1.0 INTRODUCTION

This Parcel 3 Groundwater Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) Supplemental Sampling Work Plan (Work Plan) provides guidance for the groundwater monitoring activities to be conducted by NDN Sundance Joint Venture, LLC (NDN Sundance) at Fort Wingate Depot Activity (FWDA) in McKinley County, New Mexico (Figure 1-1). This Work Plan has been prepared in accordance with (IAW) the performance work statement under contract number W912PP21C0028.

This Work Plan has been prepared IAW the RCRA permit NM 6213820974, first issued in 2005. The RCRA Permit became effective on December 1, 2005, and was most recently revised in February 2015 (New Mexico Environment Department [NMED], 2015). Proposed monitoring includes quarterly water-elevation measurements and quarterly sampling for newly installed and existing monitoring wells.

1.1 PURPOSE

The objectives of performing the prescribed eight consecutive quarters of groundwater monitoring as an addendum to the Parcel 3 groundwater RFI are as follows.

- Conduct quarterly groundwater water-level measurements to determine if seasonal trends exist.
- Monitor and determine if dry monitoring wells have groundwater following precipitation events.
- Collect and analyze groundwater from newly installed and existing wells for metals, volatile organic compounds (VOCs), explosives, perchlorate, and select semi-volatile organic compounds (SVOCs) related to explosives to evaluate contaminant concentrations to supplement data from the first mobilization in the *Final Parcel 3 Groundwater RCRA Facility Investigation* (Sundance Consulting, Inc. [Sundance], 2019).
- Collect and analyze groundwater from newly installed and existing wells for four consecutive rounds for nitrate and nitrite to verify concentrations remain below screening values as presented in the 2017 Parcel 3 Groundwater RFI (Sundance, 2019).
- Collect and analyze groundwater from newly installed and existing background wells to determine if background monitoring wells are sufficient to perform a groundwater background study.
- Monitor groundwater flow and water quality parameters that affect contaminant fate and transport.
- Collect sufficient data to evaluate the results and conclusions from the 2017 Parcel 3 groundwater RFI report, fill data gaps from that report, and develop future recommendations.

1.2 REGULATORY BACKGROUND

The Army conducted a groundwater RFI in 2017 and reported the findings and recommendations in the *Final Parcel 3 Groundwater RCRA Facility Investigation Report* (Sundance, 2019). Following submission of the Final RFI report, NMED directed the Army to conduct eight consecutive rounds of quarterly groundwater monitoring to provide data to expand on the findings from the 2017 RFI Report. NMED comments in the letter *Disapproval for Final Parcel*

3 Groundwater RCRA Facility Investigation Report dated October 17, 2018, and NMED comments in the *Approval with Modifications, Final Revision 1 Parcel 3 Groundwater RCRA Facility Investigation Report* dated June 14, 2019 (FWDA-18-001) documented the required additional monitoring within and adjacent to Parcel 3. This supplemental Work Plan has been prepared in response to the conference call and the NMED letters to perform eight consecutive events of quarterly groundwater monitoring at Parcel 3.

Attachment 7 of the RCRA permit (NMED, 2015) provides a hierarchy for the selection of screening value criteria application to Parcel 3 groundwater monitoring. Groundwater analytical results are evaluated and compared to these screening values. The following documents and regulations are used to determine whether the concentration of a particular hazardous constituent exceeds the RCRA permit screening value (NMED, 2015).

1. New Mexico Water Quality Control Commission (NMWQCC) standards for the analytes listed in the New Mexico Administrative Code (NMAC) 20.6.2.7.T having the values listed in NMAC 20.6.2.3103 A and B.
2. U.S. Environmental Protection Agency (EPA) drinking water maximum contaminant levels (MCLs) provided under 40 Code of Federal Regulations (CFR) 141 and 40 CFR 143.
3. If both an NMWQCC standard and an EPA MCL have been established for a constituent of potential concern (CoPC), the lowest value of (1) and (2) above will be selected.
4. If no NMWQCC standard or EPA MCL has been established for a carcinogenic hazardous constituent, values will be selected from the most recent version of the EPA regional screening levels (RSLs) (EPA, 2022a) for tap water, adjusted to a target excess cancer risk level of 1×10^{-5}.
5. If no NMWQCC standard or EPA MCL has been established for a non-carcinogenic hazardous constituent, values will be selected from the most recent version of the EPA RSLs for tap water with a target hazard index of 1.0.
6. Previously, no NMWQCC standard or EPA MCL standard was published for perchlorate. An EPA MCL standard of 15 micrograms per liter (µg/L) was published in the November 2017 update, and was rescinded as of July 2020 (EPA, 2020). The previously selected EPA tap water RSL of 14 µg/L was followed for perchlorate IAW Attachment 7 of the RCRA permit for FWDA (NMED, 2015).

For some analytes, selected screening values have RSLs listed for both carcinogenic risks and non-carcinogenic hazards. IAW the RCRA permit, only the RSLs for carcinogens are adjusted to a cancer risk of 1×10^{-5}. Subsequent to this modification, the lower of the adjusted carcinogenic and the non-carcinogenic RSLs will be selected as the final screening value.

Reporting requirements are specified in the Work Plan IAW the RCRA permit. A schedule of regulatory deliverables is included in the Work Plan. RCRA permit Section V.A.2 requires the format to be consistent with General Reporting Requirements for Routine Groundwater Monitoring at RCRA Sites (NMED, 2003).

1.3 DOCUMENT ORGANIZATION

The remainder of this Work Plan is organized into the following sections.

- **Section 2** – presents the available site history and general description of FWDA and summarizes previous groundwater investigations.
- **Section 3 –** describes the proposed field methodology for groundwater sampling, sample management and sample handling, laboratory analysis requirements, and data quality assurance (QA).
- **Section 4 –** discusses project reporting.
- **Section 5 –** presents the project schedule.
- **Section 6** – presents works cited within this Work Plan.
- **Appendix A** – contains response to NMED Comments on the 2023 Supplemental Sampling Work Plan.
- **Appendix B** – contains example field forms used for data collection and documentation during execution of the quarterly monitoring activities.

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