

US EPA ARCHIVE DOCUMENT

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 258

[FR-6964-9]

Project XL Site-specific Rulemaking for Buncombe County Landfill, Alexander, Buncombe County, North Carolina

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is today proposing a site-specific rule to implement a project under the Project XL program, an EPA initiative to allow regulated entities to achieve better environmental results at decreased costs. Project XL (eXcellence and Leadership) was announced on March 16, 1995 as a central part of the National Performance Review and EPA s efforts to reinvent environmental protection. Today s proposal would provide regulatory flexibility under the Resource Conservation and Recovery Act (RCRA), as amended, for the Buncombe County Solid Waste Management Facility, Alexander, Buncombe County, North Carolina (Buncombe County).

Buncombe County, the State of North Carolina, and EPA signed a Final Project Agreement (FPA) for a project under EPA s Project XL to use certain bioreactor techniques at its municipal solid waste landfill (MSWLF), specifically, the recirculation of landfill leachate, with the possible addition of water, to accelerate the biodegradation of landfill waste, to decrease the time it takes for the waste to reach stabilization in the landfill, and to promote recovery of landfill gas. The principal objective of this XL project is to demonstrate that leachate can safely be recirculated over a liner that differs from the liner prescribed in EPA MSWLF regulations. To implement this project, Buncombe County will need relief from certain regulatory requirements

in EPA regulations which set forth the design and operating criteria for MSWLFs.

Under existing regulations, leachate recirculation in Cells 1 and 2 is authorized because those cells were constructed using the prescribed composite liner. The proposed rule to allow leachate recirculation over an alternative liner would apply to Buncombe County landfill Cells 3 through 10. In all, Buncombe County is seeking to recirculate the leachate in Cells 1-10. The proposed rule would be conditional and depends on implementation of the design proposed in the rulemaking. Upon completion of this rulemaking, the landfill liner design would be enforceable in the same way that current RCRA standards for a landfill are enforceable to ensure that management of nonhazardous solid waste is performed in a manner protective of human health and the environment. Today's rulemaking would not in any way affect the provisions or applicability of any existing or future regulations. EPA retains its full range of enforcement options under this rule.

There are several XL pilot projects involving MSWLF bioreactors throughout the country. These landfill projects will enable EPA to evaluate benefits of different alternative liners and leachate recirculation systems under various terrains and operating conditions. The terms of each XL project are contained in a Final Project Agreement (FPA) for that landfill. The Final Project Agreement for each landfill project is available for public review at the EPA Docket in Washington, D.C., in each EPA regional library in which the landfill is located, and on the world wide web at <https://www.epa.gov/projectxl/>.

DATES: Public Comments: Comments on the proposed rule must be received on or before [INSERT DATE 30 days after publication].

Public Hearing: Commentors may request a public hearing [INSERT DATE 14 days after publication] during the public comment period. Commentors must state the basis for requesting

the public hearing. If EPA determines there is sufficient reason to hold a public hearing, it will do so no later than [INSERT DATE 21 days after the publication date], during the last week of the public comment period. Requests for a public hearing should be submitted to the address listed below. If a public hearing is scheduled, the date, time, and location will be made available through a Federal Register notice or by contacting Sherri Walker at the EPA Headquarters office. If a public hearing is held, it will take place in Asheville, North Carolina.

ADDRESSES: Request to Speak at Hearing: Requests to speak at a hearing should be mailed to the RCRA Information Center Docket Clerk (5303G), U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., Washington, D.C. 20460. Please send an original and two copies of all comments and refer to Docket Number F-2000-BCLP-FFFFF. A copy should also be sent to Ms. Sherri Walker at the U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., (1807) Washington D.C. 20460.

Comments: Written comments should be mailed to the RCRA Information Center Docket Clerk (5305W), U.S. Environmental Protection Agency, Pennsylvania Ave., N.W., Washington, D.C. 20460. Please submit an original and 3 copies of written comments as well as an original and 3 copies of any attachments, enclosures, or other documents referenced in the comments and refer to Docket Number F-2000-BCLP-FFFFF. A copy should also be sent to Ms. Sherri Walker at the U.S. Environmental Protection Agency, 1200 Pennsylvania Ave., N.W., (1807) Washington D.C. 20460.

EPA will also accept comments electronically. Comments should be addressed to the following Internet address: walker.sherri@epa.gov. Electronic comments must be submitted as an ASCII, WordPerfect 5.1/6.1/8 format file and avoid the use of special characters or any form

of encryption. Electronic comments will be transferred into a paper version for the official record. EPA will attempt to clarify electronic comments if there is an apparent error in transmission.

Viewing Project Materials: A docket containing the proposed rule, supporting materials and public comments is available for public inspection and copying at the RCRA Information Center (RIC) located at Crystal Gateway, 1235 Jefferson Davis Highway, First Floor, Arlington, Virginia. The RIC is open from 9:00 a.m. to 4:00 p.m., Monday through Friday, excluding federal holidays. 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-2000-BCLP-FFFFF. 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/> and in the regional office where the project is located.

FOR FURTHER INFORMATION, CONTACT: Ms. Sherri Walker at the U.S.

Environmental Protection Agency, 1200 Pennsylvania Ave., N.W. (1807), Washington D.C.

20460, (202) 260-4295, walker.sherri@epa.gov. Further information on today's action may also be obtained on the world wide web at <https://www.epa.gov/projectxl/>.

Outline of Today s Document

The information presented in this preamble is arranged as follows:

- I. Authority
- II. Background

- A. What is Project XL?
- B. What Are Bioreactor Landfills?
- III. Overview of the Buncombe County Landfill XL Project
 - A. Description of the Project
 - B. What Are the Environmental Benefits Anticipated Through Project XL?
 - C. How Have Various Stakeholders Been Involved in this Project?
 - D. How Will this Project Result in Cost Savings and Paperwork Reduction?
- IV. What Regulatory Changes Will Be Necessary to Implement this Project?
 - A. Existing Liquid Restrictions for MSWLFs (40 CFR 258.28)
 - B. Proposed Site-Specific Rule
 - 1. Design Specifications
 - 2. Operational Requirements
 - 3. Monitoring and Reporting
 - 4. Duration of Authority
- V. Additional Information
 - A. How to Request a Public Hearing
 - B. How Does this Rule Comply with Executive Order 12866: Regulatory Planning and Review?
 - C. Is a Regulatory Flexibility Analysis Required?
 - D. Is an Information Collection Request Required for this Project Under the Paperwork Reduction Act?
 - E. Does this Project Trigger the Requirements of the Unfunded Mandates Reform Act?

- F. How Does this Rule Comply with Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks?
- G. How Does this Rule Comply With Executive Order 13132: Federalism
- H. How Does this Rule Comply with Executive Order 13175: Consultation and Coordination with Indian Tribal Governments?
- I. How Does this Rule Comply with the National Technology Transfer and Advancement Act?

I. Authority

This rule is published 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 6949).

II. Background

A. What is Project XL?

Project XL is an EPA initiative to allow regulated entities to achieve better environmental results at less costs. Project XL -- eXcellence and Leadership -- was announced on March 16, 1995 as a central part of the National Performance Review and EPA's efforts to reinvent environmental protection. See 60 FR 27282 (May 23, 1995). Specifically, 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 untried, potentially promising regulatory approaches, both to assess whether they provide benefits at the specific facility affected, and whether they 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 specific 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.

Adoption of such alternative approaches or interpretations in the context of a given XL project is not an indication that EPA plans to adopt that interpretation as a general matter or even in the context of other XL projects. It would be inconsistent with the forward looking nature of these pilot projects to adopt such innovative approaches prematurely on a widespread basis without first determining whether they are viable in practice and successful for the particular project that embody them. These pilot projects are not intended to be a means for piecemeal revision of entire programs.

EPA believes that adopting alternative policy approaches and/or interpretations, on a limited site specific or state specific basis and in connection with a carefully selected pilot project is consistent with the expectations of Congress about EPA's role in implementing the environmental statutes (so long as EPA acts within the discretion allowed by the statute). Congress' recognition that there is a need for experimentation and research, as well as ongoing

reevaluation of environmental programs, is reflected in a variety of statutory provisions (e.g., section 8001 of RCRA, 42 U.S.C. 6981).

Under Project XL, participants in four categories (facilities, industry sectors, governmental agencies, and communities) are offered the opportunity to develop common sense, cost-effective strategies that will replace or modify specific regulatory requirements on the condition that they produce and demonstrate superior environmental performance. To participate in Project XL, applicants must develop alternative pollution reduction strategies pursuant to eight criteria: (1) superior environmental performance; (2) cost savings and paperwork reduction; (3) stakeholder involvement and support; (4) test of an innovative strategy; (5) transferability; (6) feasibility; (7) identification of monitoring, reporting, and evaluation methods; and (8) avoidance of shifting risk burden. The project must have full support of affected federal, state, and tribal agencies to be selected. For more information about the XL criteria, readers should refer to two descriptive documents published in the Federal Register (60 FR 27282, published May 23, 1995 and 62 FR 19872, published April 23, 1997) and the document entitled Principles for Development of Project XL Final Project Agreements, dated December 1, 1995.

Development of a Project has four basic phases: the initial pre-proposal phase where the project sponsor comes up with an innovative concept that it would like EPA to consider as an XL pilot; the second phase where the project sponsor works with EPA and interested stakeholders in developing its XL proposal; the third phase where EPA, local regulatory agencies, and other interested stakeholders review the XL proposal; and the fourth phase where the project sponsor works with EPA, local regulatory agencies, and interested stakeholders in developing the FPA and legal mechanism. The XL pilot proceeds into the implementation phase and evaluation phase

after promulgation of the required federal, state and local legal mechanisms and after the designated participants sign the FPA.

The Final Project Agreement (FPA) is a written agreement between the project sponsor and regulatory agencies. The FPA contains a detailed description of the proposed pilot project. It addresses the eight Project XL criteria and discusses how EPA expects the project to meet that criteria. The FPA identifies performance goals and indicators which will enable the project sponsor to demonstrate superior environmental benefits. The FPA also discusses administration of the agreement, including dispute resolution and conditions for termination of the agreement. On July 28, 2000, EPA published a notice in the Federal Register requesting comments on the draft FPA for Buncombe County bioreactor landfill XL project (65 FR 46456). The FPA was signed on September 18, 2000. A copy of the FPA is available in the docket and on the world wide web at <https://www.epa.gov/projectxl/>.

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 the microbiological process. Bioreactor landfills often employ liquid addition to supplement leachate for recirculation. A byproduct of the decomposition process is landfill gas, which includes methane, carbon dioxide, and volatile organic compounds (VOCs). Landfill gases are produced sooner in a bioreactor landfill than in a conventional landfill. Therefore, bioreactors often incorporate state of the art landfill gas collection.

On April 6, 2000, EPA published a document in the Federal Register (65 FR 18015) 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 MSWLF. EPA requested 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 operation of MSWLFs as bioreactors provide a number of environmental benefits including: (1) increasing the rate of waste decomposition which in turn extends the operating life of the landfill and lessens the need for additional landfill space or other disposal options; (2) decreasing or even eliminating the quantity, and increasing the quality of leachate requiring treatment and offsite disposal, leading to decreased risks and costs associated with leachate management, treatment and disposal; (3) reduced post-closure care costs and risks, due to the accelerated, controlled settlement of the solid waste during landfill operation; (4) lower long term potential for leachate migration into the subsurface environment; and (5) opportunity for recovery of methane gas for energy production.

There are several XL projects involving operation of landfills as bioreactors throughout the country. These landfill projects will enable EPA to evaluate benefits of different alternative liners and leachate recirculation systems under various terrains 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 could contribute valuable data.

The Buncombe County project and other XL projects would provide additional information on the performance of MSWLFs when liquids are added to a landfill constructed with an alternative liner system. The Agency is also interested in assessing the performance of

various types of alternative liners and how they meet the design performance standard under bioreactor conditions.

The terms of the Buncombe County bioreactor project are contained in a Final Project Agreement. EPA sought public comment on the draft FPA through August 29, 2000. The Final Project Agreement is available to the public at the EPA Docket in Washington, D.C., from the Region 4 XL Coordinator, and on the world wide web at <http://www.epa.gov/projectxl/>.

III. Overview of the Buncombe County Landfill XL Project

The Buncombe County Solid Waste Management Facility operates a RCRA Subtitle D municipal solid waste landfill in an area north of Asheville in Buncombe County, western North Carolina. The landfill began operation in 1997. The landfill facility encompasses approximately 600 acres although only a portion of that acreage is used for landfilling operations at this time. The French Broad River traces the south and west border of the landfill facility acreage. To date three cells of the planned 10 cells for the facility have been constructed and are in operation.

Cells 1 and 2 of the landfill facility were constructed in 1997 with the standard composite liner system prescribed in EPA regulations implementing RCRA Subtitle D for MSWLFs. The standard liner consists of 24 inches of compacted clay with a hydraulic conductivity of no more than 1×10^{-7} cm/sec overlain by a 60 millimeter High Density Polyethylene (HDPE) membrane. Cell 3 was constructed with an alternative liner system consisting of 18 inches of compacted clay with a hydraulic conductivity of no greater than 1×10^{-5} cm/sec overlain by a geosynthetic clay liner (GCL) with a hydraulic conductivity of no greater than 5×10^{-9} cm/sec and a 60-mil HDPE liner.

Cells 1, 2, and 3 were constructed with a leachate collection/drainage system consisting of two feet of crushed stone. A 28 oz. fabric cushion protects the underlying synthetic liner from

penetration or abrasion from the stone. Interior walls of each cell (lift) slope to a collection sump where leachate is pumped out over the cell wall (i.e., no liner penetration). A central leachate collection line was also installed in Cell 3 to improve leachate collection due to the lesser interior slopes. Leachate is pumped from each of the cells to a 1.5 million gallon composite lined leachate holding pond. A tanker truck pumps leachate from the holding pond and hauls it to a wastewater treatment plant located seven miles from the landfill facility.

A. Description of the Project

Buncombe County intends to construct and operate a combined leachate recirculation and gas recovery system in prototype Cells 4 and 5 for which construction began in August, 2000. Cells 4 and 5 would be constructed with the same alternative liner system as was installed in Cell 3. If operation of these prototype cells is successful, Buncombe County will construct the remaining Cells 6-10 with the same alternative liner system and combined leachate recirculation and gas recovery system. Buncombe also intends to begin recirculation of leachate in Cell 3 if the proposed rule is finalized. Recirculation of leachate would not be permitted under the current federal regulations using the alternative liner proposed by Buncombe County.

Prior to adding any supplemental liquids to the facility, Buncombe County will prepare a comprehensive landfill stability analysis under recirculation conditions with supplemental liquids. Buncombe County will submit this analysis to three university professors who are recognized as experienced in the field of geotechnical engineering in general and landfill slope stability. The County will incorporate comments from these professors into a final stability analysis for their review. The County will forward the analysis along with letters from the reviewing professors stating that the landfill should remain stable under the operating plan

developed by the County, to the USEPA and the State of North Carolina for concurrence prior to adding any supplemental liquids.

As is the case with Cells 1, 2, and 3, Buncombe County will install an automatic submersible pump at the collection point at the bottom of each landfill cell with appurtenant piping to pump the leachate collected to the leachate holding pond. The pump engages automatically when the leachate reaches a certain depth above the pump. A new pump system and dedicated force main will be constructed at the leachate holding pond to direct leachate back to the landfill cells for recirculation.

During operation, solid waste will be added and compacted in layers above the landfill liner and leachate collection system. Additional piping will be installed in a horizontal configuration as the solid waste layers build. The piping will be used to redistribute leachate pumped from the leachate holding pond and to collect landfill gas.

As further protection against liner leakage, performance of the liner system will be monitored by an adjunct leak detection system underlying the compacted soil layer of the sump portion of each landfill cell. The leak detection system will consist of 60-mil HDPE liner placed on a prepared subgrade. Any leakage through the primary composite liner system would be captured on the 60 mil HDPE liner and fed to a sump. A 4-inch capped pipe will drain leachate collected in the sump out beyond the footprint of the landfill cell. The capped pipe will be sampled semi-annually to determine whether any leachate escaped the composite liner.

As required by 40 CFR 258.51, Buncombe County installed groundwater monitoring wells to monitor whether landfill operations impact groundwater. Two upgradient groundwater monitoring wells were installed and sampled prior to construction of the first cell to determine true background groundwater quality in the absence of any landfill construction or operation.

Additional downgradient monitoring wells will continue to be installed with the construction of each landfill unit. These wells will continue to be sampled semi-annually for constituents listed in Appendix I of the North Carolina Solid Waste Management Rules.

Moisture content of the landfill waste will be monitored throughout the life of the project through a network of moisture sensors installed as waste is placed. Final design of the moisture detection system will occur with preparation of the permitting application.

Surface water quality is currently monitored at three stations around the facility. All surface water runoff from the site flows north through erosion control structures to Blevin Branch. Blevin Branch will continue to be monitored at the eastern end of the site where it originates and at the western end where it exits the landfill facility.

Leachate would be applied to landfill waste during operations to provide enhanced conditions for rapid waste decomposition. If additional water is needed to achieve optimal moisture level, this water would be drawn from the French Broad River.

Leachate would be injected below the landfill surface to prevent contact with employees or users of the landfill. In addition, the County may apply leachate to the working face after the landfill has stopped receiving customers and just before the day's waste is covered. At that time, the only people nearby would be the driver of the leachate spray truck and the heavy equipment operators placing the soil cover. These persons should not come in contact with the leachate. If supplemental river water is used, it will first be discharged to the leachate collection pond before application to the landfill or the river water will be applied directly to the working face of the landfill by tanker truck. The recirculation system will be designed and operated to allow application of leachate in small, discreet areas as needed to maintain an optimum moisture level.

The volume of leachate and supplemental water added back to the landfill will be

monitored throughout the life of the project. Recirculation quantities will be quantified using flow sensors installed on the leachate discharge line at the leachate holding pond and on the delivery lines to each cell. The objective is to determine the amount of leachate returned to each cell individually and determine an optimum moisture content and application rate.

Proponents of leachate recirculation claim that there is an improvement in leachate quality due to the aerobic and anaerobic decomposition of constituents which serve as a food source to the bacteria. Improved leachate quality is an indicator of a stabilized waste mass that poses a decreased threat to groundwater supplies should the containment system breach at some future date. Buncombe County will sample leachate from each cell semi-annually to determine whether leachate quality is improving.

Since effective degradation of the waste mass and gas production depend on optimizing the temperature within the landfill cell, temperature gauges will be installed along with the moisture sensors as waste is added to the landfill. As each cell reaches design grade, monuments will be installed to monitor settlement of the waste. Monument settlement will be evaluated semi-annually. Additionally, annual aerial topographic surveys will be conducted to evaluate settlement and the effectiveness of the leachate recirculation system.

B. What Are the Environmental Benefits Anticipated Through Project XL?

Under the FPA for the Buncombe County bioreactor project, the expected superior environmental benefits include: (1) maximizing landfill gas control and minimizing fugitive methane and VOC emissions; (2) greater recovery of landfill gas; (3) landfill life extension and/or reduced landfill use; and (4) minimizing leachate associated groundwater concerns.

1. 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. Landfill gas also contains volatile organic compounds (VOC's) that are air pollutants of local concern. Buncombe County will immediately begin collecting landfill gas by installing a gas collection system consisting of a surface permeable gas collection layer overlain by a cover of soil with an embedded membrane. Gas will be withdrawn such that this permeable layer beneath surface containment will be at a slight vacuum. This system will minimize the amount of landfill gas emitted to the environment. Buncombe County will immediately begin collecting landfill gas once recirculation operations begin.

2. Expedited Methane Generation/Recovery.

If the landfill were operated as a conventional landfill, the County would likely not have to install a gas collection system at this facility under New Source Performance Standards (NSPS) for several years. However, in the Buncombe bioreactor, the majority of the methane will be generated over a much earlier and shorter time period than a conventional landfill. The County has committed to installing the system and collecting gas as soon as recirculation begins which should make the total amount of gas collected at this site greater than if it operated conventionally and only complied with NSPS. This is expected to minimize the long-term low-rate methane generation often lost in conventional landfill practices.

3. Landfill Life Extension And/or Reduced Landfill Use.

The more rapid conversion of greater quantities of solid waste to gas reduces the volume of the waste. Volume reduction translates into either landfill life extension and/or less landfill use. Thus, this bioreactor landfill will be able to accept more waste over its working lifetime, subject to applicable State regulatory requirements. Additionally, fewer landfills may be needed

to accommodate the same inflows of waste from a given population.

4. Minimizing Leachate-Associated Concerns.

Research has shown that bioreactor processes can reduce the concentration of many pollutants in leachate. These include organic acids and other soluble organic pollutants. Since a bioreactor operation brings pH to near-neutral conditions, metals of concern are largely precipitated and immobilized in the waste.

C. How Have Various Stakeholders Been Involved in this Project?

Buncombe County encouraged stakeholder involvement during the project development stage in several ways. The methods included communicating through the media (newspaper, e-mails, and XL website); directly contacting interested parties; and offering an educational program regarding the regulatory requirements impacted by the XL project. Buncombe County has continued to keep stakeholders informed on the project status via mailing lists, newspaper articles, and public meetings; and EPA has posted information on the website at URL: <http://www.epa.gov/projectxl/buncombe/index.htm>. In addition, Buncombe County has initiated stakeholder involvement by televising a presentation of the issues associated with the landfill originally presented to the Buncombe County Commissioners Annual Retreat. The State of North Carolina and EPA are kept informed of issues as they arise.

Representatives from the local community and the Blue Ridge Environmental Defense League participated in conference calls and meetings with the Project XL team and provided comments during the development of the Final Project Agreement.

Few local stakeholders other than immediate residents have expressed interest in actively participating in the development of the project. Copies of all comment letters, as well as EPA's

response to comment letters, are available on the website.

As this XL project is implemented, the stakeholder involvement program will shift its focus to ensure that: (1) stakeholders are apprized of the status of project implementation; and, (2) stakeholders have access to information sufficient to judge the success of this Project XL initiative. Anticipated stakeholder involvement during the term of the project will likely include other general public meetings to present periodic status reports, availability of data and other information generated. Buncombe County will convene periodic meetings for interested stakeholders to brief them on progress during the duration of the XL Agreement. In addition to the reporting requirements of today's proposed rule, the FPA includes provisions whereby the County will make copies of project reports available to all interested parties. A public file on this XL project has been maintained at the website throughout project development, and the EPA will continue to update it as the project is implemented. Additional information is available at EPA's website at <http://www.epa.gov/projectxl>.

A detailed description of this program and the stakeholder support for this project is included in the Final Project Agreement, which is available through the docket or through EPA's Project XL site on the Internet (see ADDRESSES section of this preamble).

Buncombe County has preliminarily identified the following stakeholders, and additional stakeholders may be added over time.:

Buncombe County General Services Department

Buncombe County Citizens, as represented by the Buncombe County Board of Commissioners

Buncombe County Environmental Affairs Board, representing citizens of Buncombe

County

The North Carolina Chapter of the Solid Waste Association of North America

(NCSWANA)

The Western North Carolina Regional Air Pollution Control Agency (which has authority to issue a Title V Permit under the Clean Air Act)

Blue Ridge Environmental Defense League

Counsel of Independent Business Owners

Nearby residents

D. How Will this Project Result in Cost Savings and Paperwork Reduction?

With respect to Cell 3, the alternative liner system saved Buncombe County nearly \$400,000 as compared with the standard composite system. It is estimated that the County will save a total of \$5 million through build-out of the facility if the alternative liner system is used.

Other potential cost savings from the project include:

1. \$5 - \$10 million in reduced construction costs for additional landfill capacity if an increase of 20%-30% in additional waste volume can be achieved due to rapid waste decomposition during operations; and,
1. \$9 million if leachate hauling and off-site treatment can be eliminated. No appreciable reduction in paperwork is anticipated.

IV. What Regulatory Changes Will Be Necessary to Implement this Project?

A. Existing Liquids Restriction for MSWLFs (40 CFR 258.28)

EPA is proposing a site-specific rule to grant regulatory flexibility from 40 CFR 258.28 Liquid Restrictions, which restricts placement of liquid wastes in a MSWLF. Under the existing

rule, bulk or noncontainerized liquid waste is not allowed to be placed in a MSWLF unit unless (1) the waste is household waste other than septic waste, or (2) the waste is leachate or gas condensate derived from the MSWLF unit and the MSWLF unit is designed with a composite liner and leachate collection system as described in §258.40(a)(2). As stated above, Buncombe County seeks to recirculate leachate derived from the landfill, possibly supplemented with river water, to Cell 3 and future cells, all of which have or are expected to have a liner system that differs from the liner prescribed in 40 CFR 258.41(a)(2). Cells 1 and 2 were constructed with the prescribed liner, and therefore would be allowed to receive leachate and gas condensate under 40 CFR 258.28(a)(2).

EPA has entered into Final Project Agreements for several bioreactor pilot projects. Each of these projects will require a site-specific rulemaking in order to be implemented. EPA is proposing to amend 40 CFR 258.28(a) by adding a new subsection (3) to allow liquids to be added to municipal solid waste landfills that are subject to site-specific provisions set forth in a new 40 CFR 258.41. This amendment to §258.28(a) would apply to all Project XL MSWLF bioreactor projects. Until such an amendment is promulgated, EPA is including this amendment in each site specific rule proposal, to ensure that this provision can be promulgated with the first site specific rule. Therefore, the amendment to §258.28(a) is included in today's proposal.

B. Proposed Site-Specific Rule

Today's proposal would amend 40 CFR 258.28(a) by adding a new paragraph §258.28(a)(3) to refer to a new section of the rules, §258.41. The new §258.41(a) would specifically apply to the Buncombe County Solid Waste Management Facility in Buncombe County, North Carolina and would allow Cells 1-10 of the landfill to utilize recirculation of

leachate supplemented with river water, as long as each cell meets the design criteria and other requirements set forth in §258.41(a).

1. Design Specifications

Currently, federal regulations outline two methods for complying with liner requirements for municipal solid waste landfills. The first method is a performance standard under 40 CFR 258.40(a)(1). This standard allows installation of any liner configuration provided the liner design is approved by an EPA approved state 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). Section 258.40(b) sets forth a specific 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 1×10^{-7} cm/sec.

As stated earlier, leachate recirculation in municipal landfills is allowed under 40 CFR 258.28(a)(2) but only if the liner system complies with the design standard set out under 40 CFR 258.40(b) and a leachate collection system as described in §258.40(a)(2). The reason that the existing regulation requires a leachate collection system and a composite liner design as specified §258.40(a)(2) is to ensure that contaminant migration to the aquifer is controlled. (56 FR 50978, 51056 (Oct. 9, 1991)).

Under today's proposal, 40 CFR 258.41(a) would specifically address Buncombe County Landfill in Alexander, North Carolina and would allow Cells 3 -10 of that landfill to recirculate leachate over an alternative liner as long as those cells met the requirements set forth in that

subsection. Section 258.41(a)(4) would provide an alternative to the landfill liner design requirements set forth at 40 CFR 258.40(a)(2) and (b). These design criteria would be identical to the liner design described in 40 CFR 258.40(b), except that the upper component would include a 60 mil HDPE liner overlying a GCL with a hydraulic conductivity of no greater than 5×10^{-9} cm/sec. The lower component of the composite liner would consist of 18 inches of compacted soil with a hydraulic conductivity of not more than 1×10^{-5} cm/sec. The GCL will overlay and be in direct contact with the compacted soil layer.

The State of North Carolina reviewed the alternative liner system proposed for Cell 3 prior to approval and authorization for construction. The state's alternative liner design showed a leakage rate through the standard Subtitle D liner system and compared that figure against rates calculated for the alternative liner system proposed for Cell 3. The standard liner calculations produced a leakage rate of 1.12 gallons/acre/day while the alternative liner calculations produced a leakage rate of only 0.53 gallons/acre/day (North Carolina Permitting Guidance for Alternative Composite Liner Systems, June 1, 1998). The alternative liner's leakage rate is expected to be less than half that of the standard prescribed liner. The modeling performed to complete the demonstration of the acceptability (and superiority) of the alternative liner involves inputting the leakage rates into EPA's MULTIMED model, which simulates the movement of contaminants leaching from a landfill. The output of the MULTIMED model reflects the fact that the alternative liner is more protective than the standard regulatory liner. Based on this information, EPA is satisfied that the liner design will afford as much, if not more, protection to groundwater as the standard composite liner specified in 40 CFR 258.41(a).

As further protection against liner leakage, the proposed rule would require cells 3 -10 to be constructed with an adjunct leak detection system underlying the compacted soil layer of the

sump portion of each landfill cell. The leak detection system would be required to consist of 60-mil HDPE liner placed on a prepared subgrade. Any leakage through the primary composite liner system would be captured on the 60 mil HDPE liner and fed to a sump. The design specifications would also require a 4-inch capped pipe to drain leachate collected in the sump out beyond the footprint of the landfill cell.

Based on the modeling for the alternative liner, in conjunction with the leak detection system, EPA believes that the addition of landfill leachate into cells 3-10 will not result in any increased leakage to groundwater from the bioreactor cells. EPA seeks comment on allowing the addition of liquids to cells 3-10 if constructed with the proposed alternative liner.

The proposed rule would not change the requirement in 40 CFR 258.28(a)(2) that a leachate collection system as described in 40 CFR 258.40(a)(2) be in place in order for leachate to be recirculated in the landfill unit. Buncombe County's proposed design for Cells 3-10 would still be required to have leachate collection systems designed to maintain leachate over the liner to a depth of no more than 30 cm.

2. Operational Requirements

The proposed rule would only allow certain liquid waste to be added to the Buncombe County facility. Section 258.41(a)(2) would authorize only leachate or gas condensate derived from the MSWLF, which may be supplemented with water from the French Broad River. Buncombe County would also be required to control liquids addition in order to assure that the average moisture content of the landfill does not exceed 50% by weight. EPA is proposing a moisture content of 50% by weight because this is in the middle of the 40% - 70% range

commonly accepted as needed for biological reaction to go forward in a bioreactor landfill.¹ The proposal allows the State Director to establish a different maximum limit on landfill unit moisture content if the State Director determines that a different limit is either necessary to maintain the integrity of the landfill and its liner system or to increase the reaction rate, provided landfill and liner system integrity are maintained. As previously stated, prior to adding any supplemental liquids to the facility, Buncombe County will prepare a comprehensive landfill stability analysis under recirculation conditions with supplemental liquids and will submit this analysis to three university professors who are recognized as experienced in the field of geotechnical engineering in general, and landfill slope stability. The proposed rule also includes, as a prerequisite to adding liquids, the requirement that Buncombe County receive an air quality permit from the Western North Carolina Regional Air Quality Agency incorporating requirements for Buncombe County Landfill XL project. The air quality permit is also referred to as the Federally-Enforceable State-Operating Permit (FESOP). The air permit addressing the potential for earlier gas generation was issued on November 13, 2000 and would be required to be in effect during the entire period of leachate recirculation and post closure period. As described above in section III.B., Expected Superior Environmental Performance, one result of adding liquids to a landfill is that landfill gases will be generated earlier and over a shorter period than in a conventional landfill.

3. Monitoring and Reporting

As discussed above in section III.A., Description of the Project, an important element of

¹ Reinhart, Debra R. and Townsend, Timothy G., Landfill Design and Operation (Lewis Publ. 1998), p. 140.

the project is the information about bioreactor operation, alternative liner performance, waste decomposition efficiency, and potential environmental impacts. The proposed rule would require Buncombe County to monitor certain parameters which are not required for conventional MSWLFs under 40 CFR part 258. Some of this data, for example, moisture content, would be required in order to assess the physical stability of the landfill unit. The proposed rule would also require Buncombe County to report data obtained from the required monitoring to the State and EPA on an annual basis.

4. Duration of Authority

The FPA calls for the project to continue for 25 years in order to take into account the bioreactor process in all 10 cells of the facility. Therefore, today's proposal would provide that 40 CFR 258.41(a) be in effect for 25 years from the effective date of the rule.

The proposal also includes an early termination provision in the event of noncompliance with the requirements of 40 CFR 258.41(a). The EPA Regional Administrator for Region 4 would be authorized to issue a notice of termination, stating the reason for the decision to terminate the authority under 40 CFR 258.41(a). The Regional Administrator could terminate the rule with respect to all or part of the landfill cells for which the site-specific authority to add liquids would be required (Cells 3 -10). Termination would take effect 60 days from the date of the notice, unless the Regional Administrator determined, in writing, to rescind the termination. In the event of termination, all the applicable regulatory requirements of 40 CFR part 258 that would have applied to the Buncombe County facility in the absence of 40 CFR 258.41(a) would be applicable. However, the Regional Administrator could establish an interim compliance period if deemed necessary to complete the transition from bioreactor operation to conventional

dry tomb operation.

This provision for early termination of the rule is not exclusive. In addition to termination for noncompliance, the FPA allows any party to the agreement to terminate the project before the end of 25 years, for any reason. In the event that EPA determines that this project and site-specific rule should be terminated for reasons other than noncompliance before the end of the 25 year period and that the site-specific rule should be rescinded, the Agency would withdraw this rule through a subsequent rulemaking. This will afford all interested persons and entities the opportunity to comment on the proposed early termination and withdrawal of regulatory authority, and the proposed termination would also include any proposal for an interim compliance period while Buncombe County returned to full compliance with the existing requirements of 40 CFR part 258.

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 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 would no longer be needed.

V. Additional Information

A. How to Request a Public Hearing

If requested, a public hearing will be held to provide opportunity for interested persons to make oral presentations regarding this proposed rulemaking, in accordance with 40 CFR part 25.

Persons wishing to make an oral presentation on the proposed site specific rule to implement a leachate recirculation system with an alternative liner at the Buncombe County Landfill should contact Sherri Walker at the address given in the ADDRESSES section of this document. Any member of the public may file a written statement before the hearing or after the hearing to be received by EPA no later than fourteen days after publication of this proposed rulemaking.

Written statements should be sent to EPA at the addresses given in the ADDRESSES section of this document. If a public hearing is held, a verbatim transcript of the hearing and written statements provided at the hearing will be available for inspection and copying during normal business hours at the EPA addresses for docket inspection given in the ADDRESSES section of this preamble.

B. How Does this Rule Comply With Executive Order 12866: Regulatory Planning and Review?

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

C. Is a Regulatory Flexibility Analysis Required?

The Regulatory Flexibility Act (RFA), 5 U.S.C. 601 et seq., generally requires an agency to conduct 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. Only the definition of small governmental jurisdiction is relevant here. 5 U.S.C. 601(5) defines small

governmental jurisdiction to mean governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand. According to Buncombe County officials, the county population in 1990 exceeded 150,000; thus, Buncombe County does not qualify as small governmental jurisdiction within the meaning of 5 U.S.C. 601(5). Consequently, EPA can certify that this proposed rulemaking will not have a significant impact on a small governmental jurisdiction and is not required to conduct a regulatory flexibility analysis.

D. Is an Information Collection Request Required for this Project Under the Paperwork Reduction Act?

This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act (PRA), 44 U.S.C. 3501 *et seq.* The requirements of this proposed rule would not apply to 10 or more entities, therefore the PRA does not apply.

E. Does This Project 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 discussed above, this proposed rulemaking has limited application. It applies only to the Buncombe County Solid Waste Management Facility. If adopted, this proposed rule would result in a cost savings for Buncombe County when compared with the costs it would have had to incur if required to adhere to the requirements contained in the current rule. As such, this proposed rule would 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. While this proposed rule would have a unique affect for Buncombe County, the population of Buncombe County exceeds that which would qualify it as a small government, therefore, EPA is not required under section 203 of UMRA to develop a small government plan. However, EPA has worked with and continues to work with Buncombe County, affected citizens, and other stakeholders in seeking meaningful and timely input into the development of the Final Project Agreement and this proposed rule. Thus, today's rule is not subject to the

requirements of sections 202 and 205 of the UMRA.

F. How Does this Rule Comply with Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks?

Executive Order 13045, entitled 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 proposed 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. The proposed rule does not involve decisions based on environmental health or safety risks because it is limited to modifying a regulatory construction standard for a municipal solid waste liner that is expected to result in a liner which performs at least as well as the liner design specified in the current regulations and for a lesser construction cost.

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.

Policies that have federalism implications is defined in the Executive Order to include regulations that have substantial and 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.

The proposed rule does not have federalism implications. It will not have a substantial direct effect on States, on the relationship between the national government and the States, or on the distribution of powers and responsibilities among various levels of government, as specified in Executive Order 13132. The proposed rulemaking will only affect one local governmental entity and state and would provide regulatory flexibility for each entity concerned. Thus, Executive Order 13132 does not apply to this proposed 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 proposed 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. EPA is currently unaware of any Indian tribes located in the vicinity of the landfill or Buncombe County. Thus, Executive Order 13175 does not apply to this rule.

I. 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, requires that EPA 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. If EPA elects not to use available and applicable voluntary consensus standards, EPA must provide an explanation to Congress, through OMB, as to why EPA is not using the standard.

This proposed rulemaking involves technical standards. This rule complies with the requirements of the NTTAA because it utilizes existing voluntary consensus standards developed by the American Society of Testing and Materials (ASTM). The ASTM is a voluntary consensus standards-setting body under the NTTAA. EPA proposes to use ASTM D5261 and ASTM D2216 as standards for the geosynthetic liner specified in proposed 40 CFR 258.41(a)(4)(iii). These standards assure the proper standards of production for geotextiles and geosynthetic clay liners addressed in today s proposed rule. Both standards were approved on June 15, 1992. They are available from ASTM through their website, <http://www.astm.org/>, or by contacting

them at ASTM, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania, 19428-2959. In addition, EPA asks the public to identify potentially applicable voluntary consensus standards not addressed by EPA and explain why this standard is applicable and how it should be applied in this regulation.

List of Subjects in 40 CFR Part 258

Environmental protection, Solid waste, Landfill.

Dated: April 3, 2001 Christine Todd Whitman,
Administrator.

For the reasons set forth in the preamble, part 258 of title 40 Chapter I of the Code of Federal Regulations is proposed to be 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 C Operating Criteria

2. Amend §258.28 by:

- a. Removing or at the end of paragraph (a)(1).
- b. Removing the period at the end of paragraph (a)(2) and adding in its place ; or .
- c. Adding paragraph (a)(3).

The addition reads as follows:

§258.28 Liquid restrictions.

(a)* * *

(3) The MSWLF unit is a Project XL MSWLF and meets the applicable requirements in §258.41. The owner or operator must place documentation of the landfill design in the operating record and notify the State Director that it has been placed in the operating record.

* * * * *

Subpart D Design Criteria

3. Section 258.41 is added to read as follows:

§258.41 Project XL Bioreactor Landfill Projects.

(a) *Buncombe County, North Carolina Project XL Bioreactor Landfill Requirements.*

Paragraph (a) of this section applies to Cells 1, 2, 3, 4, and 5 of the Buncombe County Solid Waste Management Facility located in the County of Buncombe, North Carolina, owned and operated by the Buncombe County Solid Waste Authority, or its successors. This subsection will also apply to Cells 6, 7, 8, 9, and 10, provided that the EPA Regional Administrator for Region 4 and the State Director determine that the pilot project in Cells 3, 4, and 5 is performing as expected and that the pilot project has not exhibited detrimental environmental results.

(1) The Buncombe County Solid Waste Authority is allowed to place liquid waste in the Buncombe County Solid Waste Management Facility, provided that the provisions of paragraphs

(a)(2) through (9) of this section are met.

(2) The only liquid waste allowed under this section is leachate or gas condensate derived from the MSWLF, which may be supplemented with water from the French Broad River. The owner or operator shall control any liquids to the landfill to assure that the average moisture content of the landfill does not exceed 50% by weight. Liquid addition and recirculation is allowed only to the extent that the integrity of the landfill including its liner system is maintained, as determined by the State Director.

(3) The MSWLF unit shall be designed and constructed with a liner and leachate collection system as described in §258.40(a)(2) or paragraphs (a)(4) and (5) of this section. The owner or operator must place documentation of the landfill design in the operating record and notify the State Director that it has been placed in operating record;

(4) Cells 3 - 10 shall be constructed with a liner system consisting of the components described in paragraphs (a)(4)(i) through (v) of this section, or an equivalent or superior liner system as determined by the State Director:

(i) A lower component consisting of at least 18 inches of compacted soil with a hydraulic conductivity of no more than 1×10^{-5} cm/sec., and

(ii) An upper component consisting of a minimum 30-millimeter (mil) flexible membrane liner (FML) or 60-mil if High Density Polyethylene (HDPE) is used, and

(iii) A geosynthetic clay liner (GCL) overlaying and in direct contact with the 18 inches of compacted soil in paragraph (a) (4) of this section and having the following properties:

(A) The GCL shall be formulated and manufactured from polypropylene geotextiles and high swelling containment resistant sodium bentonite. The bentonite-geotextile liner shall be manufactured using a minimum of one pound per square foot as determined using ASTM D5261

test method, of a high swelling sodium montmorillonite clay at 12% moisture content as determined by the ASTM D2216 test method.

(B) The encapsulating geotextile shall be polypropylene and shall have a minimum weight of 6 oz./square yard.

(iv) The upper component shall be installed in direct and uniform contact with an overlaying soil cushioning component.

(v) Underlying the above liner system, there shall also be installed a leak detection system consisting of a 60-mil HDPE liner placed on a prepared subgrade.

(A) A 4 inch capped pipe will drain liquid collected in the sump out beyond the footprint of the landfill cell.

(B) Water collected on the leak detection liner shall be monitored at least semi-annually as directed by the State Director to determine whether any leachate escaped the liner system.

(5) Cells 3 - 10 shall be designed and constructed with a leachate collection system to maintain less than 30 centimeters depth of leachate is present at the sump location. The leachate collection system shall include a continuous monitoring system to monitor depth of leachate.

(6) The owner/operator shall keep the Federally Enforceable State Operating Permit (FESOP) issued the by the Western North Carolina Air Quality Agency for the Buncombe County Solid Waste Management Facility in effect, and shall comply with the provisions of the FESOP, during the entire period of leachate recirculation and the post closure period. The FESOP was issued on November 13, 2000 and contains the air quality requirements for the Buncombe County Landfill XL project.

(7) Monitoring and Reporting Requirements. The owner or operator of the Buncombe County Solid Waste Management Facility shall monitor for the parameters listed in paragraphs

(a)(7)(i) through (xiii) of this section and submit an annual report on the XL project to the EPA Regional Administrator for Region 4 and the State Director. The first report is due coincident with the October 2001 report to the state. The report should state what progress has been made toward the superior environmental performance and other commitments as stated in the Final Project Agreement. The report shall include, at a minimum, the following data:

- (i) Amount of landfill gas generated;
- (ii) Percent capture of landfill gas, if known;
- (iii) Quality of the landfill gas, amount and type of liquids applied to the landfill;
- (iv) Method of liquids application to the landfill;
- (v) Quantity of waste placed in the landfill;
- (vi) Quantity and quality of leachate collected;
- (vii) Quantity of leachate recirculated back into the landfill;
- (viii) Information on the pretreatment of waste applied to the landfill;
- (ix) Data collected on landfill temperature and moisture content;
- (x) Data on the leachate pressure (head) on the liner;
- (xi) Observations, information, and studies made on the physical stability of the MSWLF units that are developed during the project term, if any.
- (xii) The above data may be summarized, and, at a minimum shall contain, the minimum, maximum, median, and average data points as well as the frequency of monitoring as applicable.
- (xiii) The method and frequency of monitoring shall be specified by the State Director.

(8) Termination and Withdrawal.

- (i) Paragraph (a) of this section will terminate 25 years from its effective date, unless a

subsequent rulemaking is issued or terminated earlier pursuant to paragraph (a)(8)(ii) of this section.

(ii) In the event of noncompliance with paragraph (a) of this section, EPA may terminate the authority under paragraph (a) of this section and the authority to add liquid wastes to all or part of cells 3-10 under §258.28(a)(3). The EPA Regional Administrator will provide written notice of intent to terminate to the Buncombe County Solid Waste Authority with a copy to the State Director. The notice will state EPA's intent to terminate under the rules and will include a brief statement of EPA's reasons for its action. The termination will take effect 60 days from the date of the notice, unless the EPA Regional Administrator for Region 4 issues a written notice rescinding the termination.

(9) Compliance Requirements in the Event of Termination or Withdrawal. The Buncombe County Solid Waste Management Facility will be subject to all regulatory provisions applicable to MSWLFs upon termination of authority under this section. In the event of early termination of this section, the EPA Regional Administrator for Region 4 may provide an interim period of compliance to allow Buncombe County a reasonable period of time for transition following cessation of liquids addition.

(b) [Reserved]