

prevent any landfill fires from occurring. The operator of the landfill shall monitor the gas temperature at well heads, at a minimum, on a monthly basis.

(8) The operator of the landfill shall perform an annual surface topographic survey to determine the rate of the settlement of the waste in the test and control areas.

(9) The operator of the landfill shall monitor and record the frequency of odor complaints during and after liquid application events. EPA and VADEQ shall be notified of the occurrence of any odor complaints in the semi-annual report.

(10) The operator of the landfill shall collect representative samples of the landfill waste in the test areas on an annual basis and analyze the samples for the following solid waste stabilization and decomposition parameters: Moisture Content, Biochemical Methane Potential, Cellulose, Lignin, Hemicellulose, Volatile Solids and pH.

(11) The operator of the landfill shall report to the EPA Regional Administrator and the State Director on the information described in paragraphs (c)(1) through (10) of this section on a semi-annual basis. The first report is due within 6 months after the effective date of this section. These reporting provisions shall remain in effect for the duration of the project term.

(12) Additional monitoring, record keeping and reporting requirements related to landfill gas will be contained in a Federally Enforceable State Operating Permit (“FESOP”) for the VA Project XL Landfills issued pursuant to the Clean Air Act, 42 U.S.C. 7401 *et seq.* Application of this site-specific rule to the VA Project XL Landfills is conditioned upon the issuance of such a FESOP.

(13) This section applies until July 18, 2012. By July 18, 2012, the VA Project XL Landfills must return to compliance with the regulatory requirements which would have been in effect absent the flexibility provided through this section. If EPA Region 3’s Regional Administrator, the Commonwealth of Virginia and Waste Management agree to an amendment of the project term, the parties must enter into an amended or

new Final Project Agreement for any such amendment.

(14) The authority provided by this section may be terminated before the end of the 10 year period in the event of noncompliance with the requirements of paragraph (c) of this section, the determination by the EPA Region 3’s Regional Administrator that the project has failed to achieve the expected level of environmental performance, or the promulgation of generally applicable requirements that would apply to all landfills that meet or exceed the performance standard set forth in §258.40(a)(1). In the event of early termination EPA in consultation with the Commonwealth of Virginia will determine an interim compliance period to provide sufficient time for the operator to return the landfills to compliance with the regulatory requirements which would have been in effect absent the authority provided by this section. The interim compliance period shall not exceed six months.

[66 FR 42449, Aug. 13, 2001, as amended at 66 FR 44069, Aug. 22, 2001; 67 FR 47319, July 18, 2002; 69 FR 18803, Apr. 9, 2004]

§§ 258.42–258.49 [Reserved]

**Subpart E—Ground-Water Monitoring and Corrective Action**

**§ 258.50 Applicability.**

(a) The requirements in this part apply to MSWLF units, except as provided in paragraph (b) of this section.

(b) Ground-water monitoring requirements under §258.51 through §258.55 of this part may be suspended by the Director of an approved State for a MSWLF unit if the owner or operator can demonstrate that there is no potential for migration of hazardous constituents from that MSWLF unit to the uppermost aquifer (as defined in §258.2) during the active life of the unit and the post-closure care period. This demonstration must be certified by a qualified ground-water scientist and approved by the Director of an approved State, and must be based upon:

(1) Site-specific field collected measurements, sampling, and analysis of physical, chemical, and biological processes affecting contaminant fate and transport, and

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(2) Contaminant fate and transport predictions that maximize contaminant migration and consider impacts on human health and environment.

(c) Owners and operators of MSWLF units, except those meeting the conditions of §258.1(f), must comply with the ground-water monitoring requirements of this part according to the following schedule unless an alternative schedule is specified under paragraph (d) of this section:

(1) Existing MSWLF units and lateral expansions less than one mile from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in §§ 258.51-258.55 by October 9, 1994;

(2) Existing MSWLF units and lateral expansions greater than one mile but less than two miles from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in §§ 258.51-258.55 by October 9, 1995;

(3) Existing MSWLF units and lateral expansions greater than two miles from a drinking water intake (surface or subsurface) must be in compliance with the ground-water monitoring requirements specified in §§ 258.51-258.55 by October 9, 1996.

(4) New MSWLF units must be in compliance with the ground-water monitoring requirements specified in §§ 258.51-258.55 before waste can be placed in the unit.

(d) The Director of an approved State may specify an alternative schedule for the owners or operators of existing MSWLF units and lateral expansions to comply with the ground-water monitoring requirements specified in §§ 258.51-258.55. This schedule must ensure that 50 percent of all existing MSWLF units are in compliance by October 9, 1994 and all existing MSWLF units are in compliance by October 9, 1996. In setting the compliance schedule, the Director of an approved State must consider potential risks posed by the unit to human health and the environment. The following factors should be considered in determining potential risk:

(1) Proximity of human and environmental receptors;

(2) Design of the MSWLF unit;

(3) Age of the MSWLF unit;

(4) The size of the MSWLF unit; and

(5) Types and quantities of wastes disposed including sewage sludge; and

(6) Resource value of the underlying aquifer, including:

(i) Current and future uses;

(ii) Proximity and withdrawal rate of users; and

(iii) Ground-water quality and quantity.

(e) Owners and operators of all MSWLF units that meet the conditions of §258.1(f)(1) must comply with all applicable ground-water monitoring requirements of this part by October 9, 1997.

(f) Once established at a MSWLF unit, ground-water monitoring shall be conducted throughout the active life and post-closure care period of that MSWLF unit as specified in §258.61.

(g) For the purposes of this subpart, a *qualified ground-water scientist* is a scientist or engineer who has received a baccalaureate or post-graduate degree in the natural sciences or engineering and has sufficient training and experience in groundwater hydrology and related fields as may be demonstrated by State registration, professional Certifications, or completion of accredited university programs that enable that individual to make sound professional judgements regarding ground-water monitoring, contaminant fate and transport, and corrective-action.

(h) The Director of an approved State may establish alternative schedules for demonstrating compliance with §258.51(d)(2), pertaining to notification of placement of certification in operating record; §258.54(c)(1), pertaining to notification that statistically significant increase (SSI) notice is in operating record; §258.54(c)(2) and (3), pertaining to an assessment monitoring program; §258.55(b), pertaining to sampling and analyzing appendix II constituents; §258.55(d)(1), pertaining to placement of notice (appendix II constituents detected) in record and notification of notice in record; §258.55(d)(2), pertaining to sampling for appendix I and II to this part; §258.55(g), pertaining to notification (and placement of notice in record) of SSI above ground-water protection standard;

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§§ 258.55(g)(1)(iv) and 258.56(a), pertaining to assessment of corrective measures; § 258.57(a), pertaining to selection of remedy and notification of placement in record; § 258.58(c)(4), pertaining to notification of placement in record (alternative corrective action measures); and § 258.58(f), pertaining to notification of placement in record (certification of remedy completed).

[56 FR 51016, Oct. 9, 1991; 57 FR 28628, June 26, 1992, as amended at 58 FR 51547, Oct. 1, 1993; 60 FR 52342, Oct. 6, 1995]

### § 258.51 Ground-water monitoring systems.

(a) A ground-water monitoring system must be installed that consists of a sufficient number of wells, installed at appropriate locations and depths, to yield ground-water samples from the uppermost aquifer (as defined in § 258.2) that:

(1) Represent the quality of background ground water that has not been affected by leakage from a unit. A determination of background quality may include sampling of wells that are not hydraulically upgradient of the waste management area where:

(i) Hydrogeologic conditions do not allow the owner or operator to determine what wells are hydraulically upgradient; or

(ii) Sampling at other wells will provide an indication of background ground-water quality that is as representative or more representative than that provided by the upgradient wells; and

(2) Represent the quality of ground water passing the relevant point of compliance specified by Director of an approved State under § 258.40(d) or at the waste management unit boundary in unapproved States. The down-gradient monitoring system must be installed at the relevant point of compliance specified by the Director of an approved State under § 258.40(d) or at the waste management unit boundary in unapproved States that ensures detection of ground-water contamination in the uppermost aquifer. When physical obstacles preclude installation of ground-water monitoring wells at the relevant point of compliance at existing units, the down-gradient monitoring system may be installed at the

closest practicable distance hydraulically down-gradient from the relevant point of compliance specified by the Director of an approved State under § 258.40 that ensure detection of groundwater contamination in the uppermost aquifer.

(b) The Director of an approved State may approve a multiunit ground-water monitoring system instead of separate ground-water monitoring systems for each MSWLF unit when the facility has several units, provided the multiunit ground-water monitoring system meets the requirement of § 258.51(a) and will be as protective of human health and the environment as individual monitoring systems for each MSWLF unit, based on the following factors:

(1) Number, spacing, and orientation of the MSWLF units;

(2) Hydrogeologic setting;

(3) Site history;

(4) Engineering design of the MSWLF units, and

(5) Type of waste accepted at the MSWLF units.

(c) Monitoring wells must be cased in a manner that maintains the integrity of the monitoring well bore hole. This casing must be screened or perforated and packed with gravel or sand, where necessary, to enable collection of ground-water samples. The annular space (i.e., the space between the bore hole and well casing) above the sampling depth must be sealed to prevent contamination of samples and the ground water.

(1) The owner or operator must notify the State Director that the design, installation, development, and decommission of any monitoring wells, piezometers and other measurement, sampling, and analytical devices documentation has been placed in the operating record; and

(2) The monitoring wells, piezometers, and other measurement, sampling, and analytical devices must be operated and maintained so that they perform to design specifications throughout the life of the monitoring program.

(d) The number, spacing, and depths of monitoring systems shall be:

(1) Determined based upon site-specific technical information that must include thorough characterization of: