

# Technical Memorandum

Date: Monday, January 06, 2020

Project: Omaha Public Power District, North Omaha Station, North Omaha Ash Landfill

To: OPPD

From: HDR Engineering, Inc.

Subject: Semiannual Update for Selection of Remedy

The Omaha Public Power District (OPPD) operates the North Omaha Station (NOS) Landfill in accordance with the United States Environmental Protection Agency's (USEPA) Disposal of Coal Combustion Residuals (CCR) from Electric Utilities rule (CCR Rule), as specified in 40 CFR 257. In accordance with 40 CFR 257.95(g), OPPD published notification on February 14, 2019 that concentrations of arsenic, selenium, cobalt, lithium, and molybdenum detected in groundwater monitoring wells at the NOS Landfill resulted in statistically significant levels (SSLs) above the Groundwater Protection Standards (GWPS). The purpose of this technical memorandum is to provide an update describing the progress in selecting and designing a remedy for corrective action at the NOS Landfill and; therefore, satisfies the requirements specified in 40 CFR 257.97(a).

In correspondence dated May 30, 2019, OPPD notified Nebraska Department of Environment and Energy (NDEE) of their intent to initiate corrective measures at the NOS Landfill.

Subsequent to the notification to NDEE, HDR Engineering, Inc. (HDR) performed a desktop analysis of potentially applicable corrective measures for the remediation of constituents of interest (COIs) identified in groundwater at the NOS Landfill at SSLs above their respective GWPS. The results of this work were submitted to OPPD in a July 5, 2019 report entitled, *Assessment of Corrective Measures for Groundwater at Omaha Public Power District (OPPD) North Omaha Station* (the report). During the course of completing the report, HDR identified data gaps necessary to further develop a conceptual site model and additional information necessary for the "selection of remedy". Based on the site's unique characteristics, additional hydrogeologic data is necessary to assist in determining the mostly likely to succeed remedy that will meet the standards listed in 40 CFR 257.97.

Additionally, OPPD received correspondence from the NDEE as part of their Title 132 comprehensive permit inspection requiring submittal of a Nature & Extent Investigation Report in accordance with Title 132, Chapter 7, 005.07B and Title 118, Appendix A, Step 7.

Subsequent to the NDEE request, HDR conducted additional field investigations at the NOS Ash Landfill and submitted results to OPPD in a December 18, 2019 report entitled, *Title 132: Nature and Extent Investigation Report NOS CCR Landfill*.

OPPD has continued to comply with both NDEE solid waste regulations and the Federal CCR regulation and has made progress towards "selection of remedy" by obtaining additional site information necessary to understand the hydrogeologic system at the NOS Landfill.

Since July 2019 the following activities have been conducted:

- OPPD has conducted additional site characterization through field investigations which included the collection of soil, ash, and groundwater samples and installation of additional monitoring wells as part of the Nature and Extent Investigation activities,.
- A conceptual site model has been initiated to describe the site-specific geologic and hydrogeologic regimes that influence the extent and potential migration pathways of CCR and Title 132 constituents.

The following activities are proposed to be completed within the next 6-month period:

- Completion of the conceptual site model.
- Develop a 3-dimensional computer-based groundwater flow and transport model to create a digital representation of the groundwater flow system to predict groundwater movement and constituent fate and transport.