

Jeb Bush  
Governor

# Department of Environmental Protection

Northeast District  
7825 Baymeadows Way, Suite B200  
Jacksonville, Florida 32256-7590

David B. Struhs  
Secretary

March 5, 2003

**CERTIFIED MAIL - RETURN RECEIPT REQUESTED**

Mr. Warren S. Flenniken, V.P. and General Manager  
Jefferson Smurfit Corp. (U.S.), Mill Division  
North 8<sup>th</sup> Street  
Fernandina Beach, FL 32034

RECEIVED

MAR 07 2003

BUREAU OF AIR REGULATION

Nassau County -Air Permitting  
Jefferson Smurfit Corporation (U.S.), Mill Division  
Final Title V Permit No. 0890003-001-AV  
Request for Additional Information Regarding Title V Permit Renewal Application

Dear Mr. Flenniken:

On December 18, 2002, the Department received your application for a Title V Permit Renewal for the referenced facility.

However, in order to continue processing your application, the Department will need the below additional information pursuant to Rule 62-213.420(1)(b)4., F.A.C., and Rule 62-4.070(1), F.A.C. Should your response to any of the following items require new calculations, please submit the new calculations, assumptions, reference material and appropriate revised pages of the application form.

1. Alternative Methods of Operation, Attachment JSF-FI-C10 includes the operation of the package boiler. The Department acknowledges the use of this boiler as stated in Subsection J in FINAL Title V Permit 0890003-001-AV. However, this boiler was removed from the DRAFT Title V Permit Revision that was issued on May 31, 2002. The package boiler is presently being addressed in an air construction permit application. JSC's response to the Department's October 30, 2002 Request for additional information was deemed incomplete and a second request for additional information was mailed on February 28, 2003. Because the final agency action has not been taken on this application, the Title V Renewal application should not reflect this boiler as a permitted EU.
2. The No. 5 Power Boiler fires both carbonaceous fuel and No. 6 fuel oil. The particulate matter emissions and visible emissions permit limits are based on the Carbonaceous Rule, 62-296.410, F.A.C. However, this rule is not listed in the List of Applicable Regulations in Section C. Emissions Unit Regulations of the Application. Please update this page of the application.
  - Please also note that this list states Rule 62-296.404(1)(b), F.A.C., which is Reserved. Please correct this rule citation.
  - It appears that Rule 62-296.404(3)(a)1., F.A.C. was omitted from the application regulations list. Please correct.

*"More Protection, Less Process"*

Printed on recycled paper.

--ATTENTION MAIL ROOM--

PLEASE ROUTE THIS  
DOCUMENT TO:

Jonathan Holton - DARM  
Name of Individual/Office

5505

Mail Station Number

Mr. Warren S. Flenniken, V.P. and General Manager  
Jefferson Smurfit Corp. (U.S.), Mill Division  
March 5, 2003  
Page Two

3. The application states that the No. 5 Power Boiler is subject to Rule 62-296.404(5)(d) and 62-296.404(6), F.A.C., Surrogate Parameters and Quarterly Reporting, respectively. Please submit documentation that indicates compliance with these regulations.
4. It appears that 40 CFR 60.284(c) is applicable to the No. 5 Recovery Boiler. Please review and update the List of Applicable regulations accordingly.
5. Rule 62-296.404(5)(d), F.A.C. is stated as being applicable to the No. 5 Smelt Dissolving Tank. Please provide the surrogate parameters being monitored and the minimum/maximum limits for inclusion in the Title V Permit.
6. Permit No. AO45-169854 states that the maximum sulfur content of the No. 6 fuel oil shall not exceed 2.5% by weight. However, this requirement does not appear in the current Title V Permit. Please explain.
7. In the amendment to Permit No. AO45-169854 dated January 21, 1992, it states that the permitted rate for bark ash from the No. 5 Power Boiler is 3.33 Tons per hour. However, the current Title V Permit states the permitted rate as 10 Tons per hour. Please explain. Was this addendum to the permit also completed through an AC permitting process? Was the increase to 10 tons per hour completed through an AC permitting process?
8. The current Title V Permit states that the applicable NOX emissions limit is 0.7 lb/MMBTU, 714.7 lbs/hr and 3,130.4 TPY. It appears that the 0.7 lb/MMBTU limit is based on an amendment to Construction Permit No. AC45-35532 dated October 22, 1984. However a note in the DEP files indicates that this amendment was withdrawn by CCA (Cynthia Sawyer, Environmental Coordinator) and voided on December 4, 1984. It appears that this is further supported with the issuance of Operation Permit No. AO45-169854. The NOx limit in this permit is stated to be 0.6 lb/MMBTU, 612.60 lb/hr and 2683.19 TPY. The permit also makes reference to an EPA/DER agreement (CFR 52.21(j)) as the rule basis of this condition. On December 7, 1984, an amendment to Construction Permit No. AC45-35532 was issued which stated that the emission standard for NOx to be used in applying 40 CFR 60.45(a) and (b) [CEMS requirements], shall be in accordance with 40 CFR 60.44(a)(3), i.e. a maximum of 0.7 lb/MMBTU. This amendment did not increase the NOx limit from 0.6 to 0.7 lb/MMBTU. Therefore, the NOx limit in the Title V Permit will be 0.6 lb/MMBTU, 612.60 lb/hr and 2683.19 TPY. Please correct the application pages to reflect 0.6 lb/MMBTU as the NOx limit.
9. In the EPA Modification to PSD-FL-062, it is stated that EPA concurs that the proposed use of less than 0.75 percent sulfur Eastern or Mid Western bituminous coal to achieve the NSPS emissions limit (1.2 lbs SO<sub>2</sub>/MMBTU), constitutes BACT. However, Condition F. 19 of the Current Title V Permit establishes the sulfur content of the coal based on the following formula:

$$\%S (\text{max allowed}) = (6.32 \times 10^{-5}) \times (\text{BTU per lb coal})$$

Please provide the documentation that allows the use of this formula to determine the maximum sulfur content of the coal instead of the 0.75 as stated in the EPA Modification to PSD-FL-062.

Mr. Warren S. Flenniken, V.P. and General Manager  
Jefferson Smurfit Corp. (U.S.), Mill Division  
March 5, 2003  
Page Three

10. In the EPA Modification to PSD-FL-062, Table 7 states the Allowable Emissions Limits applicable to the No. 7 boiler. This table establishes allowables for SO<sub>2</sub> and NO<sub>x</sub> emissions when firing wood and the combination of wood and coal. These allowables are not stated in the current Title V Permit. Please provide documentation that this BACT has been revised such that these allowables are not longer applicable.
11. In the EPA Modification to PSD-FL-062, Table 3 states the Allowable Emissions Limits applicable to the No. 7 boiler, the Coal Handling System, and the Ash Handling System. The Table states a 0.5 lb/hr PM emission limit for the Ash Handling System based on BACT. However, this limitation is not in the current Title V Permit. Please provide documentation that this BACT has been revised such that this limitation is no longer applicable.
12. In the Title V Renewal Application, a copy of and EPA Region IV letter dated November 21, 1989 was provided. In the letter it states that EPA proposes that the Department approve JSC (Container Corporation at that time), proposed fuel sampling and analysis procedures for compliance with 60.45(b) for the No. 7 Boiler. In a December 11, 1989 letter, the Department approves these procedures. Please provide a copy of these fuel sampling and analysis procedures for inclusion in the Title V Permit.
13. Please remove the Golder and Associates letter dated October 12, 2001, concerning JSC requests for corrections to the current Title V Permit from Attachment JSF-UE7-13 and any other EU where it may appear in the application. This attachment is entitled, "Identification of Additional Applicable Requirements". These requests were addressed in the Departments Request for Additional Information dated December 14, 2001, as well as the DRAFT Title V Permit Revision issued May 31, 2002. Since not all of these requests were incorporated in the Title V Permit or were incorporated as requested in this October 12, 2001 letter, they cannot be classified as applicable requirements as written in this letter.
14. Please address the applicability of 40 CFR Part 63 Subpart KK, National Emission Standards for the Printing and Publishing Industry to this facility.
15. Please note that the regulation citation, 40 CFR 60.282(a)(1)(v) in the List of Applicable Regulations for the C-Line BSW System is incorrect. It should be 40 CFR 60.283(a)(1)(v).
16. The Title V Permit allows for the continuous monitoring of TRS surrogate parameters: scrubber liquid flow rate and the pressure drop across the scrubber tower. However, this emissions unit is subject to the provisions of 40 CFR 60 Subpart BB, which require the installation and operation of a TRS and Oxygen Continuous Monitor. The previous PSD permit, No. AC45-190383/PSD-FL-165 also states that monitoring of emissions and operations shall be in accordance with 40 CFR 60.284. Please explain when and under what permitting process were the monitoring of surrogate parameters authorized.
17. Please note that it appears that 40 CFR 63.443(d) was omitted from the List of Applicable Regulations for the Pulping System – MACT I emissions unit. Please correct this list of applicable regulations.

Mr. Warren S. Flenniken, V.P. and General Manager  
Jefferson Smurfit Corp. (U.S.), Mill Division  
March 5, 2003  
Page Four

18. It appears that the regulation citation, 40 CFR 63.446(c)(2) is incorrect for the option that JSC has elected. It appears that the citation should be 40 CFR 63.446(c)(3). Please correct this list of applicable regulations.
19. It appears that the regulation citation, 40 CFR 63.446(e)(3) is incorrect for the option that JSC has elected. It appears that the citation should be 40 CFR 63.446(e)(4). Please correct this list of applicable regulations.
20. It appears that the regulation citation, 40 CFR 63.453(i) was omitted from the List of applicable Regulations for the Pulping System – MACT I emissions unit. Please justify.
21. It is understood that because JSC uses an UNOX system as the control device to comply with the condensate requirements of Subpart S, that 40 CFR 63.453(p) is not applicable since it pertains to open biological treatment systems. It is not clear from the EPA approved 3/5/01 amended, Condensate Compliance Plan, what steps JSC undertakes when a monitoring parameter excursion occurs. Please provide this information for inclusion in the Title V Permit.
22. It appears that the regulation citation, 40 CFR 63.455(e) was omitted from the List of Applicable Regulations for the Pulping System – MACT I emissions unit. Please justify.
23. Please explain, in detail, why the following citations were not listed in the List of Applicable Regulations for the Pulping System – MACT I emissions unit: 40 CFR 63.457(b), (c), (f), (g), (j), (l), (m)(2). If these regulations are covered by the 3/5/01 amended Condensate Compliance Plan, please identify which portions of the plan.

#### CAM Questions:

##### PM Emissions From The No. 5 Power Boiler

Please compare past successful PM compliance results to the associated COMS readings and/or concurrent Method 9 results. An indicator range of 30% VE would not appear to be protective of the PM standard if, under normal operations, "there will be very little VE from the ESP exhaust." Provide a correlation between actual PM emissions and representative actual VE readings. Indicator ranges should be sufficiently protective of the emissions standards in order to prevent excursions.

##### PM Emissions From The Nos. 4 and 5 Recovery Boilers, Nos. 4 and 5 Smelt Dissolving Tanks, No. 4 Lime Kiln

Because this emissions unit is subject to a SIP limit for PM emissions, has potential uncontrolled emissions greater than 100 TPY, and because a control device is used to meet this limit, a CAM plan is required upon permit renewal. Please submit an approvable CAM plan to monitor compliance with the current SIP standards. Provide a correlation between actual PM emissions and scrubber parameters, i.e. pressure drop, flow rate, etc. Indicator ranges should be sufficiently protective of the emissions standards in order to prevent excursions.

Mr. Warren S. Flenniken, V.P. and General Manager  
Jefferson Smurfit Corp. (U.S.), Mill Division  
March 5, 2003  
Page Five

TRS Emissions From The Nos. 4 and 5 Smelt Dissolving Tanks

Please provide documentation that the TRS emissions pre-control device is equal to or greater than 100 tons per year. Please provide information on how much TRS removal is obtained from the Venturi Scrubber. Are there any parameters that can be correlated to a successful stack test, i.e. pressure drop, and flow rate of the scrubber medium? Please submit an approvable CAM Plan at this time.

PM Emissions From The No. 7 Power Boiler

Please compare past successful PM compliance results to the associated COMS readings and/or concurrent Method 9 results. An indicator range of 20% VE would not appear to be protective of the PM standard if, under normal operations, "there will be very little VE from the ESP exhaust." Provide a correlation between actual PM emissions and representative actual VE readings. Indicator ranges should be sufficiently protective of the emissions standards in order to prevent excursions. Please amend the CAM Plan as needed.

Responsible Official (R.O.) Certification Statement:

Rule 62-213.420, F.A.C. requires that a responsible official must certify all Title V permit applications. Due to the nature of the information requested above, the responsible official should certify your response. Please complete and submit a new R.O. certification statement page from the Application for Air Permit - Title V Source, DEP Form No. 62-210.900(1), effective February 11, 1999 (enclosed).

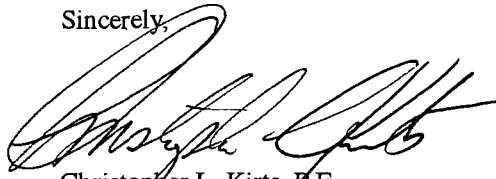
Professional Engineer (P.E.) Certification Statement:

Rule 62-4.050(3), F.A.C. requires that a professional engineer registered in the State of Florida certify all applications for a Department permit. This requirement also applies to responses to Department requests for additional information of an engineering nature. As a result, a professional engineer registered in the State of Florida should certify your response. Please complete and submit a new P.E. certification statement page from the Application for Air Permit - Title V Source, DEP Form No. 62-210.900(1), effective February 11, 1999 (enclosed).

The Department must receive a response from you within 90 (ninety) days of receipt of this letter, unless you (the applicant) request additional time under Rule 62-213.420(1)(b)6., F.A.C.

If you should have any questions, please call Rita Felton-Smith at (904) 807-3300, extension 3237.

Sincerely,



Christopher L. Kirts, P.E.  
District Air Program Administrator

RFS  
CLK:RFS

Enclosure:         Responsible Official Certification Statement  
                       Professional Engineer Certification Statement

Copy to:  
David A. Buff, P.E.  
Bill Crews, Jefferson Smurfit Corporation  
Jonathan Holtom, DARM

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:*

*(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*

*(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.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here [  ], 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 schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [  ], 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.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [  ], 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.*

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

(seal)

\* Attach any exception to certification statement.

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official:
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: Street Address: City: State: Zip Code:
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: ( ) - Fax: ( ) -
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ ], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.</i>  _____ Signature Date

\* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: Registration Number:
2. Professional Engineer Mailing Address: Organization/Firm: Street Address: City: State: Zip Code:
3. Professional Engineer Telephone Numbers: Telephone: ( ) - Fax: ( ) -





# Jefferson Smurfit Corporation

Telephone (904) 261-5551

**CERTIFIED MAIL**

**7002 0460 0000 7436 1644**

Containerboard Mill Division

North 8th Street

Fernandina Beach, FL 32034

**RECEIVED**

**FEB 07 2003**

January 31, 2003

Mr. Christopher Kirts, PE  
District Air Program Administrator  
Florida Department of Environmental Protection  
7825 Baymeadows Way, Suite B200  
Jacksonville, FL 32256-7590

**BUREAU OF AIR REGULATION**

Re: CAM Plan Submittal  
Title V Permit Renewal, Permit No. 0890003-001-AV  
Jefferson Smurfit Corporation (U.S.), Fernandina Beach Mill

Dear Mr. Kirts:

Enclosed please find the Compliance Assurance Monitoring (CAM) Plan required as part of the Title V Permit renewal for the Jefferson Smurfit Corporation, Fernandina Beach Mill. As stated in the Compliance Report and Plan in the Title V Permit renewal application, the CAM Plan would be submitted prior to February 1, 2003. A Responsible Official Certification and Professional Engineer Statement are also enclosed.

If you have any questions regarding this plan please contact me at (904) 277-7746 or David Buff at (352) 336-5600.

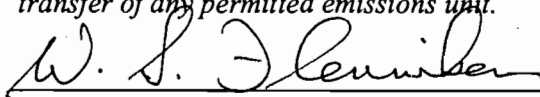
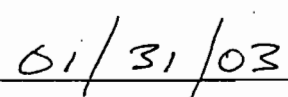
Sincerely,

William O. Crews  
Environmental Manager

Enclosures

cc: S. Devlin  
S. Hamilton  
D. Buff, Golder Assoc.  
J. Holtom, FDEP Certified Mail 7002 0460 0000 7436 1668

**Owner/Authorized Representative or Responsible Official**

1. Name and Title of Owner/Authorized Representative or Responsible Official: <b>Warren S. Flenniken, V.P. and General Manager</b>
2. Owner/Authorized Representative or Responsible Official Mailing Address: Organization/Firm: <b>Jefferson Smurfit Corp. (U.S.), Mill Div.</b> Street Address: <b>North 8th Street</b> City: <b>Fernandina Beach</b> State: <b>FL</b> Zip Code: <b>32034</b>
3. Owner/Authorized Representative or Responsible Official Telephone Numbers: Telephone: <b>( 904 ) 261 - 5551</b> Fax: <b>( 904 ) 277 - 5888</b>
4. Owner/Authorized Representative or Responsible Official Statement: <i>I, the undersigned, am the owner or authorized representative*(check here [ ], if so) or the responsible official (check here [ X ], if so) of the Title V source addressed in this application, whichever is applicable. 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. 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 any permitted emissions unit.</i>   Signature   Date

\* Attach letter of authorization if not currently on file.

**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 23rd Street, Suite 500</b> City: <b>Gainesville</b> State: <b>FL</b> Zip Code: <b>32653-1500</b>
3. Professional Engineer Telephone Numbers: Telephone: <b>( 352 ) 336 - 5600</b> Fax: <b>( 352 ) 336 - 6603</b>

\*Board of Professional Engineers Certificate of Authorization # 00001670

4. Professional Engineer Statement:

*I, the undersigned, hereby certify, except as particularly noted herein\*, that:*

*(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*

*(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.*

*If the purpose of this application is to obtain a Title V source air operation permit (check here [ X ], 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 schedule is submitted with this application.*

*If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], 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.*

*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], 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.*

Signature

*David A. Buff*

(seal)

Date

*1/30/03*

\* Attach any exception to certification statement.

**COMPLIANCE ASSURANCE MONITORING PLAN  
(CAM PLAN)**

**for**

**Jefferson Smurfit Corporation (U.S.)**

**Fernandina Beach Mill**

**January 30, 2003**

## TABLE OF CONTENTS

1.0	EMISSION UNITS REQUIRING CAM PLANS.....	1-1
1.1	CAM RULE APPLICABILITY DEFINITION.....	1-1
1.2	EMISSIONS UNITS REQUIRING CAM PLANS .....	1-1
1.2.1	NO. 5 POWER BOILER (EU 006) .....	1-2
1.2.2	NO. 4 RECOVERY BOILER (EU 007).....	1-3
1.2.3	NO. 5 RECOVERY BOILER (EU 011).....	1-3
1.2.4	NO. 4 SMELT DISSOLVING TANK (EU 013).....	1-3
1.2.5	NO. 5 SMELT DISSOLVING TANK (EU 014).....	1-4
1.2.6	NO. 7 POWER BOILER (EU 015) .....	1-4
1.2.7	TALL OIL PLANT (EU 020).....	1-4
1.2.8	NO. 4 LIME KILN (EU 021) .....	1-4
1.2.9	BROWNSTOCK WASHER C-LINE (EU 024).....	1-5
1.2.10	PULPING SYSTEM-MACT I (EU 033).....	1-5
1.2.11	PACKAGE BOILER .....	1-5
2.0	PARTICULATE MATTER EMISSIONS FROM THE NO. 5 POWER BOILER.....	2-1
2.1	EMISSIONS UNIT IDENTIFICATION .....	2-1
2.2	APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	2-1
2.3	CONTROL TECHNOLOGY DESCRIPTION.....	2-1
2.4	MONITORING APPROACH.....	2-2
2.5	JUSTIFICATION .....	2-2
2.5.1	BACKGROUND .....	2-2
2.5.2	RATIONALE FOR SELECTION OF PERFORMANCE INDICATORS .....	2-2
2.5.3	RATIONALE FOR SELECTION OF INDICATOR RANGES .....	2-3
3.0	PARTICULATE MATTER EMISSIONS FROM THE NO. 4 RECOVERY BOILER .....	3-1
3.1	EMISSIONS UNIT IDENTIFICATION .....	3-1
3.2	APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	3-1
3.3	CONTROL TECHNOLOGY DESCRIPTION.....	3-1
3.4	MONITORING APPROACH/JUSTIFICATION.....	3-1
4.0	PARTICULATE MATTER EMISSIONS FROM THE NO. 5 RECOVERY BOILER .....	4-1
4.1	EMISSIONS UNIT IDENTIFICATION .....	4-1

4.2	APPLICABLE REGULATION, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	4-1
4.3	CONTROL TECHNOLOGY DESCRIPTION.....	4-1
4.4	MONITORING APPROACH/JUSTIFICATION.....	4-1
5.0	PARTICULATE MATTER EMISSIONS FROM THE NO. 4 SMELT DISSOLVING TANK .....	5-1
5.1	EMISSIONS UNIT IDENTIFICATION .....	5-1
5.2	APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	5-1
5.3	CONTROL TECHNOLOGY DESCRIPTION.....	5-1
5.4	MONITORING APPROACH/JUSTIFICATION.....	5-1
6.0	TRS EMISSIONS FROM THE NO. 4 SMELT DISSOLVING TANK .....	6-1
6.1	EMISSIONS UNIT IDENTIFICATION .....	6-1
6.2	APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	6-1
6.3	CONTROL TECHNOLOGY DESCRIPTION.....	6-1
6.4	MONITORING APPROACH/JUSTIFICATION.....	6-1
7.0	PARTICULATE MATTER EMISSIONS FROM THE NO. 5 SMELT DISSOLVING TANK .....	7-1
7.1	EMISSIONS UNIT IDENTIFICATION .....	7-1
7.2	APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	7-1
7.3	CONTROL TECHNOLOGY DESCRIPTION.....	7-1
7.4	MONITORING APPROACH.....	7-1
8.0	TRS EMISSIONS FROM THE NO. 5 SMELT DISSOLVING TANK .....	8-1
8.1	EMISSIONS UNIT IDENTIFICATION .....	8-1
8.2	APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	8-1
8.3	CONTROL TECHNOLOGY DESCRIPTION.....	8-1
8.4	MONITORING APPROACH/JUSTIFICATION.....	8-1
9.0	PARTICULATE MATTER EMISSIONS FROM THE NO. 7 POWER BOILER.....	9-1
9.1	EMISSIONS UNIT IDENTIFICATION .....	9-1
9.2	APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	9-1
9.3	CONTROL TECHNOLOGY DESCRIPTION.....	9-1
9.4	MONITORING APPROACH.....	9-2

9.5	JUSTIFICATION .....	9-2
9.5.1	BACKGROUND .....	9-2
9.5.2	RATIONALE FOR SELECTION OF PERFORMANCE INDICATORS .....	9-2
9.5.3	RATIONALE FOR SELECTION OF INDICATOR RANGES .....	9-3
10.0	PARTICULATE MATTER EMISSIONS FROM THE NO. 4 LIME KILN.....	10-1
10.1	EMISSIONS UNIT IDENTIFICATION .....	10-1
10.2	APPLICABLE REGULATION, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	10-1
10.3	CONTROL TECHNOLOGY DESCRIPTION.....	10-1
10.4	MONITORING APPROACH/JUSTIFICATION.....	10-1
11.0	TRS EMISSIONS FROM THE PULPING SYSTEM—MACT I.....	11-1
11.1	EMISSIONS UNIT IDENTIFICATION .....	11-1
11.2	APPLICABLE REGULATION, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS.....	11-1
11.3	CONTROL TECHNOLOGY DESCRIPTION.....	11-1
11.4	MONITORING APPROACH/JUSTIFICATION.....	11-1

#### LIST OF TABLES

- Table 1. CAM Applicability Determination for Jefferson Smurfit, Fernandina Beach
- Table 2. Summary of Uncontrolled TRS Emission Rates for Sources Applicable to the CAM Plan Requirements, Jefferson Smurfit, Fernandina Beach
- Table 3. Summary of Uncontrolled PM Emission Rates for Sources Applicable to the CAM Plan Requirements, Jefferson Smurfit, Fernandina Beach

## 1.0 EMISSION UNITS REQUIRING CAM PLANS

### 1.1 CAM RULE APPLICABILITY DEFINITION

On June 15, 1998 the Florida Department of Environmental Protection (FDEP) issued a Title V Air Operation permit (Permit No. 0890003-001-AV) to the Jefferson Smurfit Corporation's (JSC) Fernandina Beach Mill. This permit expires on June 15, 2003. In order to renew the permit, a renewal application must be submitted to the Florida Department of Environmental Protection (FDEP).

As part of the Title V renewal application, a Compliance Assurance Monitoring (CAM) Plan must be submitted as required by regulations adopted in Title 40, Part 64 of the Code of Federal Regulations (40 CFR 64). This regulation has been incorporated by reference in Rule 62-204.800, F. A. C., and implemented in Rule 62-213.440, F. A. C.

CAM plans are required for all Title V permitted emission units using control devices to meet federally enforceable emission limits or standards with pre-control emissions greater than "major" source thresholds. The term "major" is defined as in the Title V Regulations (40 CFR 70), but applied on a source-by-source basis.

Specifically exempted from the CAM Rule are emissions units subject to requirements under Stratospheric Ozone Regulations (40 CFR 82), the Acid Rain Program (40 CFR 72), or that are part of an emission cap included in the Title V Permit. Also exempt are emission units subject to New Source Performance Standards (40 CFR 60) and National Emission Standards for Hazardous Air Pollutants (40 CFR 63) promulgated after November 15, 1990, as these sources have equivalent monitoring requirements included as part of the standard.

### 1.2 EMISSIONS UNITS REQUIRING CAM PLANS

A review of emission units at the JSC Fernandina Beach Mill was conducted to determine the applicability of the CAM Rule. This evaluation was conducted for each emission unit and regulated pollutant. First, the existence of a "control device" as defined by the CAM Rule was determined on a source-by-source basis for each pollutant. Those emission units without control devices were eliminated from further consideration. The remaining emission units were then evaluated on a



pollutant-by-pollutant basis to determine if a control device was used to meet a federally enforceable emission limit or standard.

Each pollutant without a federally enforceable emission limit or standard, emitted from a given emission unit, was eliminated from further consideration. Uncontrolled annual emissions were then calculated for each remaining source-pollutant combination. If uncontrolled emissions for a pollutant emitted from a given emission unit were below major source thresholds, as defined by the CAM Rule, that pollutant was not further considered.

A summary of the results of this evaluation process is presented in Table 1. Supporting information is presented in Tables 2 and 3. Specific exemptions to the applicability of the CAM Rule were also considered in this evaluation.

Each pollutant-specific emissions unit identified to require a CAM plan is described below.

#### **1.2.1 NO. 5 POWER BOILER (EU 006)**

JSC operates the No. 5 Power Boiler fired by carbonaceous fuel and No. 6 fuel oil in any combination. The No. 5 Power Boiler has a maximum heat input rate of 457 MMBtu/hr when firing carbonaceous fuel (24-hour average), 657.8 MMBtu/hr when firing No. 2 or No. 6 fuel oil (1-hour average), 573.4 MMBtu/hr when firing No. 2 or No. 6 fuel oil (24-hour average), and 805 MMBtu/hr when firing any combination of these fuels.

No. 5 Power Boiler has federally enforceable emission limits for PM, SO<sub>2</sub>, and TRS. The No. 5 Power Boiler utilizes an electrostatic precipitator (ESP) to control PM emissions. As shown in Table 3, uncontrolled PM emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit, and uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for the No. 5 Power Boiler for PM. Since there is no control device controlling SO<sub>2</sub> or TRS emissions from the No. 5 Power Boiler, CAM plans for SO<sub>2</sub> and TRS are not required.

### 1.2.2 NO. 4 RECOVERY BOILER (EU 007)

The No. 4 Recovery Boiler fires black liquor solids (BLS) and/or No. 6 fuel oil. The No. 4 Recovery Boiler has a maximum operating rate of 137,500 lb/hr BLS as a 24-hour average, and 2,981 barrels/day when firing No. 6 fuel oil alone or in combination with BLS.

The No. 4 Recovery Boiler has federally enforceable emission limits for PM and TRS. PM emissions from the No. 4 Recovery Boiler are controlled with an ESP. As shown in Table 1, uncontrolled PM emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit, and uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for the No. 4 Recovery Boiler for PM. Since there is no control device controlling TRS emissions from the No. 4 Recovery Boiler, a CAM plan for TRS is not required.

### 1.2.3 NO. 5 RECOVERY BOILER (EU 011)

The No. 5 Recovery Boiler fires BLS and No. 6 fuel oil, and has a maximum operating rate of 156,780 lb/hr BLS as a 24-hour average, and 3,012 barrels/day when firing No. 6 fuel oil; alone or in combination.

The No. 5 Recovery Boiler has federally enforceable emission limits for PM and TRS. PM emissions from the No. 5 Recovery Boiler are controlled with an ESP. As shown in Table 1, uncontrolled PM emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit, and uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for the No. 5 Recovery Boiler for PM. Since there is no control device for TRS emissions from the No. 5 Recovery Boiler, a CAM plan for TRS is not required.

### 1.2.4 NO. 4 SMELT DISSOLVING TANK (EU 013)

The No. 4 Smelt Dissolving Tank, associated with the No. 4 Recovery Boiler, has a maximum operating rate of 137,500 lb/hr BLS as a 24-hour average. The No. 4 Smelt Dissolving Tank has federally enforceable limits for PM and TRS. A venturi scrubber is used to control emissions of PM and TRS. As shown in Table 1, uncontrolled PM and TRS emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM and TRS, a control device is used to

comply with the PM and TRS emission limits, and uncontrolled PM and TRS emissions are greater than 100 TPY, a CAM plan is required for the No. 4 Smelt Dissolving Tank for PM and TRS.

#### **1.2.5 NO. 5 SMELT DISSOLVING TANK (EU 014)**

The No. 5 Smelt Dissolving Tank, associated with the No. 5 Recovery Boiler, has a maximum operating rate of 156,780 lb/hr BLS as a 24-hour average. This emissions unit has federally enforceable limits for PM and TRS. A venturi scrubber is used to control emissions of PM and TRS. As shown in Table 1, uncontrolled PM and TRS emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM and TRS, a control device is used to comply with the PM and TRS emission limits, and uncontrolled PM and TRS emissions are greater than 100 TPY, a CAM plan is required for the No. 5 Smelt Dissolving Tank for PM and TRS.

#### **1.2.6 NO. 7 POWER BOILER (EU 015)**

The No. 7 Power Boiler combusts coal, No. 6 fuel oil and/or No. 2 fuel oil. The maximum operating rates for the No. 7 Power Boiler are 81,680 lb/hr of coal (24-hour average), and 6,800 gal/hr of No. 6 or No. 2 fuel oil (24-hour average).

The No. 7 Power Boiler has federally enforceable emission limits for PM, SO<sub>2</sub>, NO<sub>x</sub>, and CO. An ESP controls the PM emissions from the No. 7 Power Boiler. As shown in Table 1, uncontrolled PM emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit, and uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for the No. 7 Power Boiler for PM. Since there is no control device on the boiler for SO<sub>2</sub>, NO<sub>x</sub>, or CO, CAM plans are not required for these pollutants.

#### **1.2.7 TALL OIL PLANT (EU 020)**

The Tall Oil Plant operates at a maximum operating rate of 17,000 lb/hr of tall oil (12-hour average). The Tall Oil Plant has a federally enforceable emission limit for TRS. TRS emissions from the Tall Oil Plant are controlled by a scrubber. As shown in Table 1, uncontrolled TRS emissions are less than 100 TPY. Therefore, a CAM plan is not required for the Tall Oil Plant.

#### **1.2.8 NO. 4 LIME KILN (EU 021)**

The No. 4 Lime Kiln operates at a maximum lime production rate of 630 TPD, corresponding to a process input rate of 46.87 TPH of lime mud (CaCO<sub>3</sub>). The No. 4 Lime Kiln has federally

enforceable emission limits for PM and TRS. An ESP controls the PM from the No. 4 Lime Kiln. The No. 4 Lime Kiln has a federally enforceable emission limit for PM. As shown in Table 1, uncontrolled PM emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM, a control device is used to comply with the PM emission limit, and uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for the No. 4 Lime Kiln for PM. Since TRS emissions are not controlled by a control device, a CAM plan is not required for TRS.

#### **1.2.9 BROWNSTOCK WASHER C-LINE (EU 024)**

The C-Line Brownstock Washing System has a maximum operating rate of 51,000 lb/hr dry pulp as a 24-hour average. The Brownstock Washer C-Line has a federally enforceable limit for TRS. TRS emissions from the Brownstock Washer C-Line are controlled with a scrubber. As shown in Table 1, uncontrolled TRS emissions are less than 100 TPY. Therefore, a CAM plan for TRS is not required.

#### **1.2.10 PULPING SYSTEM-MACT I (EU 033)**

The Pulping System-MACT I emissions unit (i.e., sources subject to MACT I) utilizes the No. 4 Lime Kiln and the No. 5 Power Boiler to control TRS emissions. Under the State of Florida TRS rules, the Pulping System has a federally enforceable emission limit for TRS. However, these emissions are accounted for in the No. 4 Lime Kiln and No. 5 Power Boiler emissions. Since uncontrolled TRS emissions are greater than 100 TPY, a CAM plan is required for this emissions unit.

#### **1.2.11 PACKAGE BOILER**

JSC operates a package boiler that combusts No. 2 fuel oil at a maximum rate of 190 MMBtu/hr. Although the Package Boiler has a federally enforceable emission limit for SO<sub>2</sub>, there is no control equipment for SO<sub>2</sub>. Therefore, a CAM plan is not required for the package boiler.

## **2.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 5 POWER BOILER**

### **2.1 EMISSIONS UNIT IDENTIFICATION**

No. 5 Power Boiler—EU ID 006

### **2.2 APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS**

The No. 5 Power Boiler has a particulate matter (PM) emission limit of 0.3 lb/MMBtu and 137.1 lb/hr for carbonaceous fuel, plus 0.1 lb/MMBtu and 34.8 lb/hr for No. 6 fuel oil; for a total PM emission rate of 171.9 lb/hr and 600.50 TPY. When firing only No. 6 fuel oil, PM emissions are limited to 0.1 lb/MMBtu, 65.78 lb/hr, and 251.15 TPY [Rule 62-296.410(1)(b)2., F.A.C.]. The current visible emissions (VE) limit is 30% opacity, with an exception of up to 40% opacity for 2 minutes per hour [Rule 62-296.410(1), F.A.C.].

PM compliance testing is required annually on the No. 5 Power Boiler. In addition, a continuous opacity monitoring system (COMS) is required to be used to record the opacity of the stack flue gas. The COMS must be properly calibrated, operated, and maintained in accordance with Rule 62-297.520, F.A.C.

### **2.3 CONTROL TECHNOLOGY DESCRIPTION**

PM emissions from the No. 5 Power Boiler are controlled by an electrostatic precipitator (ESP). The effectiveness of the ESP is evaluated with an annual stack test and continuous opacity measurements. A detailed description of the control equipment was included in the Title V renewal application (Attachment JSF-EU1-J3).

## 2.4 MONITORING APPROACH

	<b>Indicator No. 1</b>
Indicator	Opacity via a COMS.
Measurement Approach	40 CFR 60, Appendix B, Performance Specification 1
Indicator Range	An excursion is defined as a VE greater than 30% for a 6-minute block averaging time. An excursion will trigger an evaluation of operation of the power boiler and ESP. Corrective action will be taken as necessary. Any excursion will trigger recordkeeping and reporting requirements.
Data Representativeness	VE measurements are made in the stack.
Verification of Operational Status	NA
QA/QC Practices and Criteria	The COMS' is automatically calibrated every 24 hours. Calibration information is recorded through a data acquisition system (DAS). A neutral density filter test is performed quarterly as well as preventative maintenance items, replace filters, clean optics, etc., as prescribed by the manufacturer.
Monitoring Frequency	Opacity is monitored continuously.
Data Collection Procedures	Six-minute averages are recorded through the DAS. Daily reports with all six-minute averages are generated.
Averaging Period	The averaging period for opacity observations is a six-minute block average.

## 2.5 JUSTIFICATION

### 2.5.1 BACKGROUND

The pollutant specific emission unit is the No. 5 Power Boiler, which combusts carbonaceous fuel and No. 6 fuel oil. It is controlled by an ESP, which has a control efficiency of approximately 94-percent.

### 2.5.2 RATIONALE FOR SELECTION OF PERFORMANCE INDICATORS

VE was selected as the performance indicator because it is indicative of good operation and maintenance of the ESP. When the ESP is operating properly, there will be very little VE from the

ESP exhaust: An increase of VE beyond 30-percent opacity could indicate impaired performance of the particulate control device, therefore, VE is used as the performance indicator.

### **2.5.3 RATIONALE FOR SELECTION OF INDICATOR RANGES**

The selected indicator range is an opacity measurement of 30-percent or less, because VE greater than 30-percent could indicate impaired ESP performance and an associated increase in particulate emissions from the ESP outlet. The selected indicator range is the same as the opacity limit for the boiler. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence, to determine the action required (if any) to correct the situation. All excursions will be documented and reported.

### 3.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 4 RECOVERY BOILER

#### 3.1 EMISSIONS UNIT IDENTIFICATION

No. 4 Recovery Boiler—EU ID 007

#### 3.2 APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS

The No. 4 Recovery Boiler has a PM emission limit of 3 lb/3000 lb of black liquor solids (BLS); 137.5 lb/hr, and 602.25 TPY [Rule 62-296.404(2)(a), F.A.C.]. The current VE limit is 45-percent, with an exception of up to 60-percent for up to 6 minutes per hour [Rule 62-296.404(1)(a), F.A.C.].

PM compliance testing is required annually for the No. 4 Recovery Boiler [Rule 62-296.404(4)(a)2., F.A.C.].

#### 3.3 CONTROL TECHNOLOGY DESCRIPTION

PM emissions from the No. 4 Recovery Boiler are controlled by an ESP. A detailed description of the control equipment was included in the Title V renewal application (Attachment-JSF-EU2-J3).

#### 3.4 MONITORING APPROACH/JUSTIFICATION

The No. 4 Recovery Boiler is subject to MACT II (40 CFR 63, Subpart MM) regulations, which requires compliance by March 2004. The MACT II regulations limit PM emissions from recovery boilers. PM is considered to be a surrogate for hazardous air pollutant (HAP) emissions. By March 2004, JSC will be required to comply with the PM emission limits established in the MACT II regulations, as well as associated monitoring and recordkeeping. When compliance with the MACT II standards is achieved, the No. 4 Recovery Boiler will be exempt from CAM requirements (see 40 CFR 64.2(b)(1)(i)), since relevant monitoring is included in the MACT II requirements.

The monitoring requirements contained in the MACT II rule for a recovery furnace equipped with an ESP include the installation, calibration, maintenance, and operation of a COMS that can be used to determine opacity at least once every successive 10-second period and calculate and record the average opacity for each successive 6-minute period [40 CFR 63.864, Monitoring Requirements].

JSC's proposed CAM plan for the No. 4 Recovery Boiler is to comply with the MACT II regulations for PM, no later than March 2004.



#### 4.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 5 RECOVERY BOILER

##### 4.1 EMISSIONS UNIT IDENTIFICATION

No. 5 Recovery Boiler—EU ID 011

##### 4.2 APPLICABLE REGULATION, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS

The No. 5 Recovery Boiler has a PM emission limit of 0.044 gr/dscf at 8% O<sub>2</sub>, 83.3 lb/hr, and 356.9 TPY [Rule 62-204.800(7)(b)35., F.A.C.; 40 CFR 60.282(a)(1)(i)]. The current VE limit is 35% [Rule 62-204.800(7)(b)35., F.A.C.; 40 CFR 60.282(a)(1)(ii)].

PM compliance testing is required annually for the No. 5 Recovery Boiler. Additionally, a COMS is required to record the opacity of the stack flue gas. The COMS must be properly calibrated, operated, and maintained in accordance with Rule 62-297.520, F.A.C..

##### 4.3 CONTROL TECHNOLOGY DESCRIPTION

PM emissions from the No. 5 Recovery Boiler are controlled by an ESP. The effectiveness of the ESP is evaluated with an annual stack test and continuous opacity measurements. A detailed description of the control equipment was included in the Title V renewal application (Attachment JSF-EU3-J3).

##### 4.4 MONITORING APPROACH/JUSTIFICATION

The No. 5 Recovery Boiler is subject to MACT II (40 CFR 63, Subpart MM) regulations, which requires compliance by March 2004. The MACT II regulations limit PM emissions from recovery boilers. PM is considered to be a surrogate for HAP emissions. By March 2004, JSC will be required to comply with the PM emission limits established in the MACT II regulations, including associated monitoring and recordkeeping provisions. Upon compliance with the MACT II standards, the No. 5 Recovery Boiler will be exempt from CAM requirements (see 40 CFR 64.2(b)(1)(i)), since relevant monitoring is included in the MACT II requirements.

The monitoring requirements contained in the MACT II rule for a recovery furnace equipped with an ESP include the installation, calibration, maintenance, and operation of a COMS that can be used to determine opacity at least once every successive 10-second period and calculate and record the average opacity for each successive 6-minute period [40 CFR 63.864, Monitoring Requirements].

JSC's proposed CAM plan for the No. 5 Recovery Boiler is to comply with the MACT II regulations for PM, no later than March 2004.

## **5.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 4 SMELT DISSOLVING TANK**

### **5.1 EMISSIONS UNIT IDENTIFICATION**

No. 4 Smelt Dissolving Tank—EU ID No. 013

### **5.2 APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS**

The No. 4 Smelt Dissolving Tank has a PM emission limit of 28.5 lb/hr and 124.83 TPY based on 56.568 lb smelt/hr, which is based on the maximum BLS fired in the No. 4 Recovery Boiler [Rule 62-296.320(4)(a)2., F.A.C.]. The current VE limit is 20-percent [Rule 62-296.404(2)(b), F.A.C.].

A PM compliance test is required annually for the No. 4 Smelt Dissolving Tank [Rule 62-296.404(4)(c)1., F.A.C.].

### **5.3 CONTROL TECHNOLOGY DESCRIPTION**

PM emissions from the No. 4 Smelt Dissolving Tank are controlled by a venturi scrubber. A detailed description of the scrubber was included in the Title V renewal application (Attachment JSF-EU4-J3).

### **5.4 MONITORING APPROACH/JUSTIFICATION**

The No. 4 Smelt Dissolving Tank is subject to MACT II (40 CFR 63, Subpart MM) regulations, which require compliance by March 2004. The MACT II regulations limit PM emissions from smelt dissolving tanks associated with a recovery furnace. PM is considered to be a surrogate for HAP emissions. By March 2004, JSC will be required to comply with the PM emission limits established in the MACT II regulations, as well as associated monitoring and recordkeeping. Upon compliance with the MACT II standards, the No. 4 Smelt Dissolving Tank will be exempt from CAM requirements [see 40 CFR 64.2(b)(1)(i)] since relevant monitoring is included in the MACT II requirements.

The monitoring requirements contained in the MACT II rule for a smelt dissolving tank equipped with a wet scrubber include the installation, calibration, maintenance, and operation of a continuous monitoring system that records the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period [40 CFR 63.864, Monitoring Requirements].

JSC's proposed CAM plan for PM emissions from the No. 4 Smelt Dissolving Tank is to comply with the MACT II regulations for PM, no later than March 2004.

## 6.0 TRS EMISSIONS FROM THE NO. 4 SMELT DISSOLVING TANK

### 6.1 EMISSIONS UNIT IDENTIFICATION

No. 4 Smelt Dissolving Tank—EU ID No. 013

### 6.2 APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS

The No. 4 Smelt Dissolving Tank has a TRS emission limit of 0.048 lb/3,000 lb BLS; 2.2 lb/hr; and 9.64 TPY [Rule 62-296.404(3)(d)1., F.A.C.]. The current VE limit is 20-percent [Rule 62-296.404(2)(b), F.A.C.].

A continuous monitor is required to be used to record the weak wash flow rate to the scrubber, as a surrogate parameter for TRS control [Rule 62-296.404(5)(d), F.A.C.].

### 6.3 CONTROL TECHNOLOGY DESCRIPTION

TRS emissions from the No. 4 Smelt Dissolving Tank are controlled by a venturi scrubber. A detailed description of the scrubber was included in the Title V renewal application (Attachment JSF-EU4-J3).

### 6.4 MONITORING APPROACH/JUSTIFICATION

The current Title V permit contains monitoring requirements for the TRS surrogate parameter—weak wash flow rate to the scrubber. JSC's proposed CAM plan is to continue to comply with the monitoring of scrubber parameters, as required by the Title V permit, until the MACT II regulations take effect in 2004.

As described in Section 5.0, the No. 4 Smelt Dissolving Tank is subject to MACT II (40 CFR 63, Subpart MM) regulations, which requires compliance by March 2004. The monitoring requirements contained in the MACT II rule for a smelt dissolving tank equipped with a wet scrubber include the installation, calibration, maintenance, and operation of a continuous monitoring system that records the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period [40 CFR 63.864, Monitoring Requirements]. These same scrubber parameters would also be used as surrogates for TRS control. Since the MACT II regulations require monitoring of additional scrubber parameters for smelt dissolving tanks, JSC's proposed CAM plan for TRS emissions is to additionally monitor the same parameters for TRS control by March 2004.

## **7.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 5 SMELT DISSOLVING TANK**

### **7.1 EMISSIONS UNIT IDENTIFICATION**

No. 5 Smelt Dissolving Tank—EU ID No. 014

### **7.2 APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS**

The No. 5 Smelt Dissolving Tank has a PM emission limit of 0.2 lb/ton BLS, 15.68 lb/hr, and 67.17 TPY [Rule 62-204.800(7)(b)35., F.A.C.]. The current VE limit is 20-percent [Rule 62-296.404(2)(b), F.A.C.].

A PM compliance test is required annually for the No. 5 Smelt Dissolving Tank. A continuous monitor is required to be used to record the scrubber liquid supply pressure and pressure loss of the gas stream [Rules 62-204.800(7)(b)35., F.A.C.; and 40 CFR 60.284(b)(2)].

### **7.3 CONTROL TECHNOLOGY DESCRIPTION**

PM emissions from the No. 5 Smelt Dissolving Tank are controlled by a venturi scrubber. A detailed description of the control equipment was included in the Title V renewal application (Attachment JSF-EU5-J3).

### **7.4 MONITORING APPROACH**

The No. 5 Smelt Dissolving Tank is subject to MACT II (40 CFR 63, Subpart MM) regulations, which requires compliance by March 2004. The MACT II regulations limit PM emissions from smelt dissolving tanks associated with a recovery furnace. PM is considered to be a surrogate for HAP emissions. By March 2004, JSC will be required to comply with the PM emission limits established in the MACT II regulations, as well as associated monitoring and recordkeeping. Upon compliance with the MACT II standards, the No. 5 Smelt Dissolving Tank will be exempt from CAM requirements [see 40 CFR 64.2(b)(1)(i)] since relevant monitoring is included in the MACT II requirements.

The monitoring requirements contained in the MACT II rule for a smelt dissolving tank equipped with a wet scrubber include the installation, calibration, maintenance, and operation of a continuous

monitoring system that records the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period [40 CFR 63.864, Monitoring Requirements].

JSC's proposed CAM plan for PM emissions from the No. 5 Smelt Dissolving Tank is to comply with the MACT II regulations for PM, no later than March 2004.

## **8.0 TRS EMISSIONS FROM THE NO. 5 SMELT DISSOLVING TANK**

### **8.1 EMISSIONS UNIT IDENTIFICATION**

No. 5 Smelt Dissolving Tank—EU ID No. 014

### **8.2 APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS**

The No. 5 Smelt Dissolving Tank has a TRS emission limit of 0.033 lb/ton BLS, 2.59 lb/hr and 11.08 TPY [Rules 62-204.800(7)(b)35., F.A.C.; and 40 CFR 60.283(a)(4)]. The current VE limit is 20-percent [Rule 62-296.404(2)(b), F.A.C.].

A continuous monitor is required to be used to record the scrubber liquid supply pressure and pressure loss of the gas stream [Rules 62-204.800(7)(b)34., F.A.C.; and 40 CFR 60.284(b)(2)]. A continuous monitor is also required to be used to record the weak wash flow rate to the scrubber, as a surrogate parameter for TRS control [Rule 62-296.404(5)(d), F.A.C.].

### **8.3 CONTROL TECHNOLOGY DESCRIPTION**

TRS emissions from the No. 5 Smelt Dissolving Tank are controlled by a venturi scrubber. A detailed description of the control equipment was included in the Title V renewal application (Attachment JSF-EU5-J3).

### **8.4 MONITORING APPROACH/JUSTIFICATION**

The current Title V permit contains monitoring requirements for the TRS surrogate parameter—scrubber liquid supply pressure and pressure loss of the gas stream through the scrubber. JSC's proposed CAM plan for TRS is to continue to comply with the monitoring of scrubber parameters, as required by the Title V permit, until the MACT II regulations take effect in 2004.

As described in Section 7.0, the No. 5 Smelt Dissolving Tank is subject to MACT II (40 CFR 63, Subpart MM) regulations, which requires compliance by March 2004. The monitoring requirements contained in the MACT II rule for a smelt dissolving tank equipped with a wet scrubber include the installation, calibration, maintenance, and operation of a continuous monitoring system that records the pressure drop across the scrubber and the scrubbing liquid flow rate at least once every successive 15-minute period [40 CFR 63.864, Monitoring Requirements]. These same scrubber parameters would also be used as surrogates for TRS control. Since the MACT II regulations



requires monitoring of additional scrubber parameters for smelt dissolving tanks, JSC's proposed CAM plan for TRS emissions is to additionally monitor the same parameters for TRS control by March 2004.

## 9.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 7 POWER BOILER

### 9.1 EMISSIONS UNIT IDENTIFICATION

No. 7 Power Boiler—EU ID No. 015

### 9.2 APPLICABLE REGULATIONS, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS

The No. 7 Power Boiler has a PM emission limit of 0.1 lb/MMBtu, 102.1 lb/hr, and 447.2 TPY [Rule 62-204.800(7)(b)1., F.A.C.; 40 CFR 60.42(a)(1)]. The current VE limit is 20-percent, except up to 27-percent is allowed for up to 6 minutes per hour [Rules 62-204.800(7)(b)1., F.A.C.; and 40 CFR 60.42(a)(1) and (2)].

A PM compliance test is required annually for the No. 7 Power Boiler. Additionally, a COMS is required to record the opacity of the stack flue gas. The COMS must be calibrated, operated, and maintained in accordance with Rule 62-297.520, F.A.C. A continuous monitoring system is also required to record the oxygen content of the flue gas. The oxygen monitor must be calibrated, operated, and maintained in accordance with Rules 62-204.800(7)(b)1, F.A.C. and 40 CFR 60.45.

### 9.3 CONTROL TECHNOLOGY DESCRIPTION

PM emissions from the No. 7 Power Boiler are controlled by an ESP. The effectiveness of the ESP is evaluated with an annual stack test and continuous opacity measurements. A detailed description of the control equipment was included in the Title V renewal application (Attachment JSF-EU6-J3).

## 9.4 MONITORING APPROACH

	<b>Indicator No. 1</b>
Indicator	Opacity via a COMS.
Measurement Approach	40 CFR 60, Appendix B, Performance Specification 1
Indicator Range	An excursion is defined as a VE greater than 20% for a six-minute block averaging time. An excursion will trigger an evaluation of operation of the recovery boiler and ESP. Corrective action will be taken as necessary. Any excursion will trigger recordkeeping and reporting requirements.
Data Representativeness	VE measurements are made in the stack.
Verification of Operational Status	NA
QA/QC Practices and Criteria	The COMS is automatically calibrated every 24 hours. Calibration information is recorded through a data acquisition system (DAS). A neutral density filter test is performed quarterly as well as preventative maintenance items, replace filters, clean optics, etc., as prescribed by the manufacturer.
Monitoring Frequency	Opacity is monitored continuously.
Data Collection Procedures	Six-minute averages are recorded through the DAS. Daily reports with all six-minute averages are generated.
Averaging Period	The averaging period for opacity observations is a six-minute block average.

## 9.5 JUSTIFICATION

### 9.5.1 BACKGROUND

The pollutant specific emission unit is the No. 7 Power Boiler, which combusts coal, No. 6 fuel oil, and No. 2 fuel oil. It is controlled by an ESP, which has a control efficiency of approximately 99-percent.

### 9.5.2 RATIONALE FOR SELECTION OF PERFORMANCE INDICATORS

VE was selected as the performance indicator because it is indicative of good operation and maintenance of the ESP. When the ESP is operating properly, there will be very little VE from the

ESP exhaust. An increase of VE beyond 20-percent opacity could indicate impaired performance of the particulate control device, therefore VE is used as the performance indicator.

### 9.5.3 RATIONALE FOR SELECTION OF INDICATOR RANGES

An indicator range 20-percent or less opacity was selected because VE greater than 20-percent opacity could indicate impaired ESP performance and an associated increase in particulate emissions from the ESP outlet. The selected indicator range is the same as the opacity limit for the boiler. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence, to determine the action required (if any) to correct the situation. All excursions will be documented and reported.

## **10.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 4 LIME KILN**

### **10.1 EMISSIONS UNIT IDENTIFICATION**

No. 4 Lime Kiln—EU ID No. 021

### **10.2 APPLICABLE REGULATION, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS**

The No. 4 Lime Kiln has a PM emission limit of 0.13 gr/dscf at 10% O<sub>2</sub>, 43.5 lb/hr, and 190.0 TPY [Rule 62-204.800(7)(b)35., F.A.C.; 40 CFR 282(a)(3)(ii)]. The current VE limit is 20-percent [Rule 62-296.320(4)(b)1, F.A.C.].

A PM compliance test is required annually for the No. 4 Lime Kiln. Additionally, a continuous monitoring system is required to be used to record the TRS concentration in the stack flue gas. The monitoring system must be calibrated, operated, and maintained in accordance with Rules 62-204.800(7)(b)35, F.A.C.; and 40 CFR 60.284(a)(2).

### **10.3 CONTROL TECHNOLOGY DESCRIPTION**

PM emissions from the No. 4 Lime Kiln are controlled by an ESP. A detailed description of the control equipment was included in the Title V renewal application (Attachment JSF-EU8-J11).

### **10.4 MONITORING APPROACH/JUSTIFICATION**

The No. 4 Lime Kiln is subject to MACT II (40 CFR 63, Subpart MM) regulations, which required compliance by March 2004. The MACT II regulations limit PM from lime kilns. PM is considered to be a surrogate for HAP emissions. By March 2004, JSC will be required to comply with the PM emission limits established in the MACT II regulations as well as associated monitoring and recordkeeping. Upon compliance with the MACT II standards, the No. 4 Lime Kiln will be exempt from CAM requirements (see 40 CFR 64.2(b)(1)(i)), since relevant monitoring is included in the MACT II requirements.

The monitoring requirements contained in the MACT II rule for a lime kiln equipped with an ESP include the installation, calibration, maintenance, and operation of a COMS that can be used to determine opacity at least once every successive 10-second period and calculate and record the average opacity for each successive 6-minute period [40 CFR 63.864, Monitoring Requirements].

JSC's proposed CAM plan for the No. 4 Lime Kiln is to comply with the MACT II regulations for PM, no later than March 2004.

## 11.0 TRS EMISSIONS FROM THE PULPING SYSTEM—MACT I

### 11.1 EMISSIONS UNIT IDENTIFICATION

Pulping System-MACT I—EU ID No. 033

### 11.2 APPLICABLE REGULATION, EMISSIONS LIMITS, AND MONITORING REQUIREMENTS

TRS emissions from the Pulping System-MACT I are controlled in the No. 4 Lime Kiln and the No. 5 Power Boiler. The No. 4 Lime Kiln has a TRS emission limit of 8 ppmvd @ 10% O<sub>2</sub>, 2.63 lb/hr, and 11.5 TPY [Rules 62-204.800(7)35., F.A.C.; and 40 CFR 60.283(a)(5)]. The No. 5 Power Boiler has a TRS emission limit of 5 ppmvd @ 10% O<sub>2</sub> (12-hour average), 11.74 lb/hr, and 12.85 TPY [Rule 62-296.404(3)(f)].

A TRS compliance test is required annually for the No. 4 Lime Kiln. Additionally, a continuous monitoring device for TRS is required for the No. 4 Lime Kiln [Rules 62-204.800(7)(b)34., F.A.C.; and 40 CFR 60.284(a)(2)].

Compliance with the TRS limit for the No. 5 Power Boiler is achieved by maintaining the minimum temperature of 1200°F and the 0.5-second residence time [Rules 62-296.404(3)(a)1., F.A.C.; and 40 CFR 60.283(a)(1)(iii)]. However, no specific monitoring is required under Rule 62-296, F. A. C., to comply with this requirement.

### 11.3 CONTROL TECHNOLOGY DESCRIPTION

TRS emissions are combusted in the No. 4 Lime Kiln (primary control device) and the No. 5 Power Boiler (secondary control device).

### 11.4 MONITORING APPROACH/JUSTIFICATION

The Pulping System-MACT I is subject to MACT I (40 CFR 63, Subpart S) regulations. The MACT I regulations limit HAP emissions from pulping processes. Although the MACT I standards only regulate HAP emissions, the TRS emissions are contained in the same gas stream and are therefore controlled in the same manner. Since both HAP and TRS emissions are controlled by the No. 4 Lime Kiln and the No. 5 Power Boiler, and the HAP emissions are regulated by the MACT I standards, the proposed CAM plan for TRS is to comply with the MACT I regulations.

The monitoring requirements contained in the MACT I rule for pulping processes include monitoring of the closed vent system for transporting the HAP gases to the combustion device. The rules also require that the HAP emission stream be introduced with the primary fuel or the into the flame zone of the combustion device.



Table 1. CAM Applicability Determination for Jefferson Smurfit, Fernandina Beach

Emission Source	Title V EU ID	Control Equipment	Pollutants with Emission Limits	Uncontrolled Emission Rate (TPY) <sup>a</sup>		CAM Plan Required? (Yes/No)	Pollutants Requiring CAM	Comments
				PM/PM <sub>10</sub>	TRS			
No. 5 Power Boiler	006	ESP	PM, SO <sub>2</sub>	1,121	--	Yes	PM	PM uncontrolled emissions >100 TPY. No add-on controls for SO <sub>2</sub> .
No. 4 Recovery Boiler	007	ESP	PM, TRS	55,407	--	Yes	PM	PM uncontrolled emissions >100 TPY. No add-on controls for TRS.
No. 5 Recovery Boiler	011	ESP	PM, TRS	63,176	--	Yes	PM	PM uncontrolled emissions >100 TPY. No add-on controls for TRS.
No. 4 Smelt Dissolving Tank	013	Venturi Scrubber	PM, TRS	1,686	> 100	Yes	PM, TRS	PM and TRS uncontrolled emissions >100 TPY.
No. 5 Smelt Dissolving Tank	014	Venturi Scrubber	PM, TRS	1,923	> 100	Yes	PM, TRS	PM and TRS uncontrolled emissions >100 TPY.
No. 7 Power Boiler	015	ESP	PM, SO <sub>2</sub> , NO <sub>x</sub> , CO	12,522	--	Yes	PM	PM uncontrolled emissions >100 TPY. No add-on controls for SO <sub>2</sub> , NO <sub>x</sub> or CO.
Tall Oil Plant	020	Scrubber	TRS	--	27	No	--	TRS uncontrolled emissions <100 TPY.
No. 4 Lime Kiln	021	ESP	PM, TRS	23,372	--	Yes	PM	PM uncontrolled emissions >100 TPY. No add-on controls for TRS.
Brownstock Washer--C-Line	024	Scrubber	TRS	--	52	No	--	TRS uncontrolled emissions <100 TPY.
Pulping System--MACT I	033	No. 4 Lime Kiln, No. 5 Power Boiler	TRS	--	>100	Yes	TRS	TRS uncontrolled emissions >100 TPY.
Package Boiler		none	SO <sub>2</sub>	--	--	No	--	No control device for SO <sub>2</sub> .

<sup>a</sup> Refer to Tables 2 and 3 for uncontrolled emission rate calculations.

Table 2. Summary of Uncontrolled TRS Emission Rates for Sources Applicable to the CAM Plan Requirements, Jefferson Smurfit, Fernandina Beach

Emission Source	Title V EU ID	Production/ Process Rate	Uncontrolled TRS Emissions		
			Emission Factor	Ref.	Emission Rate <sup>a</sup> (TPY)
No. 4 Smelt Dissolving Tank	013	-- --	-- --		> 100
No. 5 Smelt Dissolving Tank	014	-- --	-- --		> 100
Tall Oil Plant	020	17,000 lb/hr tall oil	0.72 lb/ton tall oil	1	26.69
Brownstock Washer--C-Line	024	51,000 lb/hr ODP	0.42 lb/ton ADUP	2	51.60
Pulping System--MACT 1	033	-- --	-- --		> 100

1. Based on NCASI Technical Bulletin No. 650 (6/93)--"Compilation of Air Toxic Emission Data for Boilers, Pulp Mills, and Bleach Plants", Table 15; factor for tall oil reactor vents (dimethyl sulfide + dimethyl disulfide + methyl mercaptan + hydrogen sulfide = TRS).
2. AP-42 Table 10.2-1, Emission Factors for Kraft Pulping (9/90); factor for untreated brown stock washer. Factor of 1.1 ton ADUP = 1.0 ton ODUP used to convert.

Notes:

ADUP = air-dried unbleached pulp

BLS = black liquor solids

ODUP = oven-dried unbleached pulp

<sup>a</sup> Based on 8,760 hr/yr operation.

Table 3. Summary of Uncontrolled PM Emission Rates for Sources Applicable to the CAM Plan Requirements, Jefferson Smurfit, Fernandina Beach

Emission Source	Title V EU ID	Production/ Process Rate	Uncontrolled PM Emissions		
			Emission Factor	Ref.	Emission Rate <sup>a</sup> (TPY)
No. 5 Power Boiler	006	457 MMBtu/hr (bark)	0.56 lb/MMBtu	1	1,121
No. 4 Recovery Boiler	007	137,500 lb/hr BLS	230 lb/ton ADUP	2	55,407
No. 5 Recovery Boiler	011	156,780 lb/hr BLS	230 lb/ton ADUP	2	63,176
No. 4 Smelt Dissolving Tank	013	137,500 lb/hr BLS	7 lb/ton ADUP	2	1,686
No. 5 Smelt Dissolving Tank	014	156,780 lb/hr BLS	7 lb/ton ADUP	2	1,923
No. 7 Power Boiler	015	1,021 MMBtu/hr	2.8 lb/MMBtu	3	12,522
No. 4 Lime Kiln	021	26.25 TPH CaO	56 lb/ton ADUP	4	23,372

1. Based on uncontrolled emission factor for bark burning from AP-42 Table 1.6-1, Emission Factors for PM from Wood Residue Combustion.
2. AP-42 Table 10.2-1, Emission Factors for Kraft Pulping (9/90); untreated emission factors for non-contact recovery boiler. Factor of 0.8 tons ADUP/ton BLS used to convert.
3. Based on uncontrolled emission factor of 10A lb PM/ton coal from AP-42 Table 1.1-4, Emission Factors for PM and PM-10 from Bituminous and Subbituminous Coal Combustion, where A = 7% ash, and the heat content of coal: 12,500 Btu/lb.
4. AP-42 Table 10.2-1, Emission Factors for Kraft Pulping (9/90); untreated emission factor for lime kilns. Factor of 3.63 tons ADUP/ton CaO used to convert.

Notes:

ADUP = air-dried unbleached pulp

BLS = black liquor solids

MMBtu = million british thermal units

<sup>a</sup> Based on 8,760 hr/yr operation.