

-File-

CDM

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Project No.: 2678-59229

To: Mr. Scott of Deptch

From: Younis Hernandez

Fax No.: 850-922-6979

Date: June 5, 2008

No. of Pages: 20

Message: Mr. Deptch: Please find attached a

copy of our response to the RAI received on

May 16, 2008, in reference to File No

0990234-012-AC & 0990234-013-AU. The original

copy will be sent via FedEx to your office.

Younis Hernandez



1601 Belvedere Road, Suite 211 South
West Palm Beach, Florida 33406
tel: 561 689-3336
fax: 561 689-9713

June 5, 2008

Mr. Scott M. Sheplak, P.E.
FDEP – Title V Section
Mail Station #5505
2600 Blair Stone Road
Tallahassee, Florida 32399

Subject: Solid Waste Authority of Palm Beach County
North County Resource Recovery Facility
Air Construction Permit/Title V Air Operation Permit Revision Application
RAI Response (File Numbers 0990234-012-AC and 0990234-013-AV)

Dear Mr. Sheplak:

This letter is in response to your request for additional information, File Numbers 0990234-012-AC and 0990234-013-AV Flares, Emergency Generators, and Landfill Gas Compression System. Our responses are as follows:

Question No. 1: The sulfur contents used in the air pollutant emission calculations were based on samples obtained on 11/02/1997 as cited in Appendix E attached to the application. The cited sulfur content values were 190 ppmv and 350 ppmv for the Class I and Class III landfill gases, respectively.

A Class III landfill receives construction and demolition (C&D) type debris. Due to the recent storms, the Department is aware of higher volumes of C&D type wastes going to landfills which could result in higher emissions of H₂S and SO₂. Higher levels of H₂S are being generated from the decomposition of wallboard within the C&D debris. Wallboard is made of gypsum, CaSO₄·2H₂O (calcium sulfate). Combustion of landfill gases with increased sulfur contents can result in higher SO₂ emissions.

a. Are more recent sulfur content values available for the Class I and Class III landfill gases? If not, please obtain current values and report the results.

Response: An Annual Operational Testing Report for the Landfill Gas Management System at the Solid Waste Authority's North County Resource Recovery



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Facility Class I and III landfills was submitted in September 2007. This report included annual testing of the gases entering and exiting both the Class I and Class III flares. The values obtained for sulfur content were 290.5 ppm and 561 ppm, respectively. Updates to the calculations presented in APPENDIX E of the application have been included as Attachment 1.

b. In the Title V air operation permit, Final Permit No.: 0990234-010-AV, the design capacities are referenced as 33,212,516 and 5,723,708 megagrams by mass, respectively. Have there been any changes to the design capacities of the Class I and Class III landfills?

Response: There have been no changes to the design capacities.

c. How much waste in megagrams was in place in 1994? How much waste in megagrams is in place now, 2008?

Response: Based on data in the 2008 SWA Landfill Depletion Model report published on December 11, 2007, the mass of in-place waste was 10,074,000 Mg in September 1994 and 12,552,000 Mg in September, 2007.

d. Please evaluate whether or not the requested changes associated with this project are considered to be a modification, triggering the need for a prevention of significant deterioration (PSD) permit. (For PSD applicability in the State of Florida see Rule 62-212, Florida Administrative Code (F.A.C.))

Response: CDM has reviewed Rule 62-212 and based on the scope of the current project and the Title V Permit Application has determined that a PSD permit is not required at this time.

Question No. 2: It was indicated that the existing Class III Landfill – 1800 scfm Flare will be replaced. When did the Class III Landfill – 1800 scfm Flare begin operations? What will be the final disposition of this flare? Will it be dismantled & removed from site?

Response: The Class III Landfill – 1800 scfm Flare began operation in 1999. The Solid Waste Authority of Palm Beach County intends to keep the existing Class III Landfill – 1800 scfm Flare onsite as a back-up flare. It will NOT operate simultaneously with any of the permanent flares.



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Question No. 3: New Applicable Requirements – Reciprocating Internal Combustion Engines (RICE) Maximum Available Control Technology (MACT) 40 CFR 63 Subpart ZZZZ for engines and Standards of Performance for New Stationary Sources (NSPS) 40 CFR 60 Subpart IIII for engines. Some detailed information related to applicability could not be located on the Manufacturer's Cut Sheets in APPENDIX M.

- a. What is the equivalent brake HP for the proposed new 50 kW and 125 kW emergency generators? Are these units compression ignition (CI) type engines?

Response: The Solid Waste Authority of Palm Beach County has discontinued the scalehouse project. The scope of the pre-construction air permit application is now reduced to only one new emergency standby generator, rated at 125 KW, for the Operations Building. The generator will be manufactured by Caterpillar. This unit is a compression ignition (CI) type engine.

The horsepower for the new Operations Building generator is 217 hp. Please refer to the page 4 of the Manufacturer's cut-sheet, included in Attachment 2, for Max power at rated rpm in KW and hp. The equivalent brake horsepower for the new generator will be approximately 220 hp based on the manufacturer. The exact brake hp will only be available from the manufacturer based on the serial number of the actual unit purchased.

Question No. 4: The length of construction for this project is needed to fix the term (expiration date) of the AC permit.

- a. How long do you anticipate construction to last and when is construction anticipated to be completed for this project?

Response: This Title V revision application includes three separate projects: 1) replacement of the Class I Landfill Gas Flare, 2) relocation of the existing Class I Landfill Gas Flare to the Class III Landfill, and 3) construction and installation of a new emergency generator for the new Operations Building. Please find the projected schedule for the completion of each project detailed below:

- 1) The installation of the new flare at the Class I Landfill will be completed by May 30, 2008.



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- 2) The relocation of the existing Class I Landfill Gas Flare to the Class III Landfill is scheduled to be completed by December 2008.
- 3) The construction of the new Operations Building is anticipated to commence during October 2008, with an anticipated date of completion of April 2010.

A Compliance Plan showing mayor milestones and completion dates for each of the projects is included as Attachment 3.

We trust that the responses adequately address each question. If you need further clarification, please feel free to contact me at 561-689-3336.

Very truly yours,

A handwritten signature in black ink, appearing to read 'Manuel Hernandez', with the date '6/5/08' written below it.

Manuel Hernandez, P.E.
Florida Professional Engineer No. 59796
Project Manager
Camp Dresser & McKee Inc.

MJH/wlb

Attachments

cc: Mary Beth Morrison, SWA
Patrick Carroll, SWA

File: 2678-59229-079.PM.MGT

ATTACHMENT 1

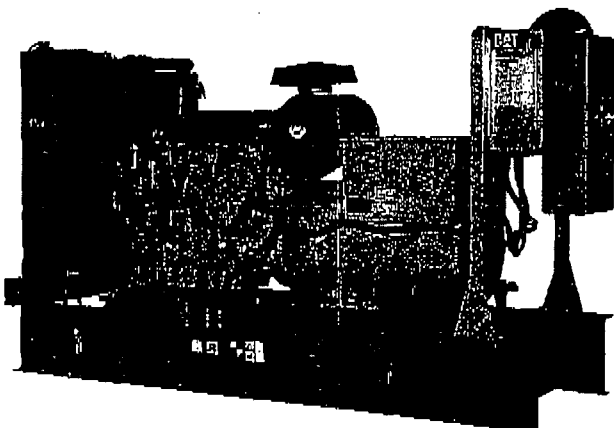
NCRRF Class I Landfill - Secondary Air Pollutant Emissions from Flares											
Energy content of methane:		1000	Btu/cf	35310	Btu/m3						
CO and NOx Emission Rates Based on AP-42 Table 13.5-1 Industrial Flares (open candlestick flares)											
Pollutant	Methane Flow Rate to Flare (std. m ³ /yr)	Energy input to flare (MMBtu/yr)	Emission Factor (lb/MMBtu)	Emissions from Flare (lb/yr)	Emissions from Flare (lb/hr)	Emissions from Flare (ton/yr)					
3,500-scfm Flare (EU 1)											
Carbon Monoxide	3.05E+07	1076023.9	0.37	398,129	45.44	199.06					
Nitrogen Oxides	3.05E+07	1076023.9	0.068	73,170	8.35	36.56					
SO2 and HCl Emission Rates Based on Mass Balance											
Pollutant	Total CH ₄ Gas Flow Rate to Flare (Std. m ³ /yr)	Concentration of S or Cl in Landfill Gas (ppmV)	Emission rate of S or Cl (m ³ /yr)	Molecular Weight of S or Cl (g/gmol)	Temperature at Standard Conditions (°C)	Uncontrolled Mass Emissions of S or Cl (kg/yr)	Control Efficiency (%)	Ratio of Molecular Weights SO ₂ /S or HCl/Cl	Controlled Mass Emissions of Pollutant (kg/yr)	Controlled Mass Emissions of Pollutant (lb/hr)	Mass Emissions of Pollutant (ton/yr)
3,500-scfm Flare (EU 1)											
Sulfur - Sulfur Dioxide	3.05E+07	290.45	8861.07	32.06	25	11797.59	0	2.00	23573.84	5.934	25.99
Chlorine - Hydrogen Chloride	3.05E+07	42.0	1279.89	35.45	25	1886.12	91	1.03	174.64	0.044	0.19

The calculation methodology for CO and NOx is from U.S. EPA, Compilation of Air Pollutant Emission Factors (Report No. AP-42), Section 13.5 Industrial Flares, 1991. The calculation of SO2 is based on samples taken at SWA Class I Landfill on 8/7/2007. The calculation of HCl is from: AP-42, Section 2.4, Municipal Solid Waste Landfills, 1998.

NCRRF Class III Landfill - Secondary Air Pollutant Emissions from Flares											
Energy content of methane:		1000	Btu/cf	35310	Btu/m3						
CO and NOx Emission Rates Based on AP-42 Table 13.5-1 Industrial Flares (open candlestick flares)											
Pollutant	Methane Flow Rate to Flare (std. m ³ /yr)	Energy Input to Flare (MMBtu/yr)	Emission Factor (lb/MMBtu)	Emissions from Flare (lb/yr)	Emissions from Flare (lb/hr)	Emissions from Flare (ton/yr)					
1,800-scfm Flare											
Carbon Monoxide	1.57E+07	553383.7	0.37	204,752	23.37	102.38					
Nitrogen Oxides	1.57E+07	553383.7	0.068	37,630	4.29	18.82					
SO2 and HCl Emission Rates Based on Mass Balance											
Pollutant	Total CH ₄ Gas Flow Rate to Flare (Std. m ³ /yr)	Concentration of S or Cl in Landfill Gas (ppmv)	Emission rate of S or Cl (m ³ /yr)	Molecular Weight of S or Cl (g/gmol)	Temperature at Standard Conditions (°C)	Uncontrolled Mass Emissions of S or Cl (kg/yr)	Control Efficiency (%)	Ratio of Molecular Weights SO ₂ /S or HCl/Cl	Controlled Mass Emissions of Pollutant (kg/yr)	Controlled Mass Emissions of Pollutant (lb/hr)	Controlled Mass Emissions of Pollutant (ton/yr)
1,800-scfm Flare											
Sulfur - Sulfur Dioxide	1.57E+07	561	8782.08	32.06	25	11718.96	0	2.00	23416.73	5.884	25.82
Chlorine - Hydrogen Chloride	1.57E+07	42.0	658.23	35.45	25	970.01	91	1.03	89.81	0.023	0.10

The calculation methodology for CO and NOx is from U.S. EPA, Compilation of Air Pollutant Emission Factors (Report No. AP-42), Section 13.5 Industrial Flares, 1991. The calculation of SO2 is based on samples taken at SWA Class III Landfill on 8/7/2007. The calculation of HCl is from: AP-42, Section 2.4, Municipal Solid Waste Landfills, 1998.

ATTACHMENT 2

DIESEL GENERATOR SET**CATERPILLAR®**

Picture shown may not
reflect actual package

STANDBY 125-150 kW
PRIME 114-135 kW
60 Hz

Model	Standby kW (kVA)	Prime kW (kVA)
✓ D125-8	125 (156.3)	114 (142.5)
D150-8	150 (187.5)	135 (168.8)

Tier 3 EPA Approved, Emissions Certified

FEATURES**GENERATOR SET**

- Complete system designed and built at ISO 9001 certified facilities
- Factory tested to design specifications at full load conditions

ENGINE

- Governor, electronic
- Electrical system, 12 VDC
- Cartridge type filters
- Battery rack and cables
- Coolant and lube drains piped to edge of base

GENERATOR

- Insulation system, class H
- Drip proof generator air intake (NEMA 2, IP23)
- Electrical design in accordance with BS5000 Part 99, EN61000-6, IEC60034-1, NEMA MG-1.33

CONTROL SYSTEM

- EMCP 3.1 digital control panel
- Vibration isolated NEMA 1 enclosure with lockable hinged door
- DC and AC wiring harnesses

MOUNTING ARRANGEMENT

- Heavy-duty fabricated steel base with lifting points
- Anti-vibration pads to ensure vibration isolation
- Complete OSHA guarding
- Stub-up pipe ready for connection to silencer pipework
- Flexible fuel lines to base with NPT connections

COOLING SYSTEM

- Radiator and cooling fan complete with protective guards
- Standard ambient temperatures up to 50° C (122° F)

CIRCUIT BREAKER

- UL/CSA listed
- 3-pole with solid neutral
- NEMA 1 steel enclosure, vibration isolated
- Electrical stub-up area directly below circuit breaker

AUTOMATIC VOLTAGE REGULATOR

- Voltage within $\pm 0.5\%$ 3-phase at steady state from no load to full load
- Provides fast recovery from transient load changes

EQUIPMENT FINISH

- All electroplated hardware
- Anticorrosive paint protection
- High gloss polyurethane paint for durability and scuff resistance

QUALITY STANDARDS

- BS4999, BS5000, BS5514, EN61000-6, IEC60034, NEMA MG-1.33, NFPA 110 (with optional equipment)

DOCUMENTATION

- Operation and maintenance manuals provided
- Wiring diagrams included

WARRANTY

- All equipment carries full manufacturer's warranty.

**PRIME
60 Hz**

114-135 kW

CATERPILLAR®

OPTIONAL EQUIPMENT*

ENCLOSURE

- B Series weather protective enclosure (includes internal silencer system)
- Sound attenuated enclosure (includes internal silencer system)
 - Single point lift
 - Panel viewing window
 - External emergency stop pushbutton

SILENCER SYSTEM – OPEN UNIT

- Level 1 silencer
- Level 2 silencer
- Level 3 silencer
- Mounting kit
- Through-wall installation kits

ENGINE

- Battery heater
- Lube oil drain pump
- High lube oil temperature shutdown
- Lube oil sump heater

CIRCUIT BREAKER

- Auxiliary voltfree contacts
- Shunt trip

GENERATOR

- Anti-condensation heater
- Permanent magnet generator
- AREP excitation system
- Generator upgrade 1 size

CONTROL SYSTEM

- No control system
- EMCP 3.2 digital control panel

MOUNTING ACCESSORIES

- Seismic (Zone 4) vibration isolators

FUEL SYSTEM

- UL listed closed top-diked skid-mounted fuel tank base (12/24-hour capacity) with fuel alarm (low level/leak detected)
- Critical high fuel alarm
- Critical low fuel level shutdown

COOLING SYSTEM

- Coolant heater
- Low coolant temperature alarm
- Low coolant level shutdown
- Radiator transition flange

REMOTE ANNUNCIATORS

- 16-channel remote annunciator panel (supplied loose)

MISCELLANEOUS ACCESSORIES

- Toolkit
- Additional operator's manual pack
- Special enclosure color
- UL listing
- CSA certification
- French or Spanish language labels

EXTENDED SERVICE CONTRACTS

- Extended Service Coverage available

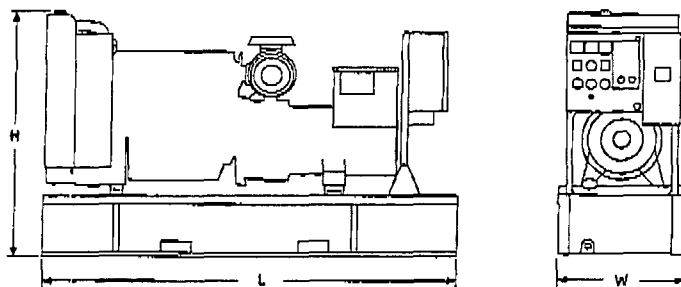
* Some options may not be available on all models.
Not all options are listed.

PRIME
60 Hz

114-135 kW

CATERPILLAR®

GENERATOR SET DIMENSIONS AND WEIGHTS



Model	Length mm (in)	Width mm (in)	Height mm (in)	Weight kg (lb)*
D125-6	2780 (109.4)	900 (35.4)	1543 (60.7)	1347 (2,970)
D150-8	2780 (109.4)	900 (35.4)	1543 (60.7)	1407 (3,102)

NOTE: General configuration not to be used for installation. See specific dimensional drawings for detail.

*Includes oil and coolant

PRIME
60 Hz

114 - 135 kW

CATERPILLAR®

SPECIFICATIONS

GENERATOR

Voltage regulation	± 0.5% 3-phase at steady state from no load to full load
Frequency	± 0.25% for constant load, no load to full load
Waveform distortion	THD < 4%, at no load
Radio interference	Compliance with EN61000-6
Telephone interference	TIF < 50, THF < 2%
Overspeed limit	2250 rpm
Insulation	Class H
Temperature rise	Within Class H limits
Available voltages	277/480, 266/460, 120/240, 127/220, 120/208, 347/600
Deration	Consult factory for available outputs
Ratings	At 30° C (86° F), 152.4 m (500 ft), 60% humidity, 0.8 pf

ENGINE

Manufacturer	Caterpillar
Type	4-cycle
Bore - mm (in)	105.0 (4.13)
Stroke - mm (in)	127.0 (5.00)
Governor Type	Electronic
Class	G2
Piston speed - m/sec (ft/sec)	7.62 (25.0)
Engine speed - rpm	1800
Air cleaner type	Dry, replaceable paper element type with restriction indicator

D125-6 - C6.6 ACERT

Aspiration	ATAAC
Cylinder configuration	In-line 6
Displacement - L (cu in)	6.6 (404)
Compression ratio	16.3:1
Max power at rated rpm - kW (hp)	
Standby	161.6 (217)
Prime	144.6 (194)
BMEP - kPa (psi)	
Standby	1633 (237)
Prime	1461 (212)
Regenerative power - kW (hp)	14.9 (20)

D150-8 - C6.6 ACERT

Aspiration	ATAAC
Cylinder configuration	In-line 6
Displacement - L (cu in)	6.6 (404)
Compression ratio	16.3:1
Max power at rated rpm - kW (hp)	
Standby	171.3 (230)
Prime	154.4 (207)
BMEP - kPa (psi)	
Standby	1731 (251)
Prime	1560 (226)
Regenerative power - kW (hp)	14.9 (20)

CONTROL PANEL

- Heavy duty sheet steel enclosure with lockable hinged door
- Vibration isolated from generating set
- LCD display
- AC metering
- DC metering
- Fail to start shutdown
- Low oil pressure shutdown
- High engine temperature
- Low/high battery voltage
- Underspeed/overspeed
- Loss of engine speed detection
- 2 spare fault channels
- 20 event fault log
- 2 LED status indicators
- Lockdown emergency stop push button

RATING DEFINITIONS AND CONDITIONS

Standby - Applicable for supplying continuous electrical power (at variable load) in the event of a utility power failure. No overload is permitted on these ratings. The generator is peak rated (as defined in ISO8528-3).

Prime - Applicable for supplying continuous electrical power (at variable load) in lieu of commercially purchased power. There is no limitation to the annual hours of operation and the generator set can supply 10 percent overload power for 1 hour in 12 hours.

PRIME 114-135 kW
60 Hz

CATERPILLAR

D125-6 (3-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data - 1800 rpm/60 Hz		Standby		Prime	
Power Rating	KW kVA	125	156.3	114	142.5
Lubricating System					
Type: full pressure					
Oil filter: spin-on, full flow					
Oil cooler: watercooled					
Oil type required: API CH4/C14					
Total oil capacity	L U.S. gal	16.5	4.4	16.5	4.4
Oil pan	L U.S. gal	15.5	4.1	15.5	4.1
Fuel System					
Generator set fuel consumption					
100% load	L/hr gal/hr	40.6	10.7	36.0	9.5
75% load	L/hr gal/hr	31.6	8.3	30.0	7.9
50% load	L/hr gal/hr	24.5	6.5	23.2	6.1
Engine Electrical System					
Voltage/ground: 12/negative					
Battery charging generator ampere rating					
		amps		100	
Cooling System					
Water pump type: centrifugal					
Radiator system capacity incl. engine					
Maximum coolant static head	L U.S. gal	21.0	5.5	21.0	5.5
	m H ₂ O ft H ₂ O	8.0	26.0	8.0	26.0
Coolant flow rate	L/hr U.S. gal/hr	10 200	2,693	10 200	2,693
Minimum temperature to engine	°C °F	85	185	85	185
Temperature rise across engine	°C °F	7.9	14.2	7.9	14.2
Heat rejected to coolant at rated power	kW Btu/min	74.9	4,262	69.8	3,971
Total heat radiated to room at rated power	kW Btu/min	13.0	740	12.1	688
Radiator fan load	kW hp	8.0	10.7	8.0	10.7
Air Requirements					
Combustion air flow	m ³ /min cfm	12.6	445	12.3	434
Maximum air cleaner restriction	kPa in H ₂ O	5	20	5	20
Radiator cooling air (zero restriction)	m ³ /min cfm	327	11,548	327	11,548
Generator cooling air	m ³ /min cfm	26.4	923	26.4	923
Allowable air flow restriction (after radiator)	kPa in H ₂ O	0.12	0.50	0.12	0.50
Cooling air flow (@ rated speed)					
Rate with restriction	m ³ /min cfm	317	11,195	317	11,195
Exhaust System					
Maximum allowable backpressure					
Exhaust flow at rated kW	kPa in Hg	15	4.4	15	4.4
Exhaust temperature at rated kW - Dry exhaust	m ³ /min cfm	29.7	1,049	28.6	1,010
	°C °F	437	819	427	801
Generator Set Noise Rating*					
(without attenuation) at 1 m (3 ft)					
		dB(A)		97	

Generator Technical Data		277/480V	286/460V	127/220V	120/240V 120/208V	347/600V
Motor Starting Capability: (kVA)						
(30% voltage dip)						
Self excited		360	335	311	283	N/A
PM excited**		469	437	406	370	437
AREP excited		469	437	406	370	437
Full Load Efficiencies:						
Standby		92.7	92.6	92.5	92.3	92.6
Prime		92.8	92.8	92.7	92.5	92.8
Reactances (per unit):						
X _s		2.74	2.99	3.27	3.65	2.99
X' _s		0.10	0.10	0.11	0.13	0.10
Reactances shown are applicable to the standby rating.		X'' _s	0.057	0.062	0.068	0.076
		X _a	1.65	1.79	1.96	1.79
		X'' _a	0.068	0.074	0.080	0.074
		X _s	0.063	0.068	0.075	0.083
		X ₀	0.004	0.005	0.006	0.005
Time Constants:		t' _a	t'' _a	t' _{no}	t _o	
		100 ms	10 ms	2865 ms	15 ms	

* dB(A) levels are for guidance only

** With PMG Excited Option AVR12

**PRIME 114 - 135 kW
60 Hz**



D150-8 (3-Phase)

Materials and specifications are subject to change without notice.

Generator Set Technical Data - 1800 rpm/60 Hz		Standby		Prime	
Power Rating	kW kVA	150	187.5	135	168.8
Lubricating System					
Type: full pressure Oil filter: spin-on, full flow Oil cooler: watercooled Oil type required: API CH4/CI4 Total oil capacity Oil pan					
	L U.S. gal	16.5	4.4	16.5	4.4
	L U.S. gal	15.5	4.1	15.5	4.1
Fuel System					
Generator set fuel consumption					
100% load	L/hr gal/hr	44.7	11.8	41.5	11.0
75% load	L/hr gal/hr	36.8	9.7	34.3	9.1
50% load	L/hr gal/hr	28.4	7.5	26.6	7.0
Engine Electrical System					
Voltage/ground: 12/negative Battery charging generator ampere rating					
	amps	100		100	
Cooling System					
Water pump type: centrifugal Radiator system capacity incl. engine Maximum coolant static head Coolant flow rate Minimum temperature to engine Temperature rise across engine Heat rejected to coolant at rated power Total heat radiated to room at rated power Radiator fan load					
	L U.S. gal	21.0	5.5	21.0	5.5
	m H ₂ O ft H ₂ O	8.0	26.0	8.0	26.0
	L/hr U.S. gal/hr	10 200	2,693	10 200	2,693
	°C °F	85	185	85	185
	°C °F	7.9	14.2	7.9	14.2
	kW Btu/min	78.4	4,461	73.5	4,182
	kW Btu/min	13.6	774	12.7	723
	kW hp	8.0	10.7	8.0	10.7
Air Requirements					
Combustion air flow Maximum air cleaner restriction Radiator cooling air (zero restriction) Generator cooling air Allowable air flow restriction (after radiator) Cooling airflow (@ rated speed) Rate with restriction					
	m ³ /min cfm	12.9	456	12.6	445
	kPa in H ₂ O	5	20	5	20
	m ³ /min cfm	327	11,548	327	11,548
	m ³ /min cfm	26.4	923	26.4	923
	kPa in H ₂ O	0.12	0.50	0.12	0.50
	m ³ /min cfm	317	11,195	317	11,195
Exhaust System					
Maximum allowable backpressure Exhaust flow at rated kW Exhaust temperature at rated kW - Dry exhaust					
	kPa in Hg	15	4.4	15	4.4
	m ³ /min cfm	31.5	1,112	30.5	1,077
	°C °F	625	1,157	610	1,130
Generator Set Noise Rating* (without attenuation) at 1 m (3 ft)					
	dB(A)	97.3		97.3	

Generator Technical Data	277/480V	266/460V	127/220V	120/240V 120/208V	347/600V
Motor Starting Capability: (kVA)					
(30% voltage dip)					
Self excited	420	391	363	330	N/A
PM excited**	548	511	476	433	511
AREP excited	548	511	476	433	511
Full Load Efficiencies:					
Standby	92.9	92.9	92.9	92.5	92.9
Prime	93.1	93.1	93.1	92.8	93.1
Reactances (per unit):					
X _s	2.90	3.16	3.45	3.86	3.16
X' _s	0.10	0.11	0.12	0.13	0.11
Reactances shown are applicable to the standby rating.	X'' _s 0.058	0.063	0.069	0.078	0.063
X _a	1.74	1.89	2.07	2.32	1.89
X'' _a	0.069	0.075	0.082	0.092	0.075
X _d	0.063	0.069	0.075	0.084	0.069
X _d	0.005	0.005	0.006	0.007	0.005
Time Constants:					
	t' _d 100 ms	t'' _d 10 ms	t' _{d0} 2966 ms	τ 15 ms	

* dB(A) levels are for guidance only
** With PMG Excited Option AVR12

PRIME
60 Hz

114-135 kW

CATERPILLAR®

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**PRIME
60 Hz**

114-135 kW

CATERPILLAR®

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LEHE5521-01 (04-07)

ATTACHMENT 3

ATTACHMENT 3

Compliance Plan

Introduction

The Solid Waste Authority of Palm Beach County (SWA) owns and operates a Class I and a Class III Landfill at the North County Resource Recovery Facility (NCRRF). Both landfills have active landfill gas collection and control systems (LFGCCS) that comply with the requirements of the New Source Performance Standards (NSPS) for Municipal Solid Waste Landfills, 40 CFR 60 Subpart WWW. The LFGCCS is operated under Title V Permit No. 0990234-010-AV.

Purpose of Compliance Plan

The purpose of this Compliance Plan is to establish the major milestones such as construction completion, initial startup, and compliance demonstrations for the following activities:

- Installation of a new 3,500 scfm flare at the Class I Landfill as part of a landfill gas compression system.
- Relocation of the existing Class I Landfill gas flare to the Class III Landfill.
- Addition of one emergency generator for the new Operations Building (The Title V application submitted on March 25, 2008, requested addition of two emergency generators. Since then, SWA has decided to delete the scalehouse project and move forward with only the new Operations Building.)

Installation of New 3,500 scfm Flare for Landfill Gas Compression System

The new 3,500 scfm flare has been delivered to the NCRRF site along with the landfill gas compression equipment. The construction of the flare and compression skid system is expected to be completed during the first week of June 2008.

The new flare will be ready for initial startup as soon as the revised permit is received from FDEP. The initial performance testing will be performed within the allowed 180-day period established in 40 CFR 60.757.

Relocation of Existing Class I Landfill Gas Flare to Class III Landfill

Once the new 3,500 scfm flare is up and running at the Class I Landfill, the existing flare will be relocated to the Class III Landfill. The relocation of the flare to the Class III Landfill should be complete by the December 2008. Initial startup of the flare is expected to commence during January 2008. The initial performance testing will be performed within the allowed 180-day period established in 40 CFR 60.757.

Proposed Emergency Generator

SWA is currently completing the design of a new Operations Building which will include a new emergency standby generator. The current schedule for this project is as follows:

- Project out to bid: August 2008
- Construction start: November 2008
- Construction completion: April 2010

Based on this schedule, initial startup of the emergency standby generator for the new Operations Building will be performed between April 2010 and May 2010.



1601 Belvedere Road, Suite 211 South
West Palm Beach, Florida 33406
tel: 561 689-3336
fax: 561 689-9713

SEP 30 2008

September 22, 2008

Mr. Jonathan K. Holtom, P.E.
Acting Program Administrator
Title V Section
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399

RECEIVED

OCT 01 2008

BUREAU OF AIR REGULATION

Subject: Solid Waste Authority of Palm Beach County
North County Resource Recovery Facility
Comments to Draft Air Construction Permit No. 0990234-012-AC and
Draft Title V Air Operation Permit No. 0990234-013-AV

Dear Mr. Holtom:

The Solid Waste Authority of Palm Beach County (SWA) and CDM received the Florida Department of Environmental Protection's (FDEP) draft Air Construction Permit No. 0990234-012-AC and Draft Title V Permit No. 0990234-013-AV for the North County Resource Recovery Facility (NCRRF). The following is a compilation of SWA's and CDM's comments on the draft permit.

General Comment through All Documents

The existing 1,800-scfm flare (New EU #020) at the Class III Landfill will only be used as a back-up at the Class III Landfill. Suggest addition of "at the Class III Landfill" after all references made to this flare being used as a back-up.

Draft Air Construction Permit - Specific Conditions

Item 2. Capacity and Potential to Emit (PTE) on page 5 of 12 limits the flow rates of the flares on a million ft³/yr basis. All previous permits have established the flow rate limits on a scfm basis. SWA and CDM request that the flow rate limits for the new air construction and Title V permit remain on a scfm basis.

Item 2 also states that "Total landfill gas flow to the flares shall be continuously measured and recorded." SWA and CDM would like to clarify that, since the existing Class III flare (new EU #020) will only be used as a back-up flare, the landfill flow rates to this flare will only be continuously monitored if it is put into service due to a major malfunction of the main Class III flare (the relocated and de-rated flare (EU #004).

Item 6. Sampling and Analysis of Sulfur Content of Gas on page 6 of 12 requires that ASTM method D-3246-81 be used to determine the sulfur content of the gas. We cannot find this



Permit File Scanning Request from Elizabeth

Priority: -ASAP (Public Records Request, etc.) -Place in Normal Scanning Queue

Facility ID	Project#	Type	PSD #	Submittal Date	Batch #
0990234	012	AC		OCT 06 2010	
	013	AV			

- | | | | | |
|--|--|--------------------------------------|---------------------------------|-----------------------------------|
| <input checked="" type="checkbox"/> File Approved For Disposal | <input checked="" type="checkbox"/> Correspondence | <input type="checkbox"/> Intent | <input type="checkbox"/> Permit | <input type="checkbox"/> Draft |
| <input type="checkbox"/> Return File to BAR | <input type="checkbox"/> Amendment | <input type="checkbox"/> Application | <input type="checkbox"/> OGC | <input type="checkbox"/> Proposed |

10-1-08

Document Date _____



Mr. Jonathan K. Holtom, P.E.
September 22, 2008
Page 2

ASTM method on the ASTM database. The current permit requires that sulfur content of the gas be determined using ASTM method D1072-90 or later method. ASTM method D5504 is the most recent method used to determine sulfur content; therefore, we would suggest keeping the current permit's wording or using ASTM method D5504.

Item 6 on page 6 of 12 also requires that SO₂ calculations in tons per year (TPY) be included in the annual operating report (AOR). The SO₂ calculations are not part of the current AOR, and we would request that this requirement be removed.

Item 7. Initial Compliance Demonstration on page 6 of 12 requires that an initial compliance test be performed on the Class I and Class III flares. CDM and SWA will be performing initial compliance testing on the new Class I flare and the relocated and de-rated Class III flare. Since the existing Class III flare will only be used as a back-up at the Class III landfill, and due to the fact that it was tested for compliance during the month of August 2008 (as required by the current permit), we are requesting that FDEP not require an initial compliance test for this unit.

Draft Title V Air Operation Permit - Statement of Basis

The Statement of Basis states that "The facility is decommissioning the existing emergency generators listed in Appendix I-1. These units are therefore removed from this Appendix." The SWA does not intend to decommission the emergency diesel generator for the Resource Recovery Facility (RRF) nor the emergency diesel generator for the Utilities Facility.

The original application submitted to FDEP on March 25, 2008, included the addition of two new generators at the NCRRF. The first new generator was to be installed in the new landfill scalehouse, and the second new generator was to be installed in the new landfill operations and maintenance building. The two generators that would have been decommissioned were the ones at the existing landfill scalehouse not the ones at the RRF and nor the one at the Utilities Facility. Since the submittal of the application in March, SWA has decided to cancel the construction of the new landfill scalehouse and continue the operation of the existing landfill scalehouse; therefore, the only new generator requested under this application is the generator for the new landfill operations and maintenance building. The emergency generators at the existing landfill scalehouse will not be decommissioned. We request that the emergency diesel generators for the RRF and the Utilities Facility be kept in Appendix I-1 in the new permit.

Draft Title V Air Operation Permit - Specific Conditions

Specific Condition B.0.c. on page 5 shows the gas flow rate limits of the flares on a million ft³/yr basis. All previous permits have established the flow rate limits on a scfm basis. SWA and CDM request that the flow rate limits for the new air construction and Title V permit



Mr. Jonathan K. Holtom, P.E.
September 22, 2008
Page 3

remain on a scfm basis. SWA would also like to keep the current permit's Specific Condition B.47 Landfill Gas Flow Rate in the new Title V Permit, as it includes specific requirements for determining the actual gas flow rates.

Specific Condition B.0.c. also states that "Total landfill gas flow to the flares shall be continuously measured and recorded." SWA and CDM would like to clarify that, since the existing Class III flare (New EU #020) will only be used as a back-up flare, the landfill flow rates to this flare will only be continuously monitored if it is put into service due to a major malfunction of the main Class III flare (the relocated and de-rated flare (EU #004)).

Specific Condition B.0.e. on page 5 requires that ASTM method D-3246-81 be used to determine the sulfur content of the gas. We cannot find this ASTM method on the ASTM database. The current permit requires that sulfur content of the gas be determined using ASTM method D1072-90 or later method. ASTM method D5504 is the most recent method used to determine sulfur content; therefore, we would suggest keeping the current permit's wording or using ASTM method D5504.

Specific Condition B.0.e. on page 5 also requires that SO₂ calculations in tons per year (TPY) be included in the annual operating report (AOR). The SO₂ calculations are not part of the current AOR, and we would request that this requirement be removed from the new permit.

We appreciate this opportunity to comment on the draft permit. If you have any questions, please feel free to contact me at 561-689-3336.

Very truly yours,

Manuel Hernandez, P.E.
Florida Professional Engineer No. 59796
Project Manager
Camp Dresser & McKee Inc.

MJH/wlb

Attachments

cc: Mary Beth Morrison, SWA
Patrick Carroll, SWA
Scott M. Sheplak, FDEP

File: 2678-59229-079.PM.MGT

Sheplak, Scott*-file-*

From: Sheplak, Scott
Sent: Wednesday, August 20, 2008 4:38 PM
To: Holtom, Jonathan; Vielhauer, Trina
Cc: Arif, Syed; Cascio, Tom; Mitchell, Bruce
Subject: RE: Appendix ICE

0990234-013-AV

SWA of P. In Beach
County

re: engine

The State of Florida's Title V Program is not just the Tallahassee office. In my opinion, the Program is kind of like a family, comprised of: 6 District Offices; now 8 Local Programs; and, our Tallahassee office. Coming from a District Office with air permitting experience before Title V, I kept this in mind during our implementation. In this regard, I have always valued the views, opinions and recommendations of permit writers around the state. We can acknowledge our differences yet move ahead.

As to the new formats, I reaffirm my offer to review them prior to statewide release & use, especially with my personal history of Florida's Title V Program. In my opinion, the new style and content of Title V permits is a significant change within our Title V permitting program. I still recommend seeking and obtaining approval from our Office of General Counsel (OGC) and EPA prior to use. We went through some tough times with these in the past in establishing these. I do like some of the new aspects I see in the formats. We should be able to come up with something better and usher in the next era.

Has anyone in Florida issued a Title V permit resembling Appendix ICE? The permitting of engines seems to be a good teleconference item to hear how permit writers are handling these. We can learn from each other. I offer to tee this one off at the next teleconference and just listen.

From: Holtom, Jonathan
Sent: Wednesday, August 20, 2008 12:18 PM
To: Cascio, Tom; Sheplak, Scott; Mitchell, Bruce
Cc: Arif, Syed; Vielhauer, Trina
Subject: Appendix ICE

The attached document is our immediate fix to get around Pat's concern with us including ICE as unregulated units in the Title V permit. If your Title V facility contains engines that met the categorical exemption and never had to get an AC permit, then list them on this document that will be included in the Title V permit as an enforceable appendix and include the applicable Subpart (IIII, JJJJ and/or ZZZZ).

The entire new Title V format is in an evolutionary process and will continue to change as we go forward (hopefully towards an increasingly better product). I sincerely apologize for any and all confusion surrounding the new templates and the impression that everyone's input might not be valued or wanted. Because we comprise the bulk of the original Title V permitting section, I know first hand that we all have a vested interest in maintaining the success of the program that we were all instrumental in establishing. As such, I greatly value the opinions and input of each of you and I encourage you to speak up if something does not feel right or make sense. We are being asked to change some of the look and feel of our old permits. We have been using them for over ten years now and a little remodeling is not a bad thing. To the extent that we can make the changes we have been asked to make, I am committed to doing so and I am asking for your support in making it happen. At the same time, I am relying upon each of you to exercise your historical knowledge of the program to point out any potential conflicts or omissions so we can continue to meet our program obligations. I am also committed to making these changes as painless for each of you as I possibly can, but I do know that it change isn't completely painless. I know that we are all very busy and overwhelmed with the current work assignments. We have a very large workload right now to handle with fewer workers than ever. In spite of that, it is my hope that we can continue to function as the close-knit, successful work group that we were ten years ago when we set the Title V bar for the rest of the country. I'm certain that if we stick together, we can get past this hurdle as successfully as the many others we have passed together since we started this program.

8/22/2008

Permit File Scanning Request from Elizabeth

Priority: -ASAP (Public Records Request, etc.) -Place in Normal Scanning Queue

Facility ID	Project#	Type	PSD #	Submittal Date	Batch #
0990234	013	ACAV		OCT 06 2010	
	B				

- File Approved For Disposal Correspondence Intent Permit Draft
 Return File to BAR Amendment Application OGC Proposed

Document Date _____

APPENDIX ICE
REQUIREMENTS FOR INTERNAL COMBUSTION ENGINES

This Title V facility contains stationary internal combustion engines that have been exempted from the requirement to obtain an air construction permit because they qualify for one of the categorical exemptions listed in Rule 62-210.300(3)(a), Florida Administrative Code (F.A.C.). However, they are included in this permit as regulated emissions units because they are subject to one or more of the following federal rules:

- 40 CFR 60, Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.
- 40 CFR 60, Subpart JJJJ—Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.
- 40 CFR 63, Subpart ZZZZ—National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines.

The below listed engines are subject to the specified federal rules.

<u>E.U. ID</u> <u>No.</u>	<u>Brief Description of Engine</u>	<u>Year</u> <u>Built</u>	<u>Displacement or</u> <u>Horsepower</u>	<u>Rule</u> <u>Applicability</u>
-xxx				IIII
-xxx				JJJJ
-xxx				ZZZZ
-xxx				IIII & ZZZZ
-xxx				JJJJ & ZZZZ
-xxx				Etc.
-xxx				

The engines listed above are currently demonstrating compliance with the emissions limitations of the applicable federal rule through the retention of a manufacturer's certification statement. So long as that certification is able to be retained, no additional compliance demonstration is required. At such time that the manufacturer's certification is no longer valid (i.e. due to operation or maintenance practices that are inconsistent with the manufacturer's recommendations), the permittee shall begin demonstrating compliance with the standards listed in the applicable federal rule (included in the appendices as an enforceable part of this permit) in a manner that is prescribed by that rule.