

Adams, Patty

From: Koerner, Jeff
Sent: Thursday, April 01, 2004 3:33 PM
To: Adams, Patty
Subject: SWA North County Resource Recovery Facility - Project No. 0990234-008-AC

Patty,

With regard to the permit application data for the following project:

Project No. 0990234-008-AC

Description: Addition of a new 3500 scfm flare (Emissions Unit 008) to replace existing 1800 scfm (Emissions Unit 003) in existing Class I landfill

Solid Waste Authority of Palm Beach County
North County Resource Recovery Facility

Please refer to the information in the application for Permit No. PSD-FL-108E dated October 22, 2003. This flare project was determined to be distinct and separated out for quick issuance.

Thanks!

Jeff Koerner, BAR - Air Permitting South
Florida Department of Environmental Protection
850/921-9536



1601 Belvedere Road, Suite 211 South
West Palm Beach, Florida 33406
tel: 561 689-3336
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October 14, 2003

Mr. Steven L. Palmer, P.E.
Siting Coordination Office
Florida Department of Environmental Protection
Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

Subject: Solid Waste Authority (SWA) of Palm Beach County
Proposed Lime Recalcination and Biosolids Pelletization Facilities
Modification of Conditions of Certification, PA84-20
Transmittal of Response to Request for Additional Information, dated April 8,
2003

Dear Mr. Palmer:

The enclosed Power Plant Site Certification application is being submitted to you in response to your Request for Additional Information, dated April 8, 2003. Your April 8th letter contained a comment from Mr. Cleve Holladay requesting additional information for this application, and we apologize for the delay in providing a response. The proposed Lime Recalcination and Biosolids Pelletization Facilities project has undergone some substantial changes since the receipt of the April letter. In addition to providing the dispersion modeling that Mr. Holladay requested, we are submitting a revised application to modify the Power Plant Site Certification that reflects the project changes. This transmittal letter describes the project changes, as well as our approach in this submittal to addressing both Mr. Holladay's comment and comments that we have also received from Ms. Teresa Heron of the Air Resources Management Division.

Project Changes

The following changes have been made to the Lime Recalcination Facility (LRF) and Biosolids Pelletization Facility (BPF) projects and to Class I Landfill gas flare(s) since the January 2003, submittal of the application to modify the Power Plant Site Certification:

- The BPF has been increased in size from 200 wet tons per day (wtpd) to 400 wtpd. This is being accomplished by adding a second 200-wtpd process train, identical to the one described in the original application. There will now be two stacks (one for each train), and

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two of each of the pieces of equipment described in the original application. This doubles the air pollutant emission rates from this facility.

- The 2,300-scfm back-up flare that was described in the January 2003 submittal has been eliminated. The landfill gas pressurization system has been moved from the LRF and BPF site south of 45th Street to a pad just north of the Composting Facility, adjacent to the Class I Landfill. A 4,000-scfm pressurized landfill gas line will run from this new location south, under 45th Street, to the LRF and BPF projects. Although the supply line will be sized for 4,000-scfm, the maximum design landfill gas demand of the LRF and BPF projects will be 2,700-scfm, including the increased demand from the newly enlarged BPF.
- The PM₁₀ emission rates from the LRF's kiln exhaust and lime cooler stack have been reduced to be consistent the proposed Maximum Achievable Control Technology (MACT) Standards for Lime Manufacturing Plants (40 CFR 63 Subpart AAAAA), signed as a final rule on August 25, 2003, but not yet published in the Federal Register. The LRF's air pollution control equipment, a three-field electrostatic precipitator (ESP), will be enlarged to a four-field ESP to reduce the emission rate to the proposed MACT level of 0.1 lb PM / ton of "stone" feed from the LRF's current 0.21 lb PM / ton of "stone" feed.
- The existing 1,800-scfm flare at the Class I Landfill will be decommissioned and replaced by the 3,500-scfm Class I flare, not by the 2,300-scfm back-up flare.
- The new 3,500-scfm Class I flare is needed in the short term (within the next few months) to serve landfill gas collection system expansion in the Class I Landfill. Because of this urgent need, SWA would like to request that FDEP issue a separate minor preconstruction permit for this flare. We understand that this could be possible if we demonstrate that the flare can be exempt from PSD permitting (see further discussion in Approach, below).
- The 3,500-scfm Class I flare will not be sufficient to handle all the gas produced by the Class I Landfill at build-out. Two more flares, a 2,000-scfm flare and a 1,000-scfm flare would be needed at the Class I Landfill by 2020, the approximate build-out year. The 6,500-scfm capacity of the three flares together could handle the expected maximum gas generation rate of about 6,000 scfm. In addition, they could be used in combinations of one or two to handle smaller gas flows when the LRF and BPF are drawing off the 2,700 scfm of gas that these facilities need. All three flares have been included in the dispersion modeling portion of this application, with emission rates based on Class I Landfill build-out conditions, as discussed in Approach, below.



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FDEP Comments

You observed, in the April 8th comment letter, that the pollution control exemption for landfill gas flares required by the New Source Performance Standards only applies, "provided the owner or operator demonstrates to the Department that such increase would not cause or contribute to a violation of any ambient air quality standard, maximum allowable increase, or visibility limitation." (Rule 62-212.400(a)2.c., FAC). You requested that this demonstration be made by including the proposed new Class I flare in a cumulative dispersion modeling analysis with the LRF and BPF for all pollutants that would have a "significant" increase in emissions after addition of the flare. It is likely that this would include the modeling done for carbon monoxide (CO), nitrogen oxides (NO_x) and particulate matter less than 10 microns (PM₁₀).

In addition to this written comment, Ms. Teresa Heron of FDEP's Department of Air Resources Management submitted a verbal request on April 21, 2003, to Ms. Cynthia Hibbard of CDM to provide more information in the PSD application about the 3,500-scfm Class I flare. Specifically, she wanted to know whether or not the 3,500-scfm Class I flare plus the LRF, BPF and back-up flare would have sufficient capacity to handle all of the gas generated by the Class I Landfill at full build-out, or whether SWA would seek to increase the capacity of the Class I flare at some point in the future. She requested information on when landfill capacity would be reached and how much gas would be generated at that point. She also requested information on how large the Class I Landfill is now, how many cells contain waste, how large it would be when supplying all of the needed gas to the LRF and BPF projects, and how large it would be at build-out.

Approach for Revised Application Submittal

Because of the project changes described above, edits have been made throughout all three volumes of this application submittal to update project information. We are, therefore, submitting complete revised copies of the application, rather than just correction pages or sections.

As requested by Mr. Holladay, the dispersion modeling presented in Volume III, Sections 6 and 7, includes the proposed new 3,500-scfm Class I flare in a cumulative dispersion modeling analysis with the LRF and BPF for all pollutants that would have a "significant" increase in emissions after addition of the flare. If the modeling shows that these projects together would not cause or contribute to a violation of an ambient air quality standard, maximum allowable increase (PSD Increment), or visibility limitation, then the flare would be exempt from the other requirements of PSD permitting. That is, a Best Available Control



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Technology (BACT) analysis would not be required for the flare, and the flare could receive a separate minor modification preconstruction air permit on a more expedited schedule than the major modification for the LRF and BPF projects.

The emissions from the additional 1,000-scfm and 2,000-scfm Class I flares have also been included in the dispersion modeling. The 1,000-scfm and 2,000-scfm flares have been included:

- to determine if they can also meet the conditions of the exemption from PSD permitting;
- to address concerns raised by FDEP about how much landfill gas would be generated at landfill build-out, and about granting incremental approvals for each landfill gas collection and control system expansion; and
- to give SWA maximum flexibility on when they could install the 1,000-scfm and 2,000-scfm flares, and on how to operate the Class I Landfill gas collection and control system. The current proposed plan is to install the 1,000-scfm and 2,000-scfm flares at about the same time as the LRF and BPF. Each flare has a turndown ratio of 10:1 (that is, they can operate at flows down to 1/10th of their maximum design flow rate). Having a range of flare sizes also available at the Class I Landfill Flare Station would allow SWA to combust possibly large swings in leftover gas flow to the flares as the LRF and BPF come on- (and off-) line. The three flares could be used in any combination of one, two or three to handle fluctuating flows, and all three together could handle the Class I Landfill expected build-out flow by themselves, even if the LRF and BPF projects were not built.

All three flares, therefore -- the immediately needed 3,500-scfm Class I flare, as well as the planned 1,000-scfm and 2,000-scfm flares -- have been included in the dispersion modeling to evaluate their combined air pollutant concentration impacts with those of the LRF and BPF, and to determine if all three flares could qualify for the PSD permitting exemption.

Dispersion modeling was performed for SO₂, NO_x, CO, PM₁₀ and lead (even though significant emissions increases would occur only for NO_x, CO and PM₁₀). The dispersion modeling results presented Table 6-5 in the enclosed Volume III, Section 6, show that the combined project impacts would not exceed any Significant Impact Levels or Class II PSD Increments. Table 6-6 confirms that when background concentrations are added in, modeled concentrations would not exceed any ambient air quality standards. Table 6-7 shows that the combined projects would not cause any exceedances of Class I Significant Impact Levels or Class I Increments at either the Everglades National Park or at the Big Cypress National



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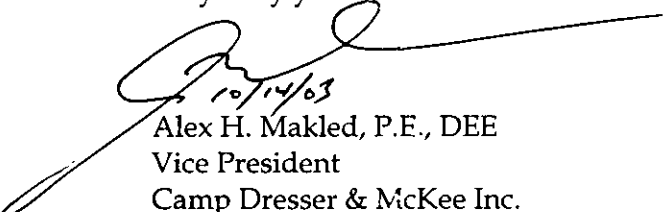
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Preserve. Section 7 in Volume III presents the results of the visibility modeling, and shows that the combined projects would not impair visibility at either the Everglades National Park or at the Big Cypress National Preserve. Since these demonstrations appear to fulfill the condition for granting the PSD permitting exemption to the three proposed landfill gas flares, the flares were excluded from the BACT analysis in this Application. In addition, a separate set of ELSA forms for a minor modification preconstruction permit application for the three flares has been prepared, and is transmitted herewith. Copies of both the PPSA (3-Volume) and Minor Modification permit applications are also being copied to the Southeast District Office.

We greatly appreciate FDEP's review of this application, and look forward to continuing to work with you throughout the review process. If you or any FDEP staff have any additional questions, or would like any clarifications on this revised application submittal, please feel free to contact myself or Jill Grimaldi at (772) 231-4301.

Very truly yours,



Alex H. Makled, P.E., DEE
Vice President
Camp Dresser & McKee Inc.

Enclosures

File: 2678-39378-064

cc: John D. Booth, SWA
Raymond H. Schauer, SWA
Marc C. Bruner, SWA
Tom Tittle, FDEP Southeast District Office
James Golden, South Florida Water Management District
Jeananne Gettle, U.S. EPA
John O'Malley, PBC Health Department