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Notification Constituents in Appendix IV of the CCR Rule Exceeded the Groundwater Protection Standard

Coal Combustion Residual Rule Compliance

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

February 26, 2019

Notification

This notification has been documented in GVEA's facility operations records to satisfy the requirements under §257.105(h)(8) of the CCR Rule. This notification has also been posted to GVEA's CCR Website in accordance of §257.107(h)(6).

In 2018, groundwater monitoring was performed semiannually to comply with U.S. Environmental Protection Agency's (EPA's) Coal Combustion Residuals (CCR) Rule¹ for the four CCR units at the Golden Valley Electric Association, Inc. (GVEA) Healy Power Plant. Groundwater samples collected from the groundwater monitoring system were analyzed for both Detection and Assessment Monitoring constituents listed in appendix III and IV of the CCR Rule. Statistical analyses were completed using the data collected during the last ten groundwater monitoring events conducted between 2016 and 2018. These statistical analyses were consistent with the statistical methods previously specified in the *Groundwater Monitoring System and Statistical Method Certification*. Statistical comparisons of Detection Monitoring constituents between compliance and background wells was not necessary to determine whether Assessment Monitoring should continue since the 2018 compliance and background well sample results for the Appendix III constituents were similar to those from previous years. For this reason, statistical comparisons were limited to the appendix IV constituents as required under the Assessment Monitoring program.

The Assessment Monitoring Program is to include laboratory analysis of the sampled groundwater for all constituents listed in Appendix IV of the CCR Rule, and the statistical comparison of detected Appendix IV constituents with the groundwater protection standards (GWPS) established consistent with 40 CFR §257.95(h). GWPSs were established in 2017 for each detected appendix IV constituent in accordance with the CCR Rule. However, these GWPSs were updated in 2018 based on revisions to the CCR Rule (referred to as Phase One, Part One²), effective August 29, 2018. See further discussion in the *2018 Groundwater Monitoring and Corrective Action Report*.

Statistical analyses were completed to determine whether a statistically significant increase over the GWPS was detected for any appendix IV Assessment Monitoring constituent. As a result, some Appendix IV constituents were detected at a statistically significant level above the GWPS at several monitoring wells and include antimony, arsenic, fluoride, lithium and molybdenum. As such, an Assessment Monitoring Program will continue at the Healy Power Plant in accordance with §257.95 and will continue on a semiannual schedule with the next sampling event in April 2019. However, as discussed in the *2018 Groundwater Monitoring and Corrective Action Report*, several

¹ Title 40 of the Code of Federal Regulations Parts 257 and 261 (40 CFR 257 and 261) dated April 17, 2015

² Hazardous and Solid Waste Management System: Disposal of Coal Combustion Residuals From Electric Utilities; Amendments to the National Minimum Criteria (Phase One, Part One) dated July 30, 2018.

factors must be considered when interpreting the results of the statistical evaluations presented in the report. One factor is that a Bonferroni correction was not applied to the level used to determine statistical significance for individual comparisons; a Bonferroni correction is typically used to maintain a sufficiently low experiment-wide Type I error rate when multiple comparisons are made, such as in the case of the statistical analysis completed for the appendix IV dataset. If such a correction were to be used, several of the metals discussed above, including antimony and lithium, would not be considered statistically significantly higher than the GWPS in any well.

As discussed in the *2018 Groundwater Monitoring and Corrective Action Report*, GVEA completed an assessment of corrective measures in August 2018. As stated in the report, source removal and disposal would be the primary corrective measure taken since the unlined ponds must be closed and removed in accordance with the location requirements of the CCR Rule. At this time, GVEA continues to make effort towards obtaining an alternative option to manage CCR from Unit 1 and to move forward with remedy selection.