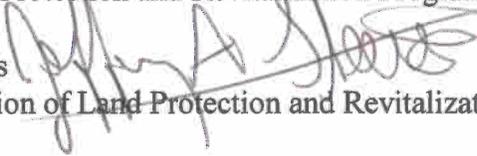


COMMONWEALTH OF VIRGINIA
Department of Environmental Quality

Subject: Division of Land Protection and Revitalization Guidance Memo No. 06-2011
AMENDMENT 7 and PHASE 1 MONITORING

To: Regional Land Protection and Revitalization Program Managers,

From: Jeffrey A Steers 
Director, Division of Land Protection and Revitalization

Date: August 3, 2011

Copies: Regional Directors

Summary

This guidance provides Regional groundwater staff with an overview of the implementation of VSWMR Amendment 7 First Determination Monitoring at those solid waste sites which previously monitored groundwater under the Phase 1 program which has been repealed under Amendment 7.

Electronic Copy

An electronic copy of this guidance is available on DEQ's website at <http://www.deq.virginia.gov/waste/guidance.html>.

Contact Information

Please contact the groundwater program coordinator, Mr. Geoff Christe at (804) 698-4283 or geoff.christe@deq.virginia.gov with any questions regarding the application of this guidance.

Disclaimer

This document is provided as guidance and, as such, sets forth standard operating procedures for the agency. However, it does not mandate any particular method nor does it prohibit any alternative method. If alternative proposals are made, such proposals should be reviewed and accepted or denied based on their technical adequacy and compliance with appropriate laws and regulations.



FIRST DETERMINATION MONITORING

I. Introduction

Prior to the implementation of Amendment 7 to the VSWMR, non-sanitary landfills, as well as sanitary landfills that met the VSWMR exemption requirements were allowed to conduct Phase 1 groundwater monitoring which entailed sampling and analysis for groundwater quality parameters including Specific Conductance, pH, total organic carbon (TOC), and total organic halogens (TOX). Sampling for specific groundwater constituents in the Table 5.1 or 5.5 lists was not required unless the facility recognized a statistical increase (or decrease in the case of pH) over site background, or an individual well background for any of the groundwater quality parameters listed above.

With the effective date of Amendment 7, sampling under the Phase 1 program will no longer be an option for landfill owner/operators. Instead, affected owner/operators shall implement the First Determination Monitoring program. The procedures contained in this guidance document apply to an owner/operator sampling groundwater under an original one-page Virginia Department of Health permit; An owner/operator sampling groundwater under the requirements of Permit Module X issued by the Department; and, an owner/operator sampling groundwater under the requirements of an Administrative Order.

II. Background

The Phase 1 monitoring program dates back to the December 21st, 1988 Department of Waste Management Solid Waste Management Regulations (VR 672-20-10). The program initially required the analysis for Specific Conductance (Sc), pH, TOC, TOX, hardness, sodium, chloride, iron, and lead. This parameter list was modified with the April 23rd, 2001 amendment of the VSWMR such that only Sc, pH, TOC, and TOX were required.

In the 20 plus years of Phase 1 monitoring, the Department file record demonstrates that the Phase 1 sampling parameters are a poor indicator of landfill impacts to an aquifer. The Department initially attempted to alleviate this issue with the promulgation of the Phase 1 Modified program during the 2003 amendment to the VSWMR. However that option proved difficult for owner/operators to track (a full table 5.1 sampling event every *other* year) and implement (uncertainty of where to go if a 5.1 detection was identified during that event).

Because of the demonstrated lack of utility of the Phase 1 monitoring results toward determining actual aquifer impact, the Department has decided to remove the program as a groundwater sampling option for regulated landfills with the implementation of Amendment 7.

III. Authority

§ 10.1-1402 of the Virginia Waste Management Act, Chapter 14 (§ 10.1-1400 *et seq.*) of Title 10.1 of the Code of Virginia, authorizes the Virginia Waste Management Board to promulgate regulations necessary to carry out its powers and duties and the intent of the Act.

IV. Definitions

The definitions found within the Virginia Waste Management Act and the Virginia Solid Waste Management Regulations (VSWMR or Regulation), 9 VAC 20-81 *et seq.*, have been used in this guidance.

V. Guidance Topics

First Determination Monitoring (FDM) Implementation

The requirements of FDM are described within 9 VAC 20-81-250.C.2. In a broad sense, the requirements include sampling for the constituents found in column A of Table 3.1 (formerly known as the Table 5.5 list) in an effort to determine site background. The sampling actions must include at least four (4) independent events completed during a period of time not to exceed a total of 360 days.

a. When would the initial FDM sampling event be expected to be conducted? Upon the effective date of Amendment 7, Phase 1 sampling and analysis will no longer be a regulatory option. Therefore, the next regularly scheduled sampling event after the Amendment 7 effective date shall be the initial FDM sampling event. For all practical purposes, those facilities sampling groundwater on a semi-annual basis will have conducted their initial FDM sampling event within six months of the Amendment 7 effective date.

b. My facility had previously been in Phase 2 monitoring years ago and went through the First Determination process already. Why do I have to redo the process again? Any owner/operator that can demonstrate that they have already completed the actions which would otherwise be required under 9 VAC 20-81-250.C.2 for the same wells that are currently part of the compliance network and for the same constituents listed under Table 3.1 column A may petition the Director under the Variance process to be relieved of the FDM regulatory burden. If a regularly scheduled groundwater sampling event is due during the timeframe of Variance processing, that sampling event should be conducted in accordance with the requirements of 9 VAC 20-81-250.C.2.c. If Variance approval is granted, the owner/operator shall conduct subsequent monitoring events in accordance with 9 VAC 20-81-250.C.2.c.

c. What if I have already sampled groundwater, but the laboratory has not yet begun its analysis, and Amendment 7 becomes effective during that timeframe? Because the sample was taken prior to the amended VSWMR becoming effective, the laboratory analysis associated with that sample can be completed using the previously required Phase 1 groundwater sampling parameters.

d. What if I have already started the FDM process under the old Regulation, prior to Amendment 7 becoming effective? In this case, because the FD process was started before Amendment 7 was effective, but will finish (i.e., collection of the last samples) after Amendment 7 is effective, all the applicable requirements and timeframes of Amendment 7 must be met in the completed First Determination.

e. When is my First Determination Report due to DEQ? 9 VAC 20-81-250.C.2.b.(2) requires your First Determination Report to be submitted to the Department within 30-days of completing your background calculations derived from the results of all four (4) of your independent background sampling events. Please recognize that 9 VAC 20-81-250.A.4.h.(2) allows an owner/operator 30-days from the completion of the laboratory analytical actions (taken to be the date the final analytical report is issued under signature from the laboratory) within which to determine if there has been an exceedance. For practical purposes then, the First Determination Report is due to the Department within 60-days from the date the lab issues its analytical report for the fourth and final FD background sampling event.

f. Can I obtain an extension to the submittal date of the First Determination Report? An extension request may be considered by the Regional Office if based on good cause. Please contact your groundwater representative to discuss potential options.

Conflicts Between Permit Requirements and Amendment 7 Language

g. My existing Solid Waste Permit requires that I sample for Phase 1 parameters and I intend to continue to sample in accordance with my Permit! Owner/operators should be advised of the language under 9 VAC 20-81-35.D which states:

“Where conflicts exist between the existing facility permit and the new requirements of the regulations, the regulations shall supersede the permit except where the standards in the permit are more stringent than the regulation. Language in an existing permit shall not act as a shield to compliance with the regulation, unless a variance to the regulations has been approved by the director in accordance with the provisions of Part VII (9VAC20-81-700 et seq.) of this chapter.”

h. Will the change in Amendment 7 require that I submit a request to amend my Permit to remove all references to Phase 1 monitoring? 9 VAC 20-81-35.D notes that: *“Existing facility permits will not be required to be updated to eliminate requirements conflicting with the regulation, except at the request of the director or if a permit is modified for another reason.”* The Department would encourage you to consider amending your Permit (Module X and the related Groundwater Monitoring Plan) to make it consistent with the revised regulatory language so your environmental consultant can conduct monitoring actions in a manner which demonstrates compliance with the new regulation.

Availability of Submission Instructions

The Department has not issued Submission Instructions for the First Determination Report. The submission has to include, at a minimum, the information required under 9 VAC 20-81-250.C.2.b.(2), as well as any other materials which support the conclusions presented in the submission.