



October 22, 2004

**RRD OPERATIONAL MEMORANDUM NO. 2**

**SUBJECT: SAMPLING AND ANALYSIS**

**Key definitions for terms used in this document:**

NREPA:	The Natural Resources and Environmental Protection Act, 1994 PA 451, as amended
Part 201:	Part 201, Environmental Remediation, of NREPA
Part 211:	Part 211, Underground Storage Tank Regulations, of NREPA
Part 213:	Part 213, Leaking Underground Storage Tanks, of NREPA
MDEQ:	Michigan Department of Environmental Quality
RRD:	Remediation and Redevelopment Division
Criteria or criterion:	Includes the cleanup criteria for Part 201 and the Risk-based Screening Levels as defined in Part 213 and R 299.5706a(4)
Facility:	Includes "facility" as defined by Part 201 and "site" as defined by Part 213
Response Action:	Includes "response activities" as defined by Part 201 and "corrective action" as defined by Part 213

**PURPOSE**

This operational memorandum has been prepared to facilitate implementation of Part 201, Part 211, and Part 213. This operational memorandum supercedes all previous MDEQ Part 201, Part 211, and Part 213 sampling and analysis guidance.

Generic cleanup criteria for groundwater and soil have been developed pursuant to Sections 20120a(1) and 21304a of NREPA (see RRD Operational Memorandum No. 1). These criteria are the risk-based values the department has determined to be protective of the public health, safety, or welfare and the environment. The evaluation of sampling data to establish compliance with cleanup criteria under the provisions of Part 201, Part 211, and Part 213 requires data that reliably establish representative concentrations of the hazardous substances in a given environmental medium. To facilitate gathering the information necessary for the department to determine compliance with the applicable provisions of Part 201, Part 211, or Part 213, this operational memorandum designates consistent sampling and analysis protocols and consolidates, as attachments, specific sampling and analysis related specifications for the following:

**Attachment 1. Target Detection Limits and Designated Analytical Methods**

This attachment provides direction for analytical target detection limits for site assessment, site investigation, and response activities under Part 201, Part 211, and Part 213. This attachment constitutes the department's published list of target detection limits and available analytical methods pursuant to R 299.5103(l).

**Attachment 2. Soil Leaching Methods**

This attachment provides specifications for soil leaching methods acceptable to the department to establish the concentration of a hazardous substance leaching from soil. Alternate methods are provided pursuant to R299.5722(3)(b).

**Attachment 3. Indoor Air Designated Methods and Target Detection Limits**

This attachment provides direction for acceptable methods and analytical target detection limits for acceptable indoor air concentrations for response activities under Part 201, and Part 213.

**Attachment 4. Sample Preservation, Sample Handling, and Holding Time Specifications**

This attachment provides specifications applicable for the collection, preservation, holding times, and handling of groundwater and soil samples applicable to site assessment, site investigation, and response activities under Part 201, Part 211, and Part 213.

**Attachment 5. Collection of Samples for Comparison to Generic Criteria**

This attachment provides direction for collection of groundwater and soils samples. Additional guidance regarding sampling strategies is available in RRD Operational Memorandum No. 4.

**Attachment 6. Sampling Methods for Volatile Organic Compounds**

This attachment provides specifications for the collection and preservation of samples collected to determine concentrations of volatile organic compounds, and is applicable for site assessments, site investigations, and response activities under Part 201, Part 211, and Part 213.

**Attachment 7. Low Level Mercury Sampling Specifications**

This attachment provides specifications for the collection of groundwater samples from monitoring wells to determine mercury concentrations for the evaluation of groundwater that vents to surface water, and is applicable to site assessments, site investigation, and response activities under Part 201, Part 211, and Part 213.

**Attachment 8. Assessments for Sites Contaminated with Petroleum Products**

This attachment provides direction for the assessment of sites contaminated with petroleum products released from leaking underground storage tanks, and is applicable to site assessment, site investigation, and response activities under Part 211, and Part 213.



This document is intended to provide direction and guidance for sampling and analysis conducted for facilities regulated under Part 201, Part 211, and Part 213. State programs administered under other parts of NREPA or Federal programs may have requirements in addition to this guidance. Questions about sampling and analysis requirements should be directed to appropriate program staff.

original signed by Andrew W. Hogarth on October 22, 2004

Dated: \_\_\_\_\_

Andrew W. Hogarth, Chief  
Remediation and Redevelopment Division

#### ATTACHMENTS

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This memorandum and its attachments are intended to provide direction and guidance to foster consistent application of Part 201, Part 211, and Part 213 and the associated administrative rules. This document is not intended to convey any rights to any parties or create any duties or responsibilities under the law. This document and matters addressed herein are subject to revision.