



Written Post-Closure Plan

Hayden Station - Active CCR Landfill

*Public Service Company of Colorado
Denver, Colorado*

October 17, 2016



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Table of Abbreviations and Acronyms

Abbreviation	Definition
ADF	Ash Disposal Facility
CCR	Coal Combustion Residuals
CFR	Code of Federal Regulations
PSCo	Public Service Company of Colorado

1.0 General Information

Hayden Station is a 446-megawatt (MW) coal-fired, steam turbine power plant owned and operated by Public Service Company of Colorado (PSCo), an Xcel Energy Company. The station is located at 13125 U.S. Highway 40, Hayden, Colorado 81639.

The station's ash disposal facility (ADF) is located on Routt County Road 27 approximately 1 mile south of Colorado Highway 40 in Routt County, Colorado approximately 5 miles east of Hayden, Colorado and 20 miles west of Steamboat Springs, Colorado.

Figure 1 provides a Site Location Map.

The ADF receives coal combustion residuals (CCR) from the station operations as well as air emission control byproducts, water intake silt, excavation soils, and coal impurities. CCR or other wastes are not accepted from any other source. The ADF is located on 154 acres of land, of which 136+/- acres are used for CCR disposal and 18+/- acres are used for stormwater control structures, access roads, and a borrow area.

In accordance with 40 Code of Federal Regulations (CFR) 257 Disposal of Coal Combustion Residuals From Electrical Utilities (CCR Rule) §104(d), PSCo is required to publish a Written Post-Closure Plan that describes the post-closure maintenance and monitoring for the landfill throughout the 30-year post closure care period

This report fulfills 40 CFR 257.§104(d) that requires:

- (i) A description of the required monitoring and maintenance activities and the frequency at which activities will be performed;
- (ii) The name address, telephone number and e-mail address of the person or office to contact about the facility during the post-closure care period; and
- (iii) A description of the planned uses of the property during the post-closure period.

2.0 Monitoring and Maintenance – §257.102(d)(i)

The Hayden ADF will be capped as cells reach their final capacity. The 30-year Post-Closure Period will begin once the landfill is completely closed and the final cap has been installed on any remaining areas.

Site monitoring and maintenance consists of semi-annual groundwater monitoring, periodic inspections, and scheduled and periodic maintenance activities.

2.1 Groundwater Monitoring

Consistent with the requirements of 40 CFR §257.90 through 257.98, PSCo has prepared a site specific groundwater monitoring system and plan. The groundwater monitoring system, sampling, analytical analysis and reporting procedures are described in the Groundwater Monitoring System Certification as posted to the facility CCR Operating Record.

All sampling, packaging, shipping, testing and reporting during the post-closure care period will be in accordance with the facility's Groundwater Monitoring System Certification.



Figure 1. Hayden Power Station Location Map

2.2 Landfill Maintenance

PSCo will be responsible for the overall maintenance of the landfill once it is closed. PSCo will conduct site inspections not less than semi-annually. Specific items on the closed CCR landfill surface which require observation are:

- Erosion effects/side slope sloughing and rills;
- Vegetation deterioration;
- Settling/subsidence areas; and
- Washouts.

Locations of noteworthy observations will be recorded on a site map with reference (distance) to easily recoverable site features such as monitoring wells or downchutes.

Routine final cover maintenance will include reseeded as necessary. Bare, sparsely covered, and drought-damaged areas shall be reseeded as soil moisture content returns to normal levels.

Simple maintenance related to the items identified above may include the following:

- Fill ruts and gullies in eroded side slope areas and regrade to match design condition.
- Fill and grade areas of subsidence on the final cap with soils to match existing surface grading.

Localized subsidence or surface depressions (visual or as evidenced by the presence of puddles following a rainstorm) will require backfilling and regrading to proper drainage.

Drainage swales should be checked for the presence of obstructions, erosion, ponding of water, and excessive siltation.

Routine drainage swale maintenance will include clearing obstructions, and cleaning of silt and debris. When accumulated debris/silt obstruct flow, the sediment will be removed using mechanical means. Drainage swales may also need regrading or reconstruction to eliminate standing water.

Groundwater monitoring wells will be visually inspected for the following at each monitoring event:

- Erosion or biotic intrusion around the base;
- Damage to locking well caps;
- Integrity of well seals; and
- Integrity of any well markers or protective structures.

Areas of erosion at groundwater monitoring wells will be filled with compatible soil materials graded to drain and covered with vegetative growth. Damaged well caps, concrete pads, and well seals should be repaired and/or replaced. Wells damaged below grade levels may need to be evaluated further and possibly replaced.

At the conclusion of the post-closure monitoring period, all monitoring wells will be abandoned in accordance with the requirements of the CDPHE and Colorado State Engineer.

3.0 Post –Closure Site Contact – §257.104(d)(ii)

In accordance with 257.102(d)(ii), the owner must provide the name address, telephone number and e-mail address of the person or office to contact about the facility during the post-closure care period.

Hayden Station ADF is owned and operated by PSCo, 1800 Larimer Street, Denver, Colorado 80202. **Table 1** lists personnel associated with the site and their responsibilities.

Table 1. Current Personnel Responsibilities			
Name	Telephone	Department	E-mail
Jennifer McCarter	303-294-2228	Environmental Services	Jennifer.McCarter@xcelenergy.com

4.0 Post-Closure Use – §257.104(d)(iii)

In accordance with 257.104(d)(iii) the post closure plan must provide a description of the planned uses of the property during the post-closure period.

There is no current post-closure use planned for the Hayden ADF. The stabilized capped landfill will be open range for wildlife and other passive uses.

5.0 Schedule of Closure Activities

Table 2. Schedule of Closure Activities		
Task	Start Date	Finish Date
Written Closure Plan	October 17, 2016	October 17, 2016
Written Post-Closure Plan	October 17, 2016	October 17, 2016
Annual Inspections	Year 2015	Annually until 2075
Fugitive Dust Plan Updates	Year 2015	Annually until 2075
Landfill Closure	On-going	Year 2075
Post Closure Maintenance	Year 2075	Year 2105 (minimum)

6.0 Certification – §257.104(d)(4)

In accordance with 40 CFR 257.102(d)(4), the owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the initial and any amendment of the written post closure plan meets the requirements of this section.

I, Christopher M. Koehler, being a registered Professional Engineer, in accordance with the Colorado State Board of Licensure for Architects, Professional Engineers and Professional Land Surveyors, do hereby certify to the best of my knowledge, information and belief, that the information contained in this written Closure Plan dated October 17, 2016, was conducted in accordance with the requirements of 40 CFR § 257.102(d), is true and correct and was prepared in accordance with recognized and generally accepted good engineering practices.

SIGNATURE:



Colorado PE 0051359

DATE:

October 14, 2016