



## **GUIDELINE 6 - CORRECTIVE ACTION OF SOLID WASTE MANAGEMENT FACILITIES**

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### **I. Introduction**

These guidelines are established pursuant to subsection 10 of Section 23.1-08-03 of North Dakota Century Code (NDCC) to supplement the North Dakota Solid Waste Management Rules for corrective action at solid waste management facilities. In the event the groundwater monitoring at a facility indicates that there has been a release resulting in a significant increase in contaminants, the facility's owner or operator should implement the following procedures. This document has been prepared by the North Dakota Department of Environmental Quality (Department) for the purpose of assisting owners and operators to fulfill regulatory and permit requirements.

### **II. Notification of Release**

The owner or operator, having reason to believe that a release has occurred, must notify the Department within seven days (1993 L.S., SB 2214 and North Dakota Administrative Code (NDAC) Article 33.1-16).

### **III. Corrective Measures Assessment**

- A. The permittee shall within ninety (90) days of finding that any of the constituents in the permittee's Groundwater Monitoring Plan have been detected indicating a significant increase, initiate an assessment of corrective measures.
1. This assessment must be completed within a reasonable period of time.
  2. The assessment must characterize the nature and extent of the contamination.
  3. As part of characterizing the nature and extent of the release, additional wells must be installed, if necessary. At least one well, however, must be installed at the facility boundary in the direction of contaminant migration to determine whether or not the contaminants have migrated past the facility boundary.
  4. Analysis of groundwater must initially consider all parameters of NDAC Article 33.1-16.
  5. The Department must be notified of assessment findings.
  6. If contamination has migrated offsite, the individuals who own land or reside on land overlying the plume must be notified.
  7. The assessment monitoring must be continued through the remedy selection phase.

8. All sampling and analysis must be conducted using appropriate Quality Assurance/Quality Control (QA/QC) procedures. All monitoring wells must be installed in accordance with Department guidelines.
- B. The assessment shall include an analysis of the effectiveness of potential corrective measures in meeting all of the requirements and objectives established in the remedy selection phase.

#### **IV. Remedy Selection**

- A. Based on data obtained in the Corrective Measures Assessment, the permittee must evaluate alternative corrective measures and select the appropriate remedy. The permittee will provide the Department within fourteen (14) days of selecting the remedy, a report describing the selected remedy. The remedy selected must:
1. Manage all solid wastes at the facility in a manner that is protective of human health and the environment and that complies with applicable state and federal regulations;
  2. Control the source(s) of releases so as to reduce or eliminate to the maximum extent practicable, further releases of contaminants into the environment that may pose a threat to human health or the environment (NDAC Article 33.1-16); and
  3. Attain the surface water and groundwater standards specified in NDAC Article 33.1-16 and NDAC Chapter 33.1-20-13 or alternate standards approved by the Department.
- B. In selecting a remedy, the permittee shall consider the following:
1. The long and short-term effectiveness and protectiveness and degree of certainty that the remedy will be successful;
  2. The effectiveness of the remedy in controlling the source to reduce further releases;
  3. The ease or difficulty in implementing the remedy;
  4. Technical and economic capability of the PERMITTEE; and
  5. The degree to which the community concerns are addressed.
- C. The permittee shall specify, as part of the remedy, a schedule for initiating and completing the remedial activities.
- D. The Department, on a case-by-case basis, may determine that remediation of a release is not necessary; however, the permittee may be required to initiate measures to eliminate or minimize further releases or to remediate the groundwater to concentrations that are technically practicable and significantly reduce threats to human health or the environment.
- E. During the remedy selection phase, the permittee shall conduct semiannual (or more frequent where necessary) groundwater monitoring for all constituents.

## **V. Remedy Implementation**

After the Corrective Measures Remedy is selected and approved by the Department, the permittee is required to implement the corrective measures, establish a corrective action groundwater monitoring program, and take any necessary interim measures. If, for some reason, a requirement for the remedy cannot be achieved, the permittee should notify the Department and obtain approval to implement an alternative measure. All solid wastes that are managed pursuant to the remedial activity shall be managed in a manner protective of human health and environmental resources and in accordance with all state and federal rules. Once implemented, corrective action must continue until compliance with the established groundwater standards is demonstrated within plumes of contamination that lie beyond the compliance boundary(ies). Upon completion of the remedy, the permittee must notify the Department within thirty (30) days that the remedy has been completed as required.