

[Comment: For dates of non-regulatory government publications, publications of recognized organizations and associations, federal rules, and federal statutory provisions referenced in this rule, see the last paragraph of rule 3745-76-01 of the Administrative Code titled "Incorporation by reference."]

- (A) Each owner or operator of an MSW landfill having a design capacity less than 2.5 million megagrams by mass or 2.5 million cubic meters by volume shall submit an initial design capacity report to the director as provided in paragraph (A) of rule 3745-76-12 of the Administrative Code. The landfill may calculate design capacity in either megagrams or cubic meters for comparison with the exemption values. Any density conversions shall be documented and submitted with the report. Submittal of the initial design capacity report shall fulfill the requirements of this chapter except as provided for in paragraphs (A)(1) and (A)(2) of this rule.
- (1) The owner or operator shall submit to the director an amended design capacity report, as provided for in paragraph (A)(3) of rule 3745-76-12 of the Administrative Code.
- (2) When an increase in the maximum design capacity of a landfill exempted from the provisions of paragraph (B) of rule 3745-76-07 of the Administrative Code to rule 3745-76-14 of the Administrative Code on the basis of the design capacity exemption in paragraph (A) of this rule results in a revised maximum design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, the owner or operator shall comply with the provision of paragraph (B) of this rule.
- (B) Each owner or operator of an MSW landfill having a design capacity equal to or greater than 2.5 million megagrams and 2.5 million cubic meters, shall either comply with paragraph (B)(2) of this rule or calculate an NMOC emission rate for the landfill using the procedures specified in rule 3745-76-09 of the Administrative Code. The NMOC emission rate shall be recalculated annually, except as provided in paragraph (B)(1)(b) of rule 3745-76-12 of the Administrative Code. The owner or operator of an MSW landfill subject to this chapter with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters is required to obtain a Title V permit.
- (1) If the calculated NMOC emission rate is less than fifty megagrams per year, the owner or operator shall:
- (a) Submit an annual emission report to the director, except as provided for in paragraph (B)(1)(b) of rule 3745-76-12 of the Administrative Code; and

- (b) Recalculate the NMOC emission rate annually using the procedures specified in paragraph (A)(1) of rule 3745-76-09 of the Administrative Code until such time as the calculated NMOC emission rate is equal to or greater than fifty megagrams per year, or the landfill is closed.
 - (i) If the NMOC emission rate, upon recalculation required in paragraph (B)(1)(b) of this rule, is equal to or greater than fifty megagrams per year, the owner or operator shall install a collection and control system in compliance with paragraph (B)(2) of this rule.
 - (ii) If the landfill is permanently closed, a closure notification shall be submitted to the director as provided for in paragraph (D) of rule 3745-76-12 of the Administrative Code.
- (2) If the calculated NMOC emission rate is equal to or greater than fifty megagrams per year, the owner or operator shall:
 - (a) Submit a collection and control system design plan prepared by a professional engineer to the director within one year:
 - (i) The collection and control system as described in the plan shall meet the design requirements of paragraph (B)(2)(b) of this rule.
 - (ii) The collection and control system design plan shall include any alternatives to the operational standards, test methods, procedures, compliance measures, monitoring, recordkeeping or reporting provisions of rule 3745-76-08 of the Administrative Code to 3745-76-13 of the Administrative Code proposed by the owner or operator.
 - (iii) The collection and control system design plan shall either conform with specifications for active collection systems in rule 3745-76-14 of the Administrative Code or include a demonstration to the director's satisfaction of the sufficiency of the alternative provisions to rule 3745-76-14 of the Administrative Code.
 - (iv) The director shall review the information submitted under paragraphs (B)(2)(a)(i), (B)(2)(a)(ii) and (B)(2)(a)(iii) of this rule and either approve it, disapprove it, or request that additional information be submitted. Because of the many site-specific factors involved with landfill gas system design, alternative systems may be necessary. A wide variety of system designs are possible, such as vertical wells, combination horizontal and vertical collection systems, or horizontal trenches only, leachate collection components, and passive systems.
 - (b) Install a collection and control system that captures the gas generated within the landfill as required under paragraph (B)(2)(b)(i) or (B)(2)(b)(ii) and

paragraph (B)(2)(c) of this rule within thirty months after the first annual report in which the emission rate equals or exceeds fifty megagrams per year, unless tier two or tier three sampling demonstrates that the emission rate is less than fifty megagrams per year as specified in paragraph (C)(1) or (C)(2) of rule 3745-76-12 of the Administrative Code.

(i) An active collection system shall:

(a) Be designed to handle the maximum expected gas flow rate from the entire area of the landfill that warrants control over the intended use period of the gas control or treatment system equipment;

(b) Collect gas from each area in the landfill where:

(i) Municipal solid waste has been placed for five years or more; or

(ii) Acceptance of municipal solid waste has ceased for at least two years;

(c) Collect gas at a sufficient extraction rate;

(d) Be designed to minimize off-site migration of subsurface gas.

(ii) A passive collection system shall:

(a) Comply with the provisions specified in paragraphs (B)(2)(b)(i)(a), (B)(2)(b)(i)(b), and (b)(2)(b)(i)(d) of this rule.

(b) Be installed with composite liners on the bottom and all sides in all areas in which gas is to be collected. The composite liners shall be designed and installed in accordance with 40 CFR 258.40 and the requirements contained in rules 3745-27-06 and 3745-27-07 of the Administrative Code.

(c) Route all the collected gas to a control system that complies with the requirements in either paragraph (B)(2)(c)(i), (B)(2)(c)(ii) or (B)(2)(c)(iii) of this rule.

(i) An open flare designed and operated in accordance with rule 3745-76-15 of the Administrative Code;

(ii) A control system designed and operated to reduce NMOC by ninety eight weight-percent, or, when an enclosed combustion device is used for control, to either reduce NMOC by ninety eight weight percent or reduce the outlet NMOC concentration to less than twenty parts per

million by volume, dry basis as hexane at three percent oxygen. The reduction efficiency or parts per million by volume shall be established by an initial performance test to be completed no later than one hundred eighty days after the initial startup of the approved control system, using the test methods specified in paragraph (D) of rule 3745-76-09 of the Administrative Code.

- (a) If a boiler or process heater is used as the control device, the landfill gas stream shall be introduced into the flame zone.
 - (b) The control device shall be operated within the parameter ranges established during the initial or most recent performance test. The operating parameters to be monitored are specified in rule 3745-76-11 of the Administrative Code;
 - (iii) Route the collected gas to a treatment system that processes the collected gas for subsequent sale or use. All emissions from any atmospheric vent from the gas treatment system shall be subject to the requirements of paragraph (B)(2)(c)(i) or (B)(2)(c)(ii) of this rule.
 - (d) Operate the collection and control device installed to comply with this chapter in accordance with the provisions of rules 3745-76-08, 3745-76-10, and 3745-76-11 of the Administrative Code.
 - (e) The collection and control system may be capped or removed provided that all the conditions of paragraphs (B)(2)(e)(i), (B)(2)(e)(ii), and (B)(2)(e)(iii) of this rule are met:
 - (i) The landfill shall be a closed landfill as defined in rule 3745-76-01 of the Administrative Code. A closure report shall be submitted to the director as provided in paragraph (D) of rule 3745-76-12 of the Administrative Code;
 - (ii) The collection and control system shall have been in operation a minimum of fifteen years from when the first well was installed and put into operation; and
 - (iii) Following the procedures specified in paragraph (B) of rule 3745-76-09 of the Administrative Code, the calculated NMOC gas produced by the landfill shall be less than fifty megagrams per year on three successive test dates. The test dates shall be no less than ninety days apart, and no more than one hundred eighty days apart.
- (C) For purposes of obtaining an operating permit under Title V of the Clean Air Act, the owner or operator of a MSW landfill subject to this chapter with a design capacity less than 2.5 million megagrams or 2.5 million cubic meters is not subject to the

requirement to obtain an operating permit for the landfill under Title V, unless the landfill is otherwise subject to Title V. For purposes of submitting a timely application of an operating permit under Title V, the owner or operator of a MSW landfill subject to this chapter with a design capacity greater than or equal to 2.5 million megagrams and 2.5 million cubic meters, and not otherwise subject to Title V, becomes subject to the requirements of Title V regardless of when the design capacity report is actually submitted, no later than:

- (1) June 10, 1996 for MSW landfills that commenced construction, modification, or reconstruction on or after May 30, 1991 but before March 12, 1996;
 - (2) Ninety days after the date of commenced construction, modification, or reconstruction for MSW landfills that commence construction, modification, or reconstruction on or after March 12, 1996.
- (D) When a MSW landfill subject to this chapter is closed, the owner or operator is no longer subject to the requirement to maintain an operating permit under Title V for the landfill if the landfill is not otherwise subject to the requirements of Title V and if either of the following conditions are met:
- (1) The landfill was never subject to the requirement for a control system under paragraph (B)(2) of this rule; or
 - (2) The owner or operator meets the conditions for control system removal specified in paragraph (B)(2)(e) of this rule.

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Certification

06/16/2011

Date

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