

US EPA ARCHIVE DOCUMENT

Commodity	Parts per million
Apple .....	1.0
Apple, wet pomace .....	3.0
Brassica, head and stem, subgroup .....	5.0
Alfalfa, forage .....	10
Alfalfa, hay .....	50
Cattle, fat .....	1.5
Cattle, meat .....	0.05
Cattle, meat byproducts .....	0.03
Corn, sweet, forage .....	10
Corn, sweet, kernel plus cob with husk removed .....	0.02
Corn, sweet, stover .....	15
Cotton gin byproducts .....	15
Cotton, undelinted seed .....	2.0
Goat, fat .....	1.5
Goat, meat .....	0.05
Goat, meat byproducts .....	0.03
Hog, fat .....	1.5
Hog, meat .....	0.05
Hog, meat byproducts .....	0.03
Horse, fat .....	1.5
Horse, meat .....	0.05
Horse, meat byproducts .....	0.03
Lettuce, head .....	5.0
Lettuce, leaf .....	10
Milk .....	0.15
Milk, fat .....	4.0
Pear .....	0.20
Peanut .....	0.01
Peanut, hay .....	40
Potato .....	0.01
Sheep, fat .....	1.5
Sheep, meat .....	0.05
Sheep, meat byproducts .....	0.03
Soybean, aspirated grain fractions .....	45
Soybean, hulls .....	4.0
Soybean, seed .....	0.80
Vegetable, fruiting, group .....	0.50

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**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 258**

[FRN-7247-4]

RIN 2090-AA30

**Project XL Site-Specific Rulemaking for Implementing Waste Treatment Systems at Two Virginia Landfills**

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

**ACTION:** Final rule.

**SUMMARY:** Today EPA is promulgating a site-specific rule proposed on December 28, 2001, to implement a project under the EPA's Project eXcellence and Leadership Program (Project XL). The rule provides site-specific regulatory flexibility under the Resource Conservation and Recovery Act (RCRA) for two Virginia landfills (referred to collectively as the "Virginia Project XL

Landfills"): The Maplewood Recycling and Waste Disposal Facility, located in Amelia County, Virginia (Maplewood Landfill); and the King George County Landfill and Recycling Facility, located in King George County, Virginia (King George Landfill). On September 29, 2000, EPA, USA Waste of Virginia, Inc., and King George Landfills, Inc., signed the Final Project Agreement (FPA) for this project, which would allow for the addition of liquids to these landfills.

The addition of liquids to landfills accelerates the biodegradation of landfill waste and is allowed for certain prescribed liner designs under current RCRA municipal solid waste landfill (MSWLF) regulations. The principal objectives of this XL project are two-fold: To demonstrate that the alternative liner designs at the Virginia Project XL Landfills will also safely accelerate the biodegradation of landfill waste and thereby decrease the time it takes for the waste to reach stabilization in the landfill, facilitate the management of leachate and other liquid wastes, and promote recovery of landfill gas; and to assess the effects of applying differing amounts of liquids to landfills.

The Virginia Project XL Landfills comprise two of several landfills, located in different geographic and climactic regions across the country, that under Project XL are testing this bioreactor technology over alternative liner designs. In order to carry out this project, the Virginia Project XL Landfills need relief from certain requirements in EPA regulations which set forth design and operating criteria for MSWLFs, requirements which would otherwise preclude the addition of liquids at these landfills. Today's rule will allow the Virginia Project XL Landfills to apply collected, non-containerized non-hazardous bulk liquids (including landfill leachate) to the landfills.

**DATES:** This regulation is effective on July 18, 2002.

**ADDRESSES:** A docket containing supporting information used in developing this final rule is available for public inspection and copying at EPA's RCRA docket office located at Crystal Gateway, 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia. The public is encouraged to phone in advance to review docket materials. Appointments can be scheduled by

phoning the Docket Office at (703) 603-9230. Refer to RCRA Docket Number F-2001-WVLP-FFFFF and F-2002-WVLF-FFFFF for the proposed and final rule dockets, respectively. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies are \$0.15 per page. Project materials are also available for review on the World Wide Web at: <http://www.epa.gov/projectxl/virginialandfills/index.htm>.

A duplicate copy of the docket is available for inspection and copying at the EPA Region 3 Library located at 1650 Arch Street, Philadelphia, PA 19103. Appointments can be scheduled by phoning the Library at (215) 814-5254.

**FOR FURTHER INFORMATION, CONTACT:** Mr. Steven J. Donohue at the U.S. Environmental Protection Agency, Region 3, (3E100), 1650 Arch Street, Philadelphia, Pennsylvania 19103. Mr. Donohue may be contacted at (215) 814-3215. Further information on today's action may also be obtained on the World Wide Web at <http://www.epa.gov/projectxl/>. Questions to EPA regarding today's action can be directed to Mr. Donohue at (215) 814-3215 [donohue.steven@epa.gov](mailto:donohue.steven@epa.gov).

#### SUPPLEMENTARY INFORMATION

#### Outline of Today's Document

The information presented in this preamble is arranged as follows:

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- I. How Does this Rule Comply with the National Technology Transfer and Advancement Act?
- J. Does this Rule Comply with Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use?

#### I. Authority

This rule is being promulgated under the authority of Sections 1008, 2002, 4004, and 4010 of the Solid Waste Disposal Act of 1970, as amended by the Resource Conservation and Recovery Act, as amended (42 U.S.C. 6907, 6912, 6945, and 6949a).

#### II. Background

##### A. What is Project XL?

Project XL is an EPA initiative developed to allow regulated entities to achieve better environmental results at less cost. Project XL—"eXcellence and Leadership"—was announced on March 16, 1995 (*see* 60 FR 27282, May 23, 1995). Detailed descriptions of Project XL have been published previously in numerous public documents which are generally available electronically via the Internet at <http://www.epa.gov/projectxl/>. Briefly, Project XL gives a limited number of regulated entities the opportunity to develop their own pilot projects and alternative strategies to achieve environmental performance that is superior to what would be achieved through compliance with current and reasonably anticipated future regulations. These efforts are crucial to the Agency's ability to test new regulatory strategies that reduce regulatory burden and promote economic growth while achieving better environmental and public health protection. The Agency intends to evaluate the results of this and other XL projects to determine which specific elements of the projects, if any, should be more broadly applied to other regulated entities for the benefit of both the economy and the environment.

Project XL is intended to allow EPA to experiment with new or pilot projects

that provide alternative approaches to regulatory requirements, both to assess whether they provide benefits at the specific facility affected, and whether these projects should be considered for wider application. Such pilot projects allow EPA to proceed more quickly than would be possible when undertaking changes on a nationwide basis. EPA may modify rules, on a site- or State-specific basis, that represent one of several possible policy approaches within a more general statutory directive, so long as the alternative being used is permissible under the statute.

On September 29, 2000, EPA's Region 3 and Office of Solid Waste, joined by Virginia Department of Environmental Quality, and USA Waste of Virginia, Inc. signed the Final Project Agreement (FPA) for the project (*see* Docket No. F-2001-WVLP-FFFFF, Item 2.2, or the Internet at <http://www.epa.gov/ProjectXL/virginialandfills/fpa.pdf>). The FPA is a non-binding written agreement between the project sponsor and regulatory agencies which describes the project in detail, discusses criteria to be met, identifies performance goals and indicators, and outlines the administration of the agreement.

##### B. What Are Bioreactor Landfills?

A bioreactor landfill is generally defined as a landfill operated to transform and stabilize the readily and moderately decomposable organic constituents of the waste stream by purposeful control to enhance microbiological processes. Bioreactor landfills often employ addition of liquids such as leachate. A byproduct of the waste decomposition process is landfill gas, which includes methane, carbon dioxide, hazardous air pollutants and volatile organic compounds (VOC). Landfill gases are produced sooner in a bioreactor than in a conventional landfill. Therefore, bioreactors typically incorporate state-of-the-art landfill gas collection systems to collect and control landfill gas upon start up of the liquid addition process.

On April 6, 2000, EPA published a document in the **Federal Register** requesting information on bioreactor landfills, because the Agency is considering whether and to what extent the Criteria for Municipal Solid Waste Landfills, 40 CFR part 258, should be revised to allow for leachate recirculation over alternative liners in MSWLFs (65 FR 18015). EPA is seeking information about liquid additions and leachate recirculation in MSWLFs to the extent currently allowed, *i.e.*, in MSWLFs designed and constructed with

a composite liner as specified in 40 CFR 258.40(a)(2).

Proponents of bioreactor technology note that operating MSWLFs as bioreactors provides a number of environmental benefits, including an increased rate of waste decomposition, which in turn would extend the operating life of the landfill and lessen the need for additional landfill space or other disposal options. Bioreactors also decrease, or at times eliminate, the quantity of leachate requiring treatment and offsite disposal. Several studies have shown that leachate quality improves over time when leachate is recirculated on a regular basis. For all of these reasons, bioreactors are expected to decrease potential environmental risks and costs associated with leachate management, treatment and offsite disposal. Additionally, use of bioreactor techniques is expected to shorten the length of time the liner will be exposed to leachate and this should lower the long term potential for leachate migration into the subsurface environment. Bioreactors are also expected to reduce post-closure care costs and risks, due to the accelerated, controlled settlement of the solid waste during landfill operation. Finally, bioreactors provide for greater opportunity for recovery of methane gas for energy production since a larger quantity of methane is produced earlier than in a normal MSWLF.

Several additional related XL pilot projects involving operation of landfills as bioreactors are being implemented throughout the country. These additional bioreactor projects will enable EPA to evaluate benefits of different alternative liners and leachate recirculation systems under various climatic and operating conditions. As expressed in the above-referenced April 2000 **Federal Register** document, EPA is interested in assessing the performance of landfills operated as bioreactors, and these XL projects are expected to contribute valuable data.

The Virginia Project XL Landfills and other XL projects will provide additional information on the performance of MSWLFs when liquids are added to the landfill. The Agency is also interested in assessing how different types of alternative liners perform when liquids are added to the landfill, including maintaining a hydraulic head at acceptable levels.

### III. The Virginia Project XL Landfills

#### A. Overview

The Virginia Project XL Landfills consists of the Maplewood Landfill and the King George Landfill. The

Maplewood Landfill is located in Amelia County, Virginia, approximately 30 miles southwest of Richmond, Virginia. The Maplewood Landfill will cover a total area of about 404 acres upon completion. Construction of the first phases started in 1992.

Construction of the most recent phase was completed in 1997. The King George County Landfill is located in King George County, Virginia, approximately 50 miles north-northeast of Richmond, Virginia. The King George Landfill will cover a total area of about 290 acres upon completion. The first phase of liner system construction began in 1996. Construction of additional liner system areas has been performed every year since 1996.

The Maplewood Landfill is owned and operated by USA Waste of Virginia, Inc., and the King George Landfill is owned by King George County and operated by King George Landfills, Inc. USA Waste of Virginia, Inc. and King George Landfills, Inc. are both subsidiaries of Waste Management, Inc., and will be referred to collectively hereinafter as "Waste Management." Maplewood Landfill and King George Landfill, both of which are municipal solid waste landfills (MSWLFs), will hereinafter be referred to collectively as the "Virginia Project XL Landfills."

#### B. What did EPA Propose and What Comments were Received?

Today's action finalizes the site-specific rule for the Virginia Project XL Landfills without modification of the proposed rule. EPA proposed adding a new subsection (c) to 40 CFR 258.41 that would apply only to the Virginia Project XL Landfills and allow the owner/operator to add non-hazardous bulk or non-containerized liquids, including leachate, to Cell 3 of the King George Landfill and Phases 1 and 2 of the Maplewood Landfill, as long as these areas meet the maintenance, operational, monitoring and other requirements set forth in § 258.41(c). See Section IV of this preamble for a full description of the regulatory relief provided for this project.

As a result of the December 28, 2001, proposed rule for the Virginia Project XL Landfills, EPA received two comments from two national organizations, one representing the solid waste management industry and one from a recycling advocacy group. EPA's Response to Comments document ("Response") and the comment letters are in the RCRA Docket No. F-2002-WVLF-FFFFF for this final rule. The solid waste management trade association supported this Virginia XL Project and did not call for any

revisions. The recycling advocacy group submitted extensive comments critical of landfilling solid waste and bioreactor technology in general, and the VA Landfills XL Project and site-specific rule in particular.

Generally, some of the recycling advocacy group comments addressed the legal basis or adequacy of EPA's existing municipal solid waste landfill (MSWLF) criteria, 40 CFR part 258, which are beyond the scope of today's rulemaking. Other comments called for EPA to establish uniform design and operating criteria for all bioreactor landfills. These comments are also beyond the scope of today's rulemaking, which addresses only the Maplewood and King George County landfills. This commenter also addressed the adequacy of landfill gas monitoring, collection, control and reporting requirements for the XL Project. The proposed rule did not include any flexibility to existing regulations addressing these requirements, rather requirements pertaining to landfill gas are governed by Clean Air Act regulations and facility-specific permits (*see* Section III.C., below). Finally, the comments suggested testing changes for the XL Project. As explained in greater detail in the Response and in Section IV.B.(below), EPA believes the monitoring, testing and reporting requirements contained in this rule, the Final Project Agreement and State solid waste and air permits will provide sufficient information to characterize the bioreactor operations at the Virginia Project XL Landfills and protect human health and the environment.

#### C. Description of the Project

This rule will allow for the addition of liquid wastes to certain areas of the Maplewood Landfill and the King George Landfill.

The goal for the Maplewood Landfill is to recirculate as much leachate as is generated at the facility. Based on facility records, the facility generated approximately 3,000,000 gallons of leachate in 1999 (a relatively dry year). Under this XL project, between 3,000,000 and 4,000,000 gallons of liquid will be applied at the landfill per year. The liquid application rate will be an average of 10,960 gallons per day, based on an application rate of 4,000,000 gallons per year. In order to comply with the requirements of the rule and provide the appropriate test conditions for biodegradation of the waste, the exact liquid application rate will be determined by Waste Management during implementation of the project. The project area in the Maplewood Landfill will be in "Phase

Development Areas” 1 and 2 (leachate recirculation areas) and 3, 4, and 11 (monitored control areas without leachate recirculation). The total size of the Phase 1, 2, 3, 4 and 11 Phase Development Areas is approximately 48 acres. During dry periods of lower or no leachate generation, liquids other than leachate could also be added, including non-hazardous liquids such as storm water and truck wash water. The liquids will be applied in trenches, excavated into the surface of the landfill in the Phases 1 and 2 areas (approximately 10 acres in size). Phases 3, 4, and 11 will be used as control cells—no liquid will be applied to these areas, only rainwater that naturally falls and percolates beneath the landfill surface will enter the waste in these areas or phases.

The goal for the King George County Landfill is to recirculate as much leachate as is generated at the facility and to add sufficient additional liquid to make a total liquids application of between 7,000,000 and 8,000,000 gallons per year. Based on facility records for the past three years, the facility generates approximately 3,500,000 gallons of leachate per year. Based on estimates of storm water runoff quantities and the storage capacity of the storm water management ponds at the site, approximately 8,000,000 gallons or more of storm water is expected to be made available for application to the landfill waste. The liquid application rate will be, on average, about 22,000 gallons per day based on an estimated application rate of 8,000,000 gallons per year. In order to comply with the requirements of the rule and provide the appropriate test conditions for biodegradation of the waste, the exact liquid application rate will be determined by Waste Management during implementation of the project.

The overall study area in the King George Landfill will be established within the Municipal Solid Waste Cells 2, 3, and 4. The total size of Cells 2, 3, and 4 is approximately 59 acres. Liquid will be applied only in Cell 3, approximately 10 acres in size. Cells 2 and 4 will be control cells in which no liquids will be applied. Cell 1 was being filled with waste in July 2001.

As stated earlier, the bioreactor program that will be implemented at the King George County Landfill involves application to the waste of about twice the quantity of liquid that is applied at the Maplewood Landfill. In the bioreactor at this landfill, conditions will be established that are intended to significantly increase the rate of degradation of waste during the operating life of the landfill to achieve

the benefits identified in the FPA. Although the process of recirculating leachate provides much of the moisture needed to enhance biological degradation of waste, research reported in “Active Municipal Waste Landfill Operations: A Biochemical Reactor” (Reinhart, 1995, see Docket No. F-2001-WVLP-FFFFF, Item 4.1) found that the quantity of liquid needed to reach water holding or field capacity of the waste to potentially maximize the rate of biodegradation is typically much greater than the quantity of leachate generated at a MSWLF. As part of the comparison of different rates of liquid addition inherent in this project, sources of liquid other than leachate will be used to supply the additional quantity of liquid needed at the King George Landfill. These sources could include storm water, truck wash water and other non-hazardous liquid waste. For this project, these liquids may be discharged into the landfill leachate storage tanks to supplement the leachate and the resulting mixture will then be distributed over the bioreactor test area.

The liquids application system at the Virginia Project XL Landfills will be constructed using typical trench construction methods and may include other methods developed during the implementation of the program. The construction methods are described in detail in the Application for Project XL Landfill Bioreactor Systems King George County Landfill and Maplewood Recycling and Waste Disposal Facility, submitted to U.S. EPA, prepared by GeoSyntec Consultants, May 30, 2000 (see Docket No. F-2001-WVLP-FFFFF, Item 5.1).

The liquids infiltration or “application capacity” of each landfill is the amount of liquid that can be expected to flow by gravity from all of the trenches. This quantity has been estimated using the methodology described in “Analysis Procedures for Design of Leachate Recirculation Systems,” (T.B. Maier, June 1998, see Docket No. F-2001-WVLP-FFFFF, Item 4.2). This method involves estimating the moisture content of the waste (typically 15 to 25 percent without liquid application), the hydraulic properties of the waste, the moisture retention capacity (field capacity) of the waste (typically 40 percent), and the depth of liquid in the trench. Using this information, the infiltration rate of liquid into the waste from one 400 foot long trench is calculated; the total application capacity equals the combined infiltration rate of all six trenches. As shown in the May 2000, GeoSyntec Report, the total application capacity of the group of six trenches is

calculated to be about 110,000 gallons per day, which is much greater than the average application rate of either 10,960 gallons per day or the 22,000 gallons per day for Maplewood and King George Landfills, respectively. The exact number and length of the trenches will be determined during the implementation of the project but at a minimum will be adequate to provide for the average application rates.

EPA’s RCRA MSWLF operating criteria require that MSWLFs be designed and constructed with a leachate collection system that can ensure a hydraulic head (leachate layer) above the liner of 30 centimeters (cm) or less, *i.e.*, approximately 12 inches. The operator must monitor the depth of liquid (or thickness of “head”) and ensure no more than 30 cm of head is on the liner. The impact of the liquid application activities on the thickness of head on the liner systems was evaluated using the Hydrologic Evaluation of Landfill Performance (HELP) model (see the May 2000, GeoSyntec Report). First, the hydrologic evaluation was performed assuming that no liquid is applied; then the evaluation was performed for the liquid application condition under the assumptions that 4,000,000 and 8,000,000 gallons per year will be recirculated at the Maplewood and King George Landfills, respectively. These calculations show that a head of 30 cm or less is expected on both the Maplewood and the King George liner. The King George Landfill is expected to maintain a lower head than the Maplewood Landfill because the drainage layer material at the King George landfill is approximately 100 times more permeable than the drainage layer material at the Maplewood landfill. This is why the King George Landfill was selected for an application rate of twice the volume of liquids that will be applied to the Maplewood Landfill.

The primary liner system of both landfills is underlain by a secondary liner and leachate collection system. Sumps are located at the low point of each cell in each system and will be monitored for the depth of liquid on a monthly basis. As needed and required, liquid in the sumps is collected and controlled as leachate. Samples are collected to evaluate the characteristics of the liquids. If the test results from the sampled liquid or the monitoring of the leachate level indicate that there is a potential leak in the primary liner system, then the need for a larger pump will be evaluated and the liquid level in the primary system will be further evaluated and monitored to minimize the liquid depth above the primary

liner. The liner leakage rate will be evaluated and the leachate injection rate may be reduced, if necessary, to control the rate of flow into the secondary leachate collection system. Waste Management will monitor the depth of liquid on the liners of both landfills throughout the XL project period, and will ensure that less than the 30 cm maximum head is maintained, in accordance with regulations. This rule will not alter Waste Management's obligation to maintain less than 30 cm of head on the liners at the Virginia Project XL Landfills.

It is necessary that the on-site leachate storage structures at both the Virginia Project XL Landfills have enough capacity to store the leachate needed for later application to the test areas in the landfills. Liquid will be collected and stored for application when conditions are relatively dry. The storage capacity of the leachate tanks at the Maplewood Landfill is approximately 500,000 gallons, this represents approximately a two months supply of leachate at a application rate of 4 million gallons per year.

During operation of the bioreactor system, leachate storage structures will also be used to temporarily store leachate at times when it is not or cannot be recirculated. At a minimum, the tanks will need to store the quantity of leachate generated over a period of several days. The May 2000, GeoSyntec Report states that the Maplewood Landfill generated approximately 3 million gallons of leachate in 1999. The 500,000 gallon storage at Maplewood Landfill represents over a two month storage capacity of leachate at a generation rate of 3 million gallons per year. Therefore, the facility has adequate leachate storage capacity for operation of the bioreactor system. As a contingency, when leachate generation exceeds the rate of recirculation in and storage capacity, leachate can be hauled off-site as is currently being done.

In the May 2000, GeoSyntec Report, Waste Management's consultant evaluated the physical stability of the waste at the Virginia Project XL Landfills under bioreactor operating conditions. GeoSyntec Consultants submitted this engineering evaluation to the Virginia Department of Environmental Quality (VADEQ) as a part of their application for a permit modification for the bioreactor testing at the Virginia Project XL Landfills. A static stability analysis conducted for the slopes of the Virginia Project XL Landfills shows a factor of safety (FOS) of greater than the minimum value of 1.5 was maintained even with the addition of the liquid application

trenches and a phreatic or subsurface leachate/water table surface in the landfill cell associated with the addition of liquids in the trench. The calculated FOS for the existing conditions and under the leachate recirculation scenarios remained unchanged in both the Virginia Project XL Landfills since the critical failure surface is located outside the areas that will be wetted by liquid addition during the bioreactor testing or the added liquid does not change the location of the critical surface. The GeoSyntec stability evaluation can be found in the rule docket (*see* Docket No. F-2001-WVLP-FFFFF, Items 4.5 and 4.6).

EPA and Waste Management expect that the addition of liquids to the landfills will accelerate the production of landfill gases; indeed, one of the benefits of bioreactor landfills is that the time interval during which landfill gas is generated should be compressed, thereby facilitating its collection and potential conversion to a useful energy source. Landfill gas generation will start sooner and end sooner in landfills where liquids are recirculated. EPA's Standards of Performance for Municipal Solid Waste Landfills, 40 CFR part 60, subpart WWW, requires large landfills that meet the emissions threshold to perform landfill gas monitoring and install a collection and control system as specified in the regulation in areas where wastes are over a certain age. Effective November 1999, Waste Management installed, and is operating, an active (*i.e.*, vacuum induced) landfill gas collection system in Phases 1, 2 and 3 at the Maplewood Landfill. An active gas collection system became operational at the King George Landfill on December 10, 2000.

This XL project will comply with the subpart WWW performance standards for MSWLFs under the Federal Clean Air Act. Waste Management will continue to provide subpart WWW-compliant landfill gas monitoring, collection and control during and following the application of liquids at the landfills. Waste Management's obligations with respect to landfill gas is set forth in a Federally Enforceable State Operating Permit (FESOP). The VADEQ is the regulatory agency which, under the Federal Clean Air Act, has air permitting authority for both landfills. The VADEQ has issued a New Source Review (NSR) permit (9 VAC 5-80-10) for the King George Landfill which contains the enforceable parameters and requirements reflecting the New Source Performance Standards (NSPS)—compliant gas collection, control and monitoring. In addition, on July 31, 2001, VADEQ issued a Title V Operating

permit (9 VAC 5-80-50 *et. seq.*), for the King George Landfill. Both the Title V permit and the underlying NSR permit issued by VADEQ are considered Federally enforceable. An NSR permit for the Maplewood Landfill was issued on March 29, 2002. A draft Title V permit is currently being revised by VADEQ. This rule is conditional upon the issuance of a FESOP. The FPA stated that the landfill gas monitoring, collection and control include at least the following provisions:

1. Waste Management will enhance the gas collection and control systems at the landfills (*e.g.*, using additional extraction wells or trenches or by enhancing the cover over affected areas). This will be done at the discretion of Waste Management, or as directed by VADEQ, if it is determined that there is a potential to exceed the applicable air quality permit requirements or NSPS during evaluation of routine monitoring data or if odor problems or air quality problems occur. The system will be expanded as needed (*e.g.*, using additional extraction wells or trenches or by placing additional cover or tarps over affected areas) to ensure compliance with the applicable air quality permit requirements.

2. The performance of the landfill gas extraction systems at the Virginia Project XL Landfills will be documented and assessed by obtaining monitoring data from the gas extraction wells and the landfill surface for parameters such as methane, carbon dioxide, oxygen, non-methane organic compounds (NMOCs) and other constituent concentrations, in accord with 40 CFR part 60, subpart WWW. The gas temperature at the well heads will also be monitored as required by subpart WWW.

3. A baseline round of air monitoring at each landfill will be completed prior to the introduction of liquids, and the monitoring will continue for the duration of the project.

4. Collected landfill gas will be controlled through the use of an active gas control system at both sites.

The site stakeholders, listed in Section III.G. of today's rule (below), recognize that the increased production of landfill gas may result in an increase in the flow rate of NO<sub>x</sub> emissions from any flares or other gas processing equipment installed as part of the project. Air quality permits for these emissions may need to be amended to allow the implementation of the XL project. In the FPA, Waste Management committed to exploring alternative uses for the collected gas other than flaring and on September 1, 2001, Waste Management signed an agreement with

a private energy development company to construct a 9MW power plant fueled by landfill gas at the Maplewood Landfill. Waste Management is currently negotiating a similar agreement for the King George Landfill.

#### *D. What Kind of Liner is Required by Current Federal Regulations?*

Currently, the Federal regulations outline two methods for complying with liner requirements for municipal solid waste landfills. The first method is a performance standard set out under 40 CFR 258.40(a)(1). This standard allows installation of any liner configuration provided the liner design is approved by the director of an approved State (defined in § 258.2) and the design ensures that certain constituent concentrations are not exceeded in the uppermost aquifer underlying the landfill facility at the point of compliance.

The second method is set out in 40 CFR 258.40(a)(2) and (b). § 258.40(b) specifies a liner design which consists of two components: (1) An upper component comprising a minimum of 30 mil flexible membrane liner (60 mil if High Density Polyethylene (HDPE) is used); and (2) a lower component comprising at least two feet of compacted soil with a hydraulic conductivity no greater than  $1 \times 10^{-7}$  cm/sec.

#### *E. How Are the Liners at the Virginia Project XL Landfills Constructed?*

Both the Maplewood Landfill and the King George County Landfill were constructed to meet or exceed the performance standard set forth in 40 CFR 258.40(a)(1). The liner under each landfill was built with a geomembrane double synthetic liner system, with primary leachate collection and leak detection (secondary collection) layers.

- The King George County liner and leachate collection system consists, from top to bottom, 1.5 feet of protective cover, leachate drainage material, 16 oz./square yard nonwoven geotextile, 60 mil textured HDPE primary geomembrane liner, a geosynthetic clay liner, geocomposite drainage layer, 60 mil textured HDPE secondary geomembrane liner, geosynthetic clay liner, 40 mil textured HDPE tertiary geomembrane liner and 1 foot of geologic buffer material with a permeability (k) of  $< 1 \times 10^{-5}$  cm/sec.

- The Maplewood Landfill liner and leachate collection system consists of, from top to bottom, 1.5 feet of primary granular drainage layer, 60 mil HDPE geomembrane, geonet layer, 60 mil HDPE geomembrane, bentonite geocomposite, underlain by 1.5 feet of a

clayey soil liner with a permeability (k) of  $< 1 \times 10^{-5}$  cm/sec.

The 60 mil HDPE upper liner component of both landfills' liners meets the specified upper membrane liner component under RCRA (40 CFR 258.40(b)). However, instead of a lower liner component comprising at least two feet of compacted soil with a hydraulic conductivity no greater than  $1 \times 10^{-7}$  cm/sec, the Virginia Project XL Landfills were built with a second geosynthetic 60 mil HDPE layer. Additionally, beneath the double liner system at the King George County is a third 40 mil HDPE liner, underlain by one foot of soil compacted to a permeability (k) of  $< 1 \times 10^{-5}$  cm/sec., and the double liner system at the Maplewood Landfill is underlain by 18 inches of soil compacted to a permeability (k) of  $< 1 \times 10^{-5}$  cm/sec. The liner systems for the two landfills are illustrated in Figure 2 of the FPA.

While the Virginia Project XL Landfills do not have a composite liner as specified in the Design Criteria § 258.40(b), the alternative liner systems meet or exceed the performance requirements for municipal solid waste landfills. Indeed, these landfills' double-liner systems provide a high level of protection to the environment against potential impacts caused by leakage of leachate.

#### *F. What Are the Environmental Benefits Expected Through Project XL?*

The expected superior environmental benefits from the Virginia Landfills XL Project include: (1) Landfill life extension; (2) minimizing the potential for long-term leachate-associated groundwater and offsite surface water concerns; and (3) increasing landfill gas control, minimizing fugitive methane and VOC emissions and minimizing the duration of gas generation.

##### 1. Landfill Life Extension

The life of a landfill, when operated as a bioreactor, should be extended by the biodegradation of the waste. The accelerated biodegradation increases the apparent density and decreases the volume of the in-place waste remaining in the landfill. Reducing the volume of waste translates into either longer landfill life and/or less need for additional landfill space. Thus, a bioreactor landfill will be able to accept more waste over its working lifetime (subject to applicable State regulatory requirements) and less landfill space may be needed to accommodate the same amount of waste.

##### 2. Minimizing Leachate/Groundwater-Associated Concerns

Research reported in "Active Municipal Waste Landfill Operations: A Biochemical Reactor" (Reinhart, 1995, see Docket No. F-2001-WVLP-FFFFF, Item 4.1), has shown that bioreactor processes tend to reduce the concentration of many pollutants in leachate, including organic acids and other soluble organic pollutants. Bioreactor operations brings pH to near-neutral conditions and generally, metals are much less mobile under these condition. Reinhart found that metals were largely precipitated and immobilized in the waste of bioreactor landfills. Discussions between Waste Management, the VADEQ, and the host communities for the Maplewood Landfill and the King George County Landfills, indicated that groundwater-related issues are of primary concern to the stakeholders, including minimizing the long-term threat to groundwater quality. This project should provide for accelerated biodegradation of the waste in the landfills and, thereby, minimize the potential for the waste to present a long-term threat to groundwater quality. Routine groundwater monitoring is, and will continue to be, performed to verify containment. Cleaner leachate also translates into decreased load on the offsite publicly owned treatment works (POTWs) where the leachate from these landfills is now being treated. As described in Section 1.2 of the FPA, both the Maplewood and King George County Landfills were constructed with double-liner systems, which are highly efficient at preventing leakage of leachate from landfills.

##### 3. Maximizing Landfill Gas Control and Minimizing Fugitive Methane and VOC Emissions

Landfill gas contains roughly 50% methane, a potent greenhouse gas. In terms of climate effects, methane is second in importance only to carbon dioxide as a greenhouse gas. Landfill gas also contains volatile organic compounds (VOC's) which are air pollutants of local concern. While the rate of gas generation will be increased by adding liquids to the landfills, the period of post closure landfill gas generation will be compressed. The existing, active gas collection systems in operation at both landfills are expected to efficiently collect and control landfill gas. The systems will be maintained and monitored in accordance with the terms of 40 CFR part 60, subpart WWWW and all applicable permits. In addition, as noted above, Waste Management has signed an agreement with a private

energy development company to construct a power plant fueled by landfill gas at the Maplewood Landfill and is negotiating a similar gas/energy recovery agreement for the King George Landfill.

It is also anticipated that the information obtained from this XL project will provide the EPA and the waste disposal industry with data concerning the use of bioreactor techniques at MSWLF sites throughout the United States, in accord with the Agency's April 6, 2000, Request for Information and Data regarding Alternative Liner Performance, Leachate Recirculation, and Bioreactor Landfills (65 FR 18014, April 6, 2000).

#### *G. How Have Various Stakeholders Been Involved in This Project?*

Initial public meetings were held on August 1, 2000 (King George County) and August 2, 2000 (Amelia County) to solicit comments from the public on the intent of the sponsors to participate in Project XL. Additional public meetings were also held during the week of September 4, 2000 in King George and Amelia Counties to discuss the draft FPA with the citizens from these localities. Since both landfills have valid State operating permits, the VADEQ intends to amend the permits to allow the construction and operation of the bioreactor systems as an experimental process. Before VADEQ issues a permit amendment, a local public hearing will be held to solicit comments on the draft permit amendments from concerned citizens. The details of the permit amendments for each landfill are outlined in advertisements along with contact information and document viewing locations. The public hearing is also advertised in a local paper. The VADEQ has a standardized mailing list of State agencies to whom a draft permit or notice of permit amendment can be sent to solicit comments. Conditions may be imposed due to additional State requirements or as a result of public comment.

In accord with VADEQ regulatory requirements, Virginia will hold public meetings and hearings on the proposed amendments to the solid waste construction and operating permits for the Virginia Project XL Landfills. If requested, these public hearings will be supplemented with additional stakeholder meetings. A stakeholder mailing list maintained by Waste Management will be updated as necessary to include private citizens and other interested parties. Periodically, progress reports and other relevant information will be distributed.

If requested, Waste Management has also agreed to provide site tours and briefings to better educate any interested citizens or stakeholders. Transcripts and video tape recordings of all public meetings and hearings will be maintained at the repositories. A repository for the project will be maintained by VADEQ at 629 East Main Street, Richmond, VA, 23219 c/o Paul Farrell, (804) 698-4214. Additional copies of the repository records will be maintained in the James Hamner Memorial Library, 16351 Dunn Street Amelia, Virginia 23002 and in the L.F. Smoot Lewis Memorial Library, 9533 Kings Highway, King George, Virginia 22485. An Internet Web site for this XL project is also maintained at: <http://www.epa.gov/ProjectXL/virginialandfills/index.htm>. Throughout project development, EPA will continue to update the website as the project is implemented. The FPA also includes a detailed description of stakeholder involvement with this XL project (see Docket No. F-2001-WVLP-FFFFF, Item 2.2, or on the Web site).

Waste Management will periodically meet with a representative from each local landfill advisory committee or the entire stakeholder group to discuss issues of concern and to disseminate information. To solicit additional stakeholder involvement, Waste Management may perform its own outreach including contacting nationwide professional and citizen groups that may have an interest in bioreactor technology and will attempt to disseminate information to its members, as well as, attend national workshops or seminars.

The following have been identified as VA Project XL Landfill stakeholders:

#### Direct Participants:

U.S. Environmental Protection Agency  
Virginia Department of Environmental Quality  
Waste Management, Inc.  
King George County Landfill  
Maplewood Landfill  
Maplewood Recycling Waste Disposal Facility

#### Commentors:

Members of Local Landfill Advisory Committees

#### *H. Will This Project Result in Cost Savings and Paperwork Reduction?*

EPA did not prepare an economic assessment of the impacts of today's rule. EPA notes, however, that Waste Management volunteered for this pilot project which will affect only two facilities and is expected to result in an overall cost savings by:

- accelerating the rate of decomposition of the waste placed in certain areas of the two Virginia Project XL Landfills, which is expected to extend the life of the landfill;
- improving the quality of leachate generated in those specific areas of the landfills, which is expected to decrease leachate treatment and disposal costs; and
- increasing methane generation and recovery efficiency, which is expected to facilitate the use of the methane for energy generation.

No appreciable direct reduction in paperwork is anticipated at the Virginia Project XL Landfills.

#### *I. How Long Will This Project Last and When Will It Be Complete?*

As with all XL projects testing alternative environmental protection strategies, the term of this XL project is limited. Today's rule will be in effect for ten (10) years. In the event that EPA determines that this project should be terminated before the end of the ten year period and that the site-specific rule should be rescinded, the Agency may withdraw this rule through a subsequent rulemaking. This will allow all interested persons and entities the opportunity to comment on the proposed termination and withdrawal of regulatory authority. In the event of an early termination of the project term, EPA or the State will establish an interim compliance period, not to exceed six months, such that Waste Management will be returned to full compliance with the existing requirements of 40 CFR part 258. In accordance with 9 VAC 20-80-480.G, VADEQ expects to utilize an experimental permit to provide for operation of the VA Project XL Landfills as bioreactors. If the XL project proves to be feasible, VADEQ expects to modify the permit for the facility to provide for the ten year XL project term.

The FPA allows any party to the agreement to withdraw from the agreement at any time before the end of the ten year period. It also sets forth several conditions that could trigger an early termination of the project, as well as procedures to follow in the event that EPA, the State or local agency seeks to terminate the project (FPA, section 11).

For example, an early conclusion will be warranted if the project's environmental benefits do not meet the Project XL requirement for the achievement of superior environmental results. In addition, new laws or regulations may become applicable during the project term which might render the project impractical, or might contain regulatory requirements that



supersede the superior environmental benefits that are being achieved under this XL project. Or, during the project duration, EPA may decide to change the Federal rule allowing recirculation over alternative liners and the addition of outside bulk liquids for all Subtitle D landfills. In that event, the FPA and site-specific rule for this project will no longer be needed.

#### *J. Why is this Rule Immediately Effective?*

Under 5 U.S.C. 553(d), the rulemaking section of the Administrative Procedure Act, EPA is making this rule effective upon publication. Under 5 U.S.C. 553(d)(1), EPA is making this rule immediately effective because the rule relieves a restriction in that it allows the Virginia Project XL Landfills to add liquids to the landfills that are currently not allowed under 40 CFR 258.28(a)(1) and (2) and § 258.40(b). In addition, under 5 U.S.C. 553(d)(3), EPA finds good cause exists to make this rule effective immediately because the Virginia Project XL Landfills are the only regulated entity affected by the rule, sought the conditional relief provided in this rule, and have had full notice of the rule. Making the rule immediately effective will allow the Virginia Project XL Landfills to proceed sooner with the bioreactor project.

#### **IV. What Regulatory Changes Are Being Made To Implement this Project?**

##### *A. Existing Liquid Restrictions for MSWLFs (40 CFR 258.28)*

This site specific rule grants regulatory relief from certain requirements of RCRA that restrict application of liquids in these MSWLFs, because as previously described, both the Maplewood and King George landfills were constructed with alternative liners pursuant to 40 CFR 258.40(a)(1). When the FPA for this project was signed, RCRA regulations, 40 CFR 258.28(a) allowed bulk or noncontainerized liquid waste to be added to a MSWLF only if the following two conditions were met:

- The liquids comprise household waste (other than septic waste), or leachate from the landfill itself, or gas condensate derived from the landfill, and
- The MSWLF has been built with a liner designed as prescribed in the design standard set forth in 40 CFR 258.40(a)(2) (i.e., not the performance standard set forth in 40 CFR 258.40(a)(1)).

Since then, EPA promulgated a site-specific rule for the Yolo County, CA,

bioreactor landfill project under Project XL, which amended § 258.28(a). The amendment allows bulk liquid wastes to be added to a MSWLF if “the MSWLF unit is a Project XL MSWLF and meets the applicable requirements of § 258.41” (66 FR 42441–42449, August 13, 2001). Therefore, the regulatory relief needed for the VA Project XL Landfills is a site-specific amendment to 40 CFR 258.41.

##### *B. Site-Specific Rule*

Today’s rule will allow the owner/operator of the Virginia Project XL Landfills to add non-hazardous bulk or non-containerized liquids, including: leachate, storm water and truck wash water (“liquids”) to Cell 3 of the King George Landfill and Phases 1 and 2 of the Maplewood Landfill, as long as these areas meet the maintenance, operational, monitoring and other requirements set forth in § 258.41(c). The owner/operator of the Maplewood Landfill will add liquids primarily consisting of leachate from the landfill, while the owner/operator of the King George Landfill will add leachate generated at this facility plus other liquids, including non-containerized liquids such as storm water, truck wash water and other non-hazardous liquid waste. Further information on the liquids that will be added to the Maplewood and King George Landfills can be found in the FPA in Section 2.2.2.1 and 2.2.2.2, respectively. Today’s rule will add a new subsection to the rules in § 258.41. New § 258.41(c) will specifically apply to the Maplewood Landfill, in Amelia County, Virginia, and the King George Landfill, in King George County, Virginia, and will allow liquids to be applied to these two landfills.

This rule imposes certain minimum monitoring, reporting, and control requirements on Waste Management, which, among other things, will ensure that the project is protective of human health and the environment and facilitate EPA’s evaluation of the project. The project monitoring and reporting requirements are listed in the FPA (sections 2.2.1.4, 2.2.1.5, 2.2.2.4, and 2.2.2.5, Table 6 and 6A) and specify that Waste Management provide semi-annual reporting of the monitoring data to stakeholders and regulators in order to facilitate project evaluation.

Existing regulation also requires a leachate collection system as specified in § 258.40(a)(2) to ensure that contaminant migration to the aquifer is controlled. (56 FR 50978–51056, Oct. 9, 1991). This rule will not change the requirement in § 258.28(a)(2) that a leachate collection system (as described in § 258.40(a)(2)) be in place in order for

leachate to be recirculated in the landfill unit, and Waste Management will still be required to ensure that leachate collection systems at the landfills maintain the leachate head over the liner at a depth of less than 30 cm.

Today’s rule does not provide any regulatory flexibility with respect to monitoring requirements, rather it adds monitoring to that which would be required for these landfills if they continued operating as conventional MSWLFs. In addition to the monitoring required in part 258, for example, the Virginia Project XL Landfills must monitor and report whether surface seeps are occurring and determine whether they are attributable to operation of the liquid application system; perform a monthly analysis of leachate quality in both test and control areas; and at least monthly, monitor the gas temperature at well heads. EPA believes this additional information will provide the necessary indicators of any increased risk to human health or the environment in a timely manner and will enable Waste Management, VADEQ and/or EPA to take whatever steps are necessary, including suspension or termination of the project, to reduce or eliminate any such risk. EPA also believes that this additional information will be valuable in assessing the benefits of bioreactor operation.

#### **V. Regulatory Assessment Requirements**

##### *A. How Does This Rule Comply With Executive Order 12866: Regulatory Planning and Review?*

Because this rule affects only two facilities, it is not a rule of general applicability and therefore not subject to OMB review under Executive Order 12866. In addition, OMB has agreed that review of site specific rules under Project XL is not necessary.

##### *B. Is a Regulatory Flexibility Analysis Required?*

The Regulatory Flexibility Act (RFA), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 *et seq.*, generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and public comment rulemaking requirements unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small not-for-profit enterprises, and small governmental jurisdictions. The project sponsor, Waste Management Inc., is the regulated entity for this pilot project. They are not

a small business. This rule does not apply to small businesses, small not-for-profit enterprises, nor small governmental jurisdictions. Further, it is a site-specific rule with limited applicability to only two landfills in the nation. After considering the economic impacts of today's final rule on small entities, I certify that this rule will not have a significant economic impact on a substantial number of small entities.

*C. Is an Information Collection Request Required for This Rule Under the Paperwork Reduction Act?*

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* It is exempt from OMB review under the Paperwork Reduction Act because it is a site specific rule, directed to fewer than ten persons. 44 U.S.C. 3502(3), (10); 5 CFR 1320.3(c), 1320.4 and 1320.5.

*D. Does This Rule Trigger the Requirements of the Unfunded Mandates Reform Act?*

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including cost benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures to State, local, and Tribal governments in the aggregate or to the private sector of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation of why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying affected small governments, enabling officials of affected small governments to have

meaningful and timely input in the development of the EPA regulatory proposal with significant Federal mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements. As used here, "small government" has the same meaning as that contained under 5 U.S.C. 601(5), that is, governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.

As discussed above, this rule will have limited application. It applies only to the Maplewood and King George County Landfills. This rule will result in a cost savings for Waste Management when compared with the costs it would have had to incur if required to adhere to the requirements contained in the current rule. EPA has determined that this rule does not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local, or Tribal governments, in the aggregate, or the private sector in any one year. Thus, this rule is not subject to the requirements of section 202 and 205 of the UMRA. EPA has also determined that this rule contains no regulatory requirements that might significantly or uniquely affect small governments.

*E. How Does the Congressional Review Act Apply to This Rule?*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. Section 804 exempts from section 801 the following types of rules (1) rules of particular applicability; (2) rules relating to agency management or personnel; and (3) rules of agency organization, procedure, or practice that do not substantially affect the rights or obligations of non-agency parties. EPA is not required to submit a rule report regarding today's action under section 801 because this is a rule of particular applicability.

*F. How Does This Rule Comply With Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks?*

Executive Order 13045, "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997), applies to any rule that: (1) Is determined to be "economically significant," as defined in Executive Order 12886; and (2) concerns an

environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to potentially effective and feasible alternatives considered by the Agency.

This rule is not subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because the Agency does not have reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This rule will allow for the addition of bulk or non-containerized liquid amendments over a liner that does not meet the design requirements in 40 CFR. 258.40(b), however, the liner systems meet or exceed the performance requirements for municipal solid waste landfills. Indeed, these landfills' double-liner systems provide a high level of protection to the environment against potential impacts caused by leakage of leachate. Therefore, no additional risk to public health, including children's health, is expected to result from this rule.

*G. How Does This Rule Comply With Executive Order 13132: Federalism?*

Executive Order 13132, entitled "Federalism" (64 FR 43255, August 10, 1999), requires EPA to develop an accountable process to ensure "meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications." The phrase, "Policies that have federalism implications" is defined in the Executive Order to include regulations that 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."

This rule 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, as specified in Executive Order 13132. This rule will only affect two local governmental entities and a State, and will provide regulatory flexibility for the State and local governmental entities concerned. Thus, Executive Order 13132 does not apply to this rule.

*H. How Does This Rule Comply With Executive Order 13175: Consultation and Coordination With Indian Tribal Governments?*

Executive Order 13175, entitled "Consultation and Coordination with Indian Tribal Governments" (65 FR 67249, November 6, 2000), requires EPA to develop an accountable process to ensure "meaningful and timely input by Tribal officials in the development of regulatory policies that have Tribal implications." "Policies that have Tribal implications" is defined in the Executive Order to include regulations that have "substantial direct effects on one or more Indian tribes, on the relationship between the Federal government and the Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes."

This rule does not have Tribal implications. It will not have substantial direct effects on Tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this rule.

*I. How Does This Rule Comply With the National Technology Transfer and Advancement Act?*

Section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law 104-113, Section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless such practice is inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (for example, material specifications, test methods, sampling procedures, and business practices) developed or adopted by voluntary consensus standard bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary consensus standards. This rulemaking however, does not involve any technical standards; therefore EPA did not consider the use of any voluntary consensus standards.

*J. Does This Rule Comply With Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use?*

This rule is not subject to Executive Order 13211, "Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

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

Environmental protection, Landfill, Solid waste.

Dated: July 12, 2002.

**Christine Todd Whitman,**  
*Administrator.*

For the reasons set forth, part 258 of Chapter I of title 40 of the Code of Federal Regulations is amended as follows:

**PART 258—CRITERIA FOR MUNICIPAL SOLID WASTE LANDFILLS [AMENDED]**

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).

**Subpart D—Design Criteria**

2. Amend 258.41 to add a new paragraph (c) to read as follows:

**§ 258.41 Project XL Bioreactor Landfill Projects.**

\* \* \* \* \*

(c) *Virginia Landfills XL Project Requirements.* Paragraph (c) of this section applies solely to two Virginia landfills operated by the Waste Management, Inc. or its successors: The Maplewood Recycling and Waste Disposal Facility, located in Amelia County, Virginia ("Maplewood Landfill"); and the King George County Landfill and Recycling Facility, located in King George County, Virginia ("King George Landfill") collectively hereinafter, "the VA Project XL Landfills or landfill." The VA Project XL Landfills are allowed to add non-hazardous bulk or non-containerized liquids including, leachate, storm water and truck wash water, hereinafter, "liquid or liquids", to Cell 3 of the King George Landfill (hereinafter "Cell 3") and Phases 1 and 2 of the Maplewood Landfill (hereinafter "Phases 1 and 2") under the following conditions:

(1) The operator of the landfill shall maintain the liners underlying Cell 3 and Phases 1 and 2, which were designed and constructed with an

alternative liner as defined in § 258.40(a)(1) in accord with their current installed design in order to maintain the integrity of the liner system and keep it and the leachate collection system in good operating order. The operator of the landfill shall ensure that the addition of any liquids does not result in an increased leakage rate, and does not result in liner slippage, or otherwise compromise the integrity of the landfill and its liner system, as determined by the State Director. In addition, the leachate collection system shall be operated, monitored and maintained to ensure that less than 30 cm depth of leachate is maintained over the liner.

(2) The operator of the landfill shall ensure that the concentration values listed in Table 1 of § 258.40 are not exceeded in the uppermost aquifer at the relevant point of compliance for the landfill, as specified by the State Director, under § 258.40(d).

(3) The operator of the landfill shall monitor and report whether surface seeps are occurring and determine whether they are attributable to operation of the liquid application system. EPA and VADEQ shall be notified in the semi-annual report of the occurrence of any seeps.

(4) The operator of the landfill shall determine on a monthly basis the leachate quality in test and control areas with and without liquid addition. The operator of the landfill shall collect monthly samples of the landfill leachate and analyze them for the following parameters: pH, Conductivity, Dissolved Oxygen, Dissolved Solids, Biochemical Oxygen Demand, Chemical Oxygen Demand, Organic Carbon, Nutrients (ammonia, total kjeldahl nitrogen, total phosphorus), Common Ions, Heavy Metals and Organic Priority Pollutants.

(5) The operator of the landfill shall determine on a semi-annual basis the total quantity of leachate collected in test and control areas; the total quantity of liquids applied in the test areas and determination of any changes in this quantity over time; the total quantity of leachate in on-site storage structures and any leachate taken for offsite disposal.

(6) Prior to the addition of any liquid to the landfill, the operator of the landfill shall perform an initial characterization of the liquid and notify EPA and VADEQ of the liquid proposed to be added. The parameters for the initial characterization of liquids shall be the same as the monthly parameters for the landfill leachate specified in paragraph (c)(4) of this section. The operator shall annually test all liquids

added to the landfill and compare these results to the initial characterization.

(7) The operator of the landfill shall ensure that Cell 3 and Phases 1 and 2 are operated in such a manner so as to 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, Hemi-cellulose, 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.

[FR Doc. 02-18175 Filed 7-17-02; 8:45 am]

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## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 300

[FRL-7246-2]

#### National Oil and Hazardous Substance Pollution Contingency Plan; National Priorities List

**AGENCY:** Environmental Protection Agency.

**ACTION:** Notice of deletion of the Compass Industries Landfill Superfund Site from the National Priorities List.

**SUMMARY:** The Environmental Protection Agency (EPA) Region 6 is publishing a Notice of Deletion of the Compass Industries Landfill Superfund Site (Site), located in the Chandler Park area west of Tulsa, Tulsa County, Oklahoma, from the National Priorities List (NPL). The NPL, promulgated pursuant to section 105 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, is found at Appendix B of 40 CFR part 300 which is the National Oil and Hazardous Substances Pollution Contingency Plan (NCP). The EPA and the State of Oklahoma, through the Oklahoma Department of Environmental Quality (ODEQ), have determined that all appropriate response actions under CERCLA, other than operation and maintenance and five-year reviews, have been completed.

**EFFECTIVE DATE:** July 18, 2002.

**FOR FURTHER INFORMATION CONTACT:** Katrina Coltrain, Remedial Project Manager (RPM), U.S. EPA Region 6 (6SF-LP), 1445 Ross Avenue, Dallas, TX 75202-2733, (214) 665-8143 or 1-800-533-3508 (*coltrain.katrina@epa.gov*).

**SUPPLEMENTARY INFORMATION:** A Notice of Intent to Delete for this Site was published in the **Federal Register** on May 16, 2002 (67 FR 34886). The closing date for comments on the Notice of Intent to Delete was June 17, 2002. No comments were received, therefore EPA has not prepared a Responsiveness Summary.

The EPA identifies sites that appear to present a significant risk to public health or the environment and maintains the NPL as the list of those sites. As described in § 300.425(e)(3) of the NCP, sites deleted from the NPL remain eligible for remedial actions if conditions at a deleted site warrant such action. Deletion of a site from the NPL does not affect responsible party liability or impede agency efforts to recover costs associated with response efforts.

#### List of Subjects in 40 CFR Part 300

Environmental protection, Air pollution control, Chemicals, Hazardous waste, Hazardous substances, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

Dated: June 28, 2002.

**Gregg A. Cooke,**

*Regional Administrator, Region 6.*

For the reasons set out in the preamble, 40 CFR part 300 is amended as follows:

#### PART 300—[AMENDED]

1. The authority citation for part 300 continues to read as follows:

**Authority:** 33 U.S.C. 1321(e)(2); 42 U.S.C. 9601-9657; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; E.O. 12580, 52 FR 2923, 3 CFR, 1987 Comp., p. 193.

#### Appendix B—[Amended]

2. Table 1 of Appendix B to Part 300 is amended under Oklahoma ("OK") by removing the site entry for "Compass Industries Landfill (Avery Drive), Tulsa."

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