ponds. CSES Security will contact an ECD representative who will then follow-up with the complainant. The Environmental Compliance Department (ECD) will log and record these citizen complaints regarding CCR fugitive dust events (see Attachment 1). ECD personnel will take appropriate actions to investigate and correct dusting issues. The Citizen Complaint Log will be saved to the Facility Operating Record as they occur.

3. Effectiveness Assessment Procedure

Weekly Monitoring

ECD personnel familiar with EPA Method 9 will monitor the effectiveness of the CCR Fugitive Dust Control Plan (FDCP) by conducting weekly visual observations of the CCR areas (see Attachments 2 & 3). Appropriate corrective actions will be initiated upon discovery of fugitive dusting conditions and recorded on the Weekly Visual Inspection Log Sheet. These observations will be recorded and filed monthly in the Facility Operating Record for reference in the annual report.

4. Amending the CCR FDCP

The ECD will amend this plan when there are changes or additions to the disposal sites, or new dust control activities are implemented. The most current CCR FDCP must be maintained in the CSES CCR Operating Record and on the publically accessible CSES CCR internet site. The MDEQ Director will be notified when the plan or any amended plan is placed in the record or on the webpage.

5. CCR FDCP Certification

A qualified professional engineer will review and approve the initial CCR FDCP and any future amendments to the plan.

6. CCR Fugitive Dust Control Report

An annual report will be prepared that describes actions taken to control CCR fugitive dust, provides a record of citizen's complaints for the year, and summarizes the corrective actions taken during the year. The first annual report is due no later than 14 months after the initial CCR FDCP is placed in the facility's operating record. Subsequent annual reports will be completed one year after the date of completing the previous report. The report will be maintained in the CSES CCR Operating Record and on the publically accessible CSES CCR internet site. The MDEQ Director will be notified when the report is placed in the record or on the webpage.

Rev	00	Date	10/19/2015
Prepared by:	<i>William L. Neumiller</i>		
Reviewed by:	<i>Stephen J. Christian</i>		
Approved & Certified by:	<i>Gordon D. Criswell, P.E.</i>		
Comments	Initial Issue		

**Figure 1
Plant Site**

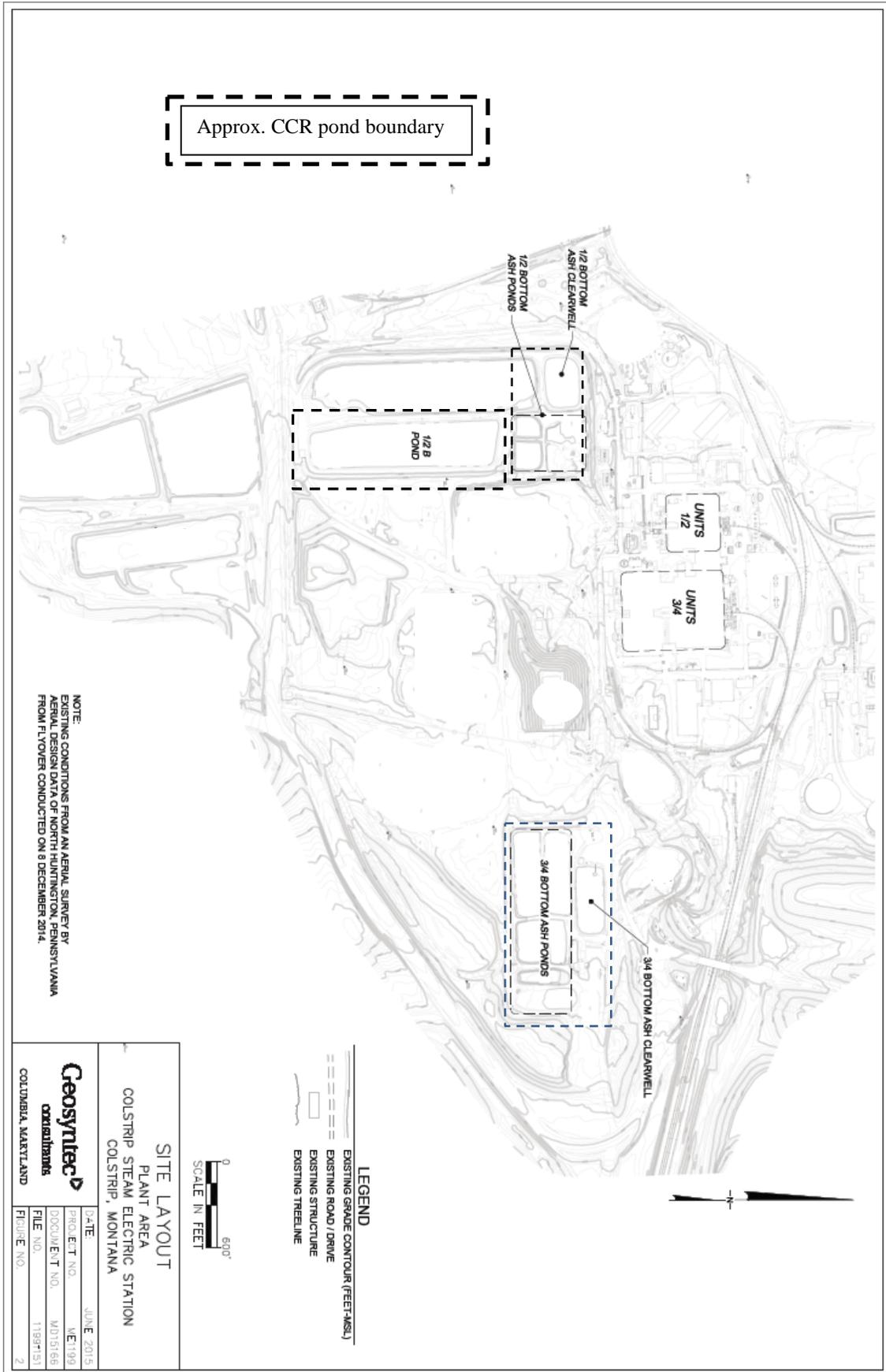


Figure 2
Stage Two Evaporation Pond (STEP)

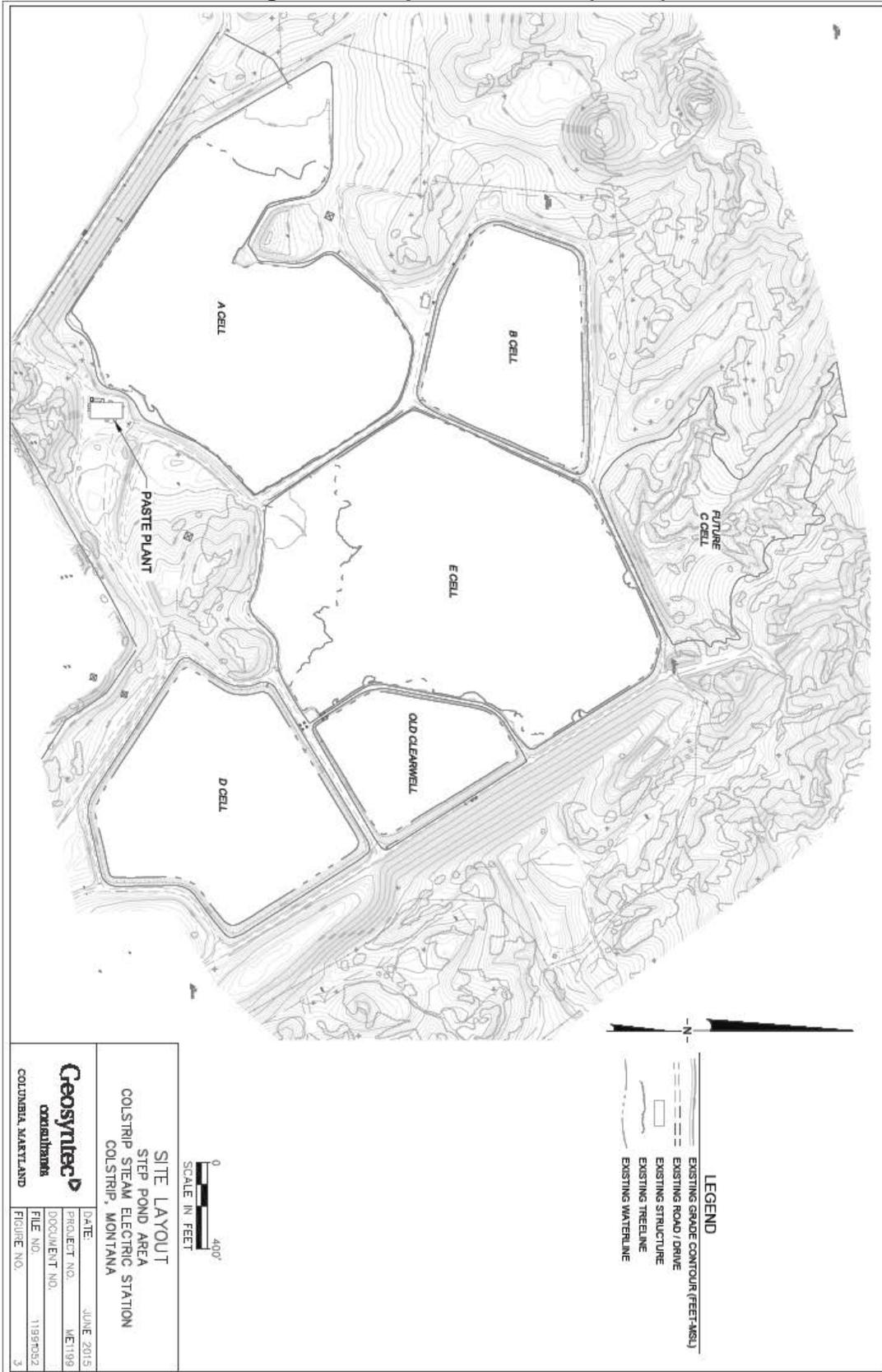
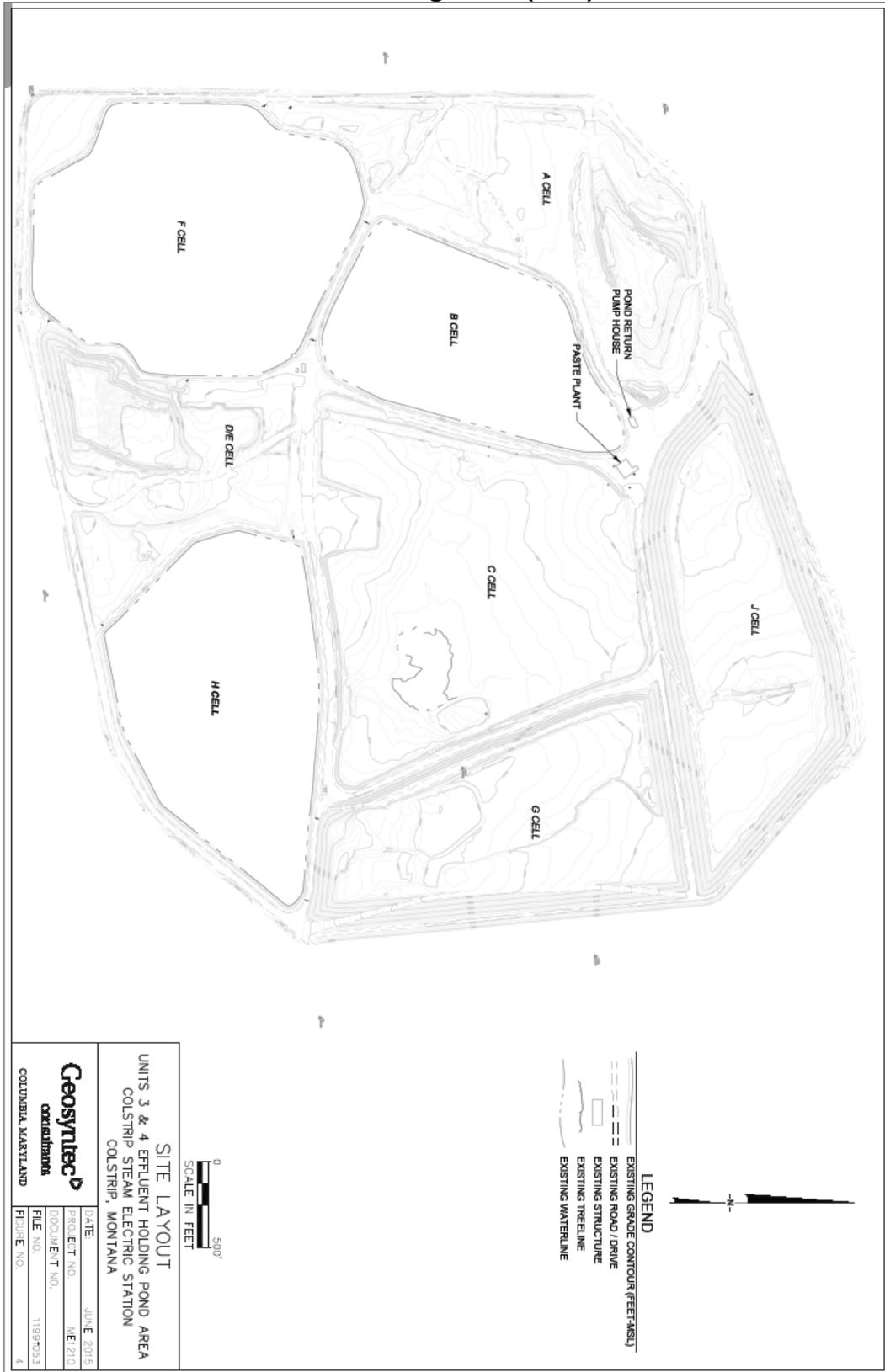


Figure 3
3&4 Effluent Holding Pond (EHP)



**Attachment 2
CCR Dust Control
Units 1&2 Visual Observation Log**

**Talen Montana, LLC
Colstrip Steam Electric Station
CCR Fugitive Dust Control Plan
Weekly Visual Inspection Log Sheet**

Date	Time	Observer Name	Wind		Units 1&2						Comments*
					B Pond		BA Pond		STEP		
			Dir.	Speed	Acceptable		Acceptable		Acceptable		
					Yes	No*	Yes	No*	Yes	No*	

*Note: List specific effected pond or cell. Corrective actions must be initiated any time dusting conditions are observed.

**Attachment 3
CCR Dust Control
Units 3&4 Visual Observation Log**

**Talen Montana, LLC
Colstrip Steam Electric Station
CCR Fugitive Dust Control Plan
Weekly Visual Inspection Log Sheet**

Date	Time	Observer Name	Wind		Units 3&4				Comments*
					BA Pond		EHP		
			Dir.	Speed	Acceptable		Acceptable		
					Yes	No*	Yes	No*	

*Note: List specific effected pond or cell. Corrective actions must be initiated any time dusting conditions are observed.