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BUREAU OF AIR REGULATION

**UPDATES TO**

**BART EXEMPTION MODELING ANALYSIS FOR**

**SMURFIT-STONE CONTAINER ENTERPRISES, INC.**

**PANAMA CITY MILL**

### 3.0 AIR MODELING ANALYSIS RESULTS

Summaries of the maximum visibility impairment values for the BART-eligible emissions units at the Mill, estimated using the 1999 IMPROVE algorithm, are presented in Tables 3-1 and 3-2 for normal operations and compared to the BART exemption criteria of 0.5 dv. These model results include the proposed lower SO<sub>2</sub> emission limit on the No. 4 Combination Boiler. The 98<sup>th</sup> percentile 24-hour average visibility impairment values (i.e., 8<sup>th</sup> highest) for the years 2001, 2002, and 2003, and the 22<sup>nd</sup> highest 24-hour average visibility impairment value over the 3 years, are presented in Table 3-1. The number of days and receptors for which the visibility impairment was predicted to be greater than 0.5 dv is also presented in Table 3-1. The eight highest visibility impairment values predicted at the PSD Class I area are presented in Table 3-2.

As shown in these tables, the 8<sup>th</sup> highest visibility impairment values for normal operations are predicted to be greater than 0.5 dv for each year at the PSD Class I area using the 1999 IMPROVE algorithm. The 22<sup>nd</sup> highest visibility impairment value predicted over the 3-year period at the PSD Class I area is also greater than 0.5 dv.

As a result, the visibility impacts were evaluated at the St. Marks NWA with the new IMPROVE algorithm. Similar to the results presented using the 1999 IMPROVE algorithm, summaries of the maximum visibility impairment values estimated using the new IMPROVE algorithm are presented in Tables 3-3 and 3-4. As shown in these tables, the highest, 8<sup>th</sup> highest visibility impairment value predicted at the St. Marks NWA with the new IMPROVE algorithm is 0.498 dv. The 22<sup>nd</sup> highest visibility impairment value predicted at this PSD Class I area over the 3-year period is 0.473 dv.

Based on these results, which demonstrate that the maximum visibility impairment values for the BART-eligible emission units are predicted to be less than the FDEP's BART exemption criteria of 0.5 dv, an exemption from BART determination is requested for the Panama City Mill.

Summaries of the maximum visibility impairment values predicted for the BART-eligible emission units at the Mill for periodic maintenance operations are presented in Tables 3-5 and 3-6 using the 1999 IMPROVE algorithm and in Tables 3-7 and 3-8 using the new IMPROVE algorithm. As discussed previously, SSCE does not believe that the recovery boiler maintenance operation is a condition that should be modeled for visibility impacts. These results for periodic maintenance are presented for informational purposes at the request of the FDEP.

TABLE 3-1  
 SUMMARY OF BART EXEMPTION MODELING RESULTS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 NORMAL OPERATIONS  
 1999 IMPROVE ALGORITHM

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts >0.5 dv									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	14	101	0.567	10	101	0.586	13	101	0.559	0.567

**TABLE 3-2**  
**VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS**  
**SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL**  
**NORMAL OPERATIONS**  
**1999 IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.499	1.114	1.200
	2	1.136	0.816	0.902
	3	0.888	0.792	0.769
	4	0.754	0.670	0.656
	5	0.674	0.669	0.632
	6	0.592	0.619	0.567
	7	0.570	0.593	0.559
	8	0.567	0.586	0.559

TABLE 3-3  
 SUMMARY OF BART EXEMPTION MODELING RESULTS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 NORMAL OPERATIONS  
 NEW IMPROVE ALGORITHM

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts $\geq 0.5 \text{ dv}^4$									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	NA	NA	0.473	NA	NA	0.498	NA	NA	0.459	0.473

Note: NA= not available.

<sup>4</sup> No. of days and receptors are not readily available from the spreadsheet developed by VISTAS to estimate visibility impairment with the new IMPROVE equation.

**TABLE 3-4  
 VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 NORMAL OPERATIONS  
 NEW IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.210	0.930	0.977
	2	0.930	0.665	0.726
	3	0.723	0.665	0.648
	4	0.618	0.566	0.541
	5	0.551	0.549	0.515
	6	0.497	0.523	0.479
	7	0.473	0.500	0.468
	8	0.473	0.498	0.459

**TABLE 3-5  
SUMMARY OF BART EXEMPTION MODELING RESULTS  
SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
PERIODIC MAINTENANCE OPERATIONS  
1999 IMPROVE ALGORITHM**

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts >0.5 dv									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	15	101	0.617	13	101	0.642	15	101	0.504	0.597

**TABLE 3-6**  
**VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS**  
**SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL**  
**PERIODIC MAINTENANCE OPERATIONS**  
**1999 IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.682	1.240	1.084
	2	1.252	0.901	0.813
	3	0.983	0.879	0.717
	4	0.826	0.740	0.593
	5	0.740	0.739	0.562
	6	0.628	0.686	0.517
	7	0.618	0.643	0.506
	8	0.617	0.642	0.504



TABLE 3-7  
 SUMMARY OF BART EXEMPTION MODELING RESULTS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 PERIODIC MAINTENANCE OPERATIONS  
 NEW IMPROVE ALGORITHM

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts >0.5 dv <sup>2</sup>									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	8	NA	0.508	10	NA	0.541	9	NA	0.507	0.518

NA= not available

<sup>2</sup> No. of days and receptors are not readily available from the spreadsheet developed by VISTAS to estimate visibility impairment with the new IMPROVE equation.

**TABLE 3-8  
 VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 PERIODIC MAINTENANCE OPERATIONS  
 NEW IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.358	1.033	1.095
	2	1.023	0.733	0.822
	3	0.799	0.736	0.724
	4	0.674	0.625	0.597
	5	0.604	0.603	0.565
	6	0.526	0.578	0.521
	7	0.500	0.538	0.508
	8	0.511	0.543	0.507

**TABLE 2-3  
SUMMARY OF MAXIMUM 24-HOUR AVERAGE EMISSION RATES FOR THE BART-ELIGIBLE EMISSIONS UNITS  
NORMAL OPERATIONS - SMURFIT-STONE CONTAINER ENTERPRISES - PANAMA CITY MILL**

Source	EU ID	Model ID	PM <sub>10</sub>		NO <sub>x</sub>		SO <sub>2</sub>	
			lb/hr	Reference	lb/hr	Reference	lb/hr	Reference
No. 1 Recovery Boiler	001	RB1	7.2	Stack Test 10/10/05	67.4	Appendix A	141.6	Appendix A
No. 2 Recovery Boiler	019	RB2	27.1	Stack Test 10/6/04	67.4	Appendix A	141.6	Appendix A
No. 4 Combination Boiler	016	CB4	38.2	Permit 0050009-022-AC <sup>a</sup>	334.0	Stack Test 2/6/06	690.0	Proposed Limit
No. 1 Smelt Dissolving Tai	021	SDT1	9.46	Stack Test 10/10/05	1.24	Appendix A	0.31	Appendix A
No. 2 Smelt Dissolving Tai	020	SDT2	11.0	Stack Test 10/5/04	1.24	Appendix A	0.31	Appendix A
Lime Kiln	004	LKILN	13.0	Stack Test 10/13/05	35.6	Stack Test 2/7/06	0.50	Stack Test 2/7/06
Lime Slaker	005	LSLAK	3.2	Stack Test 10/13/05	--		--	
<b>Total Emissions</b>			<b>109.1</b>		<b>506.9</b>		<b>974.4</b>	

<sup>a</sup>Permit No. 0050009-022-AC, PM emission limitation of 0.07 lb/MMBtu and heat input rate of 545 MMBtu/hr.  
Note: See Appendix A for a summary of the stack test data at SSCE Panama City Mill.

**TABLE 2-4  
SUMMARY OF MAXIMUM 24-HOUR AVERAGE EMISSION RATES FOR THE BART-ELIGIBLE EMISSIONS UNITS  
PERIODIC MAINTENANCE SCENARIO - SMURFIT-STONE CONTAINER ENTERPRISES - PANAMA CITY MILL**

Source	EU ID	Model ID	PM <sub>10</sub>		NO <sub>x</sub>		SO <sub>2</sub>	
			lb/hr	Reference	lb/hr	Reference	lb/hr	Reference
No. 1 Recovery Boiler (maintenance)	001	RB1	6.7	Appendix A	68.4	Appendix A	290.7	Appendix A
No. 1 Recovery Boiler (normal operation)	019	RB2	27.1	Stack test 10/6/04	67.4	Appendix A	141.6	Appendix A
No. 4 Combination Boiler	016	CB4	38.2	Permit 0050009-022-AC <sup>a</sup>	334.0	Stack Test 2/6/06	690.0	Proposed Limit
No. 1 Smelt Dissolving Tank	021	SDT1	9.46	Stack Test 10/10/05	1.24	Appendix A	0.31	Appendix A
No. 2 Smelt Dissolving Tank	020	SDT2	11.0	Stack Test 10/5/04	1.24	Appendix A	0.31	Appendix A
Lime Kiln	004	LKILN	13.0	Stack Test 10/13/05	35.6	Stack Test 2/7/06	0.50	Stack Test 2/7/06
Lime Slaker	005	LSLAK	3.2	Stack Test 10/13/05	--		--	
<b>Total Emissions</b>			<b>108.6</b>		<b>507.9</b>		<b>1,123.4</b>	

<sup>a</sup>Permit No. 0050009-022-AC, PM emission limitation of 0.07 lb/MMBtu and heat input rate of 545 MMBtu/hr.

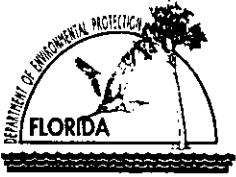
Note: Nos. 1 and 2 Recovery Boilers undergo maintenance on the cascade evaporators approximately once every six weeks. Maintenance work is performed normally on one boiler on any given day. See Appendix A for a summary of the stack test data at SSCE Panama City Mill. Derivation of the 24-hour average recovery boiler emissions during maintenance are presented in Table A-1.

**UPDATES TO**

**APPENDIX B**

**CONSTRUCTION PERMIT APPLICATION**

**UPDATES TO**  
**REVISED AIR MODELING PROTOCOL**  
**DATED JANUARY 2007**



# Department of Environmental Protection

## Division of Air Resource Management

### APPLICATION FOR AIR PERMIT - LONG FORM

#### I. APPLICATION INFORMATION

**Air Construction Permit** – Use this form to apply for an air construction permit at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also use this form to apply for an air construction permit:

- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- Where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- Where the applicant proposes to establish, revise, or renew a plantwide applicability limit (PAL).

**Air Operation Permit** – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial/revised/renewal Title V air operation permit.

**Air Construction Permit & Title V Air Operation Permit (Concurrent Processing Option)** – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

#### Identification of Facility

1. Facility Owner/Company Name: <b>Smurfit-Stone Container Enterprises, Inc.</b>	
2. Site Name: <b>Panama City Mill</b>	
3. Facility Identification Number: <b>0050009</b>	
4. Facility Location...: Street Address or Other Locator: <b>One Everitt Avenue</b> City: <b>Panama City</b> County: <b>Bay</b> Zip Code: <b>32402</b>	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

#### Application Contact

1. Application Contact Name: <b>Tom Clements, Environmental Superintendent</b>	
2. Application Contact Mailing Address... Organization/Firm: <b>Smurfit-Stone Container Enterprises, Inc.</b> Street Address: <b>One Everitt Avenue</b> City: <b>Panama City</b> State: <b>FL</b> Zip Code: <b>32402</b>	
3. Application Contact Telephone Numbers... Telephone: <b>(850) 785-4311</b> ext. 470 Fax: <b>(850) 763-8530</b>	
4. Application Contact Email Address: <b>tmclemen@smurfit.com</b>	

#### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):

## APPLICATION INFORMATION

### Purpose of Application

This application for air permit is submitted to obtain: (Check one)

#### **Air Construction Permit**

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

#### **Air Operation Permit**

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

#### **Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)**

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

**Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:**

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

### Application Comment

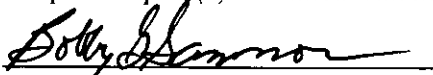
This application is to establish a permit limit for SO<sub>2</sub> emissions of 690 lb/hr (24-hour average) for the No. 4 Combination Boiler (EU 016).



## APPLICATION INFORMATION

### Application Responsible Official Certification

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

1. Application Responsible Official Name: B.G. Sammons, General Manager
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: Smurfit-Stone Container Corporation Enterprises, Inc Street Address: One Everitt Avenue City: Panama City State: FL Zip Code: 32402
4. Application Responsible Official Telephone Numbers... Telephone: (850)785-4311 ext. 200 Fax: (850)763-6290
5. Application Responsible Official Email Address: bgsammons@smurfit.com
6. Application Responsible Official Certification: <i>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.</i>  Signature <u>11/1/07</u> Date

# 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>6241 NW 23<sup>rd</sup> Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(352) 336-5600</b> ext. <b>545</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 checked="" 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 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>  <i>David A. Buff</i> _____ Signature  (seal)  _____ Date <b>10/30/07</b>

\* Attach any exception to certification statement.

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

# EMISSIONS UNIT INFORMATION

Section [1]

No. 4 Combination Boiler

## A. GENERAL EMISSIONS UNIT INFORMATION

### Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

### Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

**No. 4 Combination Boiler**

3. Emissions Unit Identification Number: **016**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>26</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input type="checkbox"/> No
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9. Package Unit:

Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

**The Batch Digester System and Multi-Effect Evaporator System may vent non-condensable gases (NCGs) to the No. 4 Combination Boiler as a backup control device. The No. 4 Combination Boiler may also be used for condensate stripper off-gas (SOG) destruction.**

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
No. 4 Combination Boiler

Page [1] of [1]  
Sulfur Dioxide – SO<sub>2</sub>

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

**(Optional for unregulated emissions units.)**

**Potential/Estimated Fugitive Emissions**

**Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>1,183 lb/hour                      3,022.2 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>690 lb/hr SO<sub>2</sub>, 24-hr average</b>  Reference: <b>Proposed permit limit</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From:                      To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions:  <b>24-hour &amp; Annual: 690 lb/hr SO<sub>2</sub> x 8,760 hr/yr x 1 ton/2,000 lb = 3,022.2 TPY</b>  <b>3-hour: Current permit limit: 1,183 lb/hr</b>			
11. Potential Fugitive and Actual Emissions Comment:			

**EMISSIONS UNIT INFORMATION**

**POLLUTANT DETAIL INFORMATION**

Section [1]  
No. 4 Combination Boiler

Page [1] of [1]  
Sulfur Dioxide – SO<sub>2</sub>

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>690 lb/hr, 24-hr average</b>	4. Equivalent Allowable Emissions: <b>690 lb/hour      3,022.2 tons/year</b>
5. Method of Compliance: <b>CEMS for SO<sub>2</sub>.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Proposed permit limit as a 24-hour average.</b>	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>1,183.0 lb/hr</b>	4. Equivalent Allowable Emissions: <b>1,183.0 lb/hour      tons/year</b>
5. Method of Compliance: <b>Annual test using EPA Test Method 6.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 0050009-025-AV when incinerating NCG and SOG. Limit is 1,174 lb/hr when burning SOG but not NCG, 1,183 lb/hr when burning NCG but not SOG, and 772 lb/hr when not incinerating NCG or SOG.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: <b>lb/hour      tons/year</b>
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	

**Golder Associates Inc.**

6241 NW 23rd Street, Suite 500  
Gainesville, FL 32653-1500  
Telephone (352) 336-5600  
Fax (352) 336-6603



TRANSMITTAL LETTER

**To: Bruce Mitchell**  
**DEP**

**Date: October 30, 2007**  
**Project No.: 063-7596**

**RECEIVED**

OCT 31 2007

Sent by: tz

- Mail
- Air Freight
- Hand Carried

- UPS
- Federal Express

BUREAU OF AIR REGULATION

Per:

Quantity	Item	Description
1	Copy	Updates to BART Exemption Modeling Analysis

Remarks:

Now contains the sealed P.E. page.

cc: Tom Clements, Smurfit-Stone Panama City

*Jim Cooper*  
*Rich Bradburn*

Y:\Projects\2006\0637596 SSCE Panama City BARTM.I\103007-596.doc

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BUREAU OF AIR REGULATION

**UPDATES TO**

**BART EXEMPTION MODELING ANALYSIS FOR**

**SMURFIT-STONE CONTAINER ENTERPRISES, INC.**

**PANAMA CITY MILL**

### 3.0 AIR MODELING ANALYSIS RESULTS

Summaries of the maximum visibility impairment values for the BART-eligible emissions units at the Mill, estimated using the 1999 IMPROVE algorithm, are presented in Tables 3-1 and 3-2 for normal operations and compared to the BART exemption criteria of 0.5 dv. These model results include the proposed lower SO<sub>2</sub> emission limit on the No. 4 Combination Boiler. The 98<sup>th</sup> percentile 24-hour average visibility impairment values (i.e., 8<sup>th</sup> highest) for the years 2001, 2002, and 2003, and the 22<sup>nd</sup> highest 24-hour average visibility impairment value over the 3 years, are presented in Table 3-1. The number of days and receptors for which the visibility impairment was predicted to be greater than 0.5 dv is also presented in Table 3-1. The eight highest visibility impairment values predicted at the PSD Class I area are presented in Table 3-2.

As shown in these tables, the 8<sup>th</sup> highest visibility impairment values for normal operations are predicted to be greater than 0.5 dv for each year at the PSD Class I area using the 1999 IMPROVE algorithm. The 22<sup>nd</sup> highest visibility impairment value predicted over the 3-year period at the PSD Class I area is also greater than 0.5 dv.

As a result, the visibility impacts were evaluated at the St. Marks NWA with the new IMPROVE algorithm. Similar to the results presented using the 1999 IMPROVE algorithm, summaries of the maximum visibility impairment values estimated using the new IMPROVE algorithm are presented in Tables 3-3 and 3-4. As shown in these tables, the highest, 8<sup>th</sup> highest visibility impairment value predicted at the St. Marks NWA with the new IMPROVE algorithm is 0.498 dv. The 22<sup>nd</sup> highest visibility impairment value predicted at this PSD Class I area over the 3-year period is 0.473 dv.

Based on these results, which demonstrate that the maximum visibility impairment values for the BART-eligible emission units are predicted to be less than the FDEP's BART exemption criteria of 0.5 dv, an exemption from BART determination is requested for the Panama City Mill.

Summaries of the maximum visibility impairment values predicted for the BART-eligible emission units at the Mill for periodic maintenance operations are presented in Tables 3-5 and 3-6 using the 1999 IMPROVE algorithm and in Tables 3-7 and 3-8 using the new IMPROVE algorithm. As discussed previously, SSCE does not believe that the recovery boiler maintenance operation is a condition that should be modeled for visibility impacts. These results for periodic maintenance are presented for informational purposes at the request of the FDEP.



**TABLE 3-1  
SUMMARY OF BART EXEMPTION MODELING RESULTS  
SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
NORMAL OPERATIONS  
1999 IMPROVE ALGORITHM**

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts >0.5 dv									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	14	101	0.567	10	101	0.586	13	101	0.559	0.567

**TABLE 3-2  
 VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 NORMAL OPERATIONS  
 1999 IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.499	1.114	1.200
	2	1.136	0.816	0.902
	3	0.888	0.792	0.769
	4	0.754	0.670	0.656
	5	0.674	0.669	0.632
	6	0.592	0.619	0.567
	7	0.570	0.593	0.559
	8	0.567	0.586	0.559

TABLE 3-3  
 SUMMARY OF BART EXEMPTION MODELING RESULTS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 NORMAL OPERATIONS  
 NEW IMPROVE ALGORITHM

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts >0.5 dv <sup>a</sup>									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	NA	NA	0.473	NA	NA	0.498	NA	NA	0.459	0.473

Note. NA= not available.

<sup>a</sup> No. of days and receptors are not readily available from the spreadsheet developed by VISTAS to estimate visibility impairment with the new IMPROVE equation.

**TABLE 3-4  
 VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 NORMAL OPERATIONS  
 NEW IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.210	0.930	0.977
	2	0.930	0.665	0.726
	3	0.723	0.665	0.648
	4	0.618	0.566	0.541
	5	0.551	0.549	0.515
	6	0.497	0.523	0.479
	7	0.473	0.500	0.468
	8	0.473	0.498	0.459

**TABLE 3-5  
SUMMARY OF BART EXEMPTION MODELING RESULTS  
SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
PERIODIC MAINTENANCE OPERATIONS  
1999 IMPROVE ALGORITHM**

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts >0.5 dv									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	15	101	0.617	13	101	0.642	15	101	0.504	0.597

**TABLE 3-6  
 VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS  
 SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
 PERIODIC MAINTENANCE OPERATIONS  
 1999 IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.682	1.240	1.084
	2	1.252	0.901	0.813
	3	0.983	0.879	0.717
	4	0.826	0.740	0.593
	5	0.740	0.739	0.562
	6	0.628	0.686	0.517
	7	0.618	0.643	0.506
	8	0.617	0.642	0.504

**TABLE 3-7  
SUMMARY OF BART EXEMPTION MODELING RESULTS  
SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL  
PERIODIC MAINTENANCE OPERATIONS  
NEW IMPROVE ALGORITHM**

Class I Area	Distance (km) of Source to Nearest Class I Area Boundary	Number of Days and Receptors with Impacts >0.5 dv <sup>a</sup>									22 <sup>nd</sup> Highest Impact (dv) Over 3-Yr Period
		2001			2002			2003			
		No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	No. of Days	No. of Receptors	8 <sup>th</sup> Highest Impact (dv)	
St. Marks NWA	112	8	NA	0.508	10	NA	0.541	9	NA	0.507	0.518

NA= not available

<sup>a</sup> No. of days and receptors are not readily available from the spreadsheet developed by VISTAS to estimate visibility impairment with the new IMPROVE equation.

**TABLE 3-8**  
**VISIBILITY IMPACT RANKINGS AT PSD CLASS I AREAS**  
**SMURFIT-STONE CONTAINER ENTERPRISES, INC., PANAMA CITY MILL**  
**PERIODIC MAINTENANCE OPERATIONS**  
**NEW IMPROVE ALGORITHM**

Class I Area	Rank	Predicted Impact (dv)		
		2001	2002	2003
St. Marks NWA	1	1.358	1.033	1.095
	2	1.023	0.733	0.822
	3	0.799	0.736	0.724
	4	0.674	0.625	0.597
	5	0.604	0.603	0.565
	6	0.526	0.578	0.521
	7	0.500	0.538	0.508
	8	0.511	0.543	0.507



**UPDATES TO**  
**REVISED AIR MODELING PROTOCOL**  
**DATED JANUARY 2007**

**TABLE 2-3**  
**SUMMARY OF MAXIMUM 24-HOUR AVERAGE EMISSION RATES FOR THE BART-ELIGIBLE EMISSIONS UNITS**  
**NORMAL OPERATIONS - SMURFIT-STONE CONTAINER ENTERPRISES - PANAMA CITY MILL**

Source	EU ID	Model ID	PM <sub>10</sub>		NO <sub>x</sub>		SO <sub>2</sub>	
			lb/hr	Reference	lb/hr	Reference	lb/hr	Reference
No. 1 Recovery Boiler	001	RB1	7.2	Stack Test 10/10/05	67.4	Appendix A	141.6	Appendix A
No. 2 Recovery Boiler	019	RB2	27.1	Stack Test 10/6/04	67.4	Appendix A	141.6	Appendix A
No. 4 Combination Boiler	016	CB4	38.2	Permit 0050009-022-AC <sup>a</sup>	334.0	Stack Test 2/6/06	690.0	Proposed Limit
No. 1 Smelt Dissolving Tank	021	SDT1	9.46	Stack Test 10/10/05	1.24	Appendix A	0.31	Appendix A
No. 2 Smelt Dissolving Tank	020	SDT2	11.0	Stack Test 10/5/04	1.24	Appendix A	0.31	Appendix A
Lime Kiln	004	LKILN	13.0	Stack Test 10/13/05	35.6	Stack Test 2/7/06	0.50	Stack Test 2/7/06
Lime Slaker	005	LSLAK	3.2	Stack Test 10/13/05	--		--	
<b>Total Emissions</b>			<b>109.1</b>		<b>506.9</b>		<b>974.4</b>	

<sup>a</sup>Permit No. 0050009-022-AC, PM emission limitation of 0.07 lb/MMBtu and heat input rate of 545 MMBtu/hr.

Note: See Appendix A for a summary of the stack test data at SSCE Panama City Mill.

**TABLE 2-4  
SUMMARY OF MAXIMUM 24-HOUR AVERAGE EMISSION RATES FOR THE BART-ELIGIBLE EMISSIONS UNITS  
PERIODIC MAINTENANCE SCENARIO - SMURFIT-STONE CONTAINER ENTERPRISES - PANAMA CITY MILL**

<b>Source</b>	<b>EU ID</b>	<b>Model ID</b>	<b>PM<sub>10</sub></b> lb/hr Reference	<b>NO<sub>x</sub></b> lb/hr Reference	<b>SO<sub>2</sub></b> lb/hr Reference
No. 1 Recovery Boiler (maintenance)	001	RB1	6.7 Appendix A	68.4 Appendix A	290.7 Appendix A
No. 1 Recovery Boiler (normal operation)	019	RB2	27.1 Stack test 10/6/04	67.4 Appendix A	141.6 Appendix A
No. 4 Combination Boiler	016	CB4	38.2 Permit 0050009-022-AC <sup>a</sup>	334.0 Stack Test 2/6/06	690.0 Proposed Limit
No. 1 Smelt Dissolving Tank	021	SDT1	9.46 Stack Test 10/10/05	1.24 Appendix A	0.31 Appendix A
No. 2 Smelt Dissolving Tank	020	SDT2	11.0 Stack Test 10/5/04	1.24 Appendix A	0.31 Appendix A
Lime Kiln	004	LKILN	13.0 Stack Test 10/13/05	35.6 Stack Test 2/7/06	0.50 Stack Test 2/7/06
Lime Slaker	005	LSLAK	3.2 Stack Test 10/13/05	--	--
<b>Total Emissions</b>			<b>108.6</b>	<b>507.9</b>	<b>1,123.4</b>

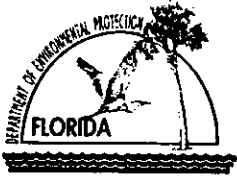
<sup>a</sup>Permit No. 0050009-022-AC, PM emission limitation of 0.07 lb/MMBtu and heat input rate of 545 MMBtu/hr.

Note: Nos. 1 and 2 Recovery Boilers undergo maintenance on the cascade evaporators approximately once every six weeks. Maintenance work is performed normally on one boiler on any given day. See Appendix A for a summary of the stack test data at SSCE Panama City Mill. Derivation of the 24-hour average recovery boiler emissions during maintenance are presented in Table A-1.

**UPDATES TO**

**APPENDIX B**

**CONSTRUCTION PERMIT APPLICATION**



# Department of Environmental Protection

## Division of Air Resource Management

### APPLICATION FOR AIR PERMIT - LONG FORM

#### I. APPLICATION INFORMATION

**Air Construction Permit** – Use this form to apply for an air construction permit at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air permit. Also use this form to apply for an air construction permit:

- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- Where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- Where the applicant proposes to establish, revise, or renew a plantwide applicability limit (PAL).

**Air Operation Permit** – Use this form to apply for:

- An initial federally enforceable state air operation permit (FESOP); or
- An initial/revised/renewal Title V air operation permit.

**Air Construction Permit & Title V Air Operation Permit (Concurrent Processing Option)** – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

#### Identification of Facility

1. Facility Owner/Company Name: <b>Smurfit-Stone Container Enterprises, Inc.</b>	
2. Site Name: <b>Panama City Mill</b>	
3. Facility Identification Number: <b>0050009</b>	
4. Facility Location...: Street Address or Other Locator: <b>One Everitt Avenue</b> City: <b>Panama City</b> County: <b>Bay</b> Zip Code: <b>32402</b>	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

#### Application Contact

1. Application Contact Name: <b>Tom Clements, Environmental Superintendent</b>	
2. Application Contact Mailing Address... Organization/Firm: <b>Smurfit-Stone Container Enterprises, Inc.</b> Street Address: <b>One Everitt Avenue</b> City: <b>Panama City</b> State: <b>FL</b> Zip Code: <b>32402</b>	
3. Application Contact Telephone Numbers... Telephone: <b>(850) 785-4311</b> ext. 470 Fax: <b>(850) 763-8530</b>	
4. Application Contact Email Address: <b>tmclemen@smurfit.com</b>	

#### Application Processing Information (DEP Use)

1. Date of Receipt of Application:	3. PSD Number (if applicable):
2. Project Number(s):	4. Siting Number (if applicable):

## APPLICATION INFORMATION

### Purpose of Application

This application for air permit is submitted to obtain: (Check one)

#### **Air Construction Permit**

- Air construction permit.
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL).
- Air construction permit to establish, revise, or renew a plantwide applicability limit (PAL), and separate air construction permit to authorize construction or modification of one or more emissions units covered by the PAL.

#### **Air Operation Permit**

- Initial Title V air operation permit.
- Title V air operation permit revision.
- Title V air operation permit renewal.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is required.
- Initial federally enforceable state air operation permit (FESOP) where professional engineer (PE) certification is not required.

#### **Air Construction Permit and Revised/Renewal Title V Air Operation Permit (Concurrent Processing)**

- Air construction permit and Title V permit revision, incorporating the proposed project.
- Air construction permit and Title V permit renewal, incorporating the proposed project.

**Note: By checking one of the above two boxes, you, the applicant, are requesting concurrent processing pursuant to Rule 62-213.405, F.A.C. In such case, you must also check the following box:**

- I hereby request that the department waive the processing time requirements of the air construction permit to accommodate the processing time frames of the Title V air operation permit.

### Application Comment

This application is to establish a permit limit for SO<sub>2</sub> emissions of 690 lb/hr (24-hour average) for the No. 4 Combination Boiler (EU 016).

# 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>6241 NW 23<sup>rd</sup> Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(352) 336-5600</b> ext. <b>545</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 checked="" 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 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>  <i>David A. Buff</i> Signature _____ Date <u>10/30/07</u>  (seal)

\* Attach any exception to certification statement.

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

**EMISSIONS UNIT INFORMATION**

Section [1]  
No. 4 Combination Boiler

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
Sulfur Dioxide – SO<sub>2</sub>

**F2. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION -  
ALLOWABLE EMISSIONS**

Complete if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>690 lb/hr, 24-hr average</b>	4. Equivalent Allowable Emissions: <b>690 lb/hour      3,022.2 tons/year</b>
5. Method of Compliance:  <b>CEMS for SO<sub>2</sub>.</b>	
6. Allowable Emissions Comment (Description of Operating Method):  <b>Proposed permit limit as a 24-hour average.</b>	

**Allowable Emissions** Allowable Emissions 2 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>1,183.0 lb/hr</b>	4. Equivalent Allowable Emissions: <b>1,183.0 lb/hour      tons/year</b>
5. Method of Compliance: <b>Annual test using EPA Test Method 6.</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Based on Permit No. 0050009-025-AV when incinerating NCG and SOG. Limit is 1,174 lb/hr when burning SOG but not NCG, 1,183 lb/hr when burning NCG but not SOG, and 772 lb/hr when not incinerating NCG or SOG.</b>	

**Allowable Emissions** Allowable Emissions \_\_\_\_ of \_\_\_\_

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units:	4. Equivalent Allowable Emissions: <b>lb/hour      tons/year</b>
5. Method of Compliance:	
6. Allowable Emissions Comment (Description of Operating Method):	



# EMISSIONS UNIT INFORMATION

Section [1]

No. 4 Combination Boiler

## A. GENERAL EMISSIONS UNIT INFORMATION

### Title V Air Operation Permit Emissions Unit Classification

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)
- The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.
- The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

### Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in this Section: (Check one)
- This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).
- This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.
- This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section:

**No. 4 Combination Boiler**

3. Emissions Unit Identification Number: **016**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date:	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>26</b>	8. Acid Rain Unit? <input type="checkbox"/> Yes <input type="checkbox"/> No
--	--------------------------------	--------------------------	--	---

9. Package Unit:

Manufacturer:

Model Number:

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:

**The Batch Digester System and Multi-Effect Evaporator System may vent non-condensable gases (NCGs) to the No. 4 Combination Boiler as a backup control device. The No. 4 Combination Boiler may also be used for condensate stripper off-gas (SOG) destruction.**

**EMISSIONS UNIT INFORMATION**

Section [1]  
No. 4 Combination Boiler

**POLLUTANT DETAIL INFORMATION**

Page [1] of [1]  
Sulfur Dioxide – SO<sub>2</sub>

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
POTENTIAL/ESTIMATED FUGITIVE EMISSIONS**

(Optional for unregulated emissions units.)

**Potential/Estimated Fugitive Emissions**

**Complete for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>1,183 lb/hour                      3,022.2 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to                      tons/year			
6. Emission Factor: <b>690 lb/hr SO<sub>2</sub>, 24-hr average</b>  Reference: <b>Proposed permit limit</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required): tons/year		8.b. Baseline 24-month Period: From:                      To:	
9.a. Projected Actual Emissions (if required): tons/year		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions:  <b>24-hour &amp; Annual: 690 lb/hr SO<sub>2</sub> x 8,760 hr/yr x 1 ton/2,000 lb = 3,022.2 TPY</b>  <b>3-hour: Current permit limit: 1,183 lb/hr</b>			
11. Potential Fugitive and Actual Emissions Comment:			