



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION III  
1650 Arch Street  
Philadelphia, Pennsylvania 19103-2029

AUG 03 2000

Mr. James Stenburg  
Regional Engineer  
Waste Management, Inc.  
8000 Chambers Road  
Charles City, VA 22485

**Re: Waste Management, Inc. Project XL Proposal  
(Test of Bioreactor Systems vs. Leachate Recirculation)**

Dear Mr. Stenburg:

I am pleased to inform you that the U. S. Environmental Protection Agency ("EPA") has selected Waste Management's May 30, 2000 bioreactor and leachate recirculation XL proposal as a potential Project XL pilot, based on the proposal and information provided by you during your April presentation at EPA headquarters.

EPA will work with Waste Management, King George County, Amelia County, the Commonwealth of Virginia and appropriate stakeholders to develop the next stage of your XL project: a Final Project Agreement ("FPA"), which will set forth the expectations and commitments of the counties, EPA, the Commonwealth of Virginia, and other project partners for the proposed project. Agency staff both at headquarters and at Region III believe your proposal has significant merit and look forward to working with you to develop your project further.

Project XL was established to test innovative environmental strategies, and encourage excellence and leadership in environmental stewardship. EPA believes that this proposal - a demonstration project involving a comparison of leachate recirculation and bioreactor systems as potential waste treatment methods in municipal solid waste landfills (MSWLF) - shows the potential to accomplish these goals. Specifically, the Agency sees an opportunity to compare the benefits and costs of two different types of waste treatment systems at locations which are similar in terms of climatological factors.

Recirculation of leachate, and the addition of water from other sources, offers several potential benefits, including accelerated biodegradation of waste and potential contaminants in the landfill, a shorter overall duration of landfill gas generation, potential for earlier re-use of the landfill for beneficial purposes/potential to avoid new landfill construction, and increased settlement of the solid waste during landfill operation and decreased settlement after final

capping of the waste cell. In addition, the expected enhanced biological breakdown of contaminants in the leachate is expected to decrease the quantity, and increase the quality, of leachate requiring treatment and offsite disposal, leading to decreased risks (to site workers and the community) and costs associated with leachate management, treatment and disposal, and lower long term potential for leachate migration into the subsurface environment. In addition, leachate recirculation is expected to reduce post-closure care costs and risks, due to the accelerated, controlled breakdown and settlement of the solid waste during active landfill operation.

The project team believes the additional liquid streams proposed to be introduced into the bioreactor system at the King George County facility, which include surface water, wastewater treatment plant sludges and other biota rich sludges in addition to leachate, would offer an opportunity to compare the two types of waste treatment methods for efficacy and cost. The project will enable the state and EPA to determine what factors contribute most to extending the operating life of a landfill and lessening the need for additional landfill space or other disposal options.

Under the Project, WM is requesting flexibility from the RCRA requirement that prohibits application of bulk liquids in municipal solid waste landfills (40 CFR Section 258.28.) The facility is also requesting similar flexibility under Part V of Virginia Solid Waste Management Regulations.

In order to ensure that this project meets the Project XL criteria, that it achieves the enhanced environmental results mentioned above, and that the requested regulatory flexibility is appropriately granted, EPA expects that WM and other stakeholders will need to address in more detail the following project elements during development of the FPA:

- 1. Gas Collection and Control:** EPA understands that WM is currently controlling landfill gas (LFG) at both landfills via an active gas collection system, and is conducting regular LFG monitoring, pursuant to plans approved by the VADEQ. Moreover, EPA recognizes that WM is not seeking any regulatory flexibility with respect to Federal or state air requirements for this project, and that WM is committed to assuring that any increase in LFG emissions caused by the addition of liquids is adequately controlled. EPA believes that it will likely be appropriate to include more specific information in the FPA on these LFG control measures, and to make these measures mandatory through appropriate regulatory mechanisms.
- 2. Monitoring, Reporting, and Evaluation:** In early April of this year EPA issued a Request for Comment concerning the efficacy of landfill leachate recirculation projects generally. EPA would like to ensure that the data gathered in this project will be useful to this broader information gathering effort.

**3. Additional Superior Environmental Performance:** EPA encourages WM to commit to redirecting some percentage of the money saved by the flexibility provided (e.g., avoided leachate treatment costs) to undertake studies or projects that would further WM's superior performance in integrated solid waste management practices.

EPA's XL project team assigned to your project will work with you to refine certain areas of the project, and assist in the development of the FPA. The EPA team assigned to this project encompasses the program offices with a direct stake in either the flexibility requested or the superior environmental performance to be gained, and will be led by Chris Menen, Region III XL project manager (215/814-2786) and Janet Murray (202/260-7570) from the Office of Policy and Reinvention. Mr. Menen and Ms. Murray will both be available to provide you with guidance and direction as you develop the FPA.

If I can be of assistance in expediting the development and review of your FPA, please do not hesitate to call me at 215/814-3125. I look forward to working with you and your staff to reach agreement on a mutually satisfactory XL project.

Sincerely,

A handwritten signature in black ink, appearing to read 'Thomas C. Voltaggio', with a long horizontal flourish extending to the right.

Thomas C. Voltaggio  
Deputy Regional Administrator

