

## **Re-evaluation of Groundwater Management Zones at RCRA Facilities**

**April 6, 2002**

### **I. Introduction:**

35 Ill. Adm. Code Part 620.250 allows for the establishment of a Groundwater Management Zone (GMZ) within any class of groundwater. A GMZ is a three-dimensional region containing groundwater being managed to mitigate impairment caused by the release of contaminants from a site. A GMZ expires upon the Illinois EPA's receipt of appropriate documentation which confirms the achievement of applicable standards set forth in 35 Ill. Adm. Code Part 620, Subpart D.

The establishment of a GMZ, associated with RCRA closure activities, must have been approved by the Illinois EPA under an existing corrective action process. The Illinois EPA will review the on-going adequacy of the controls and continued management of the GMZ at the site, if concentrations of chemical constituents, as specified in 35 Ill. Adm. Code Part 620.450(a)(4)(B), remain in groundwater at the site. This review will take place no less than every five (5) years after the establishment of the GMZ and be submitted to the Illinois EPA for review in a written report.

### **II. Procedures:**

The written report will be reviewed by the Illinois EPA to evaluate the information provided in order to determine the adequacy of on-going controls and continued management of the GMZ at the site. The items below must be addressed thoroughly, and if appropriate, both historical and current information associated with the GMZ discussed. After review by the Illinois EPA, the Illinois EPA will issue a letter in regard to the: (1) on-going adequacy of the GMZ; (2) the continued management of the GMZ; and (3) conditions necessary to ensure that the requirements of 35 Ill. Adm. Code Part 620 continue to be met.

### **III. Format to be Utilized in a Re-Evaluation of a GMZ:**

The report addressing the evaluation of a GMZ must include, but need not be limited to, the following:

1. General information regarding the facility:
  - a. Facility name;
  - b. Facility address;

- c. County in which facility is located;
  - d. Illinois EPA, Bureau of Land, and USEPA Identification Numbers;
  - e. A general description of the type of industry, products manufactured, raw materials used, location and size of the facility, including SIC codes;
  - f. An identification of specific units (operating or closed) present at the facility for which the GMZ was approved;
  - g. A USGS topographic or county map showing the location of the site and a more detailed scaled map of the facility with each waste management unit identified in Item 1.f above. Map scale must be specific and the location of the facility must be provided with respect to Township, Section, and Range;
  - h. A description of the geology and hydrogeology within the GMZ and the surrounding area;
  - i. Groundwater classification at the site;
  - j. A description of the circumstances under which the release from each waste management unit identified in Item 1.f above, to groundwater was identified.
2. Information Regarding the Release, including:
- a. The chemical constituents released to the groundwater;
  - b. Identification of the chemical constituents detected in groundwater that are above the applicable standard in 35 Ill. Adm. Code Part 620;
  - c. A description of how the site has been investigated to determine the source or sources of the release;
  - d. A description of how groundwater has been monitored to determine the rate and extent of the release;
  - e. A description of the groundwater monitoring network and groundwater sampling protocols in place at the facility;
  - f. The schedule for monitoring of the groundwater; and
  - g. A summary of the results of groundwater monitoring associated with the release at each waste management unit identified in Item 1.f above. The summary of groundwater results should provide the following information:
    - i. Dates of sampling;

- ii. Identification of monitoring wells;
  - iii. Chemical constituents analyzed and concentrations in parts per million (ppm) for each monitoring well identified in Item 2.g.ii above;
- 3. Scaled drawings identifying the horizontal and vertical boundaries of the GMZ.
- 4. Information regarding the approved remedial action including:
  - a. A description of the approved remedial action;
  - b. A description of how the approved remedial action has impacted the release;
  - c. A description of how the approved remedial action is operated and maintained;
  - d. A projected schedule for completion of remediation;
  - e. An identification of any and all permits obtained from the Illinois EPA for the remedial action;
  - f. A description of how groundwater at the facility will be monitored following the future completion of the remedy to ensure that the groundwater quality standards have been attained;
  - g. A discussion addressing the adequacy of on-going controls and continued management of the GMZ at the site; and
  - h. Course of action for future activities and/or request for modification in regards to the GMZ at the site.
- 5. Point of Compliance:

In any GMZ, the goal is remediation of the groundwater to the level of the standards applicable to that class of groundwater. This goal does not mean all groundwater within the GMZ must be returned to the groundwater standard. On the other hand, groundwater within the GMZ that is beyond the point of compliance as established under 35 Ill. Adm. Code Part 620.505(a) is to be remediated to the level applicable to that groundwater class. However, groundwater contamination within the three-dimensional zone between the compliance point wells and the waste management unit could still exceed the applicable standards at completion of the corrective action. If this is the case, post-remediation monitoring may be necessary.