



OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

SCOTT A. THOMPSON
Executive Director

KEVIN STITT
Governor

June 8, 2021

Mr. Lee Evans
Evans & Associates Construction Company, Inc.
P.O. Box 30
Ponca City, OK 74602

Re: Reevaluation of Molybdenum Using Background as GWPS, Request for Extension Due to Proposed Rule Changes, Big Fork Ranch Coal Combustion Residuals (CCR) Landfill, Solid Waste Permit # 3552014, Noble County, Oklahoma.

Dear Mr. Evans:

The Oklahoma Department of Environmental Quality (DEQ) is in receipt of the Reevaluation of Molybdenum Using Background as GWPS, dated May 4, 2021, and the Request for Extension Due to Proposed Rule Changes dated May 21, 2021. The reports were submitted by Altamira on behalf of Evans and Associates Construction Company, Inc. (Evans). The reports were submitted in response to the DEQ letter dated March 9, 2021 requesting Evans to reevaluate whether a statistically significant level (SSL) exists for molybdenum using background as the groundwater protection standard (GWPS).

In the letter dated May 4, 2021, Evans reevaluated the 2020 assessment monitoring data for molybdenum by comparing confidence limits at the well to the background concentrations in the upgradient well. For both the April 2020 and October 2020 monitoring events, the upper and lower confidence limits for molybdenum at MW-9A and MW-12A exceed the upgradient well background concentration, indicating an SSL.

Discussions from the phone call conducted between DEQ and Evans on May 11, 2021 included proposed rule changes under legislative review which would adopt the EPA- promulgated alternative risk-based groundwater protection standard for molybdenum. If the proposed rule changes become effective, the reported molybdenum concentrations will not be SSLs and actions required under 252:517-9-6(g) and 252:515-9-7 will no longer be necessary. In response to the call, Evans submitted a request for extension on remediation actions until the outcome of the proposed rule changes are known.

The extension request is approved. The May 4, 2021 letter satisfies DEQ's request for an addendum to the 2020 Annual Groundwater Monitoring and Corrective Action Report. Should you have any questions, please contact Kaylee Shiplet at (405) 702-5196 or Kaylee.shiplet@deq.ok.gov.

Sincerely,

Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/ks

cc: Chris Schaefer, Hydrogeologist, Altamira
Saeed Zahrai, P.E., Emera Corporation



May 21, 2021
Hillary Young, P.E.
Chief Engineer - Land Protection Division
Oklahoma Department of Environmental Quality
P.O. Box 1677
Oklahoma City, OK 73162

Re: Request for Extension Due to Proposed Rule Changes
Evans and Associates Construction Co, Inc.
Big Fork Ranch Coal Combustion Residuals (CCR) Landfill, Ponca City, Noble County, OK
Solid Waste Permit #352014

Dear Ms. Young:

In its letter dated March 9, 2021, the Oklahoma Department of Environmental Quality (DEQ) requested that Evans and Associates Construction Company, Inc. (Evans) “reevaluate whether an SSL exists for molybdenum using background as the GWPS.” Evans responded by letter (Reevaluation of Molybdenum Using Background as GWPS, Altamira) on May 4, 2021. Evans reevaluated Year 2020 Assessment Monitoring data for molybdenum by comparing confidence limits at the compliance wells to background concentrations in the upgradient well. From this comparison, the upper and lower confidence limits for molybdenum at MW-9A and MW-12A exceed the upgradient well background concentration; but are not at statistically significant levels (SSLs) above the EPA-promulgated alternative risk-based groundwater protection standard for molybdenum.

From discussion with DEQ on May 11, 2021, changes have been proposed by DEQ to *Oklahoma Administrative Code (OAC) Chapter 517. Disposal of Coal Combustion Residual from Electric Utilities* and are under legislative review which would adopt the EPA-promulgated alternative risk-based groundwater protection standard for molybdenum. If these proposed changes become effective and the EPA-promulgated alternative risk-based groundwater protection standard for molybdenum is adopted then the reported molybdenum concentrations to date will not be at SSLs and the actions contained under OAC 252:517-9-6(g) and 252:517-9-7 to address SSLs will not be necessary.

Based on above and as per discussion with ODEQ, Evans requests an extension to determine the need for and/or to conduct actions to address SSLs as contained in OAC 252:517-9-6(g) and 252:517-9-7 until the outcome of the proposed rule changes becomes evident and/or until the proposed changes to the rule become effective.

Hillary Young, P.E.
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Furthermore, Evans requests that its May 4, 2021 submittal to DEQ satisfy the request for an addendum to the 2020 Annual Groundwater Monitoring and Corrective Action Report as requested by DEQ in its March 9, 2021 letter.

Please contact me at 405-701-8215 or at Chris.Schaefer@altamira-us.com if you have any questions.

Sincerely,

Altamira-US, LLC



Chris Schaefer, PE
Hydrogeologist

cc: Saeed Zahrai, P.E. / EMERA, Corp.
Lee Evans / Avans & Associates Construction Co., Inc.

ATTACHMENT 1

DEQ LETTER (MARCH 9, 2021)



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SCOTT A. THOMPSON
Executive Director

OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY

KEVIN STITT
Governor

March 9, 2021

Mr. Lee Evans
Evans & Associates Construction Company, Inc.
P.O. Box 30
Ponca City, OK 74602

Re: 2020 Annual Groundwater Monitoring and Corrective Action Report, Big Fork Ranch Coal Combustion Residuals (CCR) Landfill, Solid Waste Permit # 3552014, Noble County, Oklahoma.

Dear Mr. Evans:

The Oklahoma Department of Environmental Quality (DEQ) received the 2020 Annual Groundwater Monitoring and Corrective Action Report (Report) dated January 29, 2021. The Report was submitted by Altamira on behalf of Evans and Associates Construction Company, Inc. (Evans). The Report documents groundwater monitoring activities conducted throughout 2020 at the Big Fork Ranch CCR Landfill in accordance with Oklahoma Administrative Code (OAC) 252:517-9-1(e).

The Report includes all groundwater data collected under OAC 252:517 and documents the status of the groundwater monitoring and corrective action program for the CCR units, summarizes key actions completed, and projects key activities for 2021. Assessment monitoring samples were collected in January, April, and October during 2020. The Report notes that no significant problems were encountered and therefore no actions were required to resolve them.

The groundwater monitoring network at Big Fork Ranch consists of existing site monitoring wells GWMP-6A, GWMP-8A, GWMP-9A, GWMP-10A, and new monitoring wells GWMP-11A, GWMP-12A, and GWMP-13A. GWMP-6A is designated as an upgradient well. Groundwater flow appears to be to the north/northeast with a contingent of flow to the west/ southwest. The groundwater flow rate is estimated to be 0.58 ft/year during the April 2020 monitoring event and 0.64 ft/ year at the October 2020 monitoring event towards the northeast.

New monitor wells GWMP-11A, GWMP-12A, and GWMP-13A were installed at the facility on September 26, 2018 for potential inclusion to the monitoring network. Sampling to establish background has been completed at GWMP-11A and GWMP-12A. Monitor well GMW-12A has already been approved for inclusion into the monitoring network. Monitoring well GWMP-13A did not recover sufficient water for sampling at any event in 2020; and has been sampled only once since its installation. If this well continues to be dry during sampling, Evans may discuss with DEQ potential alternative sampling means.

Evans transitioned from detection to assessment monitoring after statistically significant increases of TDS, boron, chloride, fluoride, and sulfate initially occurred in various monitoring wells during the April 2019 and subsequent monitoring events. Evans submitted an Alternate Source Demonstration and eventual Assessment Monitoring Plan due to the exceedances. The Assessment Monitoring Plan, dated December 10, 2019, was approved by DEQ on January 21, 2020. Assessment monitoring was implemented in 2020 and will continue throughout 2021 in accordance with OAC 252:517-9-6 and the Assessment Monitoring Plan.

Three assessment monitoring events occurred in 2020 for Appendix A and B parameters. Statistical analysis was conducted on all data sets with inter- and intra-well analyses conducted for Appendix A parameters to detect for statistically significant increases (SSIs) over background. Appendix B parameters concentrations were compared to the groundwater protection standards (GWPS). A trend analysis was conducted for each



Mr. Lee Evans
March 9, 2021
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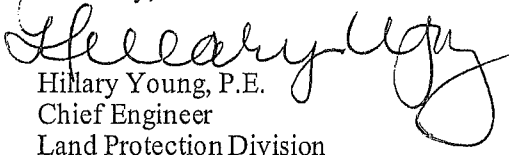
well/ constituent combination and a confidence interval established for all 2020 Appendix B constituents. A statistically significant level (SSL) above a GWPS is determined if the lower confidence limit for an Appendix B constituent exceeds the established GWPS. There were no SSLs detected for the 2020 assessment monitoring program. However, during the October monitoring event, arsenic at GWMP-10A was detected at a concentration slightly exceeding the GWPS. Since the lower confidence limit did not exceed the established GWPS; no SSL above the GWPS is indicated.

It is noted that the EPA promulgated alternative risk-based contaminant level for molybdenum was used as the GWPS. Please note that DEQ's regulations at OAC 252:517 have not incorporated the revised EPA alternative risk-based groundwater standards for Appendix B constituents that do not have maximum contaminant levels (MCLs). Accordingly, please ensure that assessment monitoring analyses are utilizing the established MCL or background level as appropriate in accordance with OAC 252:517-9-6(h) and assess if any SSLs would be triggered as a result.

Evans proposes to add MW-11A to the groundwater monitoring network as a background well that is not an upgradient well. This is allowed according to OAC 252:517-9-2(a)(1) provided the groundwater there is representative of background water quality not affected by leakage from the CCR unit. The highest groundwater elevation appears to be near the southeast corner of landfill Cell 8 and the MW-11A is positioned on the south side of the landfill, where there is a component of groundwater flow to the southwest. This seems contrary to the expected flow direction to the northeast and Table 2 shows great variability in depth to water measurements at GWMP-11A, leading DEQ to question the validity of the groundwater elevations at MW-11A. Therefore, prior to inclusion of the water quality data into the background pool along with MW-6A, DEQ requests Evans verifies the groundwater flow with re-surveying of the top of casing (TOC) elevations and ground surface elevations; and provides more information to support the inclusion of MW-11A water quality data into the background pool. Also, if the groundwater flow distribution is validated, more wells may be needed in the future due to complex groundwater.

The Report meets the requirements of OAC 252:517-9-1(e) with the exception of using the EPA risk-based groundwater standard for molybdenum as a GWPS. In an addendum, please reevaluate whether an SSL exists for molybdenum using background as the GWPS and assess the viability of MW-11A as a background well. It is noted that the Report has been placed on Big Fork's publicly accessible website. Should you have any questions, please contact Kaylee Shipler at (405) 702-5196 or Kaylee.shipler@deq.ok.gov.

Sincerely,


Hillary Young, P.E.
Chief Engineer
Land Protection Division

HY/ks

cc: Chris Schaefer, Hydrogeologist, Enviro Clean Cardinal
Saeed Zahrai, P.E., Emera Corporation