**Section 817.413 Groundwater Impact Assessment**

The impacts of the seepage of leachate from the unit shall be assessed in a systematic fashion using the techniques described in this Section.

a) Procedures for performing the groundwater impact assessment:

1) The operator shall estimate the amount of seepage from the unit during operations which assume:

A) That the minimum design standards for slope configuration, cover, liner, leachate drainage, and collection system apply; and

B) That the actual design standards planned for the unit apply. Other designs for the unit may be used if determined by the operator to be appropriate to demonstrate the impacts to groundwater.

2) The concentration of constituents in the leachate shall be determined from actual leachate samples from the waste or similar waste, or laboratory-derived extracts.

3) The operator shall estimate the capability of the geology and hydrology beneath the unit to meet the groundwater quality standards of Section 817.416 at the edge of the zone of attenuation. The estimate shall be made in accordance with the following:

A) Determine the aquifer conductivity and gradient using the hydrogeologic information collected pursuant Section 817.411. If the aquifer conductivity is 1x10-5 cm/sec or less, no further groundwater impact assessment is required;

B) Develop a conceptual groundwater flow model of the site to determine the soil units through which leachate constituents may migrate;

C) Determine the organic carbon content for soil units through which the leachate constituents may migrate;

D) Determine the retardation factor for constituents of interest based on traditional hydrogeological methods;

E) Determine MALC values for constituents of interest required to achieve compliance with the applicable groundwater quality standards specified at Section 817.416;

F) Compare the calculated MALC values to the leachate values for the expected waste streams to determine whether compliance with groundwater standards can be met.

b) Acceptable groundwater impact assessment. The groundwater impact shall be considered acceptable if the leachate values for the expected waste streams are less than the MALC values calculated in accordance with subsection 817.413(a)(3)(F).