UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

NOV 15 2004

Mr. Steven J. Bossotti, P.E.
Plant Manager
American Ref-Fuel Company of Hempstead
600 Merchants Concourse
Westbury, NY 11590

Re: – Proposed Annual Municipal Waste Throughput Increase and NOx Emissions Decrease at the Hempstead Resource Recovery Facility (HRRF), Westbury, NY
– PSD Permit Revision and NSPS Non-Applicability Determination for the Proposed Increase

Dear Mr. Bossotti:

The Region 2 Office of the U. S. Environmental Protection Agency (EPA) has reviewed American Ref-Fuel Company of Hempstead's (American Ref-Fuel's) May 6th, 2004 request to increase the annual throughput limitation of municipal waste at the Hempstead Resource Recovery Facility (HRRF) located in Westbury, NY. This request was subsequently superceded and augmented by letters dated May 18th, June 25th, July 13th and August 17th, 2004. The HRRF currently has an existing Prevention of Significant Deterioration of Air Quality (PSD) permit issued by the New York State Department of Environmental Conservation (NYSDEC) for three waste-to-energy boilers which has been incorporated into the Title V permit under a PSD delegation authority from EPA to NYSDEC. American Ref-Fuel is proposing to increase the annual throughput of municipal waste at the facility from 914,325 tons/year to 975,000 tons/12-month. American Ref-Fuel is also proposing to increase the removal efficiency of its De-NOx Control System so that the maximum NOx stack concentration will be reduced from 205 ppm to 185 ppm. This NOx reduction will be accomplished by injecting more urea solution into the boilers. With respect to the other PSD pollutants, all the increases will be below the PSD significance levels. The projected actual increase will be 17.2 tons/year for SO_2, 15.8 tons/year for CO, 0.53 ton/year for PM, 0.53 ton/year for PM_{10}, 0.29 ton/year for VOC, 0.0009 ton/year for lead, 0.62 ton/year for H_2SO_4, 5.3×10^{-7} ton/year for dioxin/furans and 29.1 tons/year for acid gases. American Ref-Fuel requested that EPA revise the PSD permit to allow the proposed changes and issue a determination that 40 CFR §60.14 (Modification under New Source Performance Standards) does not apply.

EPA reviewed American Ref-Fuel's requested changes and has determined that these changes will not result in any increases above the PSD de minimis levels. Therefore, no additional PSD review is necessary. However, EPA made a preliminary decision to approve these changes subject to public review. The 30-day public review period ran concurrently with the 30-day Title V public review notice that the NYSDEC announced in Newsday on October 6, 2004 and ended with the NYSDEC public hearing on November 8, 2004. EPA received no public comments during this period.

With respect to the New Source Performance Standards (NSPS), 40 CFR §60.14 does not apply because of the provision under 40 CFR §60.14(e)(2) which exempts as modification any increase in the production rate of an existing facility, if that increase can be accomplished without a capital expenditure on the affected unit. American Ref-Fuel already operates 24 hours per day so the increase in throughput will be accommodated by operating more days out of the year without any new capital expenditure. EPA has therefore determined that the NSPS modification provisions of 40 CFR §60.14 are not triggered and the PSD permit conditions can be modified.

Note that the PSD conditions are contained in a merged PSD/TitleV/Part 201 permit issued by NYSDEC. These conditions were developed by NYSDEC under a PSD delegation of authority in effect at that time. As NYSDEC is no longer operating under that delegation, I am hereby exercising my authority to implement the PSD program under 40 CFR §52.21 by revising selected PSD conditions that relate to your proposal. Attachment I contains the conditions that are being modified. While the references to conditions in Attachment I are taken from the merged PSD/Title V/Part 201 permit, please be advised that today's modifications relate solely to the PSD requirements in the merged permit. Any changes pursuant to Title V and Part 201 must be addressed independently with NYSDEC.

The revised PSD permit conditions are effective immediately upon receipt. This determination is final Agency action under the Clean Air Act. No administrative review is possible since no comments were received on the proposed changes and EPA made no changes to the permit conditions after the period for public review except for a minor administrative correction to clarify a permit condition (i.e., EPA added "the tons of bulkies removed" to the last sentence of Condition No. 1). Note that independent procedures exist for addressing changes to Title V and Part 201 permits. Nothing in this PSD permit modification should be construed to effectuate changes or replace procedures under either of those programs.

If you have any questions regarding this letter, please call Mr. Steven C. Riva, Chief, Permitting Section, Air Programs Branch, at (212) 637-4074.

Sincerely,

Walter E. Mugdan, Director
Division of Environmental Planning and Protection

cc: David Shaw, Director
Division of Air Resources
New York State Department
of Environmental Conservation (w/attachment)

Ajay Shah, P.E.
Regional Air Pollution Control Engineer
Region 1
New York State Department
of Environmental Conservation (w/attachment)

Attachment I
Revised PSD Permit Conditions
Hempstead Resource Recovery Facility
Westbury, New York

1. Condition 69, Item 69.2, under Monitoring Description:

Old Language:

Excepting start-up, shutdown and upset conditions operation, the facility shall be restricted to a range of 65 to 100 percent of maximum continuous rating (MCR) of the boilers. Initial emissions testing for opacity, particulate, temperature and combustion efficiency have been conducted at the lower and upper ends of such range, and have demonstrated compliance with the emissions limitation set forth in this permit, the facility shall be permitted to operate within the specific MCR range.

The facility shall not charge more than 914,325 tons per year and shall report to the Department, on a monthly basis, the facility's average daily throughput.

New Language:

The facility shall not charge (process) more than 975,000 tons per 12-month rolling average and shall report to the Department, on a monthly basis, the facility's average annual throughput using the following formula:

Tons Processed/Week = Tons Received/Week $\pm$ Change in the Existing Inventory/Week - Bulkies Removed from the Floor/Week

where:

Tons Received/Week = Tons of incoming municipal waste received at the tipping floor for that week.
$\pm$ *Change in the Existing Inventory/Week* = Change in the existing waste inventory determined from the prior week's calculation and either added to (if the inventory went down) or subtracted from (if the inventory went up) the total deliveries recorded by the scale system for that week.

Bulkies Removed from the Floor/Week = Any bulky or unacceptable waste that is removed from the incoming waste on the tipping floor during that week.

To demonstrate compliance with the 12-month rolling average, the facility shall calculate the existing inventory, the tons of bulkies removed and the number of tons processed at the end of each month.

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2. **Condition 1-10, Item 1-10.2,**

***Old Language**:*

Parameter Monitored: OXIDES OF NITROGEN
Upper Permit Limit: 205 parts per million by volume (dry, corrected to 7% O_2)

New Language:

Parameter monitored: oxides of nitrogen
Upper Permit Limit: 185 parts per million by volume (dry, corrected to 7% O_2)

3. **Condition 72, Item 72.2, under Monitoring Description:**

***Old Language**:*

Parameter Monitored: OXIDES OF NITROGEN
Limit: 437 pounds per hour

New Language:

Parameter monitored: oxides of nitrogen
Limit: 145.7 pounds per hour per unit

4. New Condition Incorporating a NOx tons/365-day Rolling Average Limit.

New Language:

Facility-wide Maximum Annual Potential (MAP) for oxides of nitrogen (NOx) shall not exceed 1457 tons/365-day rolling average. Annual Relative Accuracy Test Audit (RATA) must be conducted to verify the mass emission rate calculations as shown below. The Reference Method (RM) to calculate the mass emissions of NOx at each flue exit must include 40 CFR Part 60, Appendix A, Method 2 (Determination of Stack Gas

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Velocity and Volumetric Flow Rate (Type S Pitot Tube)) and Method 4 (Determination of Moisture Content in Stack Gases) along with 40 CFR Part 60, Appendix A, Method 7E (Determination of Nitrogen Oxide Emissions from Stationary Sources (Instrumental Analyzer Procedure)) to determine the volumetric flow rate of gas stream at standard conditions, on a dry basis.

This NOx emission limit shall be determined by using the following formula:

Total rolling cumulative NOx emissions shall be calculated as follows:

$$\mathbf{RCT_{365NOx} = \sum_{n-1}^{n-365} Daily\ Sum_{NOx}\ (sum\ of\ previous\ 365\ days)}$$

where:

RCT_{365NOx} = Rolling cumulative total NOx emissions in tons/year for any 365-day period.

$\sum_{n-1}^{n-365} Daily\ Sum_{NOx}$ = Sum of facility-wide daily NOx emissions in tons/year for the previous 365 days.

lb/day NOx per unit = NOx ppmdv@7% O_2 (24-hr average) x 1/1,000,000 x

46.01 lb/lb-mol NOx x lb-mol/385.3 ft^3 x 14,389 dscf/MMBTU @7% O_2 x

MMBTU/1,000,000 BTU x 4700 BTU/lb x 2000 lb/ton x 890.4 tpd/unit.

The facility may request to substitute the Method 19 F-factor of 14,389 dscf/MMBTU @ 7% O_2 used in the formula above with a facility-specific F-factor based on actual stack testing. This facility-specific F-factor shall be determined only during the first annual RATA following the effective date of this permit. The methodology/protocol to determine the facility-specific F-factor shall be submitted to EPA and the Department for prior review and approval. EPA and the Department will make a determination on the acceptability of this F-factor based on the proposed protocol and actual stack test results. If this change is accepted, the permit will be amended administratively.