

Blue Prints

Appendix B

Drawings ARE

In hard copy file.



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF  
AIR AND RADIATION

September 19, 1995

Dear Sir or Madam:

Thank you for contacting the Office of Air and Radiation Docket and Information Center. Enclosed are the documents that you requested. I hope they satisfy your requirements.

My office is dedicated to prompt, courteous customer service, particularly for all who express an interest in what we are doing through docket inquiries. We are committed to increasing participation in the policy and decision-making processes of the Environmental Protection Agency.

I welcome your comments on how effective the docket has been in responding to your needs, as well as any suggestions to improve this important service.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Mary D. Nichols".

Mary D. Nichols  
Assistant Administrator  
for Air and Radiation

Enclosures



Check Sheet

Company Name: PALM BEACH CO. SOLID WASTE AUTHORITY  
Permit Number: PA-84-20C  
PSD Number: 108(B)  
Permit Engineer: HERON

**Application:**

- Initial Application
- Incompleteness Letters
- Responses
- Waiver of Department Action
- Department Response
- Other

Cross References:

- 
- 
- 

**Intent:**

- Intent to Issue
- Notice of Intent to Issue
- Technical Evaluation
- BACT Determination
- Unsigned Permit
- Correspondence with:
  - EPA
  - Park Services
  - Other
- Proof of Publication
  - Petitions - (Related to extensions, hearings, etc.)
  - Waiver of Department Action
  - Other

**Final Determination:**

- Final Determination
- Signed Permit
- BACT Determination
- Other

**Post Permit Correspondence:**

- Extensions/Amendments/Modifications
- Other

Date: 10/27/97 1:56:02 PM  
From: Thomas Tittle WPB  
Subject: PSD-FL-108(B) issued February 1996  
To: Teresa Heron TAL  
CC: Andrew Neita WPB  
CC: Terri Hilliard WPB

It has recently come to our attention that "New Specific Condition" 3 of the subject permit appears to contain an error which needs to be fixed.

The condition states: "There shall be no visible emissions from any individual flare, except for periods not to exceed a total of five minutes during any two consecutive hours at which visible emissions can be up to 20 percent opacity."

The phrase "at which visible emissions can be up to 20 percent opacity" should be deleted from this specific condition. The compliance method is Method 22. Method 22 does not evaluate the opacity of emissions ... just how long there are any emissions visible. Subpart WWW is consistent with the suggestion to delete the phrase.

Thanks for your attention to this matter. If you are not the appropriate person to address this request, please forward it to the appropriate person (and copy us with your forwarding memo). We assumed you were the "th" initials on the permit.

Tom



# Department of Environmental Protection

Lawton Chiles  
Governor

Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Virginia B. Wetherell  
Secretary

June 25, 1996

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Alex H. Makled, P.E.  
Camp Dresser & McKee Inc.  
1601 Belvedere Road, Suite 211 South  
West Palm Beach, Florida 33406

RE: Solid Waste Authority of Palm Beach County  
PSD-FL-108(B) Issued February 20, 1996

Dear Mr. Makled:

The Department is in receipt of your letter dated June 5, 1996 requesting clarification and confirmation of the new specific conditions added to the North County Resource Recovery Facility (NCRRF), permit No. PSD-FL-108(B). The Department has reviewed your letter and has the following comments:

Specific Condition No. 2. The Department agrees with your rationale. However as the condition states, the flame temperature shall be at a minimum of 1400 degrees Fahrenheit.

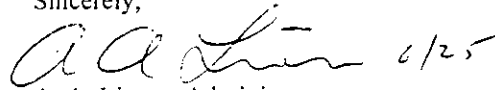
Specific Condition No. 4. The Department agrees with your rationale. The typographical error of 1.33 tons SO<sub>2</sub>/year should be corrected. An emission limit of 7.33 tons SO<sub>2</sub>/year shall be changed in the Title V permit.

Specific Condition No. 7. The Department will not delete this condition. This condition provides the Department with reasonable assurance that the operation of this flare system will not cause or contribute to a violation of the sulfur dioxide (SO<sub>2</sub>) ambient air quality standard and/or that the proposed SO<sub>2</sub> emissions will not exceed the threshold level requiring review pursuant to Prevention of Significant Deterioration (PSD). This condition is a standard condition for recently issued permits for landfill operations.

Specific Condition No.8. See Specific Condition No.7.

The Department agrees with your rationale on Specific Conditions 5, 6, 10, 11, 14, and 15. If you have any questions, please call Ms. Teresa Heron at (904)488-1344.

Sincerely,

  
A. A. Linero, Administrator  
New Source Review Section  
Bureau of Air Regulation

cc: Isidore Goldman, SED  
Buck Oven., DEP

AAL/th/t

P 339 251 117

US Postal Service  
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| PSD - FL-10S(B)   |         |

PS Form 3800 April 1995

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|   | 3. Article Addressed to:<br>MR. ALEX MAKLED, P.E.<br>CAMP, DRESSER & MCKEE, INC<br>1601 BELVEDERE RD. STE 211 S.<br>WEST PALM BEACH, FL 33406   |
| 5. Signature (Addressee)<br>   | 4b. Service Type<br><input type="checkbox"/> Registered <input type="checkbox"/> Insured<br><input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD<br><input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise |
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Thank you for using Return Receipt Service.

# CDM Camp Dresser & McKee Inc.

environmental  
services

1601 Belvedere Road, Suite 211 South  
West Palm Beach, Florida 33406  
Tel: 407 689-3336 Fax: 407 689-9713

June 5, 1996

Mr. Howard L. Rhodes  
Director  
Division of Air Resources Management  
Florida Department of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Subject: Solid Waste Authority of Palm Beach County  
North County Resource Recovery Facility (NCRRF)  
PSD-FL-108(B)

ATTENTION: Ms. Teresa Heron

Dear Mr. Rhodes:

We are writing this letter on behalf of the Solid Waste Authority of Palm Beach County (SWA) seeking clarification/confirmation of our understanding of the new specific conditions added to the North County Resource Recovery Facility (NCRRF) permit No. PSD-FL-108(B). These conditions were added by the Department as an amendment to include the construction and operation of the gas collection and control system for the NCRRF landfills. The permit amendment was issued by the Department on February 20, 1996 (copy attached).

For ease of reference and review, we have repeated each of the new conditions in this letter as shown in bold, followed by our response.

**Specific Condition No. 1. This source shall be allowed to operate continuously (i.e., 8760 hours/year).**

Response: No comments.

**Specific Condition No. 2. The utility flare system shall be designed, manufactured, and operated according to U.S. Environmental Protection Agency criteria as specified in 40 CFR 60.18, in order to ensure high efficiency combustion of landfill gas at the 98% level of destruction of total hydrocarbons, with a flame temperature of at or above 1400° F.**

Response: As indicated in our permit application submittal, the proposed utility flare system is designed in accordance with the U.S. Environmental Protection Agency (EPA) established criteria for open flares, 40 CFR 60.18, with an approximate

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JUN 6 1996  
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AIR REGULATION

Mr. Howard L. Rhodes  
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operating temperature of 1400° F. Obviously the flame temperature readings will vary depending on the point of measurement.

**Specific Condition No. 3. There shall be no visible emissions from any individual flare, except for periods not to exceed a total of five minutes during any two consecutive hours at which visible emissions can be up to 20 percent opacity.**

Response: No comments.

**Specific Condition No. 4. For inventory purposes, the pollutant emission rates from each of the flare systems are:**

| Pollutant        | Emission Factors              | Pounds/Hour | Tons/Year |
|------------------|-------------------------------|-------------|-----------|
| NO <sub>x</sub>  | 0.07 lb/million Btu           | 1.67        | 7.33      |
| VOC              | 36 lb/million ft <sup>3</sup> | 1.94        | 8.51      |
| SO <sub>2</sub>  | 0.002 lb/scf                  | 1.67        | 1.33      |
| PM <sub>10</sub> | 1.69 E-05 lb/scf              | 0.91        | 3.99      |
| CO               | 0.37 lb/million Btu           | 9.10        | 39.87     |

Response: We have two comments on this condition as follows:

Comment No. 1: It is our understanding that these emission rates are included in this permit as design data and will be used for informational purposes only during the operation of the landfill gas collection and control system.

Comment No. 2: In reference to the VOC emission rate, please note that based on the pollutant emission calculations included in the permit application, the estimated uncontrolled (prior to destruction in the flare system)VOC emission from each unit is 97.2 lb/hour. Based on a 98% destruction efficiency, this number will be reduced to 1.94 lb/hour. Additionally, please note that the SO<sub>2</sub> emission rate included in the above table under the tons/year column should be 7.33 tons/year and not 1.33 tons/year.



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**Specific Condition No. 5. This source shall meet the applicable requirements of 40 CFR Subpart WWW, NSPS for Municipal Solid Waste Landfill upon adoption by the Florida Department of Environmental Protection; 40 CFR 60.18, General Control Device Requirements; Chapters 62-209 through 297 and 62-4, F.A.C.**

Response: The system is designed to meet the proposed NSPS regulations. However, since the NSPS regulations have not been officially adopted by FDEP yet, and because they may be modified by FDEP before final adoption, we cannot assure the Department, at this time, that the installed system meets a set of regulations that are not yet in effect.

**Specific Condition No. 6. Compliance with the visible emissions standard shall be determined using EPA Method 22 and shall be for the duration of 2 hours. Such tests shall be conducted within 60 days of completion of construction and initial startup operation, and annually thereafter. The required visible emissions test report shall also contain the gas flow rate from the extraction wells and the flare temperature data.**

Response: It is SWA's intent to conduct the visible emission tests using EPA Method 22 within 60 days of final completion of construction of the entire system (Class I and Class III systems). It is also SWA's intent to include the gas flow rate from the well fields measured at the flare stations and the flare temperature data in the test reports. These test reports will be submitted to the Department after the initial start up and annually thereafter.

**Specific Condition No. 7. Sulfur content of the input gas to any flare shall not exceed 0.65 pounds per hour.**

Response: We requested that this condition be deleted during our review of the draft permit, so it is unclear why this condition was included. Please note that we have little to no control over the amount of sulfur in the landfill gas and the primary purpose of installing the flare system is to destroy hazardous air pollutants that may be emitted from the landfills. The proposed flare system is designed to meet EPA emission standards for landfill gas disposal using a utility flare. We respectfully request that this specific condition be deleted from the permit.

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**Specific Condition No. 8.** An analysis shall be performed to determine the sulfur content of input gas to the flare, by the American Society for Testing and Materials (ASTM) test method, D 1072-90, prior to any flare startup. Additional tests shall be performed on a yearly basis, and results included as part of the facility's annual operating report.

Response: Please see response to Specific Condition No 7.

**Specific Condition No. 9.** Pursuant to Rule 62-296.320 (2), F.A.C., Objectionable odors caused by these sources are prohibited.

Response: No comments.

**Specific Condition No. 10.** Total volumetric flow to any flare in the system shall be limited to 900 scfm. Total volumetric flow to the aggregate of the two flares shall be limited to 1800 scfm.

Response: Based on the landfill gas model generation rates included in the permit application, the inlet flow to each flare unit is expected to be around 900 scfm in the year 2004. Also, please note that each of the proposed flare units has a design point of 900 scfm with a maximum flow rate of 1050 scfm.

**Specific Condition No. 11.** Proper devices shall be installed at all wellheads, and at the flare station for 1) gas flow volume and gas pressure measurements, 2) gas composition analysis, 3) gas temperature and flame temperature recording, and 4) flow control, prior to the collection and disposal of the active landfill gases. Such devices shall be properly calibrated and maintained at all times, according to manufacturer's written instructions. The checking and recording of the gas flow, temperature, and pressure, shall be performed on a quarterly basis for all wells and on a monthly basis for the flare station.

The permittee shall keep a hard copy of the gas extraction monitoring and analysis data, as well as instrumentation history records, on site at all times. The data shall be summarized and included as part of the facility's annual operating report. These sources shall comply with recording and record keeping requirements specified in 40 CFR 60 Subpart WWW, NSPS for Municipal Solid Waste Landfills.

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Response:

As indicated in the landfill gas system permit application and construction drawings, the system design includes provisions for gas sampling ports, pressure taps, temperature reading and flow control devices at each wellhead; and a flow sensor for flow measurement and thermocouples for temperature monitoring at the flare station. Also, each wellhead assembly is fitted with a set of mating flanges which are set up to accommodate future installation of orifice plates to determine flow rates. The installed devices/features will be calibrated and maintained at all times in accordance with the manufacturer's written instructions.

Currently, it is the intent of SWA to monitor gas flow, temperature, pressure, and composition at the flare station on a quarterly basis. Flare flame temperature will be monitored using the skid installed thermocouples as indicated on the project design/shop drawings. SWA will keep hard copy of this monitoring data on site at all times. This data will be summarized and included as part of the facility's annual operating report.

Additionally, it is the intent of SWA to comply with any additional future record keeping and monitoring requirements that may be added as a result of FDEP's adoption of the NSPS regulations for municipal solid waste landfills, provided that such requirements can be met without major modifications to the installed landfill gas system.

**Specific Condition No. 12. The net heating value of the input gas shall be 200 Btu/scf or greater. Compliance with this parameter shall be determined by methodology specified in paragraph F of 40 CFR 60.18. Samples shall be taken, and results reported annually.**

Response: No comments.

**Specific Condition No. 13. Actual exit velocity of each flare shall be calculated and reported on an annual basis, using methods specified in paragraph F of 40 CFR 60.18.**

Response: No comments.

**Specific Condition No. 14. The Southeast District office shall be given at least 15 days written notice prior to compliance testing.**

Response: SWA will give the Southeast District office 15 days written

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notice prior to compliance testing. At the present time, the flare system for the class I landfill is scheduled to be delivered to the site on June 17, 1996 with system start-up is tentatively scheduled to begin later that week.

**Specific Condition No. 15. Prior to placing the flare in service, the pilot gas for the flare shall be fired by propane at 25 scfh (standard cubic feet per hour). The pilot light is not required when the flame is sustained by the landfill gas alone.**

Response: Prior to placing the flare in service, SWA will fire the pilot gas for the flares by propane in accordance with the design criteria which is at a rate of approximately 25 scfh.

We respectfully request that the Department review and concur with our proposed plan to comply with the permit amendment conditions. If you have any questions, please do not hesitate to call.

Very truly yours,

CAMP DRESSER & MCKEE INC.



Alex H. Makled, P.E.

AHM/mjm  
Enclosures

File: 2678-08-PM2[4]

cc: John D. Booth, SWA  
Robert F. Worobel, SWA  
Marc C. Bruner, Ph.D., SWA

cc: Teresa Heron, BAR  
J. Kahn, SED  
B. Owen, PPS  
J. Koerner, PRCHU  
EPA  
NPS

