

MEMORANDUM

Department of Environmental Quality
Waste Division

SUBJECT: **Guidance Memo No. 01-2005** Guidance for Soil Analysis Required for Facilities Treating Petroleum Contaminated Soil Under the Provisions of 9 VAC 20-80-360

TO: Waste Compliance and Permitting Managers

FROM: Karen Jackson Sismour
Director, Waste Division

DATE: [Signed 03/11/05]

I. Introduction

Facilities that treat petroleum contaminated soil are required to obtain waste permits under the provisions of the Virginia Solid Waste Management Regulations (VSWMR) [9 VAC 20-80-485 A 2]. Both biological treatment (bioremediation) and thermal treatment (incineration) are used to remediate petroleum contaminated soil. Remediation facilities must meet the provisions for materials recovery facilities (MRFs) under the VSWMR [9 VAC 20-80-360].

II. Background

The operating requirements for MRFs [9 VAC 20-80-360 D 2] state that MRFs engaged in the remediation of petroleum contaminated soil must perform the analysis required in section 700 C of the VSWMR. The purpose of this guidance is to clarify the analysis that is required under the provisions of Section 700 C and to indicate when the analysis is to be performed.

III. Definitions

§10.1-1400 of the Code of Virginia defines “treatment” and “disposal” as follows:

"Treatment" means any method, technique or process, including incineration or neutralization, designed to change the physical, chemical or biological character or composition of any waste to neutralize it or to render it less hazardous or nonhazardous, safer for transport, amenable to recovery or storage or reduced in volume.

"Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

IV. Guidance

The permit-by-rule requirements for MRF [9 VAC 20-80-485 A 2 d] require materials recovery facilities to have an operation plan describing how the operating requirements for materials recovery facilities [9 VAC 20-80-360 D] will be met. One of the operational requirements for materials recovery facilities [9 VAC 20-80-360 D 2] states that facilities processing petroleum contaminated soil must perform analysis consistent with section 9 VAC 20-80-700 C. The permit-by-rule requirement [9 VAC 20-80-360 D 2] does not specify when the analysis is to be performed. The requirements of 700 C include specific analytical methods [9 VAC 20-80-700 C 1] that are to be used when analyzing petroleum contaminated soil as well as the frequency of analysis [9 VAC 20-80-700 C 2] for disposal (placement on the land). The section [700 C 2] provides a general sampling frequency based on the amount of soil to be disposed as well as a sampling frequency following processing for thermal treatment facilities. The general sampling frequency could be used either for materials that are still in place at a petroleum contaminated site or for materials that are undergoing bioremediation. Sampling frequency for thermal treatment facilities occurs following treatment of the soil. Alternative sampling frequency is allowed with director's approval.

Section 700 C 2 describes analysis required prior to disposal (placement on the land or in a landfill) and 360 D 3 d describe the analysis of the reclaimed product. It is clear that when soils are treated, the analyses are required after treatment and prior use as a reclaimed product (ie. Landfill cover, fill dirt etc).

No analyses are specifically required by the regulation prior to undergoing treatment at a remediation facility. The treatment facility (thermal or bioremediation) may not accept hazardous waste. A facility may require analyses or certifications to ensure that:

- the material is not a hazardous waste;
- the material is amenable to the remediation that the facility can provide;
- and the facility complies with any permits issued by the DEQ air or water division.

These analyses and certifications are generally included in the treatment facility's permit-by-rule.

The regulation only requires specific testing prior to disposal of the soil. Section 700 A, "Applicability," states that the requirements of this section apply to requests by disposal facilities (landfills) for the approval (from the department) for the disposal of petroleum contaminated soil. The provisions in 360 D 3 d also require documentation to be maintained at a treatment facility for soil to be disposed. According to the VSWMR "Disposal" means the discharge, deposit, injection, dumping, spilling, leaking or placing of any solid waste into or on any land or water so that such solid waste or any constituent of it may enter the environment or be emitted into the air or discharged into any waters.

V. Conclusion

When soil is contaminated with petroleum products, analysis is required to determine how the soil is to be managed after remediation. The contaminant in the soil is the only reason the material would be considered a waste rather than a natural resource. The

analysis required in Section 700 C of the regulations is required when soil is to be placed on the land. No specific analysis of waste soil is required by the regulations for acceptance at MRFs treating petroleum contaminated soil. According to the VSWMR, a MRF may not accept hazardous waste. The generator of the soil is responsible for providing the treatment facility a hazardous waste determination through testing of the soil or knowledge of the soil. The generator of the soil must be able to provide the treatment facility (MRF):

- The soil status under the hazardous waste regulations;
- Any information required by the treatment facility to comply with any permit issued by the air or water divisions of DEQ;
- Screening information to determine that soil is contaminated with petroleum products and is amenable to treatment using the technology available at the treatment facility;
- In addition, the facility itself may impose additional sampling as part of its standard operating procedures.

The treatment facility is required to test the treated soil in accordance to 700 C prior to disposal or use as clean fill of the soil as provided in 700 D. These analyses are provided to the disposal facility where soils are to be disposed.