

**15A NCAC 13B .1636 SELECTION OF REMEDY**

(a) Based on the results of the corrective measures assessment, the owner or operator shall select a remedy that, at a minimum, meets the standards listed in Rule .1636(b). Within 14 days of selecting a remedy, the permittee shall submit an application to modify the permit describing the selected remedy to the Division for evaluation and approval. The application shall be subject to the processing requirements set forth in Rule .1604 (c) of this Section. The application shall include the demonstrations necessary to comply with the financial assurance requirements set forth in Paragraph (d) of Rule .1628.

(b) Remedies shall:

- (1) Be protective of human health and the environment;
- (2) Attain the approved ground-water protection standards;
- (3) Control the source(s) of releases so as to reduce or eliminate, to the maximum extent practicable, further releases of Appendix II constituents into the environment that may pose a threat to human health or the environment; and
- (4) Comply with standards for management of wastes as specified in Rule .1637(d); and

(c) In selecting a remedy that meets the standards of Rule .1636(b), the owner or operator shall consider the following evaluation factors:

- (1) The long-term and short-term effectiveness and protectiveness of the potential remedy(s), along with the degree of certainty that the remedy will prove successful based on consideration of the following:
  - (A) Magnitude of reduction of existing risks;
  - (B) Magnitude of residual risks in terms of likelihood of further releases due to wastes remaining following implementation of a remedy;
  - (C) The type and degree of long-term management required, including monitoring, operation, and maintenance;
  - (D) Short-term risks that might be posed to the community, workers, or the environment during implementation of such a remedy, including potential threats to human health and the environment associated with excavation, transportation, and redisposal or containment;
  - (E) Time until full protection is achieved;
  - (F) Potential for exposure of humans and environmental receptors to remaining wastes, considering the potential threat to human health and the environment associated with excavation, transportation, redisposal, or containment;
  - (G) Long-term reliability of the engineering and institutional controls; and
  - (H) Potential need for replacement of the remedy.
- (2) The effectiveness of the remedy in controlling the source to reduce further releases based on consideration of the following factors:
  - (A) The extent to which containment practices will reduce further releases; and
  - (B) The extent to which treatment technologies may be used.
- (3) The ease or difficulty of implementing a potential remedy based on consideration of the following types of factors:
  - (A) Degree of difficulty associated with constructing the technology;
  - (B) Expected operational reliability of the technologies;
  - (C) Need to coordinate with and obtain necessary approvals and permits from other agencies;
  - (D) Availability of necessary equipment and specialists; and
  - (E) Available capacity and location of needed treatment, storage, and disposal services.
- (4) Practicable capability of the owner or operator, including a consideration of the technical and economic capability.
- (5) The degree to which community concerns are addressed by a potential remedy.

(d) The owner or operator shall specify as part of the selected remedy a schedule for initiating and completing remedial activities. This schedule shall be approved by the Division. Such a schedule shall require the initiation of remedial activities within a reasonable period of time taking into consideration the factors set forth in this Rule. The owner or operator shall consider the following factors in determining the schedule of remedial activities:

- (1) Extent and nature of contamination;

- (2) Practical capabilities of remedial technologies in achieving compliance with the approved ground-water protection standards and other objectives of the remedy;
  - (3) Availability of treatment or disposal capacity for wastes managed during implementation of the remedy;
  - (4) Desirability of utilizing technologies that are not currently available, but which may offer significant advantages over already available technologies in terms of effectiveness, reliability, safety, or ability to achieve remedial objectives;
  - (5) Potential risks to human health and the environment from exposure to contamination prior to completion of the remedy;
  - (6) Resource value of the aquifer including:
    - (A) Current and future uses;
    - (B) Proximity and withdrawal rate of users;
    - (C) Ground water quantity and quality;
    - (D) The potential damage to wildlife, crops, vegetation, and physical structures caused by exposure to contaminants;
    - (E) The hydrogeologic characteristics of the facility and surrounding land;
    - (F) Ground water removal and treatment costs; and
    - (G) The costs and availability of alternative water supplies.
  - (7) Practical capability of the owner or operator; and
  - (8) Other relevant factors.
- (e) The Division may determine that active remediation of a release of an Appendix II constituent from a MSWLF unit is not necessary if the owner or operator demonstrates to the satisfaction of the Division that:
- (1) The ground water is additionally contaminated by substances that have originated from a source other than a MSWLF unit and those substances are present in concentrations such that active cleanup of the release from the MSWLF unit would provide no significant reduction in risk to actual or potential receptors; or
  - (2) The constituent or constituents are present in ground water that:
    - (A) Is not currently or reasonably expected to be a source of drinking water; and
    - (B) Is not hydraulically connected with water to which the hazardous constituents are migrating or are likely to migrate in concentrations that would exceed the approved ground-water protection standards; or
  - (3) Remediation of the releases is technically impracticable; or
  - (4) Remediation results in unacceptable cross-media impacts.
- (f) A determination by the Division pursuant to Rule. 1636(e) shall not affect the authority of the State to require the owner or operator to undertake source control measures or other measures that may be necessary to eliminate or minimize further releases to the ground water, to prevent exposure to the ground water, or to remediate ground water to concentrations that are technically practicable and significantly reduce threats to human health or the environment.

*History Note: Authority G.S. 130A-294;  
Eff. October 9, 1993.*