



May 8, 2009

WASTE MANAGEMENT

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Austin, Texas 78754
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Via Fax 512-239-5687

Ms. Lindley Anderson
MC 206
Air Quality Division
Chief Engineer's Office
Texas Commission on Environmental Quality
P. O. Box 13087
Austin, TX 78711-3087

Re: Flare Task Force Stakeholder Group

Dear Ms. Anderson:

Waste Management of Texas, Inc. ("**WMTX**") has a long history of providing non-hazardous waste management services throughout Texas and has operated solid waste facilities in this state since 1980. WMTX owns, operates, or maintains a financial interest in over thirty municipal solid waste ("**MSW**") transfer stations and disposal facilities in Texas, and has commercial and industrial nonhazardous solid waste landfill operations in the state. WMTX's parent company, Waste Management, Inc., is headquartered in Houston and is one of the leading providers of solid waste management services in the country.

Given its operational presence in Texas, WMTX has an interest in ensuring that the rules relating to MSW are fair, understandable, and predictable. Accordingly, WMTX is appreciative of the opportunity to provide the following comments to the information presented at the March 30 and April 2, 2009 Flare Task Force Stakeholder meetings.

I. GENERAL COMMENTS

The presentations made by the Texas Commission on Environmental Quality ("**TCEQ**") at the stakeholder meetings focused largely on the waste gas generated by the petroleum and chemical industries. However, WMTX and other landfill owners will also be impacted by any flare regulations unless such regulations exempt Texas landfills from any new rules that are adopted.

The presentations demonstrated the TCEQ's concerns regarding the net heating value ("**NHV**") of the waste gas going to flares. It appears that there may be some confusion or uncertainty about whether industrial waste gas flares were getting the minimum NHV of

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Ms. Lindley Anderson

Page Two

May 8, 2009

200 Btu/scf for non-assisted and minimum NHV of 300 Btu/scf for assisted flares as required in 40 CFR § 60.18. In regard to landfill gas ("**LFG**") flares, it is rare for LFG collection and flaring to be pursued unless the collected gas will meet the minimum heat content for fuel provided in 40 CFR § 60.18. LFG will be collected under such conditions only if collection of low-heating-value LFG is required by regulation, as is the case in California; and, in those cases, the flare will be supplemented with another fuel such as propane. The TCEQ's regulations do not require LFG collection under these conditions and, typically, the heat content of LFG at our Texas facilities ranges from 420-550 Btu/scf. Since the NHV of LFG is well above the minimum 200 Btu/scf limit, landfill flares in Texas should not be categorized with the industrial waste gas flares that were described at the stakeholder meetings and, as such, testing should not be required on any set schedule.

The landfill industry does not use steam or air-assisted flares for the combustion of LFG. The landfill industry only uses non-assisted flares and, therefore, does not encounter the operational problems inherent in assisting combustion with air or steam. As such, the TCEQ's concerns regarding assisted flares do not apply to LFG flares, and LFG flares should be expressly exempted from any future assisted-flare specific rules.

The gas generated by landfills is required to be collected and properly managed, usually by combustion at a certain stage of landfill development, by the New Source Performance Standards for Municipal Solid Waste Landfills, 40 CFR 60, Subpart WWW, specifically 40 CFR § 60.752(b)(2)(iii). According to this regulation, an open flare is an acceptable way by which landfills may destruct the non-methane organic compounds ("**NMOC**") contained in the LFG. If an open flare is used, there are monitoring, record keeping, and reporting requirements contained in NSPS, Subpart WWW, that apply to the landfill. Landfill flares primarily combust NMOC and methane.

It is important to note that LFG collection and control systems, including their flares, operate on a continuous basis because NSPS, Subpart WWW, requires continuous operation and because LFG is generated on a continuous basis by methanogenic bacteria acting to decompose the organic materials in the landfill. There is no way to stop the natural process of decomposition within the landfill and thereby stop production of LFG. Should LFG collection and combustion cease for a significant period of time both odor and safety problems can result. Simply said, there is no switch that can be thrown to stop production of LFG once waste materials have been deposited in a landfill.

As far as flares go, LFG can be combusted in either an open or enclosed flare. However, the NOx emissions from either of these flares are about the same. Most manufacturers state that the NOx emissions from open flares fueled by LFG is 0.068 lbs/mmBtu, whereas the NOx emissions from enclosed flares are in the range of 0.06 - 0.08 lbs/mmBtu. Depending on the manufacturer, there is little to no reduction in NOx emissions between these types of flares.

Ms. Lindley Anderson

Page Three

May 8, 2009

Instead of flaring gas, a landfill can use the LFG as a fuel for a reciprocating internal combustion engine or a turbine to produce electricity; however, combustion of LFG in this manner creates more NOx emissions per unit of LFG than flaring the LFG. The lowest emitting NOx Caterpillar engine, the Cat 3520, is limited by the standard air permit to 1.9 lb/MWh, which creates more NOx than flaring the LFG. This is not a problem overall, because the total NOx emissions are less than would be generated by both a flare for the LFG and a traditional fossil fuel power plant for the electricity. However, because of these higher emissions for the point of LFG combustion, LFG gas to electricity plants are not feasible to develop in ozone non-attainment areas due to the extremely high cost of NOx offsets.

WMTX appreciates this opportunity to comment on the information presented at the March 30 and April 2, 2009 Flare Task Force Stakeholder meetings. If you have any questions about these comments, WMTX would be happy to meet with the TCEQ to further discuss this matter. Thank you for your consideration of our comments.

Sincerely,

Waste Management of Texas, Inc.



Charles A. Rivette

Waste Management - South Texas Area