

# Post-Closure Care Plan Limited Purpose Landfill TransAlta Centralia Mine

*Prepared for*

TransAlta Centralia Mining LLC

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This document was prepared under direct supervision of Travis Pyle, PE,  
a registered civil engineer in the State of Washington, in accordance with  
*40 Code of Federal Regulations 257.104.*



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# Acronyms and Abbreviations

§	section of the Final CCR Rule
CCR	Coal Combustion Residual
LPLF	Limited Purpose Landfill
Rule	U.S. Environmental Protection Agency Final CCR Rule
TCM	TransAlta Centralia Mining LLC
TCG	TransAlta Centralia Generation LLC (or “Plant”)





# Introduction

This *Post-Closure Care Plan* presents the activities that will be conducted and the procedures that will be followed for post-closure care following closure of the Limited Purpose Landfill (LPLF) at TransAlta Centralia Mining LLC (TCM) in Centralia, Washington. Post-closure care will occur in accordance with the U.S. Environmental Protection Agency's Final Coal Combustion Residual (CCR) Rule (Rule). The Rule was published in the Federal Register on April 17, 2015, and became effective on October 19, 2015. The Rule regulates the disposal of CCR as solid waste under Subtitle D of the Resource Conservation and Recovery Act. The Rule sets forth national minimum criteria for existing and new CCR landfills and surface impoundments, and lateral expansions to landfills and impoundments.

This plan becomes effective once it is finalized, sealed by a qualified professional engineer, and placed, by TCM, in the facility's operating record. In accordance with Section 257.105(i) of the Rule, the plan must be placed in the operating record as it becomes available, but not later than October 17, 2016, per 257.104(d)(2). Additionally, within 30 days of placing the plan in the operating record, TCM must post the plan on a publicly accessible Web site and notify the State Director (Washington State Department of Ecology [Ecology]) in accordance with Section (§) 257.106(i) and §257.107(i) of the Rule, respectively.

## 1.1 Post-Closure Care Criteria

The Rule includes a number of post-closure care criteria for CCR landfill units, including (1) requirements for preparing post-closure plans; (2) Post-closure care certification requirements; and (3) requirements for conducting post-closure care. Specific post-Closure care requirements are listed in §257.104 of the Rule.

Solid waste handling is governed by Washington State regulations under Chapter 173-350 WAC, Solid Waste Handling Standards, and the Lewis County Board of Health Solid Waste Rules and Regulations, Ordinance No. H-94-0302. The LPLF is currently permitted by Washington State (Permit No. 16\_TransAlta LPLF). The permit covers the design, operation, closure, and post-closure care of the landfill.

All mining operations are governed by the regulations of the Surface Mining Control and Reclamation Act of 1977. The mining permit issued to TCM by the Office of Surface Mining, Reclamation and Enforcement (OSM) contains detailed operational descriptions for the Centralia Mine, including coal mining, backfill and grading, solid waste disposal, and reclamation operations (closure). The document containing this information is referred to as the Permit Application Package (PAP) (TransAlta, 2003).

## 1.2 Site Description

TCM (referred herein also as the Centralia Mine), a wholly owned subsidiary of TECWA Fuels, Inc., owns the mine in an area northeast of Centralia, Washington. TransAlta owns and operates the adjacent coal-fired steam-electric generation plant known as TransAlta Centralia Generation LLC (TCG) (referred herein also as the Plant). The Plant generates ash (bottom ash and fly ash) and flue gas desulfurization (FGD) process wastes that are being disposed in the landfill at the Centralia Mine.

The LPLF is located southeast of the Plant on a bench area of the TCM property, and north of Pit 7 (Exhibit 1-1). The LPLF comprised of two development stages. Stage 1 was constructed in 2009 and consists of three fill phases in the northern half of the landfill – Phases A-1, A-2, and A-3a. Stage 2 is in the southern half of the landfill and was constructed between 2011 and 2013. Stage 2 consists of three phases – Phases A-3b, A-4, and A-5. The total area of the LPLF is approximately 18 acres.



Exhibit 1-1. Site Map

# Post-Closure Care

Long-term monitoring and maintenance of the LPLF will be done in accordance with the post-closure care maintenance requirements as specified in §257.104. Following closure of the landfill, post-closure care will be conducted and will consist of the following:

1. Maintaining the integrity and effectiveness of the final cover system, including making repairs to the final cover as necessary to correct the effects of settlement, subsidence, erosion, or other events, and preventing run-on and runoff from eroding or otherwise damaging the final cover.
2. Maintaining the groundwater monitoring system and monitoring according to §257.90 through §257.98.
3. Conducting the post-closure care period for 30 years, except if operating under the assessment monitoring program in accordance with §257.95. The post-closure care period will be extended until returning to detection monitoring in accordance with §257.95.
4. Ensuring post-closure use of the property does not disturb the integrity of the final cover system or any other components of the containment system or post-closure monitoring systems.

## 2.1 Final Cover System Monitoring and Maintenance Activities

The final cover system for the LPLF will be inspected to maintain the integrity and effectiveness of the cover and monitoring systems.

### 2.1.1 Erosion Control

The vegetated cap will be inspected to ensure that proper drainage slopes are maintained, erosion and scouring of the surface are not occurring, and bare spots in the vegetation are corrected. The cover system will be inspected quarterly for the first two years of the post-closure care period and then annually thereafter. Inspections will also occur after substantial rainfall events that could cause erosion. Mowing of the cap will be conducted if necessary. If areas of erosion, scouring, rutting, or sparse vegetation occur, repairs will be made.

### 2.1.2 Groundwater Monitoring

Groundwater monitoring will be conducted in accordance with the CCR groundwater monitoring plan. The integrity of the wells will be inspected during each sampling event to ensure the wells can be accessed and used to effectively retrieve groundwater samples. Inspection will include the well locks and caps, well identifications, bollards, and access. Repairs to the wells will be made as needed.

### 2.1.3 Stormwater

Stormwater features, including ditches and culverts, will be inspected semi-annually to ensure proper drainage of stormwater. Inspections will also occur after substantial rainfall events in which erosion could be encountered. Inspections will include culvert integrity, culvert inlet and outlet armoring, ditch drainage slopes and channel geometry, sedimentation, and the riprap armoring of the stormwater ditches. Repairs and cleanout of the stormwater features will occur as needed.

### 2.1.4 Site Access Controls

Access to the LPLF will be restricted through the use of existing access gates to the TCM property, and signage in the vicinity of the LPLF. The integrity of these security features will be inspected annually and repaired as needed.

## 2.2 Post-Closure Contact Information

TCM will maintain ownership and responsibility of the LPLF. The contact information is as follows:

Environmental Specialist/Dennis Morr  
TransAlta Centralia Mining LLC  
913 Big Hanaford Road  
Centralia, Washington 98531  
Phone: (360) 330-8209

## 2.3 Post-Closure Care Planned Uses

No reuse of the LPLF is planned. If a beneficial reuse of the site is identified, the post-closure plan will be amended to ensure site activities associated with such site reuse will maintain the integrity and effectiveness of the final cover system and groundwater monitoring systems.

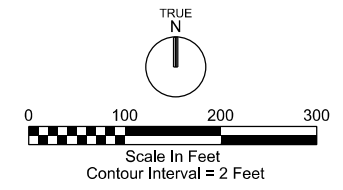
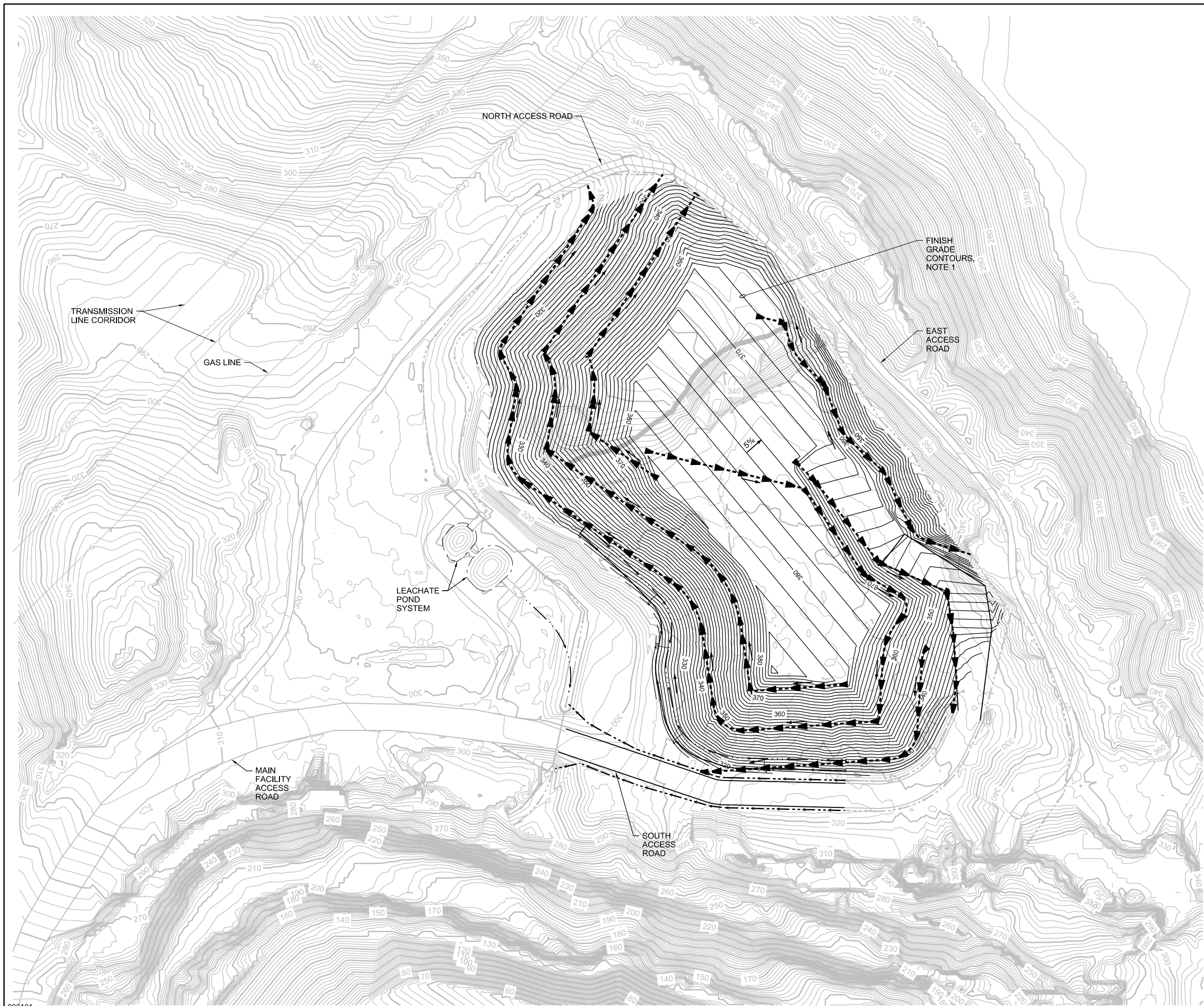
## 2.4 Schedule

Immediately following closure of the landfill, the 30-year post-closure care period will commence. Post-closure will be complete in 30 years unless assessment monitoring is occurring, at which point post-closure care will be extended until the landfill returns to detection monitoring. A notification of post-closure care period completion will be prepared no later than 60 days following the completion of post-closure care verifying that the post-closure has been completed. The certification will be provided by a qualified professional engineer verifying that completion has occurred in accordance with this plan and the Rule. Recordkeeping and compliance are considered complete once it has been placed in the operating record, as required in §257.104(e). Notification is complete once notice of completion is given to the State Director and posted on a public Web site, as required by §257.106 and §257.107, respectively.

Figure







- NOTES:**
1. FINAL TOP DECK GRADES ARE APPROXIMATE AND ARE SUBJECT TO VARY SLIGHTLY DEPENDING ON FINAL WASTE FILL VOLUMES AS THE PLANT NEARS SHUTDOWN.

- LEGEND**
- STORMWATER COLLECTION DITCH (WITH FLOW DIRECTION)
  - CULVERT
  - STORMWATER CONTROL BERMS

**FIGURE 1**  
**LIMITED PURPOSE LANDFILL**  
**FINAL CLOSURE GRADES**  
 TRANSALTA CENTRALIA MINING LLC