

**Guidance for
Evaluation of Low Yield / Poor Quality Criteria**

Florida Department of Environmental Protection (FDEP)

Bureau of Waste Cleanup

Program & Technical Support Section

Tallahassee, FL

DRAFT

October 2008

Purpose

The purpose of this guidance is to provide clarification on when the demonstration of either “low yield” or “poor quality” for groundwater is appropriate for gaining relief from groundwater cleanup target levels (GCTLs) by utilizing the adjusted concentrations listed in Chapter 62-777, Florida Administrative Code (F.A.C.), Table 1, low yield/poor quality criteria column. Also included are items specific to meeting the technical requirements to qualify for using the low yield/poor quality criteria as site groundwater cleanup concentrations.

Scope

This guidance is intended to address the use of low yield/poor quality (LY/PQ) criteria at cleanup sites falling within the regulatory framework of Chapter 62-780, F.A.C. However, the cleanup of sites that participate in one of the program areas designated in Chapter 62-777, F.A.C., (i.e. Brownfields, Dry Cleaning and Petroleum programs) may also utilize this guidance.

Definitions for “Low Yield” and “Poor Quality”

“Low yield” means groundwater that is contained in an aquifer that has an average hydraulic conductivity of less than one foot per day, determined by performing slug tests or an equivalent method for determining hydraulic conductivity on a minimum of three monitoring wells in each affected monitoring zone; and a maximum yield of 80 gallons per day, determined by pumping a four-inch well screened across the cross-section of the plume, for a minimum of two hours. The cross-section of the plume in the definition is considered to be the saturated thickness of the impacted aquifer unless discrete groundwater sampling demonstrates a more appropriate vertical well screen interval.

“Poor quality” means groundwater within the affected monitoring zone with background concentrations, as defined in subsection 62-780.200(5), F.A.C., that exceed any of Florida’s Primary or Secondary Drinking Water Standards referenced in Chapter 62-550, F.A.C. In addition to this definition, the determination of “poor quality” for groundwater is contingent upon establishing background concentrations as referenced above, and the Department has made available to the public guidance for determining site specific background in groundwater in the document titled *“Guidance for Comparing Background and Site Chemical Concentrations in Groundwater”*. If it is determined that the background concentration for any constituent is above its Primary or Secondary Drinking Water Standard, then the LY/PQ criteria applies for all site contaminants having a LY/PQ concentration listed in Table 1 of Chapter 62-777, F.A.C., within the site boundary or the defined institutional control boundary.

Applicability

Chapter 62-780.680, F.A.C., includes three risk based strategies for site closure to bring completion of the cleanup process allowed under this rule. The first of these is risk management option I (RMO-I), and application of the low yield/poor quality criteria is not allowed under this option because this is basically a clean-closure scenario. The second is risk management option II (RMO-II), and use of the LY/PQ criteria is allowed with the restriction

that it applies only to groundwater within the property boundaries. The demonstration must be made, by a minimum of one year of groundwater monitoring data, that contaminant concentrations at the property boundaries do not, and will not, exceed the appropriate groundwater CTLs specified in subparagraph 62-780.680(1)(c)1., F.A.C., and will not affect a freshwater or marine surface water body pursuant to subparagraph 62-780.680(1)(c)2., F.A.C. An institutional control restricting groundwater use on the property is also a requirement for closure under RMO-II because this is not a clean-closure strategy. The third is risk management option III (RMO-III) that is also a risk based closure strategy, but allows for contamination extending offsite to be addressed in the corrective action process with the use of acceptable controls as required by Chapter 62-780, F.A.C.

The LY/PQ criteria concentrations listed in Table 1, Chapter 62-777, F.A.C. represent adjusted (less stringent) groundwater cleanup target levels afforded by virtue of groundwater in an aquifer meeting the specifics detailed in either of the definitions of “low yield” or “poor quality”. The decision to try and qualify a contamination site for use of the LY/PQ criteria begins with first having one or more contaminants in site groundwater above the Table 1 groundwater cleanup target levels (GCTLs) specified in Chapter 62-777, F.A.C. If concentrations are above the GCTLs, but below the LY/PQ criteria, then site closure may be possible without restoring site groundwater quality to the GCTLs by qualifying for use of the LY/PQ criteria. Should contaminant concentrations in site groundwater be above the LY/PQ criteria, then corrective action may be necessary to meet acceptable requirements for closure.

Discussion

It needs to be kept in mind that the assessment of vertical and horizontal extent of groundwater contamination is based on GCTL concentrations and not the LY/PQ criteria even though a site may qualify for its use. Also, this guidance, and all other guidance issued by the Program and Technical Support Section, can be found at the internet site address below.

Contacts

For any additional information or clarification regarding the appropriate use of this guidance, staff in the Department’s section of Program and Technical Support can be contacted on the web at <http://www.dep.state.fl.us/waste/categories/wc/pages/ProgramTechnicalSupport>, or by the following:

Mail: Department of Environmental Protection

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