Alternative Closure Annual Progress Report

Coal Combustion Residuals Rule Compliance

Facility
Healy Power Plant
2.5 Mile Healy Spur Road
Healy, Alaska

July 31, 2020

This is the second annual progress report following notification made in July 2018 of GVEA's intent to comply with the alternative closure requirements under §257.103 of the coal combustion residuals (CCR) rule (CCR Rule) for the four CCR units at the Healy Power Plant near Healy, Alaska. The CCR units include three unlined CCR surface impoundments (the Ash Pond, the Recirculating Pond and the Emergency Overflow Pond) and an Ash Drying Area defined as a CCR landfill under the CCR Rule. This progress report documents GVEA's efforts toward establishing an alternative handling process for CCR as required under §257.103. During the drafting of this progress report (July 29, 2020) GVEA became aware that EPA was preparing to issue final revisions to the CCR Rule, including new provisions under §257.103 (herein referred to as CCR Closure Part A).[1] GVEA is committed to compliance with all applicable rules and regulations and will accommodate changes to the CCR Rule as appropriate.

CCR materials produced from each of the two generating units (Unit 1 and Unit 2) at the Healy Power Plant undergo different interim processes in preparation for final disposal at the nearby surface coal mine. These processes are described in detail at GVEA's publically available CCR website[2] and in several posted documents such as the 2018 *Corrective Measures Assessment Report.*[3] Presently, CCR and non-CCR wastes from Unit 1 are processed in the four CCR units to dewater and prepare CCR for safe transport and final disposal offsite. CCR from Unit 2 do not enter the CCR units, but instead are collected in intermediate storage silos and loaded directly to trucks for transport and final disposal at the nearby surface coal mine. The CCR units at the Healy Power Plant site do not receive CCR waste for final disposal. GVEA is currently overseeing plant upgrades to manage CCR and non-CCR waste streams from Unit 1 and eliminate the need for the CCR units, but at this time there is no fully-functional alternative CCR handling process in place. GVEA must continue to process CCR and non-CCR waste through the existing CCR units in order to provide power to GVEA's cooperative member owners until the necessary plant modifications are complete.

Plant modifications currently under construction are designed to convey all Unit 1 CCR (i.e., fly ash and slag/bottom ash) to the Unit 2 CCR handling systems and circumvent the CCR units. Unit 2 is presently in an extended outage to complete the first phase of modifications to its fly ash and bottom ash handling systems. Control systems are being modified to automate Unit 1's new fly ash handling system. Additionally, Unit 2 is being upgraded to allow handling of rerouted bottom ash from Unit 1. It is expected that the upgraded Unit 2 fly ash handling system will be able to fully process Unit 1's fly ash by the end of 2020; this will reduce the amount of CCR routed through the surface impoundments by 80%. GVEA plans to use Unit 2's bottom ash system to process Unit 1's bottom ash by the end of the first quarter of 2021, which will divert the remaining 20% of CCR from the CCR units.

Upon completion of the current upgrade projects, all of Unit 1's CCR will be handled through Unit 2's processing systems during normal operations. However, the new Unit 1 CCR handling

[1] https://www.epa.gov/coalash/pre-publication-copy-final-rule-holistic-approach-closure-part-deadline-initiate-closure-and
[2] http://gvea.com/energy/ccrrulecompliance
[3] http://gvea.com/images/Environmental/HPP_CCR_GW_CMA_201808.pdf

system for bottom ash will only operate when the Unit 2 plant is in operation. Consequently, further engineering or operational modifications will be needed to address Unit 1's bottom ash CCR waste during Unit 2 shutdowns. In addition, Unit 1's non-CCR waste streams are currently processed in the CCR units. An alternative handling system must be developed to manage non-CCR waste from Unit 1 before the CCR units can be closed.

GVEA monitors groundwater at the Healy Power Plant for constituents listed in Appendix IV of the CCR Rule and evaluates detected concentrations for statistically significant exceedances of groundwater protection standards. On March 1, 2018, GVEA issued a notification that its groundwater monitoring and analysis program had identified some Appendix IV constituents exceeding applicable groundwater protection standards. Under §257.101 of the CCR Rule modified as of July 30, 2018, GVEA would be required to cease placement of CCR and non-CCR waste in the three CCR surface impoundments no later than October 31, 2020 and to either retrofit or close the ponds. Because the Ash Drying Area is operated concurrently with the CCR surface impoundments at the Healy Power Plant, it would need to close in the same timeframe.

The final, fully-functioning alternative handling systems for Unit 1 CCR and non-CCR waste will not be completed in 2020 nor by April 11, 2021 [per §257.103(f)(1) of CCR Closure Part A]. However, GVEA continues to make progress toward eliminating the CCR units from plant processes and subsequently closing the CCR units consistent with the 2016 Closure and Post-Closure Plan.[4] GVEA will therefore continue to comply with alternative closure requirements under §257.103 of the CCR Rule. Over the upcoming year GVEA will continue to engineer and construct alternative systems to fully bypass the CCR units, plan for final closure and removal of the CCR units, and evaluate corrective measures to address constituents of concern in groundwater beneath the site. Table 1 presents GVEA's planned tasks and anticipated completion dates to maintain compliance with alternative closure requirements under the CCR Rule and to proceed toward final closure of the CCR units.

Table 1. CCR Rule Compliance Tasks and Anticipated Completion Dates

Task	Anticipated Completion Date
Modifications to Unit 1 and Unit 2 fly ash handling systems to process fly ash from Unit 1	December 2020
Analytical modeling of groundwater geochemistry to evaluate natural attenuation processes and estimate remediation timeframe	December 2020
Upgrades to Unit 1 and Unit 2 bottom ash handling systems to process bottom ash from Unit 1 while Unit 2 is operating	March 2021
Issue Revised Corrective Measures Assessment Report	September 2021

[4] http://gvea.com/images/Environmental/GVEAClosurePlanCCRRuleF111716.pdf

Water efficiency assessment of water and wastewater streams in Unit 1 and Unit 2 to inform design of alternative non-CCR waste handling system	October 2021
Public meeting to discuss results of Revised Corrective Measures Assessment Report	February 2022
Select a groundwater remedy	April 2022
Establish alternative handling system for Unit 1's non-CCR wastes	September 2022
Implement alternative measures to manage CCR during Unit 1 or Unit 2 shutdowns	December 2022
Initiate closure of CCR units and amend Closure and Post-Closure Plan	May 2023
Complete closure of CCR landfill (Ash Drying Area)	November 2023
Complete closure of CCR impoundments	May 2028

Tasks and anticipated completion dates presented in Table 1 are tentative and subject to potential adjustment in accordance with EPA's pending revisions to the CCR Rule. Additionally, the onset of Covid-19-related health concerns in March 2020 has exacerbated challenges in completing work during the extremely short summer construction season in Healy, Alaska. GVEA has implemented policies to protect essential plant workers by minimizing exposure to outside parties, and formal restrictions on state and international travel have delayed or disallowed the arrival of specialized contractors, many of whom travel from areas outside Alaska. GVEA has managed to proceed with the planned Unit 2 outage and upgrade projects in 2020 and continues to pursue engineering and design contracts for further plant modifications in support of timely CCR closure. Although the anticipated dates are tentative, GVEA is committed to cease placement of CCR in CCR units at the Healy Power Plant no later than July 2023.

This progress report has been placed in GVEA's facility operating record to satisfy the requirements under §257.105(i)(11) of the CCR Rule, and posted to GVEA's CCR website in accordance of §257.107(i)(11). The next annual progress report will be completed no later than 12 months from the date of this notification (by July 31, 2021). The progress report will document progress made, problems encountered, and remaining steps necessary to establish alternative handling for Unit 1's CCR and non-CCR wastes.

GVEA believes it is in compliance with alternative closure requirements of the CCR Rule. Specifically, GVEA has:

- Documented that there is no currently available feasible alternative to the capacities served by existing CCR units at the Healy Power Plant, consistent with §257.103(a)(1)(i).
- Demonstrated that efforts have been and continue to be made to develop alternative capacity and implement it as soon as is feasible, in compliance with §257.103(a)(1)(ii).

- Remained in and documented compliance with all other requirements including the requirement to conduct necessary corrective action under §257.103(a)(1)(iii).
- Prepared annual progress reports documenting the lack of alternative capacity and the progress towards development of alternative CCR disposal capacity consistent with §257.103(a)(1)(iv).
- Expressed intent to cease placing CCR and non-CCR in CCR units and initiate closure of CCR units once alternative capacity is available, in compliance with §257.103(a)(2) and §257.103(a)(3).
- Made the required notices and progress reports, or acknowledged intention to make such reports as appropriate, consistent with §257.103(c).
- Complied with recordkeeping, notification, and Internet requirements in compliance with §257.103(d).

Certification

I hereby certify that the coal ash from Unit 1 must continue to be managed in the existing unlined surface impoundments (Ash Pond, Recirculating Pond, and Emergency Overflow Pond) and at the Ash Drying Area due to absence of an alternative disposal capacity at the Healy Power Plant at this time, and I am familiar with the provisions of Title 40 of the Code of Federal Regulations Parts 257 and 261 and the final rule to regulate the disposal of Coal Combustion Residuals (CCR) as a solid waste.

Naomi J. Morton Knight, P.E.
Environmental Officer

Date