



cc: J. Koerner  
FDEP, Tall.

May 26, 2011

103-87692

Mr. Ajaya Satyal, P.E., Air Program Administrator  
Florida Department of Environmental Protection  
South District Office  
Post Office Box 2549  
Fort Myers, Florida 33902-2549

RECEIVED  
MAY 27 2011  
BUREAU OF  
AIR REGULATION

RE: SUGAR CANE GROWERS COOPERATIVE OF FLORIDA  
PROJECT NO. 0990026-015-AC AND 0990026-016-AV  
TITLE V RENEWAL APPLICATION  
RESPONSE TO RAI DATED FEBRUARY 25, 2011

Dear Mr. Satyal:

Sugar Cane Growers Cooperative of Florida (SCGCF) and Golder Associates Inc. (Golder) have received the Florida Department of Environmental Protection (FDEP) request for additional information (RAI) dated February 25, 2011, regarding the air construction permit and a Title V permit renewal application. Each of FDEP's requests is answered below, in the same order as they appear in the RAI letter. The revised application attachments are included as part of this RAI response as attachments.

**Comment 1.** The request to modify the facility's SO<sub>2</sub> limit as well as to modify the calculation scheme for SO<sub>2</sub> emissions will change permitted specific conditions in the facility's prevention significant deterioration (PSD) permit no. PSD-FL-077. Therefore, you will need to request this modification through a PSD application and submit it to the New Source Review Section, Division of Air Resource Management, 2600 Blair Stone Road, M.S. 5500 Tallahassee, Florida 32399-2400.

**Response:** Since the application was identified as being a concurrent Title V renewal application and air construction permit application, we will submit a copy of the renewal application to the Tallahassee office.

**Comment 2.** Please identify the specific regulations within 40 CFR 61 Subpart M, NESHAP for Asbestos that are applicable to the facility.

**Response:** There are no specific portions of 40 CFR 61, Subpart M that are applicable at this time. This rule citation was included in the core list in the event that the facility conducts asbestos removal operations in the future. This rule may become applicable at that time. The potentially applicable portions of the rule are identified below:

§61.145 Standard for demolition and renovation

§61.150 Standard for waste disposal for manufacturing, fabricating, demolition, renovation, and spraying operations

§61.153 Reporting



**Comment 3.** The application indicated that the spray booth's coatings' and solvents' potential emissions were based on each individual coating and solvent having the potential to emit 50 lb/hr and 24 tons per year (TPY). It is the Department's understanding that the applicant is not requesting to increase the facility's VOC emissions limit. Please resubmit the spray booth's emissions unit information section based on the facility's potential maximum usage for each material and/or limited potential usage (if necessary to meet the limit of 24 TPY) of all materials combined.

**Response:** As shown in Section F.1, Emission Unit Pollutant Detail, and as required by the current Title V permit, SCGCF will not exceed 24 TPY of VOC emitted at the spray booth. The values in Attachment GSH-EU7-B6 are the operating rates calculated as if only that material was being used while the unit emits maximum allowed VOC emissions. However, this calculation could obviously drastically overestimate the actual usage of these individual chemicals/pollutants. In addition, SCGCF desires to have flexibility for the specific coatings/solvent used in the spray booth, while not exceeding the permit limit of 24 TPY VOC. We also request that the permit limit of 50 lb/hr VOC be eliminated, as there does not appear to be any reason for an hourly limit.

Therefore, segments of the spray booth's emissions unit information section have been revised to show throughput based on the total amount of VOC emitted and not the quantity of coatings used. The facility will maintain records of the quantity of coatings and solvents used on a daily basis, and MSDS showing the VOC content of each coating/solvent. A monthly log demonstrating that the VOC limit has not been exceeded will be maintained. We request revised permit limits similar to another paint booth permitted at another sugar mill (i.e., Okeelanta Corporation), which has permit language as follows:

*VOC Emissions: Emissions of volatile organic compounds (VOC) shall not exceed 24 tons in any consecutive 12 months. The permittee may adjust the amounts and types of coatings used as necessary to comply with this standard. Coatings and thinners used in the spray booth are not restricted to specific products or manufacturers. The permittee may substitute coatings and thinners and adjust the amounts of coatings and thinners used, as needed.*

*Operational Records: For each month, the permittee shall record and maintain records of the following:*

- *the number of actual hours of operation for the paint booth;*
- *the dates of operation;*
- *the amounts and types of coatings, thinners and cleanup solvents used; and*
- *a monthly calculation of the volatile organic compounds and hazardous air pollutants emitted from the paint booth.*

*VOC/HAP emissions shall be calculated by assuming that all VOC/HAP in the coatings, thinners and cleanup solvents evaporate. The mass fraction of VOC/HAP from each solvent-containing material shall be determined from the Material Safety Data Sheets (MSDS) supplied by the vendors. The permittee shall maintain a file of MSDS for each solvent-containing material that indicates the composition of the VOC/HAP. Solvent-containing materials include, but are not limited to, powder coatings, solvent coatings, thinners, and cleanup solvents. The file must be maintained on site and made available for inspection upon request. The permittee shall have until the last day of the following month to complete these records. The amounts and types of coatings used and the calculated VOC and HAP emissions shall be included in the required Annual Operating Report.*

**Comment 4.** Attachment GSH-EU7-F1.10, Calculation of VOC Emissions, indicated the maximum usage rates in gallons per week were based on 23 weeks of probable operation while the maximum usage rates in gallons per year were based on 32 weeks of maximum operation.

- a. Please specify if the applicant is requesting to reduce the weeks of operation to 23 weeks. If so, please resubmit with maximum usage rates in gallons per year based on 23 weeks of maximum operation.
- b. If the facility is not requesting a maximum of 23 weeks of operation, please resubmit with maximum usage rates in gallons per week based on a maximum 32 weeks of maximum operation

**Response:** SCGC is not requesting to reduce the spray booth's weeks of operation. The material's maximum usage rate in Attachment GSH-EU7.F1.10 is based on 32 weeks of operation. The number of trailers and wagons used to determine the weekly usage of MCM Black Enamel and MCM Gloss Black Latex was based on the probable weeks of operation, 23. The table has been revised to reflect the changes requested by FDEP. The number of trailers and wagons per week has decreased; therefore the maximum emissions have decreased for MCM Black Enamel and MCM Gloss Black Latex.

Note that this table presents an estimate of the actual maximum VOC emission expected from the spray booth. However, SCGCF does not desire to change the permitted VOC emission rate of 24 TPY, in the event that operation of the spray booth increases in the future.

**Comment 5.** The application's subsection E., Emissions Units Pollutants, for the spray booth indicated that xylenes, a hazardous air pollutant (HAP), was an emitted pollutant. Xylene did not appear to be an identified compound in the coatings and solvents material safety data sheets submitted with the application.

- a. Please verify EU007's potential to emit xylenes.
- b. If xylene is emitted, please identify the coating or solvent which contains xylenes and provide a Material Safety Data Sheet (MSDS).

**Response:** As discussed during the meeting held on 02-09-11 between FDEP and SCGCF, the facility does not want to be limited to specific coatings or HAPs. Although the facility does not currently use coatings that contain Xylene, SCGCF would like to have the flexibility to do so in the future. Xylene will be identified as emitted over the threshold amount in the event a coating used at the spray booth in the future contains the compound.

**Comment 6.** Please verify that EU007's subsection E., Emissions Units Pollutants, identified all HAP that have potential emissions from the spray booth. Please revise subsection E., if necessary. For each identified pollutant in the revised subsection E. that has the potential to emit greater than 5.0 TPY of any regulated pollutant, 0.5 TPY of any HAP, and 1.25 TPY total HAP, please complete subsection F1., Emissions Unit Pollutant Detail Information — Potential/Estimated Fugitive Emissions and subsection F2., Emissions Unit Pollutant Detail Information — Allowable Emissions.

**Response:** There are no other pollutants that have the potential to emit an amount equal to or greater than the threshold amounts listed in the comment.

**Comment 7.** The application indicated that the facility's six boilers burn the same fuels. However, unlike boilers 1, 2, 4 and 8, the application indicated that boilers 3 and 5 did not have the potential to emit the following pollutants: methanol, naphthalene, polycyclic organic matter, and total HAP.

- a. Please explain and if necessary, revise the appropriate application pages.
- b. For each boiler, please provide a completed application subsection F.1., Emissions Unit Pollutant Detail Information — Potential/Estimated Fugitive Emission, for each pollutant that has the potential to emit greater than 5.0 TPY of any regulated pollutant, 0.5 TPY of any HAP, and 1.25 TPY total HAP,

**Response:** The facility has past HAPs emission test data for Boiler Nos. 1, 2 and 8, therefore the HAPs emissions can be estimated for these boilers. For Boiler Nos. 3, 4 and 5, the facility has no HAPs test data upon which to base an estimate for the HAPs cited above. Therefore, although it is likely that Boiler Nos. 3, 4 and 5 have a level of HAP emissions similar to Boiler Nos. 1, 2 and 8, it is speculative at this time to state that they do. Notwithstanding this, we did identify these HAPs for Boiler No. 4 also. There is no regulatory implication at this time as to whether or not the boilers are individually emitting greater than the threshold amount of HAPs. It is also noted that, according to the instructions for the Title V application, Subsection F.1, Emissions Unit Pollutant Detail Information — Potential/Estimated Fugitive Emissions, must only be completed for each emissions-limited pollutant identified in Subsection E. None of the HAPs are emissions-limited pollutants at this time (the Industrial Boiler MACT rule has been stayed by EPA). Even though this is also a concurrent air construction permit application, Subsection F.1 must only be completed for each pollutant for which preconstruction review is required. In this case, none of the HAPs requires preconstruction review.

**Comment 8.** The boiler fuel analysis in Attachment GSH-EU1-12 submitted with the application did not appear to be a current fuel analysis. The fuel analysis for bagasse appeared to be almost 10 years old. Please provide a current fuel analysis for each No. 6 fuel oil, bagasse, and residue.

**Response:** The fuel analysis for the facility has not changed in the last 10 years. The values shown in the Attachment are representative of current fuels burned. As shown in the Attachment, the fuel analysis for bagasse is based on extensive fuel testing conducted for the Industrial Boiler MACT regulations during 2002-2005. Residue has not been burned at the facility in recent years, so no newer fuel analysis is available. A recent fuel oil vendor analysis is attached; however, the analysis can vary somewhat for each fuel delivery.

**Comment 9.** Please revise the application information and the potential emissions for all boilers such that the information is based on the heating value for each bagasse, residue, and fuel oil determined from a recent fuel analysis of each fuel.

**Response:** As stated above, the fuel analysis for the facility has not changed in the last 10 years. Maximum fuel usage values and potential emissions are based on long-standing assumptions for fuel heating value; generally these are conservative in order to show the worst case, which should be used for potential emissions.

**Comment 10.** The application indicated the maximum production and maximum heat input rates for Boilers 1, 2, 4, 5 and 8 and maximum heat input rate for Boiler 3 were based on a 24 hour average.

- a. Please provide supporting operating data for the last five years to support each boiler's identified 24 hour average.
- b. If the 24 hour average is evaluated to be lower than that indicated on the application for any boiler, please revise the corresponding boiler's application pages and emissions rates

**Response:** All of the permitted steam rates contained in the Title V application were obtained from an air construction permit (0890026-011-AC) as well as the previous Title V permit (0890026-012-AV). Since these limits are in air construction permits, they cannot be changed through the TV renewal process; they can only be changed through a new air construction permit. Moreover, the maximum actual steam rates experienced by the boilers have generally been within 80% or more of the maximum permitted steam rates. Historical maximum actual steam rates for the boilers from 2006-2010 are summarized in Table 1 attached. The purpose of permitted rates is to have a rate high enough that it is never exceeded. That is the case for the boilers at SCGCF, except in the case for Boiler No. 8 (which was exceeded), as presented in the Title V renewal application.

**Comment 11.** Please refer to Boiler 1 and Boiler 2 attachments GSH-EU 1 -B6 a. and b. and GSH-EU2-B6 a. and b, (maximum hourly and maximum 24 hour and annual heat input and fuel usage) and GSH-EU1-F1.10 a. and b. and GSH-EU2-F1.10 a. and b. (maximum hourly and annual emissions of regulated pollutants). The hourly attachments were noted to be based on 175,000 lb/hr steam production for each boiler and the 24 hour and annual attachments were noted to be based on 139,700 lb/hr and 138,154 lb/hr for Boilers 1 and 2 respectively.

- a. Please verify whether or not the hourly 175,000 lb/hr rate basis was an error. If not, please explain.
- b. If it was an error and, if necessary, please revise the application and attachments for Boiler 1 and 2 to reflect the hourly maximum heat input, fuel usage rates and hourly emissions based on the 24 hour average (see Item No. 9 and 10 above).

**Response:** The 175,000 lb/hr rate is the design basis for Boiler Nos. 1 and 2, as indicated in the Title V permit. Since the 139,700 and 138,154 lb/hr steam rates for Boiler Nos. 1 and 2, respectively, are the permitted steam limits on a 24-hour basis, it is logical to base the maximum hourly steam rate (and corresponding fuel usage and emission rates) on the boiler design basis. SCGCF does not routinely record the hourly steam production for each boiler, as it is not required. Based on the maximum actual 24-hour steam rate presented in Table 1, the boilers likely did not achieve 175,000 lb/hr for any 1-hour period. However, there is no better basis or a 1-hour maximum rate than the rate reflected in the Title V permit.

**Comment 12.** Please refer to Boiler 3's attachment GSH-EU3-F1.10 a. and b. (maximum hourly and annual emissions of regulated pollutants).

- a. Please explain why the activity factor for the maximum hourly emissions was based on a maximum heat input rate of 120,000 lb/hr of steam and the annual maximum was based on 110,000 lb/hr of steam.

- b. **Please revise the application and attachments for Boiler 3's maximum hourly emissions to be based on the maximum permitted steam production and heat input of 110,000 lb/hr (eight hour average), if necessary.**

**Response:** Since the permitted steam rate of 110,000 lb/hr steam for Boiler No. 3 is based on an 8-hour average, the boiler would be allowed to produce more than 110,000 lb/hr during any 1 hour. The 120,000 lb/hr 1-hour maximum rate is less than 10% over the 8-hour maximum rate. Based on Table 1, the boiler has achieved as high as 104,542 lb/hr steam on a 24-hour average. Therefore, it is possible the boiler could achieve 120,000 lb/hr during any one hour. It is therefore not necessary to revise the maximum 1-hour rates presented in the application.

**Comment 13. Please refer to Boiler 4 and Boiler 5's attachments GSH-EU4-B6, GSH-EU5-B6, GSH-EU4-F1.10 and GSH-EU5-F1.10. There was no activity factor identified. Please specify the activity factor that the maximum heat input rate for each boiler that this was based on.**

**Response:** Attached are the identified attachments that were submitted with the Title V renewal application. Each of these attachments clearly identifies the heat input rate upon which the emission calculations were based [labeled as "Activity Factor (MMBtu/hr)" in the table column heading].

**Comment 14. It is the Department's understanding that Boilers 4 and 5 each have two scrubbers and that the water flow is not being measured for each individual scrubbers. To provide reasonable assurance with compliance assurance monitoring, the Department is requesting that the facility monitor the water flow rate for each individual scrubber. Please provide a compliance schedule for installation of additional water flow rate meters on each scrubber associated with Boilers 4 and 5.**

**Response:** SCGCF is looking at the feasibility of installing the individual water flow meters prior to the beginning of the upcoming crop season in October 2011. SCGCF will revise the CAM Plan after annual compliance testing in the fall of 2010.

**Comment 15. Please provide the manufacturer's correlating operating parameters to the design water flow and pressure drop for each scrubber.**

**Response:** These are Joy Manufacturing or equivalent spray impingement scrubbers. The only manufacturer's data available would be their standard brochure on these scrubbers. We are attempting to locate this document. It is very old and the company has long since gone out of business.

**Comment 16. Please submit a revised CAM plan to include following:**

- a. **Evaluation using only the last five years of stack test data.**
- b. **A maximum and minimum pressure drop indicator range.**
- c. **Monitoring of indicator parameters every 15 minutes for 1 hour averaging in accordance with 40 CFR 64.**

- d. **Description of continuous monitoring and recordkeeping that the facility has in place for monitoring the pressure drop and water flow.**
- e. **Consistent potential emissions with the application. The potential emissions identified in the CAM did not appear to be consistent with the application sections and corresponding tables.**

**Response:** a. The CAM rules do not require only the last 5 years of data to be evaluated. All data representative of current operations should be used to evaluate the performance of the emission control device. The basic operation of the SCGCF scrubbers has not changed over the time period shown in the data tables used for the CAM parameter evaluation. Therefore, we request that FDEP consider all data submitted with the CAM Plan.

b. Both a minimum and maximum pressure drop parameter value is not required by CAM rules. For wet scrubber, the minimum pressure drop is normally specified, as this indicates that the minimum scrubbing efficiency is being maintained. As pressure drop increases, scrubber removal efficiency should increase. The maximum pressure drop would only be important if plugging of the scrubber were an issue. However, water flow is also a CAM indicator, which is an indicator if the scrubber is plugging or otherwise working improperly. Therefore we request that a maximum pressure drop value not be required.

c. SCGCF has been operating under an approved CAM Plan since at least 2006 which requires that scrubber operating parameters be recorded every 8 hours. This was proposed by SCGCF and approved by FDEP based on the limitations of the current data software at SCGCF. The Mill continuously monitors the scrubber parameters for each boiler, and the data system records the readings every 5 seconds. However, there is no current mechanism to create hourly averages from these data. The CAM rule provides the following:

*64.3(b)(4)*

*ii) For all pollutant-specific emissions units with the potential to emit, calculated including the effect of control devices, the applicable regulated air pollutant in an amount equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source, for each parameter monitored, the owner or operator shall collect four or more data values equally spaced over each hour and average the values, as applicable, over the applicable averaging period as determined in accordance with paragraph (b)(4)(i) of this section. The permitting authority may approve a reduced data collection frequency, if appropriate, based on information presented by the owner or operator concerning the data collection mechanisms available for a particular parameter for the particular pollutant-specific emissions unit (e.g., integrated raw material or fuel analysis data, noninstrumental measurement of waste feed rate or visible emissions, use of a portable analyzer or an alarm sensor).*

Based upon information presented in the previous Title V renewal process, SCGCF was granted the request to record scrubber parameters once every 8 hours, which they do in a log book. The data recording systems at SCGFC have not changed in the last 5 years. It is therefore requested that the current CAM Plan requirements for recording once every 8 hours be maintained. The CAM rules also state the following:

*64.3(c) Evaluation factors. In designing monitoring to meet the requirements in paragraphs (a) and (b) of this section, the owner or operator shall take into account site-specific factors including the applicability of existing monitoring equipment and procedures, the ability of the monitoring to account for process and control device operational variability, the reliability and latitude built into the control technology, and the level of actual emissions relative to the compliance limitation.*

d. SCGC continuously monitors the pressure drop and water flow. The parameters are recorded electronically every 5 seconds for each scrubber. In addition, a scrubber log is maintained, wherein the scrubber parameters are recorded every 8 hours, as required by the Title V permit.

e. After a phone conversation on 5-23-11 with Ms. Machinski about this question, no additional explanation is required.

**Comment 17. Please submit the actual numerical pressure drop associated with the pressure drop excursions identified as deviations in Attachment GSH-FI-CV3b. Please submit this information for the last five years for each boiler on each date identified in the attachment.**

**Response:** Attachment GSH-FI-CV3b (Table CV3, attached) has been revised to include the actual numerical pressure drop associated with the previously identified deviations.

**Comment 18. Please submit the facility's total SO<sub>2</sub> emissions (in TPD) in addition to each boiler's individual SO<sub>2</sub> emissions (in TPD) on the days for any boiler that was identified as having steam production excursions for the last three years.**

**Response:** Total facility SO<sub>2</sub> emissions on the days when exceedances of the maximum permitted steam rate for any boiler occurred are shown in Table 2 (in tons per day). As reported in the renewal application, only Boiler No. 8 experienced steam production exceedances (16 total exceedances). Note that SO<sub>2</sub> emissions are not calculated for each boiler, according to the SO<sub>2</sub> emission calculation scheme contained in Condition H.2 of the Title V permit.

**Comment 19. For the last three years and for each boiler, please provide the dates, the time period the O<sub>2</sub> level decreased below 4%.**

**Response:** The time periods that the Boiler No. 8 O<sub>2</sub> level decreased below 4% are shown in Table 3. Note that the requirement to have an alarm system that will be triggered whenever the boiler oxygen level drops below 4 percent only applies to Boiler No. 8. Data for 2008 and 2009 are being obtained and will be submitted at a later date.

**Comment 20. Please refer to Attachment GSH-FI-CV3b, Compliance Plan. Please provide calculations for determining the 24 hour total steam production limit of 6,336,000 pounds of steam.**

**Response:** The derivation of the total steam production limit is as follows, using the permitted steam production rate for Boiler No. 8:

$$264,000 \text{ lb/hr} \times 24 \text{ hrs/day} = 6,336,000 \text{ lb steam per day}$$

**Comment 21. Please specify any steam production excursions for Boilers 1, 2, 3, 4 and 5 during 2010.**

**Response:** There were no steam rate excursions for Boiler Nos. 1, 2, 3, 4 and 5 during 2010.



**Comment 22. A Department file review of the facility's 2009 AOR appeared to show that the actual emissions were not being reported in accordance with Rule 62-210.370, F.A.C. and Permit Nos. PSD-FL-077 and PSD-FL- 213. Please explain.**

**Response:** The 2010 Annual Operating Report (AOR) was conducted in accordance with Rule 62-210.370, F.A.C. and Permit Nos. PSD-FL-077 and PSD-FL- 213, and future AORs will be completed in the same manner. However, the AORs for previous years do not include emissions based on a 5-year average of the stack test for pollutants that are tested annually.

**Comment 23. Please verify that Boiler 8 is equipped with the following instruments per Permit Nos. PSD-FL-077 and PSD-FL-213:**

- a. Working flue gas O<sub>2</sub> monitor.
- b. CO<sub>2</sub> monitor for Boiler 8.
- c. Alarm for oxygen level drops below four percent.
- d. pH monitor for scrubber water at scrubber inlet and outlet.
- e. Pressure gauges to measure the water pressure at the scrubber spray nozzles.

**Response:** Boiler No. 8 is equipped with an alarm for the oxygen level if it drops below four percent, as well as monitors to measure total pressure drop, inlet water flow to the wet scrubbers, and inlet water pressure. However, per Attachment GSH-FI-CV6, SCGCF has requested that the inlet water pressure be removed from permit conditions due to its inconsistency with the CAM Plan. The CAM Plan does not require the monitoring of inlet water pressure.


A CO<sub>2</sub> monitor is not required for Boiler No. 8. Note that a pH monitor for scrubber water at scrubber inlet and outlet has never been required in the Title V permit, dating back to at least 2002 (permit No. 0990026-004-AV); however, although not required, grab samples are taken once per shift.

Thank you for your consideration of this information. If you have any questions, please do not hesitate to call us at (352) 336-5600.

Sincerely,

**GOLDER ASSOCIATES INC.**

  
Natalia Gonzalez, E.I.  
Staff Engineer

  
David A. Buff, P.E., Q.E.P.  
Principal Engineer

cc: J. Koerner, FDEP Tallahassee (w/copy of application)

Enclosures

NG/DB/nav

## APPLICATION INFORMATION

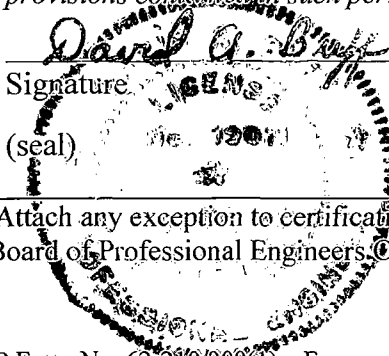
### Application Responsible Official Certification

Complete if applying for an initial, revised, or renewal Title V air operation permit or concurrent processing of an air construction permit and revised or renewal Title V air operation permit. If there are multiple responsible officials, the "application responsible official" need not be the "primary responsible official."

1. Application Responsible Official Name: <b>Jose F. Alvarez, Executive Vice President – Operations and General Manager</b>
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input checked="" type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source.
3. Application Responsible Official Mailing Address... Organization/Firm: <b>Sugar Cane Growers Cooperative of Florida</b> Street Address: <b>1500 West Sugar House Road / P.O. Box 666</b> City: <b>Belle Glade</b> State: <b>FL</b> Zip Code: <b>33430-0666</b>
4. Application Responsible Official Telephone Numbers... Telephone: <b>(561) 996-4759</b> ext.      Fax: <b>(561) 996-4747</b>
5. Application Responsible Official Email Address: <b>jfalvarez@scgc.org</b>
6. Application Responsible Official Certification: <p>I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.</p> <p><i>Jose F. Alvarez</i> Signature      <u>5/26/11</u> Date</p>

**APPLICATION INFORMATION**

**Professional Engineer Certification**

1. Professional Engineer Name: <b>David A. Buff</b> Registration Number: <b>19011</b>
2. Professional Engineer Mailing Address... Organization/Firm: <b>Golder Associates Inc.**</b> Street Address: <b>6026 NW 1st Place</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32607</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(352) 336-5600</b> ext. <b>21145</b> Fax: <b>(352) 336-6603</b>
4. Professional Engineer Email Address: <b>dbuff@golder.com</b>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input checked="" type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>
Signature: <u>David A. Buff</u> (seal) 
Date: <u>5/26/11</u>

\* Attach any exception to certification statement.

\*\*Board of Professional Engineers Certificate of Authorization #00001670.

## TABLES

**Table 1. Summary of Boiler of Maximum Actual Steam Rates, 2006-2010  
SCGCF, Belle Glade**

Boiler	Year	Date	Max 24-Hour Steam Production (lb/hr)	Permitted Steam Production (lb/hr, 24-hr avg.)	% of Permit Limit
Boiler No. 1	2006	12/5/2006	124,875	139,700	89%
	2007	2/19/2007	122,458		88%
	2008	10/28/2008	121,500		87%
	2009	12/16/2009	119,667		86%
	2010	3/4/2010	120,333		86%
Boiler No. 2	2006	12/5/2006	127,958	138,154	93%
	2007	1/22/2007	119,167		86%
	2008	1/18/2008	118,333		86%
	2009	11/1/2009	110,042		80%
	2010	12/27/2010	117,667		85%
Boiler No. 3	2006	12/5/2006	96,583	110,000 <sup>a</sup>	88%
	2007	2/19/2007	91,333		83%
	2008	1/18/2008	90,208		82%
	2009	1/13/2009	86,583		79%
	2010	3/9/2010	104,542		95%
Boiler No. 4	2006	12/5/2006	269,625	300,000	90%
	2007	1/1/2007	262,167		87%
	2008	1/12/2008	264,708		88%
	2009	11/1/2009	270,333		90%
	2010	1/31/2010	274,250		91%
Boiler No. 5	2006	2/21/2006	179,833	230,000	78%
	2007	1/9/2007	172,333		75%
	2008	1/25/2008	176,875		77%
	2009	11/1/2009	175,125		76%
	2010	1/21/2010	180,292		78%
Boiler No. 8	2006	2/14/2006	249,708	264,000 <sup>b</sup>	95%
	2007	11/27/2007	251,583		95%
	2008	2/3/2008	277,125		105%
	2009	11/9/2009	262,583		99%
	2010	1/27/2010	272,000		103%

<sup>a</sup> Based on a 8-hour average.

<sup>b</sup> Based on a 1-hour average.

**Table 2. Facility SO<sub>2</sub> Emissions During Boiler No. 8 Steam Rate Exceedances**

<b>Date</b>	<b>Average Boiler No. 8 Steam Flow Rate<sup>a</sup> (lb/hr)</b>	<b>SO<sub>2</sub> Emissions (tons/day)</b>
1/5/2010	265,625	8.36
1/14/2010	269,458	7.02
1/15/2010	265,208	7.13
1/16/2010	267,875	7.19
1/18/2010	266,083	7.00
1/21/2010	266,542	7.01
1/22/2010	265,917	7.25
1/23/2010	269,500	6.95
1/24/2010	267,083	7.03
1/26/2010	269,042	7.06
1/27/2010	272,000	7.09
1/29/2010	269,583	6.98
1/31/2010	271,000	6.99
2/8/2010	264,667	8.83
11/2/2010	266,083	8.96
12/31/2010	265,250	7.06

<sup>a</sup> Steam rate limit is 264,000 lb/hr.

**Table 3. Boiler O<sub>2</sub> Readings Below 4%  
Boiler No. 8 -SCGCF, Belle Glade**

Date	O <sub>2</sub> Level (%)	Duration (min)
10/27/2010	2	2
11/2/2010	3	3
11/7/2010	2	3
11/16/2010	3	3
11/26/2010	2	3
11/27/2010	2	2
12/5/2010	3	3
12/10/2010	3	3
12/13/2010	3	2
12/14/2010	3	2
12/17/2010	3	2
12/21/2010	3	2
12/23/2010	3	2
1/4/2011	3	1
1/23/2011	3	2
1/25/2011	3	1
2/4/2011	3	2

**REVISED APPLICATION PAGES**



**EMISSIONS UNIT INFORMATION**

Section [7]

Spray Booth

**B. EMISSIONS UNIT CAPACITY INFORMATION**

(Optional for unregulated emissions units.)

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Process or Throughput Rate: <b>50 lb/hr; 24 TPY of VOC</b>		
2. Maximum Production Rate:		
3. Maximum Heat Input Rate: million Btu/hr		
4. Maximum Incineration Rate:           pounds/hr tons/day		
5. Requested Maximum Operating Schedule:		
<b>10 hours/day</b>		<b>5 days/week</b>
<b>32 weeks/year</b>		<b>1,600 hours/year</b>
6. Operating Capacity/Schedule Comment:		
<p><b>Maximum Process Rate refers to the maximum amount of VOC content that can be applied in the spray booth.</b></p>		

**EMISSIONS UNIT INFORMATION**

**Section [7]  
Spray Booth**

**D. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate: Segment 1 of 1**

1. Segment Description (Process/Fuel Type):  <b>Surface Coating Operations: Surface Coating: Miscellaneous: Tons solvent in coating</b>		
2. Source Classification Code (SCC): <b>4-02-999-95</b>		3. SCC Units: <b>Tons solvent in coating</b>
4. Maximum Hourly Rate: <b>0.025</b>	5. Maximum Annual Rate: <b>24</b>	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment: <b>The maximum annual rates assume solvent used equal to VOC in coating.</b>		

**Segment Description and Rate: Segment \_\_\_\_ of \_\_\_\_**

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

**EMISSIONS UNIT INFORMATION**

**Section [7]**

**Spray Booth**

**D. SEGMENT (PROCESS/FUEL) INFORMATION (CONTINUED)**

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

**Segment Description and Rate:** Segment \_\_\_\_ of \_\_\_\_

1. Segment Description (Process/Fuel Type):		
2. Source Classification Code (SCC):		3. SCC Units:
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment:		

**REVISED APPLICATION ATTACHMENTS**

**Attachment GSH-EU7-F1.10. Calculation of VOC Emissions (Revised 05/26/2011)  
Spray Booth, SCGCF, Belle Glade**

Material <sup>a</sup>	Product Density <sup>b</sup> (lb/gal)	Maximum Usage Rate <sup>c</sup>		VOC Content <sup>b</sup> (lb/gal)	Maximum Emissions <sup>g</sup>	
		gal/wk	gal/yr		lb/hr	TPY
Dimension Reducer (instead of Xylol) <sup>f</sup>	6.83	9.0	288	6.91	1.24	1.00
DTM Acrylic Gloss <sup>d</sup>	8.56	107.7	3,446	1.65	3.55	2.84
Alkyd Enamel <sup>e</sup>	8.07	71.8	2,298	3.66	5.26	4.20
MCM Black Enamel	7.50	141.0	4,512	3.95	11.14	8.91
MCM Gloss Black Latex	8.64	141.0	4,512	1.21	3.41	2.73

TPY = tons per year

Footnotes:

- <sup>a</sup> These coatings will be used to coat or paint sugar-cane trailers and wagons.
- <sup>b</sup> See Attachment GSH-EU7-IV3 for MSDS product information.
- <sup>c</sup> Maximum usage (gal/yr) based on maximum of 32 weeks of operation.  
Maximum usage (gal/wk) based on 32 weeks of operation, 565 cane trailers, 188 cane wagons,  
7 gallons of paint/solvent per each trailer, and 2.5 gallons of paint/solvent per each wagon.  
Number of cane trailers each week = 565 trailers / 32 weeks = 18 trailers/week  
Number of cane wagons each week = 188 wagons / 32 weeks = 6 wagons/week
- <sup>d</sup> Only 60% of trailers and wagons coated with DTM Acrylic Gloss.
- <sup>e</sup> Only 40% of trailers and wagons coated with Alkyd Enamel.
- <sup>f</sup> For use with Alkyd Enamel (1 gallon Reducer for every 8 gallons of Alkyd Enamel = 9.0 gal/week)
- <sup>g</sup> Based on 10 hours/day, 5 days/week, 32 weeks/year, and 1,600 hours/year.

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

Minimum Pressure Drop Limit (in. H <sub>2</sub> O) *	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
Date									
11/4/2007									6.0
12/5/2007									5.7
12/11/2007									6.1
10/26/2008	3.8								
10/27/2008	3.3								
10/30/2008									6.0
10/31/2008								5.7	5.6
11/1/2008								5.4	5.7
11/2/2008	3.3								6.0
11/4/2008								5.1	5.4
11/5/2008								5.2	5.7
11/7/2008								5.4	5.5
11/8/2008								5.3	5.8
11/9/2008								4.9	5.5
11/10/2008								5.5	5.6
11/10/2008								5.6	
11/11/2008								5.5	5.7
11/11/2008								5.4	5.7
11/12/2008								5.7	5.3
11/13/2008									5.9
11/13/2008									5.5
11/14/2008									5.7
11/15/2008								5.2	5.4
									5.4
11/16/2008	3.0							5.2	5.4
									5.4
11/17/2008								4.9	5.7
								4.7	5.2
11/18/2008	3.9							5.2	5.8
11/19/2008	3.9							5.6	6.0
								5.1	
11/20/2008	3.9							5.8	6.0
								5.5	
11/21/2008	3.1							5.7	
11/22/2008	3.7							5.8	
	2.9								
11/24/2008								5.6	
11/25/2008	3.6							5.5	5.8
	3.7								
11/26/2008	2.7		3.0					5.6	6.0
	3.8								
11/27/2008	3.6							5.1	5.7
	3.8								
11/28/2008	2.7							5.8	
	3.3								
11/29/2008	2.6							5.8	
	2.8								
11/30/2008	1.8							5.6	5.9
	3.5								
12/1/2008	3.1							5.5	5.8
								5.3	6.1
12/2/2008	3.2							5.6	5.8
	3.9							5.0	5.3
12/3/2008	3.1							5.6	
								5.5	
12/4/2008	3.8							5.6	5.6
12/5/2008	3.9								6.1
	3.3								
12/6/2008	3.3							5.8	5.8
	3.3								
12/7/2008	3.8							5.8	5.8
12/8/2008	3.5							5.8	5.3
	3.9								
12/9/2008	3.8								

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)									
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S	Scrubber 8S
12/10/2008	3.7									
	3.5									
12/11/2008	2.7							5.2		5.3
	3.9									5.6
12/12/2008										5.7
12/13/2008	3.7									
12/14/2008	3.6									5.9
	3.8									
12/15/2008	3.4									
	3.1									
12/16/2008	3.7									6.1
12/17/2008	3.4									
	3.7									
12/18/2008	3.7									5.9
12/19/2008	3.6									
12/20/2008	3.5									
12/21/2008	3.8									
12/23/2008	3.6									6.0
	3.6									
12/24/2008	3.2									
12/26/2008	3.7									5.5
12/27/2008	3.6									5.7
										5.6
12/28/2008										5.8
										5.8
12/29/2008	3.5							5.8		6.1
	3.6									5.7
12/30/2008	3.7					4.4				6.0
	3.3									6.0
12/31/2008	3.9							5.7		5.9
										5.5
1/1/2009	3.4									6.1
1/2/2009	3.6									6.0
1/3/2009										5.8
1/5/2009										5.9
1/6/2009										5.9
1/7/2009	3.3									5.7
										5.7
										5.9
1/8/2009	3.4									5.9
	3.4									5.8
1/9/2009	3.5					3.4				6.1
	3.6									
1/10/2009	3.8									
	3.6									
1/11/2009	3.8									6.0
	3.6									
1/12/2009	3.2					4.0				6.1
	3.6									6.1
1/13/2009	3.5									6.0
1/14/2009	3.8									
	3.9									
1/15/2009	3.8									
1/16/2009	3.7									
	3.9									
1/17/2009	3.7									
	3.8									
1/18/2009	3.3									6.0
	3.0									
1/19/2009	3.3									6.0
	2.5									
1/20/2009	3.9									5.5
	3.7									
1/21/2009	2.9									
	3.8									
1/22/2009	3.5									
	3.1									
1/23/2009	3.8									
	3.6									

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
1/24/2009	3.9								
1/25/2009	3.6								
	3.8								
1/26/2009	3.0								
	3.6								
	3.8								
1/27/2009	3.6								
	3.6								
1/28/2009	3.4								
	3.1								
	2.5								
1/29/2009	3.0								
	2.6								
	3.4								
1/30/2009	3.9								6.1
	3.9								5.8
									5.8
1/31/2009	3.5								
2/1/2009	2.8								
	3.9								
2/2/2009	3.4								
	2.0								
2/3/2009	3.5								5.6
	3.1								
2/4/2009	2.3								5.7
	3.5								5.4
2/5/2009	3.4								5.2
	2.6								
	2.5								
2/6/2009	3.9								
	3.7								
	3.6								
2/7/2009	3.7								
	3.6								
	3.2								
2/8/2009	3.3								
	3.4								
2/9/2009	3.6								
	3.6								
	3.2								
2/10/2009	3.2								
	3.4								
	3.4								
2/11/2009	3.3								
	3.2								
	3.6								
2/12/2009	3.5								
	3.5								
2/13/2009	3.7								
2/14/2009	3.6								
	3.6								
	3.7								
2/15/2009	3.0								6.1
	3.4								
	3.8								
2/16/2009	3.4								
2/18/2009	2.3								
	2.4								
	2.5								
2/19/2009	1.2							5.8	
	2.4							5.8	
	3.4								
2/20/2009	3.9							5.8	
	3.6								
	2.9								
2/21/2009	2.6								
	3.0								
	3.5								



Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)									
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S	
2/22/2009	2.5									
	2.8									
10/22/2009	0.3									
	0.3									
	-0.3									
10/23/2009	0.3					8.9	0.3			
	0.3						1.6			
	-0.3									
10/24/2009	0.5					3.8	0.3			
	0.5					3.6				
	0.3					3.3				
10/25/2009	2.1	2.2				3.2	3.3			
	2.1									
	-0.3									
10/26/2009	0.9									
	-0.3									
	-0.3									
10/27/2009	0.3							0.7	0.3	
	0.3							0.7	0.3	
10/28/2009	2.4							5.1	4.3	
	0.3							0.7	-0.3	
								5.2	3.5	
10/29/2009	0.6							4.6	3.4	
	3.5							4.8	4.3	
	-0.3								3.6	
10/30/2009	0.4		3.2					4.9	3.8	
	-0.3		2.9					5.0	3.6	
								4.2	3.5	
10/31/2009	-0.3		3.1					3.0	2.9	
	-0.3		3.1					5.1	4.2	
	-0.3		3.0					4.5	4.0	
11/1/2009	3.9		3.2					5.8	3.9	
	2.3		3.2					4.8	3.5	
	-0.3		3.2							
11/2/2009	0.3		3.5					4.6	3.2	
	-0.3		3.3					4.0	3.0	
	-0.3		3.2					3.5	2.9	
11/3/2009	-0.3		3.6					3.6	3.6	
	1.1		3.3					4.1	4.1	
	-0.3							3.8	3.7	
11/4/2009	-0.3							4.0	6.1	
	-0.3								3.5	
	-0.3									
11/5/2009	3.2								5.9	
	2.8								6.0	
	-0.3								6.0	
11/6/2009	3.1								5.6	
	3.2								5.9	
	3.2								6.1	
11/7/2009	3.5								5.7	
	3.3								6.0	
	3.1								6.0	
11/8/2009	3.6								5.8	
	3.6								5.8	
	3.6								5.7	
11/9/2009	3.7								6.1	
	3.7								5.8	
	3.2									
11/10/2009	3.7								5.6	
	3.6								5.9	
	3.9								6.0	
11/11/2009	3.7							5.8	5.1	
	3.7								5.1	
	3.6								5.5	
11/12/2009	3.6							5.7	5.4	
	3.7							4.5	5.0	
	3.7							5.7	5.2	

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
11/13/2009	3.6							5.4	5.5
	3.8								5.0
	3.7								
11/14/2009	3.6							5.8	5.3
	3.7								5.6
	3.8								5.2
11/15/2009	3.5								5.8
	3.7								5.8
	3.8								
11/16/2009	3.7								5.8
	3.8								6.1
	3.8								5.6
11/17/2009	3.6								6.0
	3.8								
	3.9								
11/18/2009	3.6								6.1
	3.8								6.1
11/19/2009	3.9								6.1
	3.9								6.1
11/20/2009	3.8								6.1
11/21/2009	3.8								5.8
									5.8
11/22/2009	3.5								
	3.8								
	3.9								
11/23/2009	3.7								
11/24/2009	3.9								
	3.9								
	3.6								
11/25/2009	3.7	2.8							
	3.7								
11/26/2009	3.6	2.7							6.1
11/27/2009	3.6	2.6						5.5	5.6
	3.5								
11/28/2009	3.5	3.0						5.7	5.7
	3.5	3.0							5.7
	3.7	3.0							6.1
11/29/2009	3.6								5.7
	3.8								
	3.7								
11/30/2009	3.8								5.7
	3.7								6.1
	3.5								
12/1/2009	3.9								5.8
	3.8								
12/2/2009	3.7								6.0
	3.9								6.0
	3.6								
12/3/2009	3.8								
	3.6								
	3.7								
12/4/2009	3.7								6.1
	3.7								
	3.6								
12/5/2009	3.5	2.6					3.5		5.6
	3.6	2.8							
12/6/2009	3.5								5.8
	3.6								6.0
	3.4								
12/7/2009	3.9	2.7							5.6
	2.9								5.6
	3.7								
12/8/2009	3.0								5.8
	1.2								6.1
	1.1								5.9
12/9/2009	3.3								5.6
	2.5								5.9
	2.8								5.7
12/10/2009	2.5	2.5							6.0

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
12/11/2009	3.9								5.9
	3.7								
12/12/2009	2.3								5.9
	2.9								
	2.3								
12/13/2009	1.9								6.1
									5.5
12/14/2009	1.3								5.5
	0.2								5.8
	2.9								5.5
12/15/2009	3.0							5.6	5.6
	2.7								6.1
	3.8								6.1
12/16/2009	2.6	2.9							
	3.3								
	3.8								
12/17/2009	2.7								5.7
	0.8								5.6
	2.6								
12/18/2009							3.0		
							3.0		
12/20/2009	3.7			3.2					
	3.7								
12/21/2009	3.9								6.0
12/22/2009	2.1								6.1
	3.6								6.1
12/23/2009	2.1								
12/24/2009		2.7							
12/26/2009	3.8	3.0							5.9
	3.9	2.2							5.7
									5.9
12/27/2009									6.0
									6.1
									5.4
12/28/2009	3.8								5.4
									5.6
12/29/2009		3.0						2.8	6.1
									5.5
12/30/2009									5.5
									5.8
12/31/2009									5.8
									5.9
									6.0
1/1/2010								3.8	5.9
									5.6
									5.4
1/2/2010		2.5	3.8					2.2	5.8
								4.1	5.4
									5.7
1/3/2010		2.4	3.4					3.6	5.2
		2.9	3.8					3.2	5.6
		2.9	3.7					3.7	5.4
1/4/2010		2.2	3.6					5.3	5.6
		2.9	3.8					1.3	5.3
			3.6					3.9	5.2
1/5/2010		2.9	3.5					3.0	5.6
		2.5	3.6					2.0	5.2
		2.5	3.5					0.8	5.1
1/6/2010		1.6	3.8					5.6	5.3
		2.4	3.6					3.0	5.7
			3.5						
1/7/2010		2.3	3.7					2.5	5.7
		2.9	3.5					3.1	4.9
			3.4						5.3
1/8/2010		2.6	3.4					4.5	6.0
			3.6						5.8
1/9/2010		1.5	3.0					-0.6	5.0
		1.0						-2.0	5.0
1/10/2010			3.1				3.3		5.6

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
1/11/2010		1.3	3.7					3.5	5.9
		2.0	3.4					-1.5	5.3
			3.4					0.6	5.5
1/12/2010		1.9	3.6					4.2	5.8
		2.5	3.5					0.1	
			3.5					2.9	
1/13/2010		2.9	3.7					1.5	
		2.3	3.5					3.8	
		2.9	3.7						
1/14/2010			3.8					3.8	
								5.7	
1/15/2010									6.1
1/16/2010			3.5						5.7
			3.5						
1/17/2010	3.6	3.00	-0.3					5.4	5.5
	3.9		1.1						5.9
	1.7		3.1						5.1
1/18/2010			0.3					2.4	5.7
			-0.3						
1/19/2010		2.5	0.8					4.5	6.0
			0.0					3.4	5.5
			0.3						
1/20/2010			0.0					3.5	6.1
			-0.3						
			0.6						
1/21/2010			1.2					5.7	6.0
			0.4					4.6	6.1
			0.6						
1/22/2010		2.8	1.9						5.9
		3.0	1.5						5.3
			1.1						5.7
1/23/2010		2.5	1.6						6.0
			1.2						
			1.6						
1/24/2010			1.5					5.5	5.9
								5.4	6.1
1/25/2010		1.5						3.4	5.9
		1.0						5.3	5.0
		2.9							5.6
1/26/2010		2.4						3.2	6.1
		2.2						2.1	5.9
		1.7							6.0
1/27/2010		2.5						2.1	
		2.5						1.2	
1/28/2010		2.7						2.2	5.7
		2.2						1.9	
		2.5							
1/29/2010		2.6						4.6	5.6
								2.8	6.0
1/30/2010								1.0	5.5
								4.1	5.6
									4.9
1/31/2010		1.6						3.2	
		2.3						2.9	
		2.6						2.8	
2/1/2010		3.0					3.5	3.4	
2/2/2010		1.4							
		1.4							
2/3/2010		2.4						1.0	5.5
		2.5						5.7	5.9
		2.7							
2/4/2010								3.1	6.0
								1.8	5.0
2/5/2010								4.8	5.4
								2.9	5.6
2/6/2010		2.4			1.3		3.5	5.0	4.5
								5.3	4.5
								3.6	4.5

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
2/7/2010		1.2						-1.6 -0.7	5.4 4.2
2/8/2010								-1.3 5.8 -1.2	5.4 6.1 5.8
2/9/2010								5.2	4.7 5.3 5.8
2/10/2010								4.5 5.3 4.8	4.4 5.0 4.6
2/11/2010								5.4 5.2 5.0	5.2 5.7 5.3
2/12/2010								4.6 5.2	4.3 4.2
2/13/2010								4.7 5.0 4.6	5.1 5.2 4.4
2/14/2010								5.2 4.9 5.2	5.4 5.9 5.0
2/15/2010								5.6 5.1	5.0 5.4
2/16/2010								5.3 5.0 4.8	5.0 5.0 5.0
2/17/2010								5.0 5.1	6.0 5.1
2/18/2010								5.0 5.0 5.2	5.7 5.3 6.0
2/19/2010								5.7 5.5 5.7	5.8 6.1 6.0
2/20/2010								5.9	5.6 5.9
2/21/2010									5.5 5.6
2/22/2010									5.7 5.5
2/23/2010								5.8	5.7 5.8
2/24/2010								4.6	5.6 5.8 4.0
2/25/2010								5.7 4.5	5.8 4.0
2/26/2010								4.8 5.7 4.9	4.4 5.8 5.0
2/27/2010								4.8 4.8 5.4	4.5 4.5 5.0
2/28/2010								4.9 4.9 4.7	4.6 4.6 4.8
3/1/2010								5.8 5.1	5.4 6.0
3/3/2010								4.6 4.8 4.3	5.0 5.1 4.7
3/4/2010								4.7 5.2 4.8	5.3 5.5 5.3

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
3/5/2010								5.0	5.8
								5.5	6.1
								5.0	5.6
3/6/2010								4.8	5.9
								5.6	6.1
								5.0	5.8
3/7/2010								5.1	5.6
									5.8
									5.8
10/21/2010					3.1				
					3.0				
					2.8				
10/22/2010		2.3		3.5	2.6				
					2.7				
					2.5				
10/23/2010					2.6				
					2.6				
					2.6				
10/24/2010		2.9			2.6				
					2.6				
					2.6				
					2.3				
10/25/2010					2.6				
10/27/2010			2.8			2.7	0.3	2.8	2.1
			2.9					3.0	2.3
			2.7					2.7	1.8
10/28/2010			3.2			2.5	-0.3	3.3	2.3
			3.1			2.8	-0.3	3.5	2.3
			2.9			2.7	-0.3	3.1	1.9
10/29/2010			2.8			2.1	-0.3	3.1	3.2
			2.9			2.3	-0.3		
			2.8			4.8	-0.3		
10/30/2010			2.6				-0.3		6.0
			2.7				-0.3		
							-0.3		
10/31/2010			2.7				-0.3		6.1
			2.9				-0.3		
			2.9				-0.3		
11/1/2010			2.7				-0.3		
			2.8						
11/2/2010									6.0
11/3/2010									5.9
11/4/2010									5.1
									5.0
11/5/2010	-0.1	2.5							5.3
		2.4							5.5
		1.8							5.8
11/6/2010		2.2					3.1	5.8	6.1
		1.8						5.6	4.3
		1.6							4.0
11/7/2010		2.6	1.7				3.1	5.7	5.5
		2.6					3.1	5.4	4.6
		2.0							3.2
11/8/2010		2.9							5.1
		2.3							
11/9/2010		2.7							4.3
11/10/2010		2.5		3.1					6.0
11/11/2010		2.4		3.5					5.6
11/12/2010	3.8	2.5							5.7
11/13/2010		2.7							5.8
		2.4							6.1
11/14/2010		2.9							
11/16/2010									6.0
11/17/2010	3.4								6.1
									5.9
11/18/2010		2.3							5.6
									6.1

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)									
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S	Scrubber 85
11/22/2010	3.9									5.9
11/23/2010		2.9								6.0
11/24/2010										5.7
11/25/2010										4.9
										6.1
11/26/2010				3.4						5.9
										5.8
										5.4
11/27/2010		2.6		3.2						5.3
				2.6						
				1.2						
11/28/2010		2.5		0.0						6.1
				-0.1						6.1
11/29/2010					-0.3					6.0
11/30/2010										6.1
										5.8
12/1/2010		2.5						5.8		5.8
		1.6								5.7
12/2/2010		1.5						5.5		3.8
										5.9
12/3/2010								5.3		4.1
12/4/2010								5.8		6.0
										4.0
12/5/2010								5.5		5.0
										5.1
										3.3
12/6/2010								5.1		2.9
								5.5		3.7
								5.1		2.8
12/7/2010								5.4		3.6
								5.2		3.3
								5.6		4.0
12/8/2010								5.7		4.2
										4.4
										5.0
12/9/2010								5.8		5.9
										4.4
										5.6
12/10/2010								5.8		5.5
										4.6
										4.9
12/11/2010										5.9
										5.9
										6.2
12/12/2010								5.5		3.3
								5.6		4.9
										3.6
12/13/2010								5.4		3.5
								5.2		3.0
								5.4		3.5
12/14/2010								5.3		3.0
								5.1		2.8
								5.4		3.2
12/15/2010								5.6		3.2
								5.7		3.8
										4.6
12/16/2010										6.0
										5.4
12/17/2010										6.0
										6.1
12/18/2010		-0.8								5.9
										5.2
12/19/2010										5.2
										4.3
										5.8
12/20/2010								5.5		4.0
								5.7		5.0
12/21/2010										5.9
										4.3

Table CV3: Minimum Scrubber Pressure Drop Excursions (Revised 05/26/2011)

	Pressure Drop During Excursion (in. H <sub>2</sub> O)								
	Scrubber 1	Scrubber 2	Scrubber 3	Scrubber 4N	Scrubber 4S	Scrubber 5N	Scrubber 5S	Scrubber 8N	Scrubber 8S
12/22/2010									4.9
									4.7
12/23/2010									5.0
									5.5
12/24/2010	3.5								
12/25/2010	3.5								5.8
									4.8
12/26/2010	2.4							5.1	4.1
								5.3	2.8
								5.5	3.7
12/27/2010								5.5	5.0
									3.9
									4.9
12/28/2010								5.7	5.3
								5.8	3.80
									4.90

\* Pressure drop limit based on CAM Plan dated February 2006.



**COMMENT NO. 8 RESPONSE**  
**FUEL OIL VENDOR ANALYSIS**

TRANSMONTAIGNE PRODUCT SERVICES  
PORT EVERGLADES TERMINAL

## LAB CALCULATED

DATE TESTED	1/31/2011
PRODUCT	6240
VOLUME	100
BLEND %	100
API	11.3
VISCT	368.2
FLASH	221.5 F*
POUR POINT	-6.5
SULPHUR	2.29
WATER BY DISTIL	0.11
SEDIMENT HOT FILT	0.031
ASH	0.047
CARBON RESIDUE	12.47
VANADIUM	91
SODIUM	13
ALUMINUM	32
SILICON	26

PETE MATO  
954-355-4262  
INVENTORY

**COMMENT NO. 13 RESPONSE**

**ORIGINAL ATTACHMENTS FOR BOILER NOS. 4 AND 5**

**Attachment GSH-EU4-B6. Maximum 24-Hour and Annual Heat Input and Fuel Usage Rates  
Boiler No. 4, SCGCF, Belle Glade**

Fuel	Heat Transfer			Fuel Firing Rate	
	Heat Input to Boiler	Efficiency %	Heat Output to Steam	Hourly	Annual
Maximum Short-Term					
	(MMBtu/hr)		(MMBtu/hr)		
Bagasse	572.73	55.0	315.00	35.80 tons/hr <sup>a</sup>	261,163.6 TPY <sup>a</sup>
Residue	504.00	62.5	315.00	28.31 tons/hr <sup>b</sup>	206,583.4 TPY <sup>b</sup>
No. 6 Fuel Oil	392.90	62.5	245.6	2,602 gal/hr	18,984,095 gal/yr
<u>Max fuel firing + bagasse</u>					
Bagasse	126.25	55.0	69.44	7.89 tons/hr <sup>a</sup>	57,570.0 TPY <sup>a</sup>
Residue	0.00	62.5	0.00	0 tons/hr <sup>b</sup>	0.0 TPY <sup>b</sup>
No. 6 Fuel Oil	392.9	62.5	245.56	2,602 gal/hr	18,984,095 gal/yr
Total	519.15		315.00		
<u>Max fuel firing + Residue</u>					
Bagasse	0.00	55.0	0.00	0 tons/hr <sup>a</sup>	0.0 TPY <sup>a</sup>
Residue	111.10	62.5	69.44	6.24 tons/hr <sup>b</sup>	45,538.5 TPY <sup>b</sup>
No. 6 Fuel Oil	392.9	62.5	245.56	2,602 gal/hr	18,984,095 gal/yr
Total	504		315.0		

<sup>a</sup> Based on bagasse firing.

<sup>b</sup> Based on residue firing.

Notes:

Total steam production required = 300,000 lb/hr.

Net steam enthalpy = 1,050 Btu/lb.

Total heat output to steam = 300,000 lb/hr steam x 1,050 Btu/lb = 315.0 MMBtu/hr.

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal



Attachment GSH-EU4-F1.10. Maximum Hourly and Annual Emissions of Regulated Pollutants  
Boiler No. 4, SCGCF, Belle Glade

Regulated Pollutant	Bagasse			Residue			Fuel oil			Max Fuel Oil, Remainder Bagasse	Max Fuel Oil, Remainder Residue	Maximum Hourly Emission Rate (lb/hr)	Maximum Annual Emission Rate (TPY)			
	Emission Factor (lb/MMBtu)	Ref	Activity Factor <sup>a</sup> (MMBtu/hr)	Hourly Emissions (lb/hr)	Emission Factor (lb/MMBtu)	Ref	Activity Factor <sup>a</sup> (MMBtu/hr)	Hourly Emissions (lb/hr)	Emission Factor (lb/MMBtu)	Ref	Activity Factor <sup>a</sup> (MMBtu/hr)			Hourly Emissions (lb/hr)	Hourly Emissions <sup>b</sup> (lb/hr)	Hourly Emissions <sup>d</sup> (lb/hr)
Particulate (PM)	0.20	1	572.7	114.5	0.20	1	504.0	100.8	0.10	1	392.9	39.3	64.5	61.5	114.5	417.9
Sulfur dioxide	0.06	3	572.7	34.4	0.674	5	504.0	339.8	2.607	2	392.9	1,024.1	1,031.7	1,099.0	1,099.0	4,009.3 <sup>e</sup>
Nitrogen oxides	0.45	1	572.7	257.7	0.65	1	504.0	327.6	0.31	4	392.9	121.8	178.6	194.0	327.6	1,195.1
VOC	0.70	1	572.7	400.9	0.70	1	504.0	352.8	0.00185	6	392.9	0.7	89.1	78.5	400.9	1,462.5

Notes:

- <sup>a</sup> Activity factor is based on maximum heat input rate.
- <sup>b</sup> Based on 392.9 MMBtu/hr max. heat input from fuel oil combustion and 126.2 MMBtu/hr heat input from bagasse combustion.
- <sup>c</sup> Total emissions of SO<sub>2</sub> from all operating boilers shall not exceed 14 tons per day.
- <sup>d</sup> Based on 392.9 MMBtu/hr max. heat input from fuel oil combustion and 111.1 MMBtu/hr heat input from residue combustion.
- <sup>e</sup> Based on 7,296 hr/yr operation.

Unless otherwise specified, heating values for each fuel used are as follows: 3,600 Btu/lb for wet bagasse, 8,000 Btu/lb dry bagasse, 8,900 Btu/lb for dry residue, and 151,000 Btu/gal for No. 6 fuel oil.

References:

1. Emission factor from permit specific condition (Permit No. 0990026-012-AV).
2. Based on maximum 2.4% fuel sulfur content as specified in Permit No. 0990026-012-AV. No. 6 fuel oil has heating value of 151,000 Btu/gal and density of 8.2 lb/gal. Hourly emissions based on 2 lb SO<sub>2</sub> per lb of S and assuming all sulfur is emitted as SO<sub>2</sub> when firing fuel oil. Calculation: 2.4% sulfur + 151,000 Btu/gal x 8.2 lb/gal x 2 lb SO<sub>2</sub>/lb S x 10<sup>6</sup> Btu/MMBtu = 2.607 lb/MMBtu.
3. Based on industry test data.
4. Emission factor of 47 lb per 1,000 gallon for NO<sub>x</sub> due to fuel oil firing, from AP-42 Table 1.3-1. Calculation: 47 lb/1000 gal + 151,000 Btu/gal \* 10<sup>6</sup> Btu/MMBtu = 0.31 lb/MMBtu.
5. Sulfur content of residue assumed to be 0.5% (dry), with 40% removal in wet scrubbers. Calculation: 1/8900 Btu/lb x 0.5% sulfur x 2 lb SO<sub>2</sub>/lb S x 10<sup>6</sup> Btu/MMBtu x 40% scrubber removal efficiency = 0.674 lb/MMBtu.
6. Emission factor of 0.28 lb per 1,000 gallon for VOC due to fuel oil firing, from AP-42 Table 1.3-3. Calculation: 0.28 lb/1000 gal + 151,000 Btu/gal \* 10<sup>6</sup> Btu/MMBtu = 0.00185 lb/MMBtu.

**Attachment GSH-EU5-B6. Maximum 24-Hour and Annual Heat Input and Fuel Usage Rates  
Boiler No. 5, SCGCF, Belle Glade**

Fuel	Heat Transfer			Fuel Firing Rate	
	Heat Input to Boiler	Efficiency %	Heat Output to Steam	24-Hour	Annual
Maximum 24-Hour					
	(MMBtu/hr)		(MMBtu/hr)		
Bagasse	439.09	55.0	241.50	27.44 tons/hr <sup>a</sup>	200,225.5 TPY <sup>a</sup>
Residue	386.40	62.5	241.50	21.71 tons/hr <sup>b</sup>	158,380.6 TPY <sup>b</sup>
No. 6 Fuel Oil	301.9	62.5	188.7	1,999 gal/hr	14,587,168 gal/yr
<u>Max fuel firing + bagasse</u>					
Bagasse	96.02	55.0	52.81	6.0 tons/hr <sup>a</sup>	43,786.4 TPY <sup>a</sup>
Residue	0.00	62.5	0.00	0 tons/hr <sup>b</sup>	0.0 TPY <sup>b</sup>
No. 6 Fuel Oil	301.9	62.5	188.69	1,999 gal/hr	14,587,168 gal/yr
Total	397.9		241.5		
<u>Max fuel firing + Residue</u>					
Bagasse	0.00	55.0	0.00	0 tons/hr <sup>a</sup>	0.0 TPY <sup>a</sup>
Residue	84.50	62.5	52.81	4.75 tons/hr <sup>b</sup>	34,635.5 TPY <sup>b</sup>
No. 6 Fuel Oil	301.9	62.5	188.69	1,999 gal/hr	14,587,168 gal/yr
Total	386.4		241.5		

<sup>a</sup> Based on bagasse firing.

<sup>b</sup> Based on residue firing.

Notes:

Total steam production required = 230,000 lb/hr.

Net steam enthalpy = 1,050 Btu/lb.

Total heat output to steam = 230,000 lb/hr steam x 1,050 Btu/lb = 241.5 MMBtu/hr.

Fuels may be burned in combination, not to exceed total heat outputs.

Based on fuel heating values as follows:

Bagasse, dry - 8,000 Btu/lb

Residue, dry - 8,900 Btu/lb

No. 6 Fuel Oil - 151,000 Btu/gal



Attachment GSH-EU5-F1.10. Maximum Hourly and Annual Emissions of Regulated Pollutants  
Boiler No. 5, SCGCF, Belle Glade

Regulated Pollutant	Bagasse			Residue			Fuel oil			Max Fuel Oil, Remainder Bagasse	Max Fuel Oil, Remainder Residue	Maximum Hourly Emission Rate (lb/hr)	Maximum Annual Emission Rate <sup>e</sup> (TPY)			
	Emission Factor (lb/MMBtu)	Ref	Activity <sup>a</sup> (MMBtu/hr)	Hourly Emissions (lb/hr)	Emission Factor (lb/MMBtu)	Ref	Activity <sup>a</sup> (MMBtu/hr)	Hourly Emissions (lb/hr)	Emission Factor (lb/MMBtu)	Ref	Activity <sup>a</sup> (MMBtu/hr)			Hourly Emissions (lb/hr)	Hourly Emissions <sup>b</sup> (lb/hr)	Hourly Emissions <sup>d</sup> (lb/hr)
Particulate (PM)	0.25	1	439.1	109.8	0.25	1	386.4	96.6	0.10	1	301.9	30.2	54.2	51.3	109.8	400.5
Sulfur dioxide	0.06	3	439.1	26.3	0.674	5	386.4	260.5	2.607	2	301.9	786.9	792.7	843.9	843.9	3,078.6
Nitrogen oxides	0.45	1	439.1	197.6	0.65	1	386.4	251.2	0.31	4	301.9	93.6	136.8	148.5	251.2	916.2
VOC	0.70	1	439.1	307.4	0.70	1	386.4	270.5	0.00185	6	301.9	0.6	67.8	59.7	307.4	1,121.3

Footnotes:

- <sup>a</sup> Activity factor is based on maximum heat input rate.
- <sup>b</sup> Based on 301.9 MMBtu/hr max. heat input from fuel oil combustion and 96.0 MMBtu/hr heat input from bagasse combustion.
- <sup>c</sup> Total emissions of SO<sub>2</sub> from all operating boilers shall not exceed 14 tons per day.
- <sup>d</sup> Based on 301.9 MMBtu/hr max. heat input from fuel oil combustion and 84.5 MMBtu/hr heat input from residue combustion.
- <sup>e</sup> Based on 7,296 hr/yr operation.

Unless otherwise specified, heating values for each fuel used are as follows: 3,600 Btu/lb for wet bagasse, 8,000 Btu/lb dry bagasse, 8,900 Btu/lb for dry residue, and 151,000 Btu/gal for No. 6 fuel oil.

References:

1. Emission factor from permit specific condition (Permit No. 0990028-012-AV).
2. Based on maximum 2.4% fuel sulfur content as specified in Permit No. 0990028-012-AV. No. 6 fuel oil has heating value of 151,000 Btu/gal and density of 8.2 lb/gal. Hourly emissions based on 2 lb SO<sub>2</sub> per lb of S and assuming all sulfur is emitted as SO<sub>2</sub> when firing fuel oil. Calculation: 2.4% sulfur + 151,000 Btu/gal x 8.2 lb/gal x 2 lb SO<sub>2</sub>/lb S x 10<sup>6</sup> Btu/MMBtu = 2,607 lb/MMBtu.
3. Based on industry test data.
4. Emission factor of 47 lb per 1,000 gallon for NO<sub>x</sub> due to fuel oil firing, from AP-42 Table 1.3-1. Calculation: 47 lb/1000 gal + 151,000 Btu/gal \* 10<sup>6</sup> Btu/MMBtu = 0.31 lb/MMBtu.
5. Sulfur content of residue assumed to be 0.5% (dry), with 40% removal in wet scrubbers. Calculation: 1/8900 Btu/lb x 0.5% sulfur x 2 lb SO<sub>2</sub>/lb S x 10<sup>6</sup> Btu/MMBtu x 40% scrubber removal efficiency = 0.674 lb/MMBtu.
6. Emission factor of 0.28 lb per 1,000 gallon for VOC due to fuel oil firing, from AP-42 Table 1.3-3. Calculation: 0.28 lb/1000 gal + 151,000 Btu/gal \* 10<sup>6</sup> Btu/MMBtu = 0.00185 lb/MMBtu.

