Sheplak, Scott -file-

From: Arif, Syed
Sent: Wednesday, August 24, 2011 1:57 PM
To: Sheplak, Scott
Cc: Koerner, Jeff
Subject: RE: SWAPBC Title V Permit

I agree that we should keep the PSD permit requirement as stated in Specific Condition 15 even if it less stringent than what you introduced in the Title V permit renewal. You'll have a chance to make the change in the final determination.

Syed

-----Original Message-----
From: Sheplak, Scott
Sent: Wednesday, August 24, 2011 11:17 AM
To: Arif, Syed
Subject: FW: SWAPBC Title V Permit

David Dee is correct. After a detailed review, the "3 hour per occurrence" was buried in the PSD permit, Specific Condition 15. This is something I need to correct. I would like to correct it in the final Title V air operation permit renewal.

Is that o.k. with you and Jeff?

-----Original Message-----
From: David Dee [mailto:ddee@yvlaw.net]
Sent: Wednesday, August 24, 2011 10:54 AM
To: Sheplak, Scott
Cc: Marc Bruner; Marybeth Morrison
Subject: SWAPBC Title V Permit

Scott,
I am sending you this note to confirm and supplement the information I provided you during our telephone conversation this morning.

Attached for your review is a copy of the PSD permit (PSD-FL-108A) that was issued in 1992 for the SWA's facility.

On page 10 of 11, Specific Condition 15 provides that excess emissions shall be limited to "three hours per occurrence."

Since the "three hours per occurrence" language was part of the underlying PSD permit for the SWA's facility, the Department cannot reduce the authorized emissions to 3 hours in a 24 hour period when the Department renews the Title V permit for the SWA's facility.

Please revise the draft Title V permit to match the PSD permit condition dealing with excess emissions (3 hours per occurrence).

Thank you for your help with this issue.

- file -

Sheplak, Scott

From: Sheplak, Scott
Sent: Tuesday, August 23, 2011 10:40 AM
To: 'oquendo.ana@epa.gov'; 'forney.kathleen@epa.gov'
Cc: Arif, Syed
Subject: public notice notification for draft/proposed project - parallel review title V permit - Solid Waste Authority of Palm Beach County

Tracking:

Recipient	Delivery	Read
'oquendo.ana@epa.gov'		
'forney.kathleen@epa.gov'		
Arif, Syed	Delivered: 8/23/2011 10:40 AM	Read: 8/23/2011 11:05 AM

A Draft/Proposed Title V Air Operation Permit Renewal and a Draft Air Construction Permit Revision were issued (clerked) on June 15, 2011. Due to comments and some substantial (significant) changes, the previous permits (Draft/Proposed Title V Air Operation Permit Renewal and Draft Air Construction Permit Revision) issued on June 15, 2011 are withdrawn and are being replaced with these revised permits.

We have received proof of publication for the following project:

Solid Waste Authority of Palm Beach County
0990234-020-AV, *Revised* Draft/Proposed Title V Air Operation Permit Renewal
This project includes the concurrent processing of an air construction permit
Permit No. 0990234-019-AV/PSD-FL-108I, *Revised* Air Construction Permit Revision

They published on 08/20/2011, therefore,
Day 30 = 09/19/2011 (end of the 30-day public comment period)
Day 45 = 10/04/2011 (end of the USEPA Region 4 review period)
Day 55 = 10/14/2011 (final permit by operation of law).

If you should have any questions, feel free to contact me.

Sincerely,

Scott M. Sheplak, P.E.
DEP - Division of Air Resource Management
Office of Permitting and Compliance
Mail Station #5505
2600 Blair Stone Road
Tallahassee, FL 32399
scott.sheplak@dep.state.fl.us
Telephone 850/717-9074
Fax 850/717-9097

Sheplak, Scott -file-

From: Sheplak, Scott
Sent: Tuesday, August 09, 2011 10:16 AM
To: Arif, Syed; Holtom, Jonathan
Subject: FW: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Fyi.

I'm working on the revised draft permits.

From: Marybeth Morrison [mailto:mmorrison@swa.org]
Sent: Tuesday, August 09, 2011 9:55 AM
To: Sheplak, Scott
Cc: Manuel Hernandez; Marc Bruner; Mark L. McLean; hibbardcs@cdm.com
Subject: RE: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Hi Scott,

Yes, we would like to get a revised draft for both the Title V and PSD permits to incorporate the changes we talked about. We understand that it will require another public notice. We really appreciate your time and effort spent on this permit renewal.

Sincerely,

Mary Beth

From: Sheplak, Scott [mailto:Scott.Sheplak@dep.state.fl.us]
Sent: Tuesday, August 09, 2011 9:21 AM
To: Marybeth Morrison
Subject: RE: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Mary Beth,

I understand that you are o.k. with us issuing revised permits (Title V permit and PSD permit revisions) requiring another public notice to clean them up based on the comments dated July 22, 2011.

I'll stay on this project and work closely to finish ASAP; my goal is to have issued revised permits no later than **August 17th**. I want to make sure that I make the appropriate changes.

Sincerely,

Scott

From: Marybeth Morrison [mailto:mmorrison@swa.org]
Sent: Monday, August 08, 2011 11:25 AM
To: Sheplak, Scott
Subject: RE: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Hi Scott, I discussed w/ Mary Beth este yrsd. Scott 8/8/11

Before I can give you direction on how to proceed, I would like to know whether or not the proposed changes to PSD (i.e. removal of Be & F testing/limits) are going to require another public notice. If you can let me know the answer to that question, I would appreciate it.

Thanks,

Mary Beth

From: Sheplak, Scott [mailto:Scott.Sheplak@dep.state.fl.us]
Sent: Monday, August 08, 2011 10:47 AM
To: Marybeth Morrison
Subject: RE: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Mary Beth,

Some of the changes may require another public notice. Are you wanting to wait and go through revised permits and another public notice? Or, do you want to proceed ahead?

Scott

From: Holtom, Jonathan
Sent: Monday, July 25, 2011 2:05 PM
To: 'Hernandez, Manuel'
Cc: Sheplak, Scott; mhammond@swa.org; 'Marc Bruner'; 'Mark L. McLean'; 'Marybeth Morrison'; 'Jim Greer'; 'David Broten'; 'Mike Thayer'; 'Michael Tyson'; 'Hibbard, Cynthia'; Arif, Syed
Subject: RE: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Mr. Hernandez,

We have received your comments regarding the draft construction permit revision and Title V permit renewal for the Palm Beach County Solid Waste facility. Upon quick review, these comments appear to be requesting significant changes that could potentially require the issuance of revised draft permits and another public notice. After a more detailed review, we will better be able to determine which of your requests would result in the need for another public notice if we agree that they can be made without changing the intent of the original PSD permit.

Thank you for your thorough review of our draft permits and for timely submitting your public comments. We will be back in touch as soon as we complete a detailed review of your comments/requested changes.

Jon Holtom, P.E., CPM
Power Plant Permitting Group Administrator
Florida Department of Environmental Protection
Division of Air Resource Management
Office of Air Permitting and Compliance
(850) 717-9079
FAX: (850) 717-9097
Email: jon.holtom@dep.state.fl.us

The Department of Environmental Protection values your feedback as a customer. DEP Secretary Herschel T. Vinyard Jr. is committed to continuously assessing and improving the level and quality of services provided to you. Please take a few minutes to comment on the quality of service you received. Simply click on this link to the DEP Customer Survey. Thank you in advance for completing the survey.

From: Hernandez, Manuel [mailto:HernandezMJ@cdm.com]
Sent: Friday, July 22, 2011 4:34 PM
To: Holtom, Jonathan
Cc: Sheplak, Scott; mhammond@swa.org; Marc Bruner; Mark L. McLean; Marybeth Morrison; Jim Greer; David Broten; Mike Thayer; Michael Tyson; Hibbard, Cynthia
Subject: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Good afternoon Mr. Holtom.

CDM and SWA have reviewed the referenced permit documents and prepared the attached document with a summary of our comments. The original document is being FedExed today for Monday delivery.

Feel free to contact me or Cynthia Hibbard at 617-452-6244 if you have any questions.

Have a great weekend.

Please consider the environment before printing this email

Manuel J. Hernandez, P.E.

CDM

consulting engineering construction operations - www.cdm.com

Project Manager
1601 Belvedere Road, Suite 400E
West Palm Beach, FL 33406
Phone (561) 689-3336
Fax (561) 689-9713
hernandezmj@cdm.com

Sheplak, Scott -file-

From: Holtom, Jonathan
Sent: Monday, July 25, 2011 2:05 PM
To: 'Hernandez, Manuel'
Cc: Sheplak, Scott; mhammond@swa.org; 'Marc Bruner'; 'Mark L. McLean'; 'Marybeth Morrison'; 'Jim Greer'; 'David Broten'; 'Mike Thayer'; 'Michael Tyson'; 'Hibbard, Cynthia'; Arif, Syed
Subject: RE: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Mr. Hernandez,

We have received your comments regarding the draft construction permit revision and Title V permit renewal for the Palm Beach County Solid Waste facility. Upon quick review, these comments appear to be requesting significant changes that could potentially require the issuance of revised draft permits and another public notice. After a more detailed review, we will better be able to determine which of your requests would result in the need for another public notice if we agree that they can be made without changing the intent of the original PSD permit.

Thank you for your thorough review of our draft permits and for timely submitting your public comments. We will be back in touch as soon as we complete a detailed review of your comments/requested changes.

Jon Holtom, P.E., CPM
Power Plant Permitting Group Administrator
Florida Department of Environmental Protection
Division of Air Resource Management
Office of Air Permitting and Compliance
(850) 717-9079
FAX: (850) 717-9097
Email: jon.holtom@dep.state.fl.us

From: Hernandez, Manuel [mailto:HernandezMJ@cdm.com]
Sent: Friday, July 22, 2011 4:34 PM
To: Holtom, Jonathan
Cc: Sheplak, Scott; mhammond@swa.org; Marc Bruner; Mark L. McLean; Marybeth Morrison; Jim Greer; David Broten; Mike Thayer; Michael Tyson; Hibbard, Cynthia
Subject: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision

Good afternoon Mr. Holtom.

CDM and SWA have reviewed the referenced permit documents and prepared the attached document with a summary of our comments. The original document is being FedExed today for Monday delivery.

Feel free to contact me or Cynthia Hibbard at 617-452-6244 if you have any questions.

CDM

1601 Belvedere Road, Suite 400 East
West Palm Beach, FL 33406
tel: 561 689-3336
fax: 561 689-9713

July 22, 2011

Mr. Jonathan Holtom, P.E.
Program Administrator
Title V Section
Division of Air Resource Management
Florida Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

VIA ELECTRONIC MAIL

Subject: North County Resource Recovery Facility
Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal
Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Permit Revision
Solid Waste Authority (SWA) of Palm Beach County
Comments on Draft Permits

Dear Mr. Holtom:

On behalf of the SWA, Camp Dresser & McKee Inc. (CDM) is submitting comments on the Draft Title V Air Operation Permit Renewal and Air Construction Permit Revision, for which public notice was published on June 24, 2011. We greatly appreciate the Department's efforts in preparing this draft permit, and the opportunity to provide the comments, below.

1) Statement of Basis, Page SOB-1 of 4, Facility Description, 4th paragraph. We recommend deleting "and operated by Palm Beach Resource Recovery Corporation . . . , " because they only operate a portion of the site, the NCRRF itself. NEFCO operates the Biosolids Pelletization Facility (Sludge Drying Facility), and the SWA runs the Landfills, Composting Facility and other operations.

2) Draft/Proposed Permit, Page 2 of 45, Section I., Facility Information, Subsection A. Facility Description, 3rd paragraph. Same comment as above.

3) Draft/Proposed Permit, Page 7 of 45, Section III, Condition A.2. a. and b. We request that these conditions be deleted. They restrict capacity based on waste tonnage feed rate and heat input rate. These measures of capacity cannot reliably be measured, and are not required by the underlying New Source Performance Standards for Municipal Waste Combustors, 40 CFR 60

Subpart Cb. We believe that Condition A.2.c., which sets the unit capacity based on steam production rate, is the best means for assuring continuous compliance. It is also consistent with the 40 CFR 60.53b(b) Load Level requirements.

4) Draft/Proposed Permit, Page 8 of 45, Condition A.5(a)(1). This condition states that natural gas may be combusted as an "auxiliary" fuel. The term "auxiliary" is not defined in 40 CFR 60 Subparts A, Cb or Eb. We believe there is a quantitative annual capacity restriction of 10 percent for natural gas from the PSD permit. If so, and it is the Department's intent to retain that restriction, we request that it be included here. If the intent is to not have a specific restriction, we request that the natural gas annual capacity restriction be deleted from the PSD permit.

5) Draft/Proposed Permit, Page 11 of 45, Condition A.21. We request that the phrase "per occurrence" be added to the second sentence, so that it reads: "The Department authorizes three hours per occurrence in any 24-hour period for these emissions units." This change would make this condition consistent with the language in previous Title V permits and the PSD Permit, No. PSD-FL-108A. We also request that this PSD Permit language governing excess emissions be used in Condition C.19, on Page 24 of 45, for the Sludge Drying Facility.

6) Draft/Proposed Permit, Page 12 of 45, Continuous Monitoring Requirements, Permitting Note. The note includes a continuous O2 monitor in the list of monitors installed on the RDF boilers. The boilers do not have O2 monitors (just CO2), so we request that this be deleted from the list.

7) Draft/Proposed Permit, Page 12 of 45, Condition A.27, List of Test Methods. We suggest that the EPA Method 6 series, Method 7 series, Method 10 series, and EPA Method 12 be deleted from this list, because SO2, CO, and NOx compliance is determined through CEMs and Relative Accuracy Test Audits (RATA), and because Pb is tested with EPA Method 29. The Resource Recovery Facility Refurbishment Project Permit 0990234-015-AC/PSD-FL-108H required that compliance with emission standards for CO, NOx and SO2 shall be demonstrated by data collected from required CEMS and opacity standards from required COMS.

8) Draft/Proposed Permit, Page 13 of 45, Condition A.29. We request that the language describing the annual basis for HCl and fugitive ash testing be changed to match that for the other pollutants. This could be done by adding HCl and fugitive ash visible emissions to the list of pollutants for which testing shall be conducted "on a calendar year basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test . . .)" We understand that this is consistent with EPA's intent, and that the differing basis for the HCl and fugitive ash testing is an error that EPA plans to correct.

9) Draft/Proposed Permit, Page 13 of 45, Condition A.29. 40 CFR 60.58b (Appendix Eb of the Permit) states that after the initial compliance test, compliance with NOx, SO2, CO and opacity limits shall be determined continuously with the Facility CEMs and COMs. We request that this requirement from Appendix Eb be brought into the main body of the Permit following Condition A.29. The current PSD Permit 0990234-015-AC/PSD-FL-108H also requires compliance based on CEMS/COMS. (See Comment 7, above.)

10) Draft/Proposed Permit, Page 13 of 45, Condition A.30. We appreciate that the VOC compliance test is no longer required annually. We request that this change to have VOC testing only done prior to permit renewal also be made to the PSD permit.

11) Draft/Proposed Permit, Page 14 of 45, Condition A.35. This is a very helpful summary table, and we would like to see it list all of the reports required for EUs 001 and 002. For example, the table should include the Annual and Semi-Annual Reports listed in Appendix Eb. We suggest removing the NSPS Excess Emissions & Monitoring System Performance Report and adding the following to the table:

Report	Reporting Deadlines	Related Conditions
Annual Report	Every 6 months (semi-annual)	A.46 and Appendix Eb § 60.59b(g)
Semi-Annual Report	Every 6 months (semi-annual)	A.46 and Appendix Eb § 60.59b(h)
Semi-Annual Monitoring Report	Every 6 months (semi-annual) due March 1st & Sept 1st	A.46 and Appendix RR, RR4

12) Draft/Proposed Permit, Page 14 of 45, Condition A.40. This condition requires that monthly records be kept for the auxiliary burners of each MWC unit. Since there is only one natural gas meter for both auxiliary burners, we request that this be changed to recordkeeping for the burners of both units combined. Also, this condition is related to Condition A.5(a)(1)., referenced in Comment 4), above. If that condition for a quantitative natural gas capacity factor is deleted, we request that this Condition A.40 be deleted, as well.

13) Draft/Proposed Permit, Page 19 of 45, Condition B.17. The federal fiscal year requirement has been removed for boilers EU01 & EU02. Has this requirement been removed for landfill gas flares? If so please remove language each federal fiscal year (October 1st to September 30th).

14) Draft/Proposed Permit, Page 20 of 45, Condition B.22. This is a very helpful summary table, and we would like to see it list all of the reports required for the flares, EUs 004 and 008. Our suggested additions to the Semi-Annual Report listed are below:

Report	Reporting Deadlines	Related Conditions
Annual Performance Report	Annual	B.23 & B.26
Annual Operating Report (AOR)	April 1st of each year	B.23 & B.25

15) Draft/Proposed Permit, Page 20 of 45, Condition B.23. Exit velocity, net heating value, and sulfur content of landfill gas directed to each flare is reported annually in a facility performance report which is different than FDEP's Annual Operating Report (AOR). SO2 emissions in tons/year (TPY) for each flare is included in the AOR. We request you change the text to clarify the reporting requirements.

16) Draft/Proposed Permit, Page 21 of 45, Conditions B.28 and B.29. We request that a clarification or a permitting note be added in this section, and to the two appendices, to indicate that the NESHAP 40 CFR 61, Subpart A & M conditions only apply to the asbestos site at the Class III Landfill (and not to the Class I and Class III Flares).

17) Draft Permit Revision No. 0990234-019-AC/PSD-FL-108I. The Department has determined the Be limit to be obsolete for RDF Boilers No. 1 & 2, and it was removed from the Title V Air Permit. We are also requesting that the limit and testing for Be be removed from the PSD permit.

18) Draft/Proposed Permit, Pages 22 and 23 of 45, Subsection C. Biosolids Pelletization Facility, Description and Condition C.3. Both the first paragraph of the Description and Condition C.3. state that the dryers are fired with "natural gas or landfill gas." The operator would like permission to fire a blend of landfill gas and natural gas. There are times when insufficient landfill gas is available, but could still be used if it were just supplemented with natural gas. Since there would be no change to maximum potential emission rates (100% landfill gas is the worst case), we request that a simple language change to clarify that blending of the fuels is allowed: "The dryers may be fired with natural gas and/or landfill gas." We would appreciate your making this change both in the Title V and PSD permits.

19) Draft/Proposed Permit, Page 24 of 45, Condition C.19. We request that the Excess Emissions Allowed language be revised to match that in the PSD permit and Condition A.21: "The Department authorizes three hours per occurrence in any 24-hour period for these emissions units." (See also Comment 5, above.)

20) Draft/Proposed Permit, Page 25 of 45, Condition C.23. This visible emissions test is on the federal fiscal year schedule. If possible, we would like to see this changed to a calendar year schedule, similar to that in Condition A.29 for the Municipal Solid Waste Boilers.

21) Draft/Proposed Permit, Page 26 of 45, Condition C.28 and 29. These two conditions refer to reporting of excess emissions. Because the Biosolids Pelletization Facility does not have CEMs, it cannot generate excess emission reports. We request that this condition be deleted, and default to Appendix RR, Conditions RR2 and RR3 for reporting problems and deviations, and to Appendix CAM, Condition 15.b. for tracking and reporting excursions and exceedances of CAM Plan parameters.

22) Draft/Proposed Permit, Page 26 of 45, Condition C.30. We recommend that these reports that are routinely required for the Biosolids Pelletization Facility be listed here: a) the CAM Plan Semi-Annual Report, and b) the Annual Visible Emissions Test Report, and from Appendix RR, c) the Semi-Annual Monitoring Report, d) the Annual Operating Report, and e) the Annual Emissions Fee.

23) Draft/Proposed Permit, Page 27 of 45, Subsection D Engines. We very much appreciate the permit condition streamlining and organization of this section, achieved by grouping engines into common applicability categories. We have one comment that will affect almost all of the engine EUs, however – it appears that the "Engine Brake Horsepower" values were selected from the "Brake Horse Power (Electrical Output)" column of the table we submitted with the Application. These values are the rated power of the electrical generator, and not of the engine itself. The best representative of engine brake horsepower in that table is "Max Engine Power HP (Gross Mechanical Output)." We have provided what we believe to be the correct values for Engine Brake Horsepower in the individual comments that follow.

24) Draft/Proposed Permit, Page 27 of 45, Engine Type Group Table. The description for Group 4 does not match the description on Page 38. Specifically, should the range correctly be 175 HP to 500 HP?

25) Draft/Proposed Permit, Page 29 of 45, Group 1. The Engine Brake Horsepower for this group should be:

- EU 035 – 356 HP
- EU 036 – 273 HP
- EU 037 – 19 HP
- EU 039 – 19 HP
- EU 040 – 63 HP (unchanged)
- EU 041 – 47 HP

These changes do not change any categories or applicable requirements for these engines.

26) Draft/Proposed Permit, Page 31 of 45, Condition D.5. We understand that this condition does not require the installation of CEMs. Is that correct?

27) Draft/Proposed Permit, Page 32 of 45, Condition D.8. We would appreciate some clarification on what a "malfunction" is. What does the term "malfunction" apply to? For example, is it an engine break-down?

28) Draft/Proposed Permit, Page 33 of 45, Group 2. The Engine Brake Horsepower for EU 038 should be 3,164. This does not affect its category or any applicable requirements.

29) Draft/Proposed Permit, Page 33 of 45, Emissions Limitations Permitting Note. The "<" should be correct to a ">", so that the category refers to "existing" stationary CI engines with >= 500 HP.

30) Draft/Proposed Permit, Page 34 of 45, EU 017. We have realized that there are two engines at the Woody Waste Facility, not one. The 2005 engine listed here as EU 017 is actually used only as a back-up engine, when the primary engine is down for repairs. We would like to request, therefore, that it be designated as a "Limited Use Engine" as defined in 40 CFR 63 Subpart ZZZZ, and restricted to fewer than 100 hours per year. We would also like to offer a few corrections to the information listed for this engine. It has an Engine Brake HP of 1,180, its Date of Construction (Purchase Date) is 10/25/2006, the Model Year of 2005 is correct, the Model # is 3412, and the engine serial number is correct. We understand that there will be no applicable requirements except for an Initial Notification for this Limited Use engine. Would it continue to be a significant EU?

    The primary Woody Waste Facility Diesel Engine is a 2001 engine. It is also a Caterpillar Model No. 3412, with 1,180 BHP, non-emergency, and displacement of 2.25 l/c. The 2001 engine was purchased on 12/10/2001, model year 2001, and has an engine serial number of BDT00610. We propose that this be EU 017. The title of Group 3 in the permit could become – "Existing" Stationary Emergency CI RICE greater than 500 HP. The Condition D.15 Emission Limitation would be a CO concentration of 23 ppmdv at 15 percent O2, or reduce CO emissions by 70 percent or more (40 CFR 63.6600(d), Table 2c). The testing requirements in Condition D.24. would be limited to CO (no formaldehyde), and the Condition D.25. Testing Frequency would be once every 8,760 hours or 3 years, whichever comes first.

    The compliance date for these requirements would be May 3, 2013.

31) Draft/Proposed Permit, Page 38 of 45, Group 4. The Engine Brake Horsepower for this group should be:

- EU 016 – 550 HP
- EU 021 – 250 HP (Model Year 2008 and Model #DSGAB)
- EU 043 – 775 HP

This does change how these engines are categorized. With greater than 500 HP, this puts EU 016 and EU 043 into a new regulatory Group in the permit, leaving only EU 021 in Group 4. It appears that a new Group 6 would have to be created for EU 016 and EU 043: "New" Stationary Emergency CI RICE greater than 500 HP. They also have a manufacture date after 4/1/2006. Under 40 CFR 63 Subpart ZZZZ, these engines would have no emissions limitations, testing or compliance requirements, but would be subject to the hours restriction in 40 CFR 63.6640(f), and to the maintenance requirements in Table 2c to Subpart ZZZZ. Because they were manufactured after April 1, 2006, these engines are also subject to 40 CFR 60 Subpart IIII. EU 016, the BPF Emergency Generator, fulfills these requirements by being EPA Tier 3 certified. EU 043, the MRF Emergency Generator, fulfills these requirements by being Tier 2 certified. (Note that they have different emissions standards because the MRF Emergency Generator has a power output rating greater than 560 kW or 750 hp.)

32) Draft/Proposed Permit, Page 41 of 45, Group 5. The Engine Brake Horsepower for EU 042 should be 913. Also, we suggest it be identified as EPA Tier 1 certified in the information block at the top of the page. This does not change its category or any applicable requirements.

33) Appendix CAM, Page CAM-5 of 5. The footnote at the bottom of the page states that the excursion level shall be re-evaluated at the time of permit renewal, based upon the most recent stack test data and the manufacturer's recommendations. We suggest that this condition be added to the main body of the permit so it is not overlooked.

34) Appendix RR Facility-Wide Reporting Requirements, RR1 Reporting Schedule Table. This is a very helpful summary table, but we would like to see two reports added to the table for EUo1 & EU02. The report requirements were formerly R.10 & R. 11 of the previous Title V Air Permit and need to be added to this appendix. Once these conditions are added the related conditions can be completed in the Table:

Report	Reporting Deadlines	Related Conditions
Annual Report	every 6 months (semi-annual)	
Semi-Annual Report	every 6 months (semi-annual)	

35) Table L-3 Summary of Compliance Reporting Requirements for MSW Landfills. The Table states that NMOC Emission Rate Report is to be repeated either once a year OR once every 5 years. According to 40 CFR 60, subpart www, a facility is exempt from this requirement if they have installed a landfill gas collection system. Please incorporate this into the table.

36) Appendix TR, Pages TR-4and-5 of 7, Condition TR7. This condition contains references, in (2) and (4) to requiring that compliance testing be done during each federal fiscal year (October 1 – September 30). We would like to request that this language be made consistent with that in Condition A.29, which requires compliance testing "on a calendar year basis (no less than 9 calendar months and no more than 15 calendar months following the previous performance test; and must complete five performance tests in each 5-year calendar period)."

Thank you again, and please contact either Cynthia Hibbard (617-452-6244; hibbardcs@cdm.com) or me (561-689-3336; hernandezmj@cdm.com) with any questions you have.

Very truly yours,

7/22/2011

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

File: 2678-78434.07.01

cc: Scott Sheplak, FDEP
Mark Hammond, SWA
Marc Bruner, SWA
Mark McLean, SWA
Bob Worobel, SWA
Jim Greer, SWA
Mark Davis, PBRRC
Mary Beth Morrison, SWA
Michael Tyson, SWA
David Broten, SWA
Michael Thayer, NEFCO
Cynthia Hibbard, CDM

Sheplak, Scott

From: Hernandez, Manuel [HernandezMJ@cdm.com]
Sent: Friday, July 22, 2011 4:34 PM
To: Holtom, Jonathan
Cc: Sheplak, Scott; mhammond@swa.org; Marc Bruner; Mark L. McLean; Marybeth Morrison; Jim Greer; David Broten; Mike Thayer; Michael Tyson; Hibbard, Cynthia
Subject: NCRRF Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal - Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Revision
Attachments: LRG1473 ltr.pdf

Good afternoon Mr. Holtom.

CDM and SWA have reviewed the referenced permit documents and prepared the attached document with a summary of our comments. The original document is being FedExed today for Monday delivery.

Feel free to contact me or Cynthia Hibbard at 617-452-6244 if you have any questions.

Have a great weekend.

Manuel J. Hernandez, P.E.

CDM

consulting engineering construction operations - www.cdm.com

Project Manager
1601 Belvedere Road, Suite 400E
West Palm Beach, FL 33406
Phone (561) 689-3336
Fax (561) 689-9713
hernandezmj@cdm.com

-file-

Sheplak, Scott

From: Sheplak, Scott
Sent: Tuesday, June 28, 2011 9:41 AM
To: 'Oquendo.Ana@epamail.epa.gov'
Cc: 'Forney.Kathleen@epamail.epa.gov'; Holtom, Jonathan
Subject: public notice notification for draft/proposed project - parallel review title V permit - Solid Waste Authority of Palm Beach County

We have received proof of publication for the following project:

Solid Waste Authority of Palm Beach County
0990234-020-AV, Title V Air Operation Permit Renewal
This project includes the concurrent processing of an air construction permit
Permit No. 0990234-019-AV/PSD-FL-108I, Air Construction Permit Revision

They published on 06/24/2011, therefore,
Day 30 = 07/24/2011 (end of the 30-day public comment period)
Day 45 = 08/08/2011 (end of the USEPA Region 4 review period)
Day 55 = 08/18/2011 (final permit by operation of law).

If you should have any questions, feel free to contact me.

Sincerely,

Scott M. Sheplak, P.E.
DEP - Division of Air Resource Management
Mail Station #5505
2600 Blair Stone Road
Tallahassee, FL 32399
scott.sheplak@dep.state.fl.us
Telephone 850/717-9074
Fax 850/717-9097

Sheplak, Scott

-file-

From: Hernandez, Manuel [HernandezMJ@cdm.com]
Sent: Friday, May 20, 2011 4:23 PM
To: Sheplak, Scott
Cc: Marybeth Morrison; Hibbard, Cynthia; Baricevich, Amy M.
Subject: SWA Title V Air Operation Permit (File Numbers 0990234-020-AV and 0990234-017-AC)

Dear Mr. Sheplak,

The Solid Waste Authority of Palm Beach County (SWA) submitted their Title V air operation permit renewal application and an air construction (AC)/prevention of significant deterioration (PSD) Permit Modification Application for the North County Resource Recovery Facility (NCRRF) on November 17, 2010. The application was submitted as a combined renewal/AC to request changes for the Title V and PSD permits (i.e, remove beryllium (Be) emissions limit for the NCRRF Municipal Solid Waste Boilers (EUs 001 and 002), alternate sampling procedures, etc).

We understand that FDEP is in the process of finalizing the review of the application and issuance the draft permit. We would like to submit another request to this AC/PSD permit change and title V renewal application SWA requests that the fluoride (F) emissions limit of 3.2 x 13-3 lb/MMBtu and testing requirements be removed from both the PSD and Title V permits for the following reasons:

1. The latest update to 40 CFR 60 Subpart Cb/Eb does not include a limit for fluoride. This pollutant is not a PSD-pollutant.
2. Data from the existing NCRRF from 2005 to 2009 indicates that the fluoride levels at the existing 2,000 TPD refuse derived fuel facility with ESP particulate controls have been less than 2 TPY of F. This is substantially lower than the existing limit which is equivalent to 5.8 TPY.

3). The Department recently issued an AC permit for the SWA's Palm Beach Renewable Energy Facility No. 2 and determined that "it was unnecessary to set a BACT based limit or testing requirements for F given the history at the NCRRF.

For these reasons, we believe that ~~the~~ there is no longer a need to limit or test for F emissions at the NCRRF, and request these conditions be removed from both permits.

We appreciate your review and consideration of this request. Feel free to contact me if you have any questions.

Sincerely,

Manuel J. Hernandez, P.E.

CDM

consulting engineering construction operations - www.cdm.com

Project Manager
1601 Belvedere Road, Suite 400E
West Palm Beach, FL 33406
Phone (561) 689-3336
Fax (561) 689-9713
hernandezmj@cdm.com

CDM

1601 Belvedere Road, Suite 400 East
West Palm Beach, FL 33406
tel: 561 689-3336
fax: 561 689-9713

September 13, 2011

Mr. Jonathan Holtom, P.E.
Program Administrator
Title V Section
Division of Air Resource Management
Florida Department of Environmental Protection
Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: North County Resource Recovery Facility
Revised Draft/Proposed Permit No. 0990234-020-AV, Title V Operation Permit Renewal
Revised Draft Permit No. 099234-019-AC/PSD-FL-1081, Air Construction Permit Revision
Solid Waste Authority (SWA) of Palm Beach County
Comments on Revised Draft Permits

Dear Mr. Holtom:

On behalf of the SWA, Camp Dresser & McKee Inc. (CDM) is submitting comments on the Revised Draft Title V Air Operation Permit Renewal and Air Construction Permit Revision, for which public notice was published on August 20, 2011. We understand that due to comments submitted on the Draft permits, and some substantial changes to those permits, it has been necessary to withdraw the Draft permits and replace them with these revised permits. We greatly appreciate the Department's efforts in preparing the revised draft permit, and the opportunity to provide the comments, below.

1) Revised Draft/Proposed Permit, Page III.A.-5, Condition A.21. We request that the second sentence be revised to read: "The Department authorizes three hours per occurrence for these emissions units." The PSD permit (PSD-FL-108A) that was issued in 1992 states, on Page 10 of 11, Specific Condition 15, that excess emissions shall be limited to "three hours per occurrence." Since the "three hours per occurrence" language was part of the underlying PSD

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RESOURCE MANAGEMENT

permit for the SWA's facility, the Department cannot reduce the authorized emissions to three hours in a 24 hour period when the Department renews the Title V permit for the SWA's facility. (See email from David Dee to Scott Sheplak, re: SWAPBC Title V Permit, dated August 24, 2011.)

2) Revised Draft/Proposed Permit, Page III.A.-7, Condition A.29. We request that the language describing the annual basis for HCl testing be changed to match the language in the underlying 1992 PSD permit (PSD-FL-108A) that states, in Specific Condition 4. on Page 7 of 11, that each unit shall be tested annually. That is, please delete the parenthetical phrase, "(no more than 12 calendar months following the previous performance test)." This interpretation will apply until the U.S. EPA corrects Subpart Eb to include HCl and fugitive ash testing on a calendar year basis, no less than 9 calendar months and no more than 15 calendar months following the previous performance test.

3) Revised Draft/Proposed Permit, Page III.D.-7, Condition D.12 Emissions Limitations Permitting Note. The "≤" should be correct to a ">", so that the category refers to "existing" stationary CI engines with > 500 HP.

4) Revised Draft/Proposed Permit, Page III.D.-17, Condition D.58. Please correct the name of this engine to be "Emergency Generator – Biosolids Pelletization Facility (BPF) (EPA Tier 3 certified)." The E.U. ID No 016 is correct, and the applicable emissions standards are correct for the BPF engine generator.

5) Appendix CAM, Page CAM-5 of 5. The footnote at the bottom of the page states that the excursion level shall be re-evaluated at the time of permit renewal, based upon the most recent stack test data and the manufacturer's recommendations. We request that this be added as a Permitting Note to Condition C.21 on Page III.C.-3 in the main body of the permit.

6) Appendix 40 CFR 61 Subpart M [Set A]. We request that a permitting note be added to this appendix to indicate that the NESHAP 40 CFR 61, Subpart M conditions only apply to the asbestos site at the Class III Landfill (and not to the Class I and Class III Flares).

Thank you again, and please contact either Cynthia Hibbard (617-452-6244; hibbardcs@cdm.com) or me (561-689-3336; hernandezmj@cdm.com) with any questions you have.

Very truly yours,

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

MJH/aat

Enclosure

File: 2678-78434.07.01

cc: Mr. Scott Sheplak, FDEP
Mr. Mark Hammond, SWA
Mr. Marc Bruner, SWA
Mr. Mark McLean, SWA
Mr. Bob Worobel, SWA
Mr. Jim Greer, SWA
Mr. Mark Davis, PBRRC
Ms. Mary Beth Morrison, SWA
Mr. Michael Tyson, SWA
Mr. David Broten, SWA
Mr. Michael Thayer, NEFCO
Ms. Cynthia Hibbard, CDM

Sheplak, Scott -file-

From: Friday, Barbara
Sent: Thursday, November 18, 2010 9:33 AM
To: Sheplak, Scott
Cc: Holtom, Jonathan
Subject: FW: A new application was submitted in EPSAP on FDEP

Scott,

The subject EPSAP Application has been logged and assigned to you per Jonathan's request.

This is a combined project, 0990234-019-AC/0990234-020-AV.

Barbara

-----Original Message-----
From: EPSAP@dbprod.dep.state.fl.us [mailto:EPSAP@dbprod.dep.state.fl.us]
Sent: Wednesday, November 17, 2010 3:26 PM
To: Walker, Elizabeth (AIR); Lanh, Kris; Koerner, Jeff; Holtom, Jonathan; Linero, Alvaro; Friday, Barbara
Subject: A new application was submitted in EPSAP on FDEP

A new Long Form application was submitted in EPSAP for the following facility:

Application Number: 2725-1
Facility ID: 0990234
Facility Name: SOLID WASTE AUTHORITY OF PBC Site Name: SOLID WASTE AUTHORITY OF PBC/NCRRF
County: Palm Beach
Facility Office: FDEP Bureau of Air Regulation

Application Purpose: Air construction permit and Title V permit renewal, incorporating the proposed project.

Application Comment: This is a Title V Air Operation Permit Renewal Application as required by Rule 62-213, F.A.C. Calculations for emissions units 001 and 002 do not reflect the refurbishment that is currently under construction. A revised heat input of 427.5 MMBtu/hr was used for EU 001 and 002 based on permit #0990234-016-AV.

Uploaded Electronic Attachments? Yes
Sending Hard-copy Attachments? No

Emissions Units included in the Scope of Application:
EU 1: AV05
EU 2: AV05
EU 4: AV05
EU 5: AV05
EU 6: AV05
EU 7: AV05
EU 8: AV05
EU 10: AV05
EU 11: AV05
EU 12: AV05
EU 14: AV05

EU 16: AV05
EU 17: AV05
EU 18: AV05
EU 19: AV05
EU 21: AV05

Professional Engineer: MANUEL HERNANDEZ, 561-689-3336, hernandezmj@cdm.com

Primary Responsible Official: MARK HAMMOND, 561-640-4000 (Ext. 4215), mhammond@swa.org

At your earliest convenience, please log-in to the EPSAP application located at
http://appprod.dep.state.fl.us/epsap_eng/default.asp
to begin the application review process.

SOLID WASTE AUTHORITY
YOUR PARTNER FOR
SOLID WASTE SOLUTIONS

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AIR REGULATION

September 15, 2010

Mr. Scott M. Sheplak, P.E.
Florida Department of Environmental Protection
Division of Air Resource Management
2600 Blair Stone Road MS 5500
Tallahassee, Florida 32399-2400

Subject: Solid Waste Authority of Palm Beach County, Florida
North County Resource Recovery Facility
Facility ID Number 0990234
Installation and start-up of an Emergency Engine Generator at Administration Building
NESHAP/NSPS Applicability, "After-the-Fact" Initial Notification

Dear Mr. Sheplak:

The Solid Waste Authority (SWA) of Palm Beach County operates a 2,000-ton-per-day municipal waste combustor plant, Class I and Class III landfills, and other solid waste management facilities at the North County Resource Recovery Facility (NCRRF) located at 7501 North Jog Road, West Palm Beach, Florida. These facilities currently operate under Title V Air Operation Permit No. 0990234-016-AV.

SWA has installed emergency engine generators to serve the needs of the various facilities at the NCRRF. Due to the promulgation of a new regulation (National Emissions Standards for Hazardous Air Pollutants for Reciprocating Internal Combustion Engines, 40 CFR 63 Subpart ZZZZ, a.k.a. "RICE MACT Rule," January 18, 2008), some of these engine generators have new applicable air regulatory requirements. For this reason, the SWA conducted a comprehensive review of air permitting and other applicable air regulatory requirements for all 86 of its stationary engines at our NCRRF site. We plan to work with you during the Title V Air Operation Permit renewal application process (due before November 19, 2010) to categorize and group these engines into emissions units based on similar unit-specific applicable requirements. As part of this review, however, we determined that our emergency engine generator at the Administration Building was required to file an Initial Notification under the RICE MACT Rule. This letter is intended to provide this Notification after the fact.

In May 2006, the SWA purchased a Stationary Reciprocating Internal Combustion Engine (RICE) that has a site rating of greater than 500 brake horse power (bhp) and operates

exclusively as an Emergency Stationary RICE at the Administration Building at the NCRRF. SWA completed its installation and commissioned this engine on January 11, 2009.

The NCRRF Site is a major source of hazardous air pollutants (HAPs), so the Administration Building Emergency Generator is subject to 40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants (NESHAP) for Stationary Reciprocating Internal Combustion Engines. It is also subject to 40 CFR Part 60 Subpart IIII – Standards of Performance (NSPS) for Stationary Compression Ignition (CI) Internal Combustion Engines (ICE).

The Administration Building Emergency Engine Generator is a Caterpillar Model 3412 Diesel Engine Generator Set. It has an emergency standby power output rating of 913 brake horsepower (bhp) (equivalent to 681 kilowatts (kW)), and rated standby electricity output of 600 kW. 40 CFR Subpart ZZZZ categorizes this engine generator as a New Stationary RICE Subject to Limited Requirements. (40 CFR 63 Subparts 63.6590(a)(2)(i) and (b)(1)(i)) The limited requirements are:

- Provide an Initial Notification in accordance with Subsection 63.6645(f) (40 CFR 63.6590(b)(1)); and

- Meet the definition of an Emergency Stationary RICE in Subsection 63.6675 by limiting operation of the engine generator set to up to 100 hours per year for maintenance checks and readiness testing, and for additional unlimited time for emergencies only, as specified in 40 CFR 60.4243(d).

40 CFR 60 Subpart IIII requires that the Administration Building Emergency Generator:

- Be certified to the emission standards for new non-road CI engines for the same model year and maximum engine power in 40 CFR 60.4205 (a) Table I for Pre-2007 model year engines with a displacement of <10 Liters per cylinder. For this engine, certification to following emissions is required to comply with 40 CFR 60 Subpart IIII:

Pollutant	Emission Standards	
	g/KW-hr	g/HP-hr
HC	1.3	1.0
NOx	9.2	6.9
CO	11.4	8.5
PM	0.54	0.40

- Use diesel fuel that meets the requirements of 40 CFR 80.510(a), including sulfur content less than or equal to 0.05% by weight (40 CFR 60.4207);
- Be operated and maintained in accordance with manufacturer's written instructions; (40 CFR 60.4211) and
- Have a non-resettable hour meter installed prior to engine startup to track compliance with the hours restriction in 40 CFR 60.4243(d), cited above. (40 CFR 60.4209)

No Initial Notification is required for emergency engines under 40 CFR 60 Subpart IIII. (40 CFR 60.4214(b))

The engine specifications, attached, show that **the Administration Building Emergency Generator is a U.S.-EPA-certified Tier I engine (40 CFR 89), and is in compliance with the emission standards of 40 CFR Part 60 Subpart IIII for CI engines**.

In accordance with 40 CFR 63.6645(f), this letter serves as the **Initial Notification** to Florida Department of Environmental Protection (FDEP). The following information is provided to fulfill the requirements of the Initial Notification in 40 CFR 63 Subpart ZZZZ, as specified in 40 CFR 63.9(b)(2)(i) thru (v) and 40 CFR 63.6645(f).

(i) The name and address of the owner or operator:

Solid Waste Authority of Palm Beach County
7501 North Jog Road
West Palm Beach, FL 33412

(ii) The address (i.e., physical location) of the affected source:

Administration Building (same address as above)

(iii) An identification of the relevant standard, or other requirement, that is the basis of the notification and the source's compliance date:

This notification is required by 40 CFR 63 Subpart ZZZZ, Subsection 63.6590(b)(1). The compliances dates are:

- Requirements other than Initial Notification are applicable at start-up of the Emergency Stationary RICE;
- Initial Notification is required within 120 days of start-up (40 CFR 63.9(b)(2)).

(iv) A brief description of the nature, size, design, and method of operation of the source and an identification of the types of emission points within the affected source subject to the relevant standard and types of hazardous air pollutants emitted:

The affected source is the North County Regional Resource Recovery Facility (NCRRF) Site, containing a 2,000-ton-per-day municipal waste combustor plant, Class I and Class III landfills, and other solid waste management facilities, as described in Title V Air Operation Permit No. 0990234-016-AV. The emission point subject to 40 CFR 63 Subpart ZZZZ is an Emergency Stationary RICE, Caterpillar Model 3412 , Nonroad 2 diesel fueled engine. The hazardous air pollutants emitted from internal combustion engines include PAHs, acetaldehyde, arsenic, benzene, beryllium compounds and formaldehyde; U.S. EPA has established emissions limits for the surrogates of carbon monoxide and hydrocarbons. (73 FR 13, January 18, 2008)

(v) A statement of whether the affected source is a major source or an area source:

The NCRRF Site's municipal waste combustor plant is a major source of hydrogen chloride (HCl) emissions.

(f) A statement that your stationary RICE has no additional requirements under 40 CFR 63 Subpart ZZZZ, and the basis:

The Administration Building Emergency Generator is subject only to the Initial Notification and hours restrictions requirements of this Rule, because it will operate exclusively as an emergency stationary RICE, has a site rating of more than 500 brake horsepower, and is located at a major source of HAP emissions. (40 CFR 63 Subparts 63.6590(a)(2)(i) and (b)(1)(i)) Although there are no additional requirements under

this NESHAP, the Admin Emergency Generator is also subject to requirements under 40 CFR 60 Subpart IIII.

Owner/Responsible Official Certification

I, the undersigned, am the responsible official as defined in Chapter 62-210.200, FAC. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made are true, accurate and complete.

Mr. Mark Hammond
Executive Director
Solid Waste Authority

9/15/10
Date

Should you have any comments or questions, please feel free to call me, or you may direct your questions to our consulting engineer, Camp Dresser & McKee, Inc. Attention: Cynthia Hibbard at 617-452-6000.

Very truly yours,

Mark Hammond
Executive Director

Cc: M. Morrison, SWA
Joseph Kahn, FDEP
Lennon Anderson, FDEP/Southeast
John Holtom, FDEP
Ana Oquendo-Vazquez, Title V Permitting, EPA Region 4
C. Hibbard, CDM/CAM
M. Hernandez, CDM/WPB

EMISSIONS DATA [BPG00204]

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

SEPTEMBER 29, 2009

For Help Desk Phone Numbers Click here

Engine Emissions Data

For Emissions feedback and questions contact: engine_certification@cat.com

This link is case sensitive.

Emissions Definitions

This emission data is Caterpillar's best estimate for this rating. If actual emissions are required then an emission test needs to be run on your engine.

Serial Number (Machine)	
Serial Number (Engine)	**BPG00204**
Sales Model	3412
Build Date	2001-01-11
Interlock Code Progression	No Interlock Code Progression
As Shipped Data	
Engine Arrangement Number	1870557
Certification Arrangement	
Test Spec Number	0K2245
Certification	EPA / CARB / EU
Labeled Model Year	2001
Family Code	1CPXL27.0MRH
Family Certification	EPA Tier 1
Family Certification	EU Stage I
Family Certification	
Flash File	No Flash File Found
Flash File Progression	No Flash File Found
CORR FL Power at RPM	913 HP (681.0 KW) at 1800 rpms
Advertised Power	896hp 1,800RPM
Liters	

This is not an official emission certificate. This is for emission data information only.

SYSTEMS DATA [BPG00204]

SEPTEMBER 29, 2009

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

For Help Desk Phone Numbers Click here

Reference Number: DM6211 **Version Symbol:** **Change Level:**

Sales Model: 3412C DI TA JW **Eff. Serial Number Prefix:** BAX **Engr. Model:** E610

Description	Answer	Unit
Air Intake System		
The installed system must comply with the system limits below for all emissions certified engines to assure regulatory compliance.		
MAX ALLOW INTAKE RESTR W/CLEAN ELEMENT	14.9	IN WTR
MAX ALLOW INTAKE RESTR W/DIRTY ELEMENT	24.9	IN WTR
MAX ALLOW INTAKE MANIFOLD TEMP	185	DEG F
ALLOW PRESS DROP-COMPR OUT TO MANF IN	4.0	IN HG
MAX TURBO INLET AIR TEMPERATURE	97	DEG F
Cooling System		
ENGINE ONLY COOLANT CAPACITY	15.6	GAL
MAX ALLOW ENGINE COOLANT OUTLET TEMP	210	DEG F
REGULATOR START-TO-OPEN TEMP	190	DEG F
REGULATOR FULL OPENING TEMPERATURE	208	DEG F
REGULATOR LOCATION	OUTLET	
AMBIENT COOLING CAPABILITY AT RATED SPD	126	DEG F
MIN RECOMMENDED SYS PRESS CAP PRESSURE	7.0	PSI
MAX UNINTERRUPTED FILL RATE	5	GPM
MIN ALLOW COOLANT LOSS-PERCT OF TOTAL	0	PERCENT
COOL LOSS-MAX % OF PUMP PRESS RISE LOSS	0	PERCENT
MIN ALLOW PUMP CAVITATION TEMPERATURE	201	DEG F
Engine Spec System		
CYLINDER ARRANGEMENT	VEE	
NUMBER OF CYLINDERS	12	CYL
CYLINDER BORE DIAMETER	5.4016	IN
PISTON STROKE	6.0000	IN
TOTAL CYLINDER DISPLACEMENT	1,649	CU IN
COMPRESSION RATIO (TO ONE)	14.5	
CRANKSHAFT ROTATION (FROM FLYWHEEL END)	CCW	
CYLINDER FIRING ORDER	1-4-9	
CYLINDER FIRING ORDER - CONTINUED	8-5-2	
CYLINDER FIRING ORDER - CONTINUED	11-10-3	
CYLINDER FIRING ORDER - CONTINUED	6-7-12	
NUMBER 1 CYLINDER LOCATION	FRONT-RT	
STROKES/COMBUSTION CYCLE	4	STROKES
APPLICATION CLASS	GEN	
ENGINE DUTY CYCLE	STDB	
FACTORY TEST SPEC	0K2246	
EMISSION CERTIFICATION AGENCIES	EPA	
EMISSION CERTIFICATION YEAR	2000	

GENSET LINE FREQUENCY	60	HZ
GENSET VOLTAGE RANGE	440-480	
GENERATOR FRAME SIZE	593	
Exhaust System		
The installed system must comply with the system limits below for all emissions certified engines to assure regulatory compliance.		
MAX ALLOWABLE SYSTEM BACK PRESSURE	26.9	IN WTR
MANIFOLD TYPE	DRY	
MAX ALLOW STATIC WT ON EXHAUST CONN	51	LB
Fuel System		
MAX FUEL FLOW TO TRANSFER PUMP (TO ENG)	51.0	GPH
MAX ALLOW FUEL SUPPLY LINE RESTRICTION	8.9	IN HG
MAX ALLOW FUEL RETURN LINE RESTR	8.0	IN HG
NORMAL FUEL PRESSURE-CLEAN SYSTEM	30.0	PSI
FUEL SYSTEM TYPE	P & L	
MAXIMUM FUEL PRESSURE TO ENGINE	FUL-FL,S-O : INVALID DATA	PSI
Lube System		
RECOMMENDED OIL TYPE (API OR CAT SPEC)	CH-4	
OIL FILTER TYPE	FUL-FL,S-O	
LUBE SYSTEM OIL COOLER TYPE	SHL & TUBE	
MAXIMUM ALLOWABLE OIL TEMP	235	DEG F
NOM OIL PRESS W/SAE 10W30 OIL @ 99 DEG C	65.3	PSI
MIN LI OP W/SAE 10W30 OIL @ 99 DEG C	20.0	PSI
CRANKCASE VENTILATION TYPE	TO ATM	
CENTER SUMP STD/OPT/NAP	STD	
CENTER SUMP REFILL VOL W/FILTER CHANGE	63	QT
REAR SUMP STD/OPT/NAP	NAP	
FRONT DEEP SUMP STD/OPT/NAP	NAP	
CENTER DEEP SUMP STD/OPT/NAP	NAP	
REAR DEEP SUMP STD/OPT/NAP	NAP	
Mounting System		
STD - FLYWHEEL HOUSING SIZE-SAE NUMBER	#0	
MAX STAT BEND MOMT / RR FACE FLYWHL HSNG	12,002	LB IN
DRY WT ENG ONLY (DRAINED OF FLUIDS)	4,248	LB
ENGINE LENGTH	76.2597	IN
ENGINE WIDTH	49.8424	IN
Starting System		
MIN CRANKING SPD REQUIRED FOR START-RPM	100	RPM
LOWEST AMBIENT START TEMP W/O AIDS	90	DEG F
REC BAT CAP 24V 10W30 ABOVE 0 DEG C	870	CCA

Data Privacy Statement.

GENERATOR DETAIL [BPG00204]

SEPTEMBER 29, 2009

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

For Help Desk Phone Numbers Click here

Selected Model

Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Spec Information

Generator Specification

Frame: 593 **Type:** SR4B	**No. of Bearings:** 1
Winding Type: RANDOM WOUND	**Flywheel:** 18.0
Connection: SERIES STAR	**Housing:** 0
Phases: 3	**No. of Leads:** 12
Poles: 4	**Wires per Lead:** 2
Sync Speed: 1800	**Generator Pitch:** 0.7333

Generator Efficiency

Per Unit Load	kW	Efficiency %
0.25	150.0	91.9
0.5	300.0	94.5
0.75	450.0	94.9
1.0	600.0	94.7

Reactances	Per Unit	Ohms
SUBTRANSIENT - DIRECT AXIS X''_d	0.1413	0.0434
SUBTRANSIENT - QUADRATURE AXIS X''_q	0.1406	0.0432
TRANSIENT - SATURATED X'_d	0.2080	0.0639
SYNCHRONOUS - DIRECT AXIS X_d	2.8682	0.8811
SYNCHRONOUS - QUADRATURE AXIS X_q	1.4554	0.4471
NEGATIVE SEQUENCE X_2	0.1410	0.0433
ZERO SEQUENCE X_0	0.0391	0.0120

Time Constants	Seconds
OPEN CIRCUIT TRANSIENT - DIRECT AXIS T'_{d0}	2.8260
SHORT CIRCUIT TRANSIENT - DIRECT AXIS T'_d	0.2051
OPEN CIRCUIT SUBSTRANSIENT - DIRECT AXIS T''_{d0}	0.0090
SHORT CIRCUIT SUBSTRANSIENT - DIRECT AXIS T''_d	0.0065
OPEN CIRCUIT SUBSTRANSIENT - QUADRATURE AXIS T''_{q0}	0.0078
SHORT CIRCUIT SUBSTRANSIENT - QUADRATURE AXIS T''_q	0.0059
EXCITER TIME CONSTANT T_e	0.1400
ARMATURE SHORT CIRCUIT T_a	0.0239

Short Circuit Ratio: 0.5	Stator Resistance = 0.0096 Ohms	Field Resistance = 1.56 Ohms

Voltage Regulation

Voltage level adustment: +/-	5.0%
Voltage regulation, steady state: +/-	0.5%
Voltage regulation with 3% speed change: +/-	0.5%
Waveform deviation line - line, no load: less than	5.0%
Telephone influence factor: less than	50

Generator Excitation

	No Load	Full Load, (rated) pf	
		Series	Parallel
Excitation voltage:	8.97 Volts	40.06 Volts	Volts
Excitation current	1.99 Amps	7.31 Amps	Amps

Selected Model

Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Generator Mechanical Information

Center of Gravity

Dimension X	-703.1 mm	-27.7 IN.
Dimension Y	0.0 mm	0.0 IN.
Dimension Z	0.0 mm	0.0 IN.

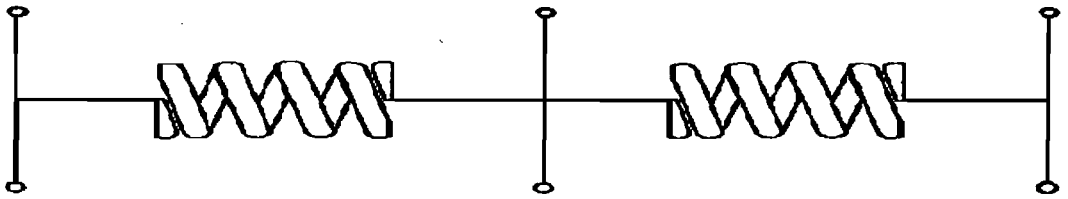
- "X" is measured from driven end of generator and parallel to rotor. Towards engine fan is positive. See General Information for details
- "Y" is measured vertically from rotor center line. Up is positive.
- "Z" is measured to left and right of rotor center line. To the right is positive.

Generator WT = 1671 kg * Rotor WT = 606 kg * Stator WT = 1065 kg
3,684 LB 1,336 LB 2,348 LB

Rotor Balance = 0.0508 mm deflection PTP

Overspeed Capacity = 150% of synchronous speed

Generator Torsional Data



J1 = Coupling and Fan | **J2 = Rotor** | **J3 = Exciter End**

TOTAL J = J1 + J2 + J3

K1 = Shaft Stiffness between J1 + J2 (Diameter 1)

K2 = Shaft Stiffness between J2 + J3 (Diameter 2)

J1	K1	Min Shaft Dia 1	J2	K2	Min Shaft Dia 2	J3
11.8 LB IN. s^2	75.2 MLB IN./rad	5.0 IN.	73.5 LB IN. s^2	9.7 MLB IN./rad	2.5 IN.	1.5 LB IN. s^2
1.336 N m s^2	8.5 MN m/rad	127.0 mm	8.31 N m s^2	1.1 MN m/rad	63.5 mm	0.171 N m s^2

Total J

86.9 LB IN. s^2

9.817 N m s^2

Selected Model

Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Generator Cooling Requirements - Temperature - Insulation Data

Cooling Requirements:		**Temperature Data: (Ambient 40 ^{0}C)**	
Heat Dissipated:	33.6 kW	**Stator Rise:**	130.0 ^{0}C
Air Flow:	112.2 m^3/min	**Rotor Rise:**	130.0 ^{0}C

Insulation Class: H

Insulation Reg. as shipped: 100.0 MΩ minimum at 40 ^{0}C

Thermal Limits of Generator

Frequency:	60 Hz
Line to Line Voltage:	480 Volts
B BR 80/40	565.0 kVA
F BR -105/40	681.0 kVA
H BR - 125/40	750.0 kVA
F PR - 130/40	750.0 kVA

Selected Model

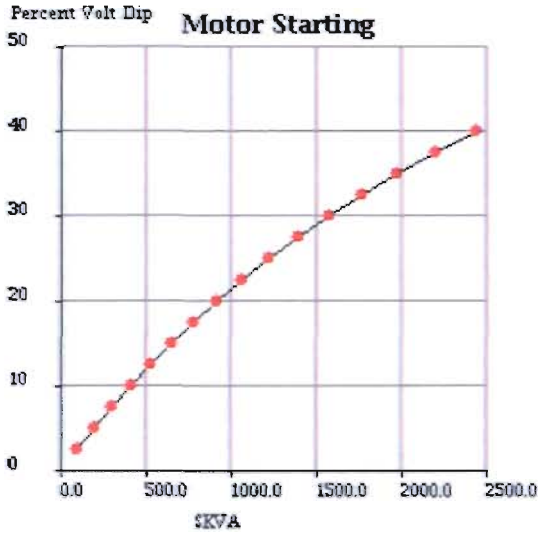
Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Starting Capability & Current Decrement

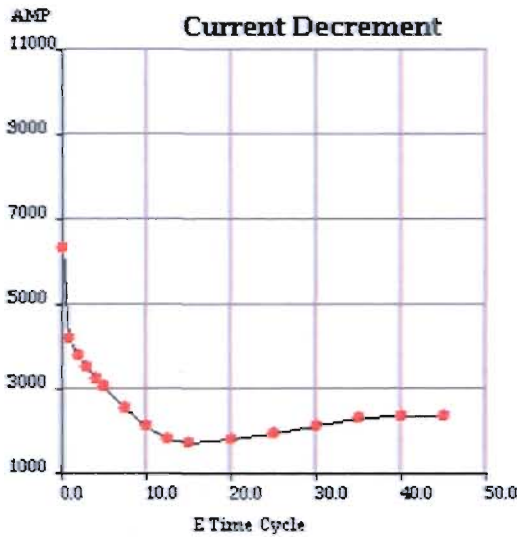
Motor Starting Capability (0.4 pf)

SKVA	Percent Volt Dip
94	2.5
192	5.0
296	7.5
406	10.0
522	12.5
645	15.0
775	17.5
914	20.0
1,061	22.5
1,218	25.0
1,386	27.5
1,566	30.0
1,759	32.5
1,968	35.0
2,193	37.5
2,436	40.0



Current Decrement Data

E Time Cycle	AMP
0.0	6,335
1.0	4,186
2.0	3,758
3.0	3,487
4.0	3,246
5.0	3,025
7.5	2,545
10.0	2,153
12.5	1,837
15.0	1,743
20.0	1,812
25.0	1,970
30.0	2,157
35.0	2,300
40.0	2,344
45.0	2,353



Instantaneous 3 Phase Fault Current: 6335 Amps **Instantaneous Line - Line Fault Current:** 5491 Amps

Instantaneous Line - Neutral Fault Current: 8352 Amps

Selected Model

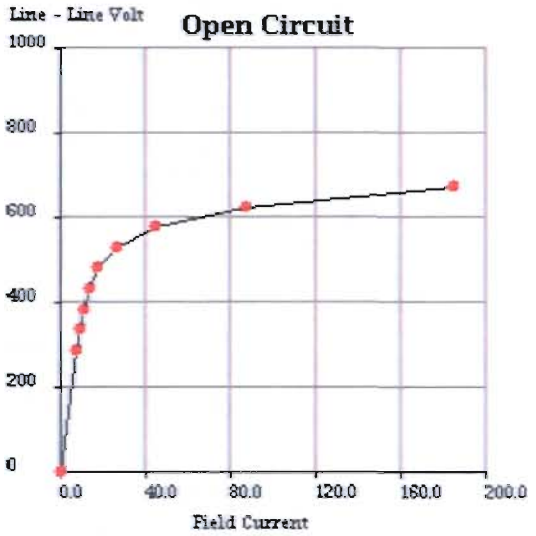
Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Generator Output Characteristic Curves

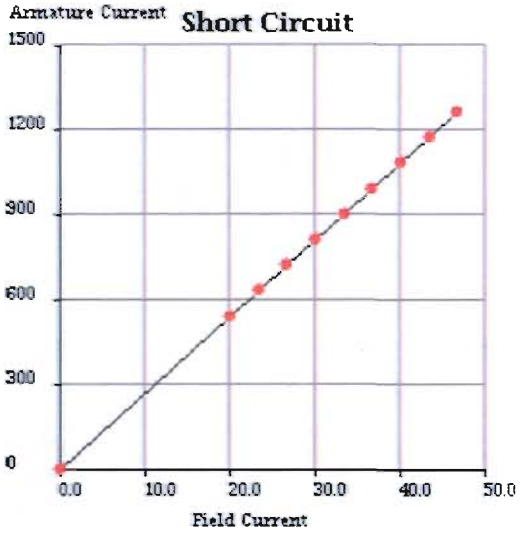
Open Circuit Curve

Field Current	Line - Line Volt
0.0	0
7.5	288
8.9	336
10.7	384
13.3	432
17.7	480
26.3	528
44.9	576
87.1	624
184.5	672



Short Circuit Curve

Field Current	Armature Current
0.0	0
20.0	541
23.4	631
26.7	722
30.0	812
33.4	902
36.7	992
40.1	1,083
43.4	1,173
46.7	1,263



Selected Model

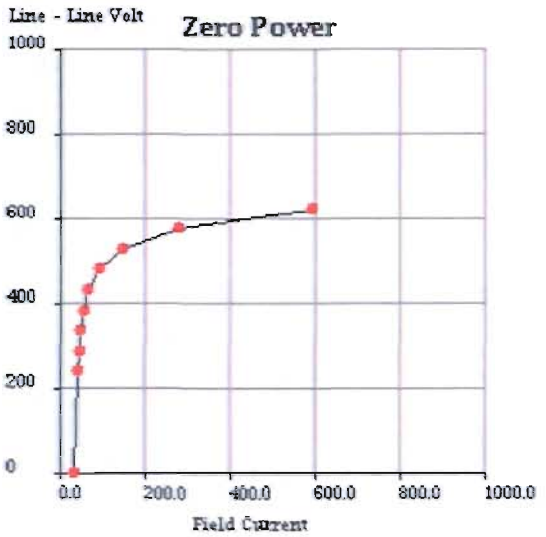
Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Generator Output Characteristic Curves

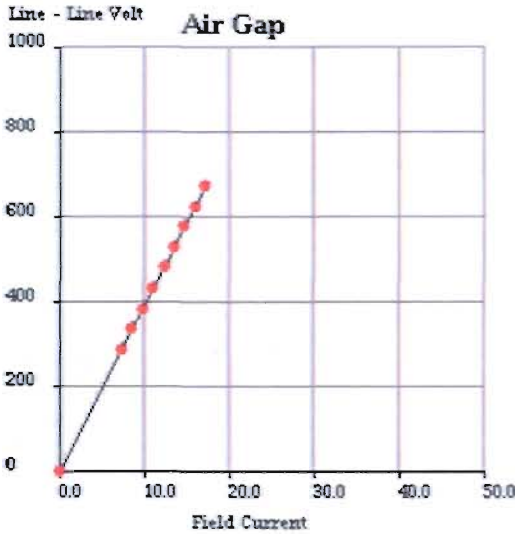
Zero Power Factor Curve

Field Current	Line - Line Volt
33.4	0
42.6	240
44.6	288
47.7	336
53.2	384
64.5	432
89.5	480
146.7	528
279.5	576
590.1	624



Air Gap Curve

Field Current	Line - Line Volt
0.0	0
7.3	288
8.5	336
9.7	384
11.0	432
12.2	480
13.4	528
14.6	576
15.8	624
17.0	672



Selected Model

Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

Reactive Capability Curve

Click to view Chart

Selected Model

Engine: 3412	**Generator Frame:** 593	**Genset Rating (kW):** 600.0	**Line Voltage:** 480
Fuel: Diesel	**Generator Arrangement:** 1366625	**Genset Rating (kVA):** 750.0	**Phase Voltage:** 277
Frequency: 60	**Excitation Type:** Permanent Magnet	**Pwr. Factor:** 0.8	**Rated Current:** 902.1
Duty: STANDBY	**Connection:** SERIES STAR	**Application:** EPG	**Status:** Current

Version: 39094 /38915 /38261 /2410

General Information

DM7802
GENERATOR GENERAL INFORMATION

I. GENERATOR MOTOR STARTING CAPABILITY CURVES
A. THE MOTOR STARTING CURVES ARE REPRESENTATIVE OF THE DATA OBTAINED BY THE FOLLOWING PROCEDURE:
1. THE CATERPILLAR GENERATOR IS DRIVEN BY A SYNCHRONOUS DRIVER.
2. VARIOUS SIZE THREE PHASE INDUCTION MOTORS (NEMA CODE F) ARE STARTED ACROSS THE LINE LEADS OF THE UNLOADED GENERATOR.
3. THE RESULTING VOLTAGE DIPS ARE RECORDED WITH AN OSCILLOSCOPE.
4. MOTOR HORSEPOWER HAS BEEN CONVERTED TO STARTING KILOVOLT AMPERES (SKVA).
5. RECORDED VOLTAGE DIPS HAVE BEEN EXPRESSED AS A OF GENERATOR RATED VOLTAGE.

II. USE OF THE MOTOR STARTING CAPABILITY CURVES.
A. CALCULATE THE SKVA REQUIRED BY THE MOTOR FOR FULL VOLTAGE STARTING ACROSS THE LINE IF THE VALUE IS NOT LISTED ON THE MOTOR DATA PLATE.
1. MOTORS CONFORMING TO NEMA STANDARDS
MULTIPLY THE MOTOR HORSEPOWER BY THE NEMA SKVA/HP FIGURE. FOR NEMA CODE F,USE 5.3 SKVA/HP; FOR NEMA CODE G, USE 6.0 SKVA/HP.
2. ALL OTHER MOTORS:
MULTIPLY THE RATED VOLTAGE BY THE LOCKED ROTOR AMPERE AND BY 0.001732. (IF THE LOCKED ROTOR AMPERES ARE NOT LISTED, MULTIPLY THE FULL LOAD (RUNNING) AMPERES BY
B. USE THE ABOVE SKVA WITH THE MOTOR STARTING TABLE.
1. ACROSS LINE STARTING:
READ ACROSS THE ROW OF "ACROSS THE LINE STARTING SKVA IF THE DESIRED VALUE OF SKVA IS NOT GIVEN, CALCULATE THE DIP BY FINDING THE PROPER SKVA INTERVAL AND INTERPOLATING AS FOLLOWS:
SKVA1 IS THE SKVA TABLE ENTRY JUST SMALLER THAN THE DESIRED SKVA, DIP1 IS THE DIP FOR SKVA2, AND SKVA2 IS THE SKVA TABLE ENTRY JUST GREATER THAN THE DESIRED SKVA. THE DIP (IN PERCENT) AT THE DESIRED SKVA IS:
DIP = DIP1 + (SKVA - SKVA1) * 2.5 /
(SKVA2 - SKVA1)
NOTE:VOLTAGE DIPS GREATER THAN 35% MAY CAUSE MAGNETIC CONTACTORS TO DROP OUT.

2. REDUCED VOLTAGE STARTING:
REFER TO THE FOLLOWING TABLE. MULTIPLY THE CALCULATE ACROSS LINE SKVA BY THE MULTIPLIER LISTED FOR THE SPECIFIC STARTING METHOD. APPLY THE RESULT TO THE STARTING TABLE AS IN II A, TO CALCULATE THE EXPECTED VOLTAGE DIP:

TYPE OF REDUCED VOLTAGE STARTING	MULTIPLY LINE SKVA BY
80% TAP	.80
65% TAP	.65
50% TAP	.50
45% TAP	.45
Wye start,delta run	.33
AUTOTRANSFORMER	
80% TAP	.68
65% TAP	.46
50% TAP	.29

NOTE: REDUCE VOLTAGE STARTING LOWERS THE MAXIMUM REQUIRED MOTOR skVA.

3. Part winding starting:
Most common is half-winding start, full-winding run. Multiply the full motor, accross line starting skVA by 0.6. Apply the result to the selected curve as in ii. A above. Read the expected voltage dip, for the required skVA.

III.DEFINITION:

A. GENERATOR TERMS

MODEL: Engine Sales model
ENG TYPE: DI = Direct Injection,
NA = Naturally aspirated, etc
HZ: Running frequency, hertz
RATING TYPE: PP, SB (prime power or standby)
KW: Base rating electrical kilowatts (ekW)
VOLTS: Rating terminal, line to line
GEN ARR: Cat generator arrangement part number
GEN FRAME: Generator frame size designation
CONN: Generator output connection
(star, wye, delta, ect.)
POLES: Number of pole pieces on rotor.
(eg. A 4 pole generator run at 1800)
RPM will produce 60 Hz alternating current. A 6 pole generator run at 1200 RPM will produce 60 Hz alternating current.)

B. GENERATOR TEMPERATURE RISE:
The indicated temperature rise indicated the NEMA limits for standby or prime power applications. These rises are used for calculating the losses and efficiencies and are not necessarily indicative of the actual temperature rise of a given machine.

C. CENTER OF GRAVITY
The specified center of gravity is for the generator only.
For single bearing, and two bearing close coupled generators, the cent er of gravity is measured from the generator/engine flywheel housing i nterface and from the centerline of the rotor shaft.

For two bearing, standalone generators, the center of gravity is measu red from the end of the rotor shaft and from the centerline of the rot or shaft.

For two bearing, standalone generators, the center of gravity is measu red from the end of the rotor shaft and from the centerline of the rot or shaft.

D. GENERATOR DECREMENT CURRENT CURVES

The generator decrement current curve gives the symmetrical current supplied by the generator for a three phase bolted fault at the generator terminals. Generators equipped with the series boost attachment or generators with PM excitation system will supply 300% of rated current for at least 10 seconds.

E. GENERATOR EFFICIENCY CURVES
The efficiency curve is representative of the overall generator efficiency over the normal range of the electrical load and at the specified parameters. This is not the overall engine generator set efficiency curve.

GEN SET PACKAGE PERFORMANCE DATA [BPG00204]

SEPTEMBER 29, 2009

(BPG00204)-ENGINE (AGE00189)-GENERATOR (BCW00205)-GENSET

For Help Desk Phone Numbers Click here

Performance Number: DM6211 **Change Level:** 00

Sales Model: 3412CDITA **Combustion:** DI **Aspr:** TA

Engine Power:

600 W/F EKW	626 W/O F EKW	**Speed:** 1,800 RPM	**After Cooler:** JWAC

896 HP

Manifold Type: DRY **Governor Type:** HYDRA **After Cooler Temp(F):** --

Turbo Quantity: 2 **Engine App:** GP **Turbo Arrangement:** Parallel

Hertz: 60 **Application Type:** PACKAGE-DIE **Engine Rating:** PGS **Strategy:**

Rating Type: STANDBY **Certification:** EPA TIER-I 1996 - 2001 EU STAGE-1 1999 - 2001

General Performance Data

GEN W/F EKW	PERCENT LOAD	ENGINE POWER BHP	ENGINE BMEP PSI	FUEL BSFC LB/BHP-HR	FUEL RATE GPH	INTAKE MFLD TEMP DEG F	INTAKE MFLD P IN-HG	INTAKE AIR FLOW CFM	EXH MFLD TEMP DEG F	EXH STACK TEMP DEG F	EXH GAS FLOW CFM
600	100	896	238.88	0.36	46.42	195.44	55.38	1,889.34	1,237.1	971.96	5,244.23
540	90	805	214.8	0.36	41.32	191.66	47.38	1,730.42	1,179.14	938.48	4,679.2
480	80	717	191.31	0.35	36.35	188.78	40.42	1,585.63	1,122.8	905.9	4,184.79
450	75	674	179.85	0.35	33.95	187.52	37.19	1,515	1,095.44	890.06	3,958.78
420	70	631	168.25	0.35	31.65	186.26	33.91	1,444.37	1,068.44	874.76	3,736.3
360	60	546	145.62	0.35	27.26	184.1	27.78	1,310.18	1,015.34	844.34	3,308.99
300	50	462	123.28	0.35	23.14	182.3	22.15	1,183.04	962.96	814.28	2,909.93
240	40	381	101.53	0.36	19.65	180.86	17.12	1,070.04	898.7	770.54	2,532.06
180	30	297	79.19	0.38	16.09	179.6	12.5	960.56	819.5	712.04	2,161.26
150	25	255	67.88	0.39	14.29	179.06	10.34	911.12	774.32	676.94	1,984.69
120	20	212	56.42	0.41	12.44	178.52	8.44	865.21	717.44	631.94	1,811.64
60	10	124	33.21	0.49	8.66	177.62	5	791.05	581.9	522.86	1,479.69

Engine Heat Rejection Data

GEN W/F EKW	PERCENT LOAD	REJ TO JW BTU/MN	REJ TO ATMOS BTU/MN	REJ TO EXHAUST BTU/MN	EXH RCOV TO 350F BTU/MN	FROM OIL CLR BTU/MN	FROM AFT CLR BTU/MN	WORK ENERGY BTU/MN	LHV ENERGY BTU/MN	HHV ENERGY BTU/MN
600	100	22,975.4	7,734.3	37,875.3	22,008.6	3,048.2	5,152.4	37,989.1	100,034.1	106,517.3
540	90	20,473.2	6,824.4	33,325.8	18,994.5	2,843.5	3,901.3	34,178.8	89,001.4	94,802.1
480	80	18,027.8	5,630.1	29,231.1	16,321.7	2,644.4	2,849.2	30,425.4	78,253.0	83,314.4
450	75	16,890.4	5,004.5	27,297.5	15,127.4	2,536.4	2,382.9	28,605.6	73,020.9	77,798.0
420	70	15,753.0	4,492.7	25,477.7	13,990.0	2,428.3	1,950.6	26,785.7	68,073.2	72,509.1
360	60	13,591.9	3,582.8	22,065.5	11,885.8	2,217.9	1,194.3	23,146.0	58,632.9	62,443.1
300	50	11,601.5	2,786.6	18,994.5	10,009.1	2,018.9	574.4	19,620.1	49,704.3	52,945.9
240	40	9,895.4	2,900.4	15,980.4	8,132.4	1,831.2	96.7	16,151.0	42,197.4	44,984.1
180	30	8,132.4	3,014.1	13,023.2	6,255.7	1,603.7	-278.7	12,625.1	34,576.9	36,794.8

150	25	7,222.5	3,014.1	11,601.5	5,288.9	1,478.6	-432.2	10,805.3	30,652.9	32,643.3
120	20	6,312.6	3,071.0	10,122.8	4,322.1	1,359.2	-557.3	8,985.4	26,728.8	28,434.9
60	10	4,435.9	2,957.2	7,222.5	2,388.5	1,086.2	-745.0	5,288.9	18,653.3	19,847.6

EXHAUST Sound Data: 4.92 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	109	99	109	109	109	102	99	98	88
540	90	108	98	108	109	108	101	99	97	88
480	80	108	97	107	108	107	100	98	96	87
450	75	107	97	107	107	107	100	97	96	86
420	70	107	96	106	107	106	99	97	96	86
360	60	106	95	105	106	105	98	96	95	85
300	50	105	94	104	105	104	97	95	94	84
240	40	104	94	104	104	104	97	94	93	83
180	30	103	93	103	103	103	96	93	92	82
150	25	103	92	102	103	102	95	93	92	82
120	20	102	92	102	102	102	95	92	91	81
60	10	101	90	100	101	100	93	91	90	80

EXHAUST Sound Data: 22.97 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	96	89	99	94	94	88	87	87	79
540	90	95	89	98	93	93	88	87	87	79
480	80	94	88	97	92	92	87	86	86	78
450	75	94	87	97	92	92	86	85	85	77
420	70	93	87	97	92	91	86	85	85	77
360	60	93	86	96	91	90	85	84	84	76
300	50	92	85	95	90	90	84	83	83	75
240	40	91	84	94	89	89	83	82	82	74
180	30	90	83	93	88	88	82	81	81	73
150	25	89	83	92	87	87	82	81	81	73
120	20	89	82	92	87	87	81	80	80	72
60	10	88	81	91	86	85	80	79	79	71

EXHAUST Sound Data: 49.21 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	89	83	92	87	87	82	81	81	73
540	90	88	82	92	87	86	81	80	80	72
480	80	88	81	91	86	85	80	79	79	71
450	75	87	81	90	85	85	80	79	79	71
420	70	87	80	90	85	85	79	78	78	70
360	60	86	79	89	84	84	78	77	77	70
300	50	85	79	88	83	83	78	77	77	69
240	40	84	78	87	82	82	77	76	76	68
180	30	83	77	86	81	81	76	75	75	67
150	25	83	76	86	81	81	75	74	74	66
120	20	82	76	85	80	80	75	74	74	66
60	10	81	75	84	79	79	74	73	73	65

MECHANICAL Sound Data: 3.28 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	105	104	113	104	101	99	97	82	78
540	90	105	104	113	104	101	99	97	82	78
480	80	105	104	113	104	101	99	97	82	78
450	75	105	104	113	104	101	99	97	82	78
420	70	105	104	113	104	101	99	97	82	78
360	60	105	104	113	104	101	99	97	82	78
300	50	105	104	113	104	101	99	97	82	78
240	40	105	104	113	104	101	99	97	82	78
180	30	105	104	113	104	101	99	97	82	78
150	25	105	104	113	104	101	99	97	82	78
120	20	105	104	113	104	101	99	97	82	78
60	10	105	104	113	104	101	99	97	82	78

MECHANICAL Sound Data: 22.97 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCJ 8000HZ DB
600	100	92	92	100	92	87	86	86	79	70
540	90	92	92	100	92	87	86	86	79	70
480	80	92	92	100	92	87	86	86	79	70
450	75	92	92	100	92	87	86	86	79	70
420	70	92	92	100	92	87	86	86	79	70
360	60	92	92	100	92	87	86	86	79	70
300	50	92	92	100	92	87	86	86	79	70
240	40	92	92	100	92	87	86	86	79	70
180	30	92	92	100	92	87	86	86	79	70
150	25	92	92	100	92	87	86	86	79	70
120	20	92	92	100	92	87	86	86	79	70
60	10	92	92	100	92	87	86	86	79	70

MECHANICAL Sound Data: 49.21 FEET

GEN W/F EKW	PERCENT LOAD	OVERALL SOUND DB(A)	OBCF 63HZ DB	OBCF 125HZ DB	OBCF 250HZ DB	OBCF 500HZ DB	OBCF 1000HZ DB	OBCF 2000HZ DB	OBCF 4000HZ DB	OBCF 8000HZ DB
600	100	86	86	94	87	82	80	79	74	63
540	90	86	86	94	87	82	80	79	74	63
480	80	86	86	94	87	82	80	79	74	63
450	75	86	86	94	87	82	80	79	74	63
420	70	86	86	94	87	82	80	79	74	63
360	60	86	86	94	87	82	80	79	74	63
300	50	86	86	94	87	82	80	79	74	63
240	40	86	86	94	87	82	80	79	74	63
180	30	86	86	94	87	82	80	79	74	63
150	25	86	86	94	87	82	80	79	74	63
120	20	86	86	94	87	82	80	79	74	63
60	10	86	86	94	87	82	80	79	74	63

EMISSIONS DATA

EPA TIER-I 1996 - 2001 ********** A4
Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following non-road regulations:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kW-hr
U. S. (incl Calif)	EPA/Tier-1	CO:11.4 HC:1.3 NOx:9.2 PM:0.5

EU STAGE-1 1999 - 2001 ********** A4
Gaseous emissions data measurements are consistent with those described in EPA 40 CFR PART 89 SUBPART D and ISO 8178 for measuring HC, CO, PM, and NOx.

Gaseous emissions values are WEIGHTED CYCLE AVERAGES and are in compliance with the following non-road regulations:

LOCALITY	AGENCY/LEVEL	MAX LIMITS - g/kW-hr
U. S. (incl Calif)	EPA/Tier-1	CO:11.4 HC:1.3 NOx:9.2 PM:0.5

REFERENCE EXHAUST STACK DIAMETER	8 IN
WET EXHAUST MASS	8,624.5 LB/HR
WET EXHAUST FLOW (971.60 F STACK TEMP)	5,247.76 CFM
WET EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	1,800.00 STD CFM
DRY EXHAUST FLOW RATE (32 DEG F AND 29.98 IN HG)	1,648.84 STD CFM
FUEL FLOW RATE	46 GAL/HR

RATED SPEED "Not to exceed data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT
600	100	896	12.7500	6.0500	.2500	.9000	9.4000
450	75	674	10.7400	3.9200	.1900	.4400	10.5000
300	50	462	8.3400	1.5100	.1900	.2300	11.9000
150	25	255	4.8400	1.2400	.1300	.1900	13.8000
60	10	124	2.9700	1.2900	.2200	.1500	16.0000

RATED SPEED "Nominal Data"

GEN PWR EKW	PERCENT LOAD	ENGINE POWER BHP	TOTAL NOX (AS NO2) LB/HR	TOTAL CO LB/HR	TOTAL HC LB/HR	TOTAL CO2 LB/HR	PART MATTER LB/HR	OXYGEN IN EXHAUST PERCENT
600	100	896	10.5300	3.2400	.1300	1,055.4	.4600	9.4000
450	75	674	8.8800	2.1000	.1000	784.9	.2300	10.5000
300	50	462	6.8900	.8100	.1000	557.2	.1200	11.9000
150	25	255	4.0000	.6600	.0700	342.2	.1000	13.8000
60	10	124	2.4500	.6900	.1100	201.2	.0800	16.0000

Altitude Capability Data(Corrected Power Altitude Capability)

Ambient Operating Temp. Altitude	50 F	68 F	86 F	104 F	122 F	NORMAL
0 F	895.8 hp	895.8 hp	895.8 hp	895.8 hp	895.8 hp	895.8 hp
984.25 F	895.8 hp	895.8 hp	895.8 hp	893.12 hp	864.96 hp	895.8 hp
1,640.42 F	895.8 hp	895.8 hp	895.8 hp	871.66 hp	844.84 hp	895.8 hp
3,280.84 F	895.8 hp	877.03 hp	847.52 hp	820.7 hp	795.22 hp	864.96 hp
4,921.26 F	854.23 hp	824.73 hp	797.91 hp	772.43 hp	748.29 hp	823.39 hp
6,561.68 F	803.27 hp	775.11 hp	749.63 hp	725.49 hp	704.04 hp	783.16 hp
8,202.1 F	754.99 hp	728.17 hp	705.38 hp	682.58 hp	661.12 hp	744.27 hp
9,842.52 F	708.06 hp	683.92 hp	661.12 hp	641.01 hp	620.89 hp	705.38 hp
11,482.94 F	665.15 hp	642.35 hp	620.89 hp	600.78 hp	582 hp	670.51 hp
13,123.36 F	623.57 hp	602.12 hp	582 hp	563.23 hp	545.8 hp	635.64 hp
14,763.78 F	583.34 hp	563.23 hp	544.45 hp	527.02 hp	510.93 hp	602.12 hp

The powers listed above and all the Powers displayed are Corrected Powers

Identification Reference and Notes

Engine Arrangement:	1859958	**Lube Oil Press @ Rated Spd(PSI):**	66.7
Effective Serial No:	BAX00001	**Piston Speed @ Rated Eng SPD (FT/Min):**	1,773.6
Primary Engine Test Spec:	0K2246	**Max Operating Altitude(FT):**	2,132.5
Performance Parm Ref:	TM5739	**PEEC Elect Control Module Ref**	
Performance Data Ref:	DM6211	**PEEC Personality Cont Mod Ref**	
Aux Coolant Pump Perf Ref:			
Cooling System Perf Ref:		**Turbocharger Model**	TV8112-1.08
Certification Ref:	EPA TIER-I	**Fuel Injector**	
Certification Year:	1996	**Timing-Static (DEG):**	40.00
Compression Ratio:	14.5	**Timing-Static Advance (DEG):**	30.00
Combustion System:	DI	**Timing-Static (MM):**	--
Aftercooler Temperature (F):	--	**Unit Injector Timing (MM):**	--
Crankcase Blowby Rate(CFH):	--	**Torque Rise (percent)**	--
Fuel Rate (Rated RPM) No Load (Gal/HR):	--	**Peak Torque Speed RPM**	--
Lube Oil Press @ Low Idle Spd(PSI):	63.8	**Peak Torque (LB/FT):**	--

Reference Number: DM6211

THIS PERFORMANCE CURVE IS ALSO APPLICABLE TO:
TEST SPECIFICATION 0K2234
ENGINE ARRANGEMENT 185-9959
TEST SPECIFICATION 0K2239
ENGINE ARRANGEMENT 186-4817
TEST SPECIFICATION 0K2245
ENGINE ARRANGEMENT 187-0557
EPA TIER-I 19962001A4EU STAGE-1 19992001A4

Parameters Reference: TM5739

GEN SET - PACKAGED - DIESEL
TOLERANCES:
AMBIENT AIR CONDITIONS AND FUEL USED WILL AFFECT THESE VALUES. EACH OF THE VALUES MAY VARY IN ACCORDANCE WITH THE FOLLOWING TOLERANCES.

ENGINE POWER	+/-	3%
EXHAUST STACK TEMPERATURE	+/-	8%
GENERATOR POWER	+/-	5%
INLET AIR FLOW	+/-	5%
INTAKE MANIFOLD PRESSURE - GAGE	+/-	10%
EXHAUST FLOW	+/-	6%
SPECIFIC FUEL CONSUMPTION	+/-	3%
FUEL RATE	+/-	5%
HEAT REJECTION	+/-	5%
HEAT REJECTION EXHAUST ONLY	+/-	10%

CONDITIONS:
ENGINE PERFORMANCE IS CORRECTED TO INLET AIR STANDARD CONDITIONS OF 99 KPA (29.31 IN HG) AND 25 DEG C (77 DEG F).

THESE VALUES CORRESPOND TO THE STANDARD ATMOSPHERIC PRESSURE AND TEMPERATURE IN ACCORDANCE WITH SAE J1349. ALSO INCLUDED IS A CORRECTION TO STANDARD FUEL GRAVITY OF 35 DEGREES API HAVING A LOWER HEATING VALUE OF 42,780 KJ/KG (18,390 BTU/LB) WHEN USED AT 29 DEG C (84.2 DEG F) WHERE THE DENSITY IS 838.9 G/L (7.002 LB/GAL).

THE CORRECTED PERFORMANCE VALUES SHOWN FOR CATERPILLAR ENGINES WILL APPROXIMATE THE VALUES OBTAINED WHEN THE OBSERVED PERFORMANCE DATA IS CORRECTED TO SAE J1349, ISO 3046-2 & 8665 & 2288 & 9249 & 1585, EEC 80/1269 AND DIN70020 STANDARD REFERENCE CONDITIONS.

ENGINES ARE EQUIPPED WITH STANDARD ACCESSORIES; LUBE OIL, FUEL PUMP AND JACKET WATER PUMP. THE POWER REQUIRED TO DRIVE AUXILIARIES MUST BE DEDUCTED FROM THE GROSS OUTPUT TO ARRIVE AT THE NET POWER AVAILABLE FOR THE EXTERNAL (FLYWHEEL) LOAD. TYPICAL AUXILIARIES INCLUDE COOLING FANS, AIR COMPRESSORS, AND CHARGING ALTERNATORS.

RATINGS MUST BE REDUCED TO COMPENSATE FOR ALTITUDE AND/OR AMBIENT TEMPERATURE CONDITIONS ACCORDING TO THE APPLICABLE DATA SHOWN ON THE PERFORMANCE DATA SET.

GEN SET - PACKAGED - DIESEL
ALTITUDE:
ALTITUDE CAPABILITY - THE RECOMMENDED REDUCED POWER VALUES FOR SUSTAINED ENGINE OPERATION AT SPECIFIC ALTITUDE LEVELS AND AMBIENT TEMPERATURES.

COLUMN "N" DATA - THE FLYWHEEL POWER OUTPUT AT NORMAL AMBIENT TEMPERATURE.

AMBIENT TEMPERATURE - TO BE MEASURED AT THE AIR CLEANER AIR INLET DURING NORMAL ENGINE OPERATION.
NORMAL TEMPERATURE - THE NORMAL TEMPERATURE AT VARIOUS SPECIFIC

ALTITUDE LEVELS IS FOUND ON TM2001.

THE GENERATOR POWER CURVE TABULAR DATA REPRESENTS THE NET ELECTRICAL POWER OUTPUT OF THE GENERATOR.

GENERATOR SET RATINGS
EMERGENCY STANDBY POWER (ESP)

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE ESP RATING. TYPICAL OPERATION IS 50 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 200 HOURS PER YEAR.

STANDBY POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR THE DURATION OF AN EMERGENCY OUTAGE. AVERAGE POWER OUTPUT IS 70% OF THE STANDBY POWER RATING. TYPICAL OPERATION IS 200 HOURS PER YEAR, WITH MAXIMUM EXPECTED USAGE OF 500 HOURS PER YEAR.

PRIME POWER RATING

OUTPUT AVAILABLE WITH VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70% OF THE PRIME POWER RATING. TYPICAL PEAK DEMAND IS 100% OF PRIME RATED EKW WITH 10% OVERLOAD CAPABILITY FOR EMERGENCY USE FOR A MAXIMUM OF 1 HOUR IN 12. OVERLOAD OPERATION CANNOT EXCEED 25 HOURS PER YEAR.

CONTINUOUS POWER RATING

OUTPUT AVAILABLE WITH NON-VARYING LOAD FOR AN UNLIMITED TIME. AVERAGE POWER OUTPUT IS 70-100% OF THE CONTINUOUS POWER RATING. TYPICAL PEAK DEMAND IS 100% OF CONTINUOUS RATED EKW FOR 100% OF OPERATING HOURS.

Solid Waste Authority Palm Beach

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

RECEIVED
JUN 10 2002
DIVISION OF AIR RESOURCES MANAGEMENT

JUN 07 2002

Clafi Scott SAS
Other AL

4APT-ATMB

Howard L. Rhodes, Director
Division of Air Resources Management
FL Department of Environmental Protection
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Dear Mr. Rhodes:

The purpose of this letter to provide you with comments regarding an alternative monitoring proposal submitted to the U.S. Environmental Protection Agency (EPA) Region 4 in the enclosed February 5, 2002, letter from the Solid Waste Authority (SWA) of Palm Beach County. In its letter, the SWA proposed a reduction in the frequency of methane surface monitoring conducted on the Class III landfill at its North County Resource Recovery Facility (NCRRF). This landfill is subject to 40 C.F.R. Part 60, Subpart WWW (Standards of Performance for Municipal Solid Waste Landfills), and SWA requested approval for an annual methane surface monitoring frequency as an alternative to the quarterly monitoring frequency required under 40 C.F.R. §60.756(f). Based upon our review of this request, an annual monitoring frequency for the Class III landfill at the NCRRF would be acceptable provided that the methane concentration during the annual screening does not exceed 250 parts per million (ppm). Details regarding the proposal and the basis for our determination are provided in the remainder of this letter.

Both a Class I and a Class III landfill are located at the NCRRF. The Class I landfill typically receives garbage, municipal solid waste incinerator ash, and other non-hazardous wastes. Construction demolition debris, trash, asbestos, paper, and glass are sent to the Class III landfill which is prohibited from accepting putrescible household waste. Based upon the types of wastes received, the Class III landfill is expected to generate less gas than the Class I landfill. Under the provisions in 40 C.F.R. §60.756(f), methane surface concentrations must be monitored on a quarterly basis, and under the provisions of 40 C.F.R. §60.755(c), corrective action must be taken if the methane surface concentration detected during these quarterly checks is 500 ppm or more above the background concentration. 40 C.F.R. §60.756(f) also has a provision that allows owners and operators of closed landfills to reduce the methane surface monitoring frequency to an annual basis if no readings of 500 ppm or more are detected during three consecutive quarterly monitoring periods.

No methane has been detected during five consecutive quarterly surface checks in the Class III landfill at the NCRRF, and based upon these results, the SWA has requested approval to conduct future methane surface monitoring on an annual basis. Under this proposal, the

monitoring would revert to a quarterly frequency if a methane reading of more than 500 ppm is detected during any of the annual surface monitoring checks. Since the Class III landfill at the NCRRF has not been closed, it does not qualify for a reduced monitoring frequency under the provisions in 40 C.F.R. §60.756(f). An alternative monitoring frequency can, however, be approved under provisions in 40 C.F.R. §60.13(i), and the authority to approve alternatives of this type has been delegated to the EPA Regional Offices.

The fact that no methane has been detected during any of the five quarters of monitoring conducted in the Class III landfill at the NCRRF is consistent with the expectation that the types of waste received will have low gas generation rates. Since there is no reason to expect that there will be any abrupt changes in the Class III landfill's gas generation rate, the SWA request for approval of an annual frequency for methane surface monitoring is acceptable to EPA Region 4. One condition for approval of this reduced monitoring frequency, however, is that a methane concentration of 250 ppm, rather than 500 ppm, must be used as the trigger for reverting back to a quarterly methane surface monitoring frequency.

One reason for using a lower threshold for resumption of a quarterly monitoring schedule for the Class III landfill at the NCRRF is that no methane has been detected during any of the five quarters of monitoring conducted thus far. Based upon the results of the previous monitoring, a methane concentration reading of 250 ppm or more above background during any future monitoring would indicate a significant change in the condition of the Class III landfill, and a change of this magnitude would justify the resumption of quarterly monitoring frequency. A second reason to use a lower threshold for resumption of a quarterly monitoring schedule for the Class III landfill at the NCRRF is that this landfill is still active. Because it is active, gas generation rates may vary more than they would for closed landfills for which 500 ppm is used as the threshold for reduced monitoring under the provisions in 40 C.F.R. §60.756(f). The possibility that gas generation rates will be more variable in an active landfill than they will be in a closed landfill justifies the use of a lower threshold for a reduced monitoring frequency in the Class III landfill at the NCRRF.

Although the 250 ppm concentration level used as the threshold for a reduction in the methane surface monitoring frequency in the Class III landfill at the NCRRF will be lower than the 500 ppm concentration level used for closed landfills under the provisions in 40 C.F.R. §60.756(f), the 500 ppm methane concentration used as a trigger for corrective action under the provisions in 40 C.F.R. §60.755(c)(4) would also apply to the Class III landfill at the NCRRF. Therefore, quarterly monitoring will be required if the methane concentration levels exceeds 250 ppm, but corrective action will be required only when the concentration level exceeds 500 ppm.

If you have any questions about the issues addressed in this letter, please contact Mr. David McNeal of the EPA Region 4 staff at (404)562-9102.

Sincerely,

Douglas Neeley

R. Douglas Neeley
Chief
Air Toxics and Monitoring Branch
Air, Pesticides and Toxics
Management Division

Enclosure

(1) February 5, 2002, alternative monitoring proposal from the SWA

cc: Mr. Joe Kahn
Mr. Donald L. Lockhart

Sheplak, Scott

From: Stevenson.Walt@epamail.epa.gov
Sent: Thursday, January 22, 2009 11:45 AM
To: Sheplak, Scott
Subject: Re: May 10, 2006 federal amendments for MWCs

Attachments: Pasco Response to RAI.pdf; JohnPower1010056-006-AVRAI.pdf


Pasco ıse to RAI.pdf

JohnPower1 56-006-AVRAI

Scott

Yes -- there was a Federal Register error in the HCl testing schedule and fugitive ash testing schedule. It will be corrected in the future. If more detail is needed on this issue, please call.

take care

Walt Stevenson, PE, BCEE
919-541-5264

Sheplak, Scott

-4.16-

From: Sheplak, Scott
Sent: Thursday, January 22, 2009 9:57 AM
To: 'stevenson.walt@epa.gov'
Subject: May 10, 2006 federal amendments for MWCs
Attachments: Pasco Response to RAI.pdf; JohnPower1010056-006-AVRAI.pdf

Mr. Walt Stevenson
U.S. Environmental Protection Agency
Research Triangle Park, North Carolina 27711

Dear Mr. Stevenson:

I understand that there was a scrivener's error in the code of federal regulations (CFR) regarding the performance testing change from the May 10, 2006 federal amendments. A few consultants have brought this to my attention (please see the attached letters regarding the testing change). It seems the intent in the federal register (page 27326) was for the testing change to apply to HCL and fugitive ash emissions as well. I am rolling the May 10, 2006 federal amendment changes into Title V permits here in Florida. Was this in fact an error?

Thank you in advance for your reply.

Sincerely,

Scott M. Sheplak
State of Florida
Department of Environmental Protection
Mail Station #5505
2600 Blair Stone Road
Tallahassee, FL 32399

850/921-9532
Scott.Sheplak@dep.state.fl.us

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

APR 06 2000

4APT-ARB

Mr. Howard L. Rhodes, Director
Department of Environmental Protection
Division of Air Resources Management
Mail Station 5500
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

SUBJ: Beryllium-Containing Wastes

Dear Mr. Rhodes:

Thank you for your correspondence, dated March 28, 2000, requesting an Environmental Protection Agency (EPA) determination regarding the applicability of the national emission standard for beryllium (40 C.F.R. part 61, subpart C) to municipal waste combustor (MWC) units subject to the emission guideline requirements of 40 C.F.R. part 60, subpart Cb. The question being addressed is whether a MWC unit is subject to the beryllium standard, because their air permit contains an emission limit for beryllium, although the unit does not accept or combust beryllium-containing wastes (as defined under subpart C).

Existing MWC units with a capacity to combust greater than 250 tons per day of municipal solid waste (MSW) are subject to 40 CFR part 60, subpart Cb (except as exempted in §60.32b). Pursuant to subpart Cb:

> "MSW" is defined as household, commercial/retail, and institutional waste. Household waste includes material discarded by single and multiple residential dwellings, hotels, motels, and other similar permanent or temporary housing establishments or facilities. Commercial/retail waste includes material discarded by stores, offices, restaurants, warehouses, nonmanufacturing activities at industrial facilities, and other similar establishments or facilities. Institutional waste includes material discarded by schools, nonmedical waste discarded by hospitals, material discarded by nonmanufacturing activities at prisons and government facilities, and material discared by similar establishments or facilities. Household, commercial/retail, and institutional waste does not include used oil, sewage sludge, wood pallets, construction, renovation and demolition wastes (including but not limited to railroad ties and telephone poles), clean wood, industrial process or manufacturing waste, medical waste, or motor vehicles (including motor vehicle parts or vehicle fluff). Household, commercial/retail, and institutional wastes include yard waste, refuse-derived fuel, and motor vehicle maintenance materials limited to vehicle batteries and tires (as specified in the rule).

> "MWC units" are defined as any setting or equipment that combusts solid, liquid, or gasified MSW including but not limited to, field-erected incinerators (with or without heat recovery), modular incinerators (starved-air or excess-air), boilers (i.e., steam generating units), furnaces (whether suspension-fired, grate-fired, mass-fired, air curtain incinerators, or fluidized bed-fired), and pyrolysis/combustion units. MWC units do not include pyrolysis/combustion units located at a plastics/rubber recycling units, cement kilns firing MSW, or internal combustion engines, gas turbines, or other combustion devices that combust landfill gases collected by landfill gas collection systems.

The provisions of 40 C.F.R. part 61, subpart C, are applicable to extraction plants, ceramic plants, foundries, incinerators, and propellant plants which process beryllium ore, beryllium, beryllium oxide, beryllium alloys, or beryllium-containing waste. Beryllium-containing waste is defined as material contaminated with beryllium and/or beryllium compounds used or generated during any process or operation performed by a source subject to subpart C. For this standard, an incinerator means any furnace used in the process of burning waste for the primary purpose of reducing the volume of the waste by removing combustible matter.

EPA addressed the issue at question in July 16, 1979, correspondence from the Division of Stationary Source Enforcement to EPA Region II regarding the definition of beryllium-containing waste in §61.31 (see Enclosure). According to this determination, beryllium-containing waste does not include materials such as scrap metals and calculators which may be burned at municipal waste incinerators. Beryllium-containing wastes only include wastes generated at ceramic plants, extraction plants, foundries, and propellant plants. However, should any of these wastes be disposed of at a municipal waste incinerator, that incinerator would be subject to the subpart C beryllium regulations. This same conclusion would also apply to MWC units; they would not be subject to subpart C requirements unless the unit combusted beryllium-containing waste from a subpart C affected facility.

Thank you for the opportunity to assist in this determination. If you have any questions, please contact Mr. Scott Davis of the EPA Region 4 staff at (404) 562-9127.

Sincerely,

R. Douglas Neeley
Chief
Air and Radiation Technology Branch
Air, Pesticides and Toxics
Management Division

Enclosure

cc: Don Elias, RTP Environmental Associates
Walt Stevenson, OAQPS
Debbie Thomas, OECA

Determination Detail

Control Number: ZC012

Category: NESHAP
EPA Office: DSSE
Date: 07/16/1979
Title: Beryllium Containing Wastes
Recipient: Dvorkin, Stephen A.
Author: Reich, Edward E.
Comments:

Abstract:

Does the term "beryllium containing wastes" include materials such as scrap metals and discarded electronic calculators which may be burned in municipal incinerators?

The term beryllium containing wastes includes only those wastes generated by a foundry, extraction plant, ceramic plant, or propellant plant.

Letter:

Control Number: ZC12

July 16, 1979

MEMORANDUM

SUBJECT: Beryllium Regulations

FROM: Director
Division of Stationary Source Enforcement

TO: Stephen A. Dvorkin, Chief
General Enforcement Branch
Region II

This is a response to your memo of May 10, 1979, in which you requested a determination regarding the applicability of the beryllium standard to municipal incinerators. Basically, you asked whether the term "beryllium containing waste", as defined in •61.31(g) of the regulations, includes materials such as discarded electronic calculators and scrap metals which may be burned in municipal incinerators or whether it includes only those beryllium wastes generated at ceramic plants, extraction plants, foundries, and propellant plants.

I interpret the term "beryllium containing waste", defined as:

"material contaminated with beryllium and/or beryllium compounds used or generated during any process or operation performed by a source subject to this subpart"

to include only those wastes generated by a foundry, extraction plant, ceramic plant or propellant plant. While one might argue that incinerators are also "sources subject to this subpart" (see above definition) and that any beryllium wastes that contain beryllium which are burned in any incinerator should be subject to the standard, the control techniques and background documents do not support such an interpretation.

Section 3.6 of the document entitled "Control Techniques for Beryllium Air Pollutants" (February 1973) contains a discussion of methods for disposal of beryllium containing wastes. The document clearly indicates that it was the incineration of wastes generated by extraction plants, ceramic plants, propellant plants and foundries that we were concerned about in developing the standard. Moreover, the Economic Impact section of the document "Background Information on Development of National Emission Standards for Hazardous Air Pollutants: Asbestos, Beryllium, and Mercury" (March 1973) discusses the impact of the standard on only four industries: ceramic plants, extraction plants, propellant plants, and foundries. An assumption is made that most of the sources in those four categories will incinerate their own wastes on site. Thus, the cost of controlling emissions from beryllium incinerators seems to be taken into account in estimating the cost of the standard to the four listed source categories. This is one further indication that the standard was only intended to apply to the incineration of wastes generated at foundries, ceramic plants, extraction plants, and propellant plants. There certainly is no indication in either the preambles to the proposed and promulgated standards or any of the background documents that the standard was intended to apply to each municipal incinerator.

While most generators of "beryllium containing waste" may incinerate their wastes on site it is possible that in some cases they may transport the wastes to another facility for disposal. Should the wastes be disposed of at a municipal incinerator, that incinerator would be subject to the beryllium regulations. The regulations apply to any incinerator which burns beryllium containing wastes generated at a foundry, ceramic plant, propellant plant or extraction plant.

If the Regional Offices are not certain where beryllium containing wastes are being incinerated and whether the incineration facilities are in compliance with the NESHAP regulations, it might be desirable to request this information from the owners of beryllium waste generators via •114 letter. In this manner, a list of incinerators subject to the beryllium standard could be assembled.

Should you wish to discuss this issue further, please contact Libby Scopino of my staff at FTS 755-2564.

Edward E. Reich

cc: Simms Roy, ESED
Stu Roth, R. II, Enf.

July 7, 1999

Ms. Maria Zannes
President
Integrated Waste Services Association
1401 H Street, NW, Suite 220
Washington, DC 20005

Re: Applicability of Maximum Achievable Control Technology Standard Monitoring to Satisfy Title V Periodic or Compliance Assurance Monitoring

Dear Ms. Zannes:

This letter is in response to your letter, dated April 22, 1999, in which you seek our views on using monitoring contained in subparts Eb of title 40 of the Code of Federal Regulations (CFR), part 60, and referenced in subpart Cb to satisfy title V periodic monitoring (40 CFR part 70) or compliance assurance monitoring (CAM) (40 CFR part 64) requirements for other applicable requirements under existing air pollution regulations, such as State implementation plans (SIP's). We understand that facility owners are now installing and operating monitoring that satisfies subpart Cb or Eb requirements before those emissions limitations become effective. Your question is whether you can expect that same monitoring to be adequate to show compliance with similar existing emissions limitations and can avoid having to provide additional monitoring to satisfy periodic monitoring or CAM requirements.

The monitoring requirements in subpart Eb are rigorous and specify use of continuous monitoring systems for opacity, for emissions of acid gases, organic gases, and nitrogen oxides, and for operational parameters that serve as surrogates for monitoring compliance particulate matter, dioxins and furans, and metals emissions limits. See generally 40 CFR, sections 60.58b and 60.38b. We expect that in most cases monitoring that complies with the requirements in subpart Eb will also provide the assurance of compliance required by part 70 or part 64 for other emissions limitations or standards for the same or similar pollutants. On the other hand, it is impossible for us to state definitively that monitoring that complies with subpart Eb requirements will provide adequate assurance of compliance for all other emissions limitations or standards. For example, a local or State agency may impose a volatile organic compounds (VOC) emissions limit, an emissions limit not directly addressed in subpart Eb. Whether the monitoring in subpart Eb alone is sufficient to satisfy part 70 or part 64 monitoring requirements for emissions

limitations not addressed in subpart Eb must be evaluated on a case-by-case basis by the permitting authority in the title V permit application review and approval process.

Factors to consider in making this evaluation include whether the other applicable requirements regulate the same or similar pollutants (e.g., metals other than cadmium, mercury, or lead). Other factors include whether different pollutant emission limitations share a common format (e.g., pounds per hour or parts per million) or can be converted easily to a common format (e.g., convert pounds per hour to tons per year). Applying monitoring required in subpart Eb to show compliance with an emission limitation for a pollutant whose emissions are related to those of a regulated pollutant may also be possible (e.g., using the carbon monoxide continuous emissions monitoring system for monitoring for compliance with a VOC emissions limit). Where possible, as determined through the permitting authority on a case-by-case basis, we fully support simplifying monitoring requirements for permits, including through the application of one monitoring approach for multiple emissions limitations of the same pollutant or dissimilar pollutants.

Should you have questions concerning this response, please contact Barrett Parker at (919) 541-5635.

Sincerely,

/s/

Steven J. Hitte
Group Leader
Operating Permits Group

cc: Zofia Kosim, OECA
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Title V Contacts, Regions I-X