

US EPA ARCHIVE DOCUMENT

## PRE-PUBLICATION COPY NOTICE:

The EPA Administrator signed the following final rule on March 21, 2016:

### **REVISION TO THE RESEARCH, DEVELOPMENT AND DEMONSTRATION PERMITS RULE FOR MUNICIPAL SOLID WASTE LANDFILLS**

**[RIN 2050-AG75; FRL 9943-87-OLEM]**

This is a **pre-publication** version of the final rule that EPA is submitting for publication in the *Federal Register*. While the Agency has taken steps to ensure the accuracy of this Internet version of the final rule, it is not the official version of the final rule. Please refer to the official version of the final rule that will appear in a forthcoming *Federal Register* publication. Once the official version of the final rule publishes in the *Federal Register*, the prepublication version of the final rule that appears on the website will be replaced with a link to the final rule that appears in the *Federal Register* publication.

The docket number for this rulemaking is **EPA-HQ-RCRA-2015-0126**. For further information about the docket, please consult the ADDRESSES section in the front of the final rule.

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 258**

**[EPA-HQ-RCRA-2015-0126; FRL-9943-87-OLEM]**

**RIN 2050-AG75**

**Revision to the Research, Development and Demonstration Permits Rule for Municipal Solid Waste Landfills**

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Final rule.

**SUMMARY:** The Environmental Protection Agency (EPA) is publishing a final rule to revise the maximum permit term for Municipal Solid Waste Landfill (MSWLF) units operating under Research, Development and Demonstration (RD&D) permits. The RD&D permit program, which began in 2004, allows landfill facilities to utilize innovative methods that vary from the run-on control systems, liquids restrictions, and final cover criteria prescribed in 40 CFR part 258 if these systems are determined by the Director of an approved State to be at least as protective as those criteria. The current rule limits permits for these units to three years, and they are renewable three times for a total permit term of 12 years. This revision allows the Director of an approved State to increase the number of permit renewals to six, for a total permit term of up to 21 years.

**DATES:** This final rule is effective on **[INSERT DATE 6 MONTHS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** The EPA has established a docket for this action under Docket ID No. EPA-HQ-RCRA-2015-0126. All documents in the docket are listed on the

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<http://www.regulations.gov> web site. Although listed in the index, some information is not publicly available, e.g., CBI or other information whose disclosure is restricted by statute.

Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available electronically through <http://www.regulations.gov>.

**FOR FURTHER INFORMATION CONTACT:** Craig Dufficy, Materials Recovery and Waste Management Division of the Office of Land and Emergency Management (mail code 5304P), U.S. Environmental Protection Agency, 1200 Pennsylvania Avenue, NW, Washington, DC 20460; telephone: 703-308-9037; e-mail: [Dufficy.craig@epa.gov](mailto:Dufficy.craig@epa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **I. General Information**

##### *A. Does this action apply to me?*

Entities potentially affected by this rule are public or private owners or operators of MSWLFs. These entities include:

<b>Category</b>	<b>Example of affected entities</b>
State Governments	Regulatory agencies and agencies operating landfills.
Industry	Owners or operators of municipal solid waste landfills.
Municipalities, including Tribal Governments	Owners or operators of municipal solid waste landfills.

The affected entities may also fall under the North American Industry Classification System (NAICS) code 924110, Sanitation engineering agencies, government; or 562212, Solid Waste Landfill. This list of sectors is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. This table lists the types of entities that the EPA believes could potentially be regulated by this action. Other types of entities not

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listed in the table could also be regulated. To determine whether your entity is regulated by this action, you should carefully examine the applicability criteria found in 40 CFR part 258 and the Research, Development and Demonstration Permits for Municipal Solid Waste Landfills final rule, referred to as the “2004 RD&D rule” (69 FR 13242, March 22, 2004). If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the **FOR FURTHER INFORMATION CONTACT** section.

### *B. What action is the agency taking?*

The EPA is revising the maximum permit term for MSWLF units operating under RD&D permits. The rule allows the Director of an approved State to issue up to six, 3-year permit renewals, for a total permit term of 21 years. The RD&D rule previously limited the total permit term to 12 years.

The primary basis for this extension of the permit period to up to 21 years is to provide the EPA more time to characterize the performance of RD&D projects without making the permit period so long as to be open-ended. The EPA believes that the period of 21 years strikes an appropriate balance between providing more time for projects to continue operations as research facilities, while providing enough time for the EPA to consider making additional changes to the part 258 MSWLF regulations.

### *C. What is the agency's authority for taking this action?*

The authority for this rulemaking is sections 1008, 2002(a), 4004, 4005(c), 4010 and 8001(a) of the Resource Conservation and Recovery Act of 1976 (RCRA), as amended, 42 U.S.C. 6907, 6912(a), 6944, 6945(c), 6949a, 6981(a).

### *D. What are the anticipated effects and benefits of this action?*

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The anticipated effect of this action is to provide the Director of an approved State the ability to issue renewals to existing RD&D permits, as well as new RD&D permits, for up to 21 years instead of 12 years. During this time, the EPA will continue to evaluate data from these facilities. There are approximately 30 facilities currently operating with RD&D permits. It is also relevant to one facility operating on tribal lands under a site-specific action. Additional facilities may also seek an RD&D permit in the future. The EPA has no information with which to estimate whether any new facilities will seek RD&D permits. Owners/operators operating under existing RD&D permits are not expected to incur any new costs as a result of this final rule. The annual costs for ongoing recordkeeping and annual reporting requirements are estimated at \$2,410 per facility.

It is important to note that applying for a RD&D permit remains voluntary. This action does not impose any new regulatory burden. This action allows the Director of an approved State to increase the number of extensions of the permit period for existing facilities, or offer more extensions of the permit term for new facilities, for those owners and operators who choose to participate in this research program. Increasing the possible number of extensions of the RD&D permit term may benefit current owners and operators of RD&D units by providing additional time to recover their costs, if the Director of an approved State chooses to extend existing permits. For example, data from one RD&D permitted facility show a projected increase of 3% in the rate of return for 20 years compared to 12 years.<sup>1</sup>

Increasing the possible number of extensions of RD&D permit terms is also expected to provide more time for the EPA to collect additional data on the potential benefits of the approaches being taken under these RD&D permits. These potential benefits include: decreased

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<sup>1</sup> See docket item EPA-HQ-RCRA-2015-0126-0012, Smiths Creek Bioreactor Report.

costs for leachate treatment due to leachate recirculation in bioreactors; increased revenue from the sale of landfill gas for use as a renewable source of fuel; decreased risk due to a reduction in the transportation of leachate for treatment; accelerated production and capture of landfill gas for use as a renewable fuel; and accelerated stabilization and corresponding decreased post-closure care activities, for facilities as a result of the accelerated decomposition of waste.

## II. Background

Under Subchapter IV of RCRA, 42 U.S.C. §§ 6941-6949a, the EPA has promulgated minimum national standards for MSWLFs at 40 CFR part 258 (56 FR 50978, October 9, 1991). As specified in 42 U.S.C. § 6981(a), RCRA also directs EPA to encourage research and development for, among other things, the development and application of new and improved methods of collecting and disposing of solid waste.

The initial 1991 MSWLF regulations addressed seven basic areas: location restrictions; operation; design; groundwater monitoring; corrective action; closure and post-closure care; and financial assurance. These MSWLF landfill regulations focused on dry-tomb landfills to minimize the possibility of groundwater contamination from the production and subsequent leakage of leachate. After the promulgation of those standards, the EPA became aware that landfill technology had advanced sufficiently that some alternative designs and operations could benefit from further study through research and demonstration projects. For example, some of these methods, particularly the addition of liquids and leachate recirculation, could accelerate biodegradation and provide additional potential benefits. These include:

- acceleration of landfill gas generation which can be collected as a source of renewable fuel;

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- minimization of leachate treatment requirements during the operational life of the landfill;
- more rapid reduction in concentration of leachate constituents of concern, thereby limiting the corresponding post-closure activities for leachate control; and
- an increase in the rate of landfill settlement resulting in the more efficient use of permitted landfill capacity.

As a means to advance innovation in landfill design, in 2000 the EPA selected four landfills to participate in its Project XL program<sup>2</sup>, all of which involved some use of bioreactor technology or leachate recirculation. The landfills are located in Buncombe County, North Carolina; Yolo County, California; King George County, Virginia; and the Maplewood facility in Amelia County, Virginia.

In addition to Project XL, in 2001 the EPA began using Cooperative Research and Development Agreements (CRADAs) to promote collaborative research between federal and non-federal scientists as an additional means to explore the addition of liquids to landfills to promote faster biodegradation and stabilization. Bioreactor landfill sites operating with CRADAs include the Outer Loop landfill in Louisville, Kentucky; and the Polk County landfill in Florida.

Subsequently, in 2004, the EPA amended the part 258 MSWLF regulations to create a broader RD&D research program. The 2004 RD&D action (69 FR 13242, March 22, 2004), which added § 258.4, enabled the Director of an approved State to allow RD&D projects with variances to specific provisions of the MSWLF criteria, including variances from operating

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<sup>2</sup> EPA began Project XL in 1995, and accepted projects until 2002, as a national pilot program to help business, state and local governments, and federal facilities work with EPA to develop and test innovative approaches to achieve better and more cost-effective environmental and public health protection. The provisions for the four Project XL landfills discussed here are codified in § 258.41.

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criteria in part 258 with respect to run-on controls (§ 258.26(a)(1)) and the liquids restrictions in § 258.28(a). In addition, the 2004 RD&D rule allows an additional variance for the final cover requirements set forth in the closure criteria in § 258.60(a)(1), (a)(2) and (b)(1). The 2004 RD&D rule limits the duration of the initial permit to three years, and the permit can be renewed for up to three additional 3-year terms, for a total of 12 years.

As of March 2014, in the most recent compilation of data available to the EPA, there were 30 active RD&D projects in 11 approved states and one project on tribal lands.<sup>3</sup> The maximum permit period for the first of these projects is coming to an end. This final rule allows the Director of an approved State to continue to extend the permit period for up to a total of 21 years to allow for continued research.

### A. *What did EPA Propose?*

EPA proposed this rulemaking through an action in the Federal Register published at 80 FR 70180, November 13, 2015. EPA proposed to allow the Director of an approved State to increase the maximum term for RD&D permits from 12 to 21 years at § 258.4(e)(1), in order to provide the EPA more time to continue to support research into the performance of bioreactors, alternative covers and run-on systems. In effect, the proposal would allow the Director of an approved State to increase the number of permit renewals from three to six. The EPA did not propose any other changes to the RD&D permit program and made it clear that EPA was not reopening at this time any other provision of the existing RD&D rule or MSWLF criteria in 40 CFR part 258.

Separately from this final rule, the EPA plans to publish an Advanced Notice of Proposed Rulemaking (ANPRM) seeking comment on the possibility of revising other sections of the

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<sup>3</sup> Permitting of Landfill Bioreactor Operations: Ten years After the RD&D Rule, EPA document number EPA/600/R-14/335.

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MSWLF criteria (40 CFR part 258) to authorize the operation of wet landfills and bioreactors and other possible changes to the national criteria on a permanent basis. Interested parties will have an opportunity to comment on broader issues relating to bioreactor operation during the public comment period on that ANPRM.

In response to the 80 FR 70180, November 13, 2015 proposed rule, the Agency received six sets of comments during the comment period that closed on December 14, 2015. The six sets of comments were from: The States of Iowa, Kansas, Michigan and Nebraska; the Southeast Michigan Council of Governments, and the Solid Waste Disposal and Conversion Task Force of the Association of State and Territorial Solid Waste Management Officials. All comments can be reviewed on-line at <http://www.regulations.gov/>, using “EPA-HQ-RCRA-2015-0126” in the search box, and then by opening the docket folder and select ‘view comments’ to review any or all of the comments.

Five of the six commenters expressed support for extending maximum permit term for RD&D permits to EPA’s proposed term of 21 years. Several commenters (including the one commenter that did not support an extension to 21 years) indicated support for eliminating the overall permit term entirely, arguing that any time limit may discourage entities from making investments. Several commenters also encouraged the EPA to establish a mechanism to convert RD&D permits into permanent designs and operational practices subject to appropriate monitoring and performance standards as administered by an approved state. Commenters indicated support for making permanent changes to the regulations at 40 CFR part 258 to authorize bioreactor operations.

After consideration of these comments, and in light of other information in the record, the EPA has decided to issue the final rule as proposed. The EPA disagrees with the comments that

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the RD&D permit program should not be time-limited, which is consistent with the EPA position since the original RD&D rule was promulgated in 2004. The RD&D permits have always been intended to be used for innovation and experimentation for a limited period of time. As such, the RD&D rule is not intended to authorize activities on a permanent basis, as unlimited renewals could effectively allow. In addition, EPA notes that the commenters did not suggest an alternative, discrete, maximum time frame other than EPA's proposal for a maximum permit term of 21 years.

The issue of making changes to the part 258 regulations to authorize bioreactor operations on a permanent basis is outside the scope of this rule, as EPA stated in the proposed rule (80 FR 70180, November 13, 2015). As discussed previously, EPA plans to publish an ANPRM requesting data relating to wet landfills and bioreactors. EPA intends this ANPRM to begin the process of considering additional changes to the part 258 regulations. In that proceeding, the commenters are free to raise concerns about how existing RD&D projects can be appropriately addressed under any potential future amendments to the existing MSWLF regulations. Thus, the comments did not change EPA's view that a maximum term of 21 years is an appropriate balance between allowing more time for continued research by EPA and allowing the facilities to continue operating for a significant but not open-ended period of time.

### *B. Basis for this Final Rule*

In the 2004 RD&D final rule, the EPA made clear its intention that MSWLF RD&D permits be of limited duration while also providing data to support future rulemaking. This final rule is intended to further these dual goals. Although the EPA does not expect that all RD&D permits will necessarily extend to the full permit term, the EPA believes that the current 12-year time limit may not be sufficient to realize potential benefits in all cases. Thus, extending the

permit period for up to 21 years will provide more time to collect data on potential benefits and any problems without making the permit period so long as to be open-ended.

Extending the maximum permit term will help continuing efforts to collect data at existing RD&D units. If the EPA did not take this action, owners and operators using existing RD&D permits would need to make significant modifications to their disposal units or cease operation altogether, before reaching the end of their normal operations or closure. Because of the potential environmental benefits that may be derived from bioreactors, alternative cover designs, and run-on systems, the EPA believes that it is important to extend the maximum permit period to 21 years to provide more time to characterize the performance of RD&D projects without making the permit period so long as to be open-ended.

The EPA also wishes to enhance the economic feasibility to build and operate bioreactors or employ alternative approaches for final covers, which would provide additional sources of data in the future. The EPA has heard from stakeholders that limiting the permit period to 12 years has the unintended consequence of discouraging the development of bioreactors.

*C. Implementation of this Final Rule*

This rule does not require states with EPA-approved RD&D programs to modify their solid waste permit programs. Since this change to the 2004 RD&D rule provides more flexibility than existing federal criteria, states are not required to amend existing solid waste permit programs that have been determined by EPA to be adequate under 40 CFR part 239. At the same time, the RD&D rule (including the revised maximum permit term) is not self-implementing, and states are required to adopt the RD&D rule and obtain EPA approval for their RD&D program in order to issue a RD&D permit. States previously approved to issue RD&D permits that wish to increase the total length of time for which RD&D permits can be issued will need to notify the

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EPA in accordance with 40 CFR part 239. States with EPA-approved solid waste permit programs that have not previously sought approval for an RD&D program and now wish to do so will need to apply to EPA for approval of an RD&D program, including approval of the longer time period allowed by this rulemaking. Any state without an EPA-approved solid waste permit program may submit an application to EPA for a determination of adequacy under 40 CFR part 239 and may include a request for approval of the RD&D permit provisions reflecting the longer time period allowed by this rule. For MSWLF units located in Indian Country, EPA intends to consider the longer maximum permit term when issuing or modifying any site-specific RD&D rule. EPA has previously issued draft guidance on the site-specific flexibility request process in Indian Country. *See* “Site-Specific Flexibility Requests for Municipal Solid Waste Landfills in Indian Country,” EPA 530-R-97-016, August 1997.

### III. Statutory and Executive Orders Reviews

Additional information about these statutes and Executive Orders can be found at

<http://www.epa.gov/laws-regulations/laws-and-executive-orders>.

*A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is not a significant regulatory action and was therefore not submitted to the Office of Management and Budget (OMB) for review.

*B. Paperwork Reduction Act (PRA)*

This action does not impose any new Information Collection Request (ICR) burden under the PRA. The purpose of this action is to extend the maximum allowable permit period for this program, and this change to the RD&D program itself does not impose any additional reporting requirements. The OMB has previously approved the information collection activities contained

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in the existing regulations in two different, applicable ICRs. The ICRs affected by this proposal are for 40 CFR part 239, Requirements for State Permit Program Determination of Adequacy and part 258, MSWLF Criteria. The OMB has reviewed the ICR for part 239 (ICR# 1608.07, OMB# 2050–0152). The EPA will request comments under the ICR review process from states that plan to make these revisions so that the EPA can better understand the expected burden that would be incurred by states who wish to make these changes. In addition, the EPA will also be requesting information from MSWLF owners/operators on the reporting burden that they would incur under an extended permit term provided in accordance with this rule under the part 258, MSWLF criteria ICR (ICR# 1381.09, OMB# 2050–0122) when that review process begins. This process is scheduled to be completed in June 2016.

### *C. Regulatory Flexibility Act (RFA)*

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. In making this determination, the impact of concern is any significant adverse economic impact on small entities. An agency may certify that a rule will not have a significant economic impact on a substantial number of small entities if the rule relieves regulatory burden, has no net burden or otherwise has a positive economic effect on the small entities subject to the rule. This rule will not create any additional burden for small entities. Small entities are not required to take any action as a consequence of this rule, and this action will not have a significant impact on a substantial number of small entities. We have therefore concluded that this action will have no net regulatory burden for all directly regulated small entities.

### *D. Unfunded Mandates Reform Act (UMRA)*

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This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local or tribal governments or the private sector. The costs involved in this action are imposed only by voluntary participation in a federal program.

### *E. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

### *F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*

This action does not have tribal implications as specified in Executive Order 13175. The EPA has concluded that this action will have no new tribal implications, nor would it present any additional burden on the tribes. It will neither impose substantial direct compliance costs on tribal governments, nor preempt tribal law. Thus, Executive Order 13175 does not apply to this action.

### *G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*

This action is not subject to Executive Order 13045, because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. The underlying RD&D rule requires all RD&D permits to include terms and conditions that are at least as protective as the criteria for municipal solid waste landfills to assure protection of human health and the environment, and this rule does not reopen or otherwise change that requirement.

*H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution or Use*

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

*I. National Technology Transfer and Advancement Act (NTTAA)*

This rulemaking does not involve technical standards.

*J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations.*

The EPA believes the human health and environmental risk addressed by this action will not have a new disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations. The underlying RD&D regulations require all RD&D permits to include terms and conditions that are at least as protective as the criteria for municipal solid waste landfills to assure protection of human health and the environment. This final rule is an administrative action to extend the maximum permit period, and it does not reopen or otherwise change the requirement for protectiveness. Therefore, the EPA finds that the human health and environmental risks addressed by this action will not have disproportionately high and adverse human health or environmental effects on minority, low-income or indigenous populations, because this action does not affect the level of protection provided to human health or the environment.

*K. Congressional Review Act (CRA)*

This action is subject to the CRA, and the EPA will submit a rule report to each House of the Congress and to the Comptroller General of the United States. This action is not a “major rule” as defined by 5 U.S.C. 804(2).

**List of Subjects in 40 CFR Part 258**

Environmental protection, Municipal landfills, Reporting and recordkeeping requirements,  
Waste treatment and disposal.

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

\_\_\_\_\_  
Gina McCarthy,  
Administrator.

For the reasons set forth in the preamble, EPA amends 40 CFR part 258 as follows:

**PART 258—CRITERIA FOR MUNICIPAL SOLID WASTE LANDFILLS**

1. The authority citation for part 258 continues to read as follows:

Authority: 33 U.S.C. 1345(d) and (e); 42 U.S.C. 6902(a), 6907, 6912(a), 6944, 6945(c) and 6949a(c), 6981(a).

**Subpart A—General**

2. Revise § 258.4(e)(1) to read as follows:

**§ 258.4 Research, development, and demonstration permits.**

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(e) \*\*\*

(1) The total term for a permit for a project including renewals may not exceed twenty-one (21) years; and

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