COMPLIANCE ASSURANCE MONITORING PLAN

(CAM PLAN)

for

Smurfit-Stone Container Enterprises

Panama City Mill

December 2009

0938-7628

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1.0 CAM APPLICABILITY

1.1 CAM Rule Applicability Definition

On July 28, 2005, the Florida Department of Environmental Protection (FDEP) issued a Title V Air Operation Permit (Permit No. 0050009-030-AV) to the Smurfit-Stone Container Enterprises, Inc. (SSCE) Panama City Mill. This permit expires on July 28, 2010. In order to renew the permit, a renewal application must be submitted to 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, Florida Administrative Code (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. For most non-hazardous pollutants, the major source threshold is 100 tons per year (TPY). For hazardous air pollutants (HAPs), the threshold is 10 TPY for an individual HAP, and 25 TPY for total HAPs combined.

The CAM rules contain specific exemptions from applicability of CAM. Specifically exempted from the CAM rule are emissions units (EUs) subject to requirements under Stratospheric Ozone Regulations contained in 40 CFR 82, the Acid Rain Program contained in 40 CFR 72, or that are part of an emissions cap included in the Title V Permit. Also exempt are emissions units subject to New Source Performance Standards (NSPS) contained in 40 CFR 60, or National Emission Standards for Hazardous Air Pollutants (NESHAPs) contained in 40 CFR 63, which were promulgated after November 15, 1990, as these sources have equivalent monitoring requirements included as part of those standards.

Inherent process equipment (IPE), or equipment that may have the effect of controlling emissions but is installed for the primary purpose of product recovery or raw material recovery, is also exempt from CAM (40 CFR 64.1). In addition, CAM does not apply to any emission limit or standard for which the Title V permit specifies a continuous compliance determination method [40 CFR 64.2(b)(1)(vi)].

1.2 Applicability of CAM to Emissions Units

A review of emissions units at the SSCE Panama City Mill was conducted to determine the applicability of the CAM rule. This evaluation was conducted for each emissions 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 emissions units without control devices were eliminated from further consideration. The remaining emissions 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 emissions 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 emissions 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. Specific exemptions to the applicability of the CAM rule were also considered in this evaluation. The "Comments" column in Table 1 contains an explanation of the determination of the applicability of the CAM rule for each emissions unit.

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

1.2.1 No. 1 Recovery Boiler (EU 001)

The No. 1 Recovery Boiler has a maximum input capacity 123,700 pounds per hour (lb/hr) of black liquor solids (BLS), dry basis. Natural gas, No. 6 fuel oil with a maximum sulfur content of 2.4 percent by weight, and No. 2 fuel oil with a maximum sulfur content of 0.5 percent by weight may be used as backup or supplemental fuel.

The No. 1 Recovery Boiler has federally enforceable emission limits for particulate matter (PM) and total reduced sulfur compounds (TRS). PM emissions from the No. 1 Recovery Boiler are controlled with an electrostatic precipitator (ESP). TRS emissions are controlled using a two-stage heavy black liquor oxidation system. As shown in Table 1, uncontrolled PM and TRS emissions are greater than 100 TPY.

The No. 1 Recovery Boiler is subject to the federal NESHAPs for Chemical Recovery Combustion Sources at Pulp Mills, 40 CFR 63, Subpart MM. This NESHAP was promulgated on January 12, 2001, with an effective date of March 13, 2002. The compliance date for existing sources was March 13, 2004. The Subpart MM rules regulate PM emissions from existing recovery boilers. As a result, the No. 1 Recovery Boiler is subject to a post-November 15, 1990, NESHAP for PM, and therefore this emissions unit is not subject to CAM for PM.

Since there is a federally enforceable emissions limit for TRS and a control device is used to meet this limit, a CAM plan for TRS is required. However, a continuous emissions monitoring system (CEMS) is already in place to satisfy the monitoring requirements in Rule 62-296.404(5), F.A.C. SSCE will use this CEMS to meet CAM requirements.

1.2.2 No. 2 Recovery Boiler (EU 019)

The No. 2 Recovery Boiler is identical to the No. 1 Recovery Boiler, and as such, is subject to the same CAM requirements as the No. 1 Recovery Boiler.

1.2.3 No. 3 Combination Boiler (EU 015)

The No. 3 Combination Boiler combusts carbonaceous fuels, fuel oil, and natural gas. The total maximum operational heat input rate of this emissions unit is 505 million British thermal units per hour (MMBtu/hr), based on a 24-hour average. The maximum heat input rates for various fuels are 474 MMBtu/hr for carbonaceous fuels, 378 MMBtu/hr for fuel oil, and 411 MMBtu/hr for natural gas. The No. 3 Combination Boiler is also used for thermal destruction of stripper off gases (SOGs) from the Condensate Stripper system.

The No. 3 Combination Boiler has federally enforceable emission limits for PM, sulfur dioxide (SO_2), and TRS. A fly ash arrestor and wet scrubber are used to control PM emissions from the No. 3 Combination Boiler. The wet scrubber is also used to control SO_2 emissions from this boiler. There are no add-on controls for TRS emissions. As shown in Table 1, uncontrolled PM and SO_2 emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM and SO_2, a control device is used to comply with these emission limits, and uncontrolled PM and SO_2 emissions are greater than 100 TPY, a CAM plan is required for the No. 3 Combination Boiler for these pollutants. Since there is no control device on the boiler for TRS emissions, no CAM plan is required for this pollutant.

The current Title V Permit already includes periodic monitoring requirements for the wet scrubber. SSCE intends to incorporate these requirements into the CAM plan for PM. SSCE already has a CEMS in place to monitor SO_2 emissions from this emission unit and intends to use it to satisfy CAM requirements.

1.2.4 No. 4 Combination Boiler (EU 016)

The No. 4 Combination Boiler combusts coal, carbonaceous fuels, fuel oil, and natural gas. The total maximum operational heat input rate of this emissions unit is 545 MMBtu/hr based on a 24-hour average. The maximum heat input rates for various fuels are 474 MMBtu/hr for carbonaceous fuels, 472 MMBtu/hr for fuel oil, 395 MMBtu/hr from coal, and 512 MMBtu/hr for natural gas. The No. 4 Combination Boiler is used as a backup to the Lime Kiln, for thermal destruction of NCGs from the digester system. The boiler can also be used for destruction of SOGs from the Condensate Stripper system.

The No. 4 Combination Boiler has federally enforceable emission limits for PM, SO_2, and TRS. A fly ash arrestor and wet scrubber are used to control PM emissions from the No. 4 Combination Boiler. The wet scrubber is also used to control SO_2 emissions from this boiler. There are no add-on controls for TRS emissions. As shown in Table 1, uncontrolled PM and SO_2 emissions are greater than 100 TPY. Since a federally enforceable emission limit exists for PM and SO_2, a control device is used to comply with these emission limits, and uncontrolled PM and SO_2 emissions are greater than 100 TPY, a CAM plan is required for the No. 4 Combination Boiler for these pollutants. Since there is no control device on the boiler for TRS emissions, no CAM plan is required for this pollutant.

The current Title V Permit already includes periodic monitoring requirements for the wet scrubber. SSCE intends to incorporate these requirements into the CAM plan for PM and SO_2. SSCE already has a CEMS in place to monitor SO_2 emissions from this emission unit and intends to use it to satisfy CAM requirements.

1.2.5 No. 1 Smelt Dissolving Tank (EU 021)

The No. 1 Smelt Dissolving Tank, associated with the No. 1 Recovery Boiler, has a maximum operating rate of 123,700 lb/hr of dry virgin BLS. The No. 1 Smelt Dissolving Tank has federally enforceable emission limits for PM and TRS. A venturi scrubber is used to control emissions of PM and TRS. As shown in Table 1, uncontrolled PM emissions are greater than 100 TPY. However, as shown in Table 2, uncontrolled TRS emissions are less than 100 TPY.

The No. 1 Smelt Dissolving Tank is subject to the federal NESHAPs for Chemical Recovery Combustion Sources at Pulp Mills, 40 CFR 63, Subpart MM. This NESHAP was promulgated on January 12, 2001, with an effective date of March 13, 2002. The compliance date for existing sources was March 13, 2004. The Subpart MM rules regulate PM emissions from existing smelt dissolving tanks. As a result, the No. 1 Smelt Dissolving Tank is subject to a post-November 15, 1990, NESHAP for PM, and therefore this emissions unit is not subject to CAM for PM.

Since uncontrolled TRS emissions are less than 100 TPY, a CAM plan is not required for the No. 1 Smelt Dissolving Tank for TRS. However, the current Title V Permit already includes periodic monitoring requirements for the wet scrubber for the control of TRS emissions, based on the State of Florida's TRS rules.

1.2.6 No. 2 Smelt Dissolving Tank (EU 020)

The No. 2 Smelt Dissolving Tank is identical to the No. 1 Smelt Dissolving Tank, and as such, is subject to the same CAM requirements as the No. 1 Smelt Dissolving Tank. As such, CAM does not apply for either PM or TRS emissions. However, the current Title V Permit already includes periodic monitoring requirements for the wet scrubber for the control of TRS emissions, based on the State of Florida's TRS rules.

1.2.7 Lime Kiln (EU 004)

The maximum operating rate for the Lime Kiln is 85,000 lb/hr of lime mud. The maximum heat input rate to the kiln is limited to 180 MMBtu/hr. The Lime Kiln is also used for thermal destruction of non-condensable gases (NCGs) from the batch digester system, the turpentine system, and the multiple effect evaporators. The Lime Kiln has federally enforceable emission limits for SO_2, nitrogen oxides (NO_x), PM, and TRS. A venturi scrubber controls PM and SO_2 emissions from the Lime Kiln. Uncontrolled SO_2, NO_x, PM, and TRS emissions are greater than 100 TPY.

The Lime Kiln is subject to the NESHAPs for chemical recovery combustion sources at pulp mills (40 CFR 63), Subpart MM. The NESHAP was promulgated on January 12, 2001, with an effective date of March 13, 2002. The compliance date for existing sources was March 13, 2004. The Subpart MM rules regulate PM emissions from existing lime kilns. As a result, the No. 4 Lime Kiln is subject to a post-November 15, 1990 NESHAP for PM, and therefore this emissions unit is not subject to CAM for PM.

Since federally enforceable emission limits exist for SO_2, a control device is used to comply with these emission limits, and uncontrolled SO_2 emissions are greater than 100 TPY, a CAM plan is required for the Lime Kiln for SO_2. There is no control device for TRS or NO_x emissions. Since TRS and NO_x emissions are not controlled by a control device, a CAM plan is not required for TRS or NO_x.

1.2.8 Multiple Effect Evaporator System (EU 026) and Digester System (EU 027)

The off gases from the Digester System and the Multiple Effect Evaporator System are collected in the low-volume, high-concentration (LVHC) NCG collection system and sent to the Lime Kiln (primary) or No. 4 Combination Boiler (backup) for thermal destruction. There are no emission limits for these emissions unit and, as such, they are not subject to CAM requirements.

1.2.9 Lime Slaker (EU 005)

The Lime Slaker has a maximum operating rate of 81.6 tons per hour (TPH), dry basis, consisting of 60.39 TPH of green liquor and 21.18 TPH of lime, based on a 24-hour average. The Lime Kiln has federally-enforceable emission limits for PM. A wet cyclonic scrubber controls PM emissions from the Lime Slaker. 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 limits, and uncontrolled PM emissions are greater than 100 TPY, a CAM plan is required for the Lime Slaker for PM.

1.2.10 Woodyard (EU 030)

There are no pollutant emission limits associated with this emissions unit. Therefore, the CAM Rule does not apply.

1.2.11 Bleach Plant (EU 033)

The maximum operation rate of the Bleach Plant is 1,250 and 839 air-dried tons of unbleached pulp per day (ADTUP/day) of hardwood and softwood, respectively. The Bleach Plant has been modified to allow for 100 percent chlorine dioxide substitution, and has a federally-enforceable emission limit for HAPs.

The Bleach Plant is subject to the federal NESHAPs for the Pulp and Paper Industry (40 CFR 63, Subpart S). This NESHAP was promulgated on December 14, 1994, with an effective date of

February 12, 1995. The compliance date for existing sources was April 16, 2001. The Subpart S rules regulate HAP emissions from existing bleach plants. As a result, the Bleach Plant is subject to a post-November 15, 1990 NESHAP for HAPs, and therefore this emissions unit is not subject to CAM for HAPs.

1.2.12 Pulping System – MACT I (EU 034)

The off-gases from the Pulping System are collected in the LVHC NCG collection system and sent to the Lime Kiln (primary) or No. 4 Combination Boiler (backup) for thermal destruction. There are no emission limits for this emissions unit and, as such, it is not subject to CAM requirements.

2.0 TOTAL REDUCED SULFUR EMISSIONS FROM THE NO. 1 RECOVERY BOILER

2.1 Emissions Unit Identification

No. 1 Recovery Boiler – EU 001.

2.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

The No. 1 Recovery Boiler has a TRS emission limit of 17.5 parts per million by volume, dry basis (ppmvd), corrected to 8 percent oxygen as a 12-hour average [Rule 62-296.404(3)(c)1.a., F.A.C; Title V Permit No. 0050009-030-AV). The current visible emissions (VE) limit is 35 percent for no more than 6 percent of the operating time within any quarterly period (40 CFR 63.864 and Title V Permit No. 0050009-030-AV).

Compliance with the VE limit is demonstrated through a continuous opacity monitoring system (COMS). TRS compliance testing is required only upon permit renewal. SSCE currently uses a CEMS to demonstrate compliance with the emission limit stipulated in Rule 62-296.404(3)(c)1.a., F.A.C.

2.3 Monitoring Approach

SSCE will use the CEMS for TRS to satisfy CAM requirements.

3.0 TOTAL REDUCED SULFUR EMISSIONS FROM THE NO. 2 RECOVERY BOILER

3.1 Emissions Unit Identification

No. 2 Recovery Boiler – EU 019.

3.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

The No. 2 Recovery Boiler has a TRS emission limit of 17.5 ppmvd, corrected to 8 percent oxygen [Rule 62-296.404(3)(c)1.a., F.A.C]. The current VE limit is 35 percent for no more than 6 percent of the operating time within any quarterly period (40 CFR 63.864 and Title V Permit No. 0050009-030-AV).

Compliance with the VE limit is demonstrated through a COMS. TRS compliance testing is required only upon permit renewal. SSCE currently uses a CEMS to demonstrate compliance with the emission limit stipulated in Rule 62-296.404(3)(c)1.a., F.A.C.

3.3 Monitoring Approach

SSCE will use the CEMS for TRS to satisfy CAM requirements.

4.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 3 COMBINATION BOILER

4.1 Emissions Unit Identification

No. 3 Combination Boiler – EU 015.

4.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

The No. 3 Combination Boiler has a PM emission limit of 0.3 lb/MMBtu for carbonaceous fuels, 0.1 lb/MMBtu for natural gas and fuel oil, and an emissions cap of 109.5 lb/hr [Rule 62-296.410(1)(b)2.; Construction Permit No. 0050009-013-AC; and Title V Permit No. 0050009-030-AV]. The current VE limit is 30 percent opacity, except up to 40 percent opacity is allowed for up to 2 minutes per hour [Rules 62-296.410(1)(b)1 and 62-296.404(2)(b), F.A.C.; and Title V Permit No. 0050009-030-AV].

PM and VE compliance tests are required annually for the No. 3 Combination Boiler.

4.3 Control Technology Description

PM emissions from the No. 3 Combination Boiler are controlled by a fly ash arrestor and wet scrubber. The effectiveness of the control equipment is evaluated with annual compliance tests. A detailed description of the control equipment was included in the Title V renewal application (Attachment SSCE-EU3-I3).

4.4 Monitoring Approach

The newly revised Title V Permit (Permit No. 0050009-030-AV) already includes monitoring requirements for the wet scrubber as part of the CAM Plan. The CAM Plan states that the scrubber water flow rate shall be maintained at 1,026 gallons per minute (gpm) based on a 3-hour average and verified during annual testing. The monitoring approach is summarized in the following table.

	Indicator No. 1
Indicator	Minimum scrubber flow rate.
Measurement Approach	Measurement of the scrubber flow rate at least four times per hour at approximately 15-minute increments.
Indicator Range	An excursion is defined as a measured 3-hour average flow rate less than 1,026 gpm. Excursions trigger an inspection, corrective action, and a reporting requirement.
Data Representativeness	The flow rate is measured using standard instrumentation provided for this purpose.
Verification of Operational Status	NA
QA/QC Practices and Criteria	Confirm the meters read zero when the unit is not operating. Calibrate the flow meter annually.
Monitoring Frequency	The flow rate will be measured at least four times per hour at approximately 15-minute increments.
Data Collection Procedures	Hourly averages are computed from readings at least once every successive 15-minute period.
Averaging Period	3-hour averages are computed from the hourly averages.

4.5 Justification

The minimum scrubber water flow rate for SSCE's CAM plan is based on past compliance testing for PM. The results of these tests are shown in the following table:

Test Date	Run	Heat Input (MMBtu/hr)	PM Emissions (lb/hr)	PM Emissions (lb/MMBtu)	Scrubber Flow (gpm)
10/11/2005	1	651.5	59.9	0.0920	1,046
	2	640.8	49.8	0.0777	1,041
	3	656.9	56.4	0.0859	1,036
6/7/2007	1	666.7	28	0.042	1,214
	2	642.9	27	0.042	1,208
	3	642.9	36	0.056	1,204
10/20/2008	1	546.2	37.1	0.0679	1,150
	2	567.0	34.3	0.0605	1,151
	3	503.7	31.7	0.0630	1,148
Maximum		**666.7**	**59.9**	**0.0920**	**1,214**
Average		**613.2**	**40.0**	**0.0652**	**1,133**
Minimum		**503.7**	**27.0**	**0.0420**	**1,036**

The PM emission rates measured during these tests were below the permitted PM emission rate of 0.3 lb/MMBtu for carbonaceous fuels, 0.1 lb/MMBtu for natural gas, and 109.5 lb/hr. Given that the measured PM emission rates were well below the permit limits, SSCE is requesting that the minimum

scrubber water flow rate of 1,026 gpm listed in the current Title V permit be used as an indicator of a deviation from normal operations for CAM purposes.

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.

5.0 SULFUR DIOXIDE EMISSIONS FROM THE NO. 3 COMBINATION BOILER

5.1 Emissions Unit Identification

No. 3 Combination Boiler – EU 015.

5.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

Permit No. 0050009-029-AC/PSD-FL-388A sets the No. 3 Combination Boiler SO_2 emission limits as follows:

- 1,366 lb/hr (based on a 3-hour rolling average) when only the No. 3 Combination Boiler is operating (No. 4 Combination Boiler not operating);
- 1,658 lb/hr (based on a 3-hour rolling average) combined SO_2 emissions when both the Nos. 3 and 4 Combination Boilers are operating;
- 907 lb/hr (based on a 24-hour rolling average) when only the No. 3 Combination Boiler is operating; and
- 329 lb/hr (based on a 24-hour rolling average) when both the Nos. 3 and 4 Combination Boilers are operating.

An SO_2 compliance test is required annually for the No. 3 Combination Boiler. A CEMS is required to continuously monitor SO_2 emissions. In addition, scrubber pH must be maintained above 8.0 (24-hour average) during times when the continuous monitor is being repaired and/or calibrated.

5.3 Control Technology Description

SO_2 emissions from the No. 3 Combination Boiler are controlled using a wet scrubber. The effectiveness of the control equipment is evaluated with annual compliance tests. A detailed description of the control equipment is included in the Title V renewal application (Attachment SSCE-EU3-I3).

5.4 Monitoring Approach

SSCE currently uses a CEMS to demonstrate compliance with the SO_2 emission limit for the No. 3 Combination Boiler. In addition, scrubber pH is monitored during times when the CEMS is being

repaired and/or calibrated. SSCE will use the CEMS and pH monitor to satisfy CAM requirements, as required by the current Title V permit.

6.0 PARTICULATE MATTER EMISSIONS FROM THE NO. 4 COMBINATION BOILER

6.1 Emissions Unit Identification

No. 4 Combination Boiler – EU 016.

6.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

The No. 4 Combination Boiler has a PM emission limit of 0.3 lb/MMBtu for carbonaceous fuels, 0.1 lb/MMBtu for coal, natural gas, and fuel oil, and an emissions cap of 86.7 lb/hr [Rule 62-296.410(1)(b)2.; Construction Permit No. 0050009-016-AC; and Title V Permit No. 0050009-030-AV]. The current VE limit is 30-percent opacity, except up to 40-percent opacity is allowed for up to 2 minutes per hour [Rule 62-296.410(1)(b)2, F.A.C., Air Construction Permit No. 0050009-016-AC; and Title V Permit No. 0050009-030-AV].

PM and VE compliance tests are required annually for the No. 4 Combination Boiler.

6.3 Control Technology Description

PM emissions from the No. 4 Combination Boiler are controlled by a fly ash arrestor and wet scrubber. The effectiveness of the control equipment is evaluated with annual compliance tests. A detailed description of the control equipment is included in the Title V renewal application (Attachment SSCE-EU4-I3).

6.4 Monitoring Approach

The current Title V Permit (Permit No. 0050009-030-AV) already includes monitoring requirements for the No. 4 Combination Boiler as part of the CAM Plan. The CAM Plan stipulates that the minimum water flow rate of the wet scrubber be maintained above 1,096 gpm. For sources with controlled emissions greater than major source thresholds, such as PM emissions from the No. 4 Combination, CAM regulations require that the selected indicator be measured and recorded a minimum of 4 times per hour. To meet this requirement, SSCE measures the scrubber water flow rate at least four times per hour, at approximately 15-minute intervals.

The monitoring approach is summarized in the following table.

	Indicator No. 1
Indicator	Minimum scrubber flow rate.
Measurement Approach	Measurement of the scrubber flow rate at least four times per hour at approximately 15-minute increments.
Indicator Range	An excursion is defined as a measured 3-hour average flow rate less than 1,046 gpm. Excursions trigger an inspection, corrective action, and a reporting requirement.
Data Representativeness	The flow rate is measured using standard instrumentation provided for this purpose.
Verification of Operational Status	NA
QA/QC Practices and Criteria	Confirm the flow meter reads zero when the unit is not operating. Calibrate flow meter annually.
Monitoring Frequency	The flow rate will be measured at least four times per hour at approximately 15-minute increments.
Data Collection Procedures	Hourly averages are computed from readings at least once every successive 15-minute period.
Averaging Period	3-hour averages are computed from the hourly averages.

6.5 Justification

The minimum scrubber water flow rate for SSCE's CAM plan is based on past compliance testing for PM. The results of these tests are shown in the following table:

Test Date	Run	Heat Input (MMBtu/hr)	PM Emissions (lb/hr)	PM Emissions (lb/MMBtu)	Scrubber Flow (gpm)
2/6/2006	1	784.8	62	0.079	1,055
	2	781.8	43	0.055	1,046
	3	800.0	56	0.07	1,077
6/26/2007	1	781.3	12.5	0.016	1,147
	2	784.6	10.2	0.013	1,144
	3	784.6	10.2	0.013	1,144
10/21/2008	1	746.2	14.0	0.0188	1,143
	2	746.3	20.9	0.0280	1,138
	3	771.8	20.5	0.0265	1,143
Maximum		**800.0**	**62.0**	**0.0790**	**1,147**
Average		**775.7**	**27.7**	**0.0355**	**1,115**
Minimum		**746.2**	**10.2**	**0.0130**	**1,046**

The PM emission rates measured during these tests were below the permitted PM emission rates of 0.1 lb/MMBtu for fossil fuels, 0.3 lb/MMBtu for carbonaceous fuels, and 86.7 lb/hr. Given that the

measured PM emission rates were well below the permitted limits, SSCE requests that the minimum scrubber water flow of 1,046 gpm be used for CAM purposes.

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.

7.0 SULFUR DIOXIDE EMISSIONS FROM THE NO. 4 COMBINATION BOILER

7.1 Emissions Unit Identification

No. 4 Combination Boiler – EU 016.

7.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

Permit No. 0050009-029-AC/PSD-FL-388A sets the No. 4 Combination Boiler SO_2 emission limits as follows:

- 1,183 lb/hr (based on a 3-hour rolling average) when both the Nos. 3 and 4 Combination Boilers are operating;
- 1,658 lb/hr (based on a 3-hour rolling average) combined SO_2 emissions when both the Nos. 3 and 4 Combination Boilers are operating;
- 690 lb/hr (based on a 24-hour rolling average) when only the No. 4 Combination Boiler is operating (No. 3 Combination Boiler is not operating); and
- 643 lb/hr (based on a 24-hour rolling average) when both the Nos. 3 and 4 Combination Boilers are operating.

An SO_2 compliance test is required annually for the No. 4 Combination Boiler. A CEMS is installed to continuously monitor SO_2 emissions. In addition, scrubber pH must be maintained above 8.0 (24-hour average) during times when the continuous monitor is being repaired and/or calibrated.

7.3 Control Technology Description

SO_2 emissions from the No. 4 Combination Boiler are controlled using a wet scrubber. The effectiveness of the control equipment is evaluated with annual compliance tests. A detailed description of the control equipment is included in the Title V renewal application (Attachment SSCE-EU4-I3).

7.4 Monitoring Approach

SSCE currently uses a CEMS to demonstrate compliance with the SO_2 emission limit for the No. 4 Combination Boiler. In addition, scrubber pH is monitored during times when the CEMS is being

repaired and/or calibrated. SSCE will use this CEMS and pH monitor to satisfy CAM requirements, as required by the current Title V permit.

8.0 PARTICULATE MATTER EMISSIONS FROM THE LIME SLAKER

8.1 Emissions Unit Identification

Lime Slaker – EU 005.

8.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

The Lime Slaker has a PM emission limit of 14 lb/hr (Permit No. 0050008-005-AC/PSD-FL-288; and Title V Permit No. 0050009-030-AV). The current VE limit is 20 percent [Rule 62-296.404(2)(b), F.A.C].

PM and VE compliance tests are required annually for the Lime Slaker.

8.3 Control Technology Description

PM emissions from the Lime Slaker are controlled by a wet scrubber. The effectiveness of the control equipment is evaluated with annual compliance tests. A detailed description of the control equipment is included in the Title V renewal application (Attachment SSCE-EU10-I3).

8.4 Monitoring Approach

The current Title V Permit (Permit No. 0050009-030-AV) already includes continuous monitoring requirements for the Lime Slaker. Specific Condition No. H.8 stipulates that the minimum weak wash flow rate of the scrubber be no less than 30 gpm, based on a 3-hour average. This permit condition further stipulates that the flow must be measured and recorded once per hour. Since controlled PM emissions from the Lime Slaker are less than 100 TPY, the minimum measurement frequency under CAM rules is once per 24-hour period. Thus, recording scrubber flow rate once per hour meets the requirement.

The monitoring approach is summarized in the following table.

	Indicator No. 1
Indicator	Minimum scrubber flow rate.
Measurement Approach	Measurement of the scrubber flow rate once per hour.
Indicator Range	An excursion is defined as a measured flow rate less than 30 gpm. Excursions trigger an inspection, corrective action, and a reporting requirement.
Data Representativeness	The flow rate is measured using standard instrumentation provided for this purpose.
Verification of Operational Status	NA
QA/QC Practices and Criteria	Confirm the flow meter reads zero when the unit is not operating. Calibrate unit annually.
Monitoring Frequency	The flow rate will be measured continuously.
Data Collection Procedures	Data collected using an appropriate measuring device. Readings taken once per hour.
Averaging Period	3-hour averages are computed from the hourly readings.

8.5 Justification

The minimum scrubber water flow rate for SSCE's CAM plan is based on past compliance testing for PM. The results of these tests are shown in the following table:

Test Date	Run	PM Emissions (lb/hr)	Scrubber Flow (gpm)
10/13/2005	1	5.0	32
	2	2.4	30
	3	2.2	30
10/15/2007	1	1.3	30
	2	1.7	30
	3	1.6	30
10/23/2008	1	0.9	30
	2	1.0	30
	3	0.7	30
Maximum		**5.0**	**32**
Average		**1.9**	**30**
Minimum		**0.7**	**30**

The PM emissions rates measured during these tests were below the permitted PM emission rate of 14 lb/hr. Given that the measured PM emission rate is well below the permitted limit, SSCE requests that the minimum scrubber water flow of 30 gpm be used for CAM purposes.

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.

9.0 SULFUR DIOXIDE EMISSIONS FROM THE LIME KILN

9.1 Emissions Unit Identification

Lime Kiln – EU 004.

9.2 Applicable Regulations, Emission Limits, and Monitoring Requirements

The Lime Kiln has an SO_2 emission limit of 4.6 lb/hr and 0.25 pound per ton of lime (lb/ton of CaO) while burning No. 6 Fuel Oil, and 18.8 lb/hr and 1.0245 lb/ton of CaO while burning petcoke blends (Permit No. 0050009-028-AC/PSD-FL-388). The current VE limit is 20 percent [Rule 62-296.404(2)(b), F.A.C]. SO_2 compliance tests are required annually for the Lime Kiln.

9.3 Control Technology Description

SO_2 emissions from the Lime Kiln are inherently controlled by the lime in the kiln, and then further controlled by a wet scrubber. The effectiveness of the control equipment is evaluated with annual compliance tests. A detailed description of the control equipment is included in the Title V renewal application (Attachment SSCE-EU7-I3).

9.4 Monitoring Approach

The current Title V Permit (Permit No. 0050009-030-AV) includes continuous parameter monitoring requirements for the Lime Kiln as part of the CAM Plan. The CAM Plan stipulates that the minimum flow rate to the scrubber be no less than 455 gpm for the bull nozzle flow and 493 gpm for the tangential flow, with a minimum differential pressure of 18 inches of water. This permit condition further stipulates that the scrubber flow be based on a 3-hour average, and that the set points for these parameters be re-evaluated during the annual testing. These minimum flow rates and pressure drop were revised in the recent testing while firing petcoke to 750 gpm for the bull nozzle and tangential flow rates, and to 24 inches of water. Permit No. 0050009-028-AC/PSD-FL-388 further specifies that the pH of the scrubbing media be continuously monitored in order to ensure compliance with the SO_2 standards. A report was submitted in December 2008, in which a minimum pH of 7.7 was proposed.

The monitoring approach is summarized in the following table.

	Indicator No. 1	Indicator No. 2	Indicator No. 3	Indicator No. 4
Indicator	Bull nozzle liquid flow rate.	Tangential liquid flow rate.	Pressure drop.	Minimum pH of scrubbing media.
Measurement Approach	Continuous measurement of the bull nozzle flow rate.	Continuous measurement of the tangential flow rate.	Continuous measurement of the pressure drop.	Continuous measurement of the pH.
Indicator Range	An excursion is defined as a measured flow rate less than 750 gpm. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a measured flow rate less than 750 gpm. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a measured pressure drop less than 24 inches of water. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a measured pH less than 7.7 based on a 3-hour average. Excursions trigger an inspection, corrective action, and a reporting requirement.
Data Representativeness	The flow rate is measured using standard instrumentation provided for this purpose.	The flow rate is measured using standard instrumentation provided for this purpose.	The flow rate is measured using standard instrumentation provided for this purpose.	The pH is measured using standard instrumentation provided for this purpose.
Verification of Operational Status	NA	NA	NA	NA
QA/QC Practices and Criteria	Confirm the flow meter reads zero when the unit is not operating. Calibrate unit annually.	Confirm the flow meter reads zero when the unit is not operating. Calibrate unit annually.	Confirm the pressure drop is zero when the unit is not operating. Calibrate unit annually.	Confirm the pH meter reads correctly using known standards.
Monitoring Frequency	The flow rate will be measured continuously.	The flow rate will be measured continuously.	The pressure drop will be measured continuously.	The pH will be measured continuously.
Data Collection Procedures	Hourly averages are computed from readings at least once every successive 15-minute period.	Hourly averages are computed from readings at least once every successive 15-minute period.	Hourly averages are computed from readings at least once every successive 15-minute period.	Hourly averages are computed from readings at least once every successive 15-minute period.
Averaging Period	3-hour block averages are computed from the hourly averages.	3-hour block averages are computed from the hourly averages.	3-hour block averages are computed from the hourly averages.	3-hour block averages are computed from the hourly averages.

9.5 Justification

During SSCE's most recent SO_2 compliance test for the kiln while burning petcoke, the bull nozzle liquid flow rate varied from 755 to 767 gpm, the tangential liquid flow rate varied from 728 to 741 gpm, the pressure drop varied from 27 to 29 inches of water, and the pH varied from 7.7 to 8.0. The proposed minimum pressure drop is based on the previous 2 years of stack testing, where the pressure drop was held at 20 inches of water during the tests. The SO_2 emissions rate measured during the test was 2.05 lb/hr, well below the permitted SO_2 emission rate of 18.8 lb/hr. Based on the recent testing, SSCE requests that the minimum flow rates, pressure drop, and pH specified in this CAM Plan be used for CAM purposes.

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.

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Emission Source	Title V EU ID	Contro Equipm	Comments
No. 1 Recovery Boiler	001	ESP, two-stag black liquor o system	e subject to 40 CFR 63, Subpart MM. TRS emissions M requirements, but CEM already in place to satisfy (5), F.A.C.
No. 2 Recovery Boiler	019	ESP, two-stag black liquor o system	e subject to 40 CFR 63, Subpart MM. TRS emissions M requirements, but CEM already in place to satisfy (5), F.A.C.
No. 3 Combination Boiler	015	Fly Ash Arres Scrubb	itoring required for the scrubber (i.e., liquid flow rate, CEMS already in place for SO_2 emissions. Monitoring of SO_2 CEMS. No add-on controls for TRS.
No. 4 Combination Boiler	016	Fly Ash Arres Scrubb	itoring required for the scrubber (i.e., liquid flow rate, CEMS already in place for SO_2 emissions. Monitoring of SO_2 CEMS. No add-on controls for TRS.
No. 1 Smelt Dissolving Tank	021	Venturi Scr	e subject to 40 CFR 63, Subpart MM. Uncontrolled TRS n 100 TPY.
No. 2 Smelt Dissolving Tank	020	Venturi Scr	e subject to 40 CFR 63, Subpart MM. Uncontrolled TRS an 100 TPY.
Lime Kiln/NCG Collection	004	Venturi Scr	e subject to 40 CFR 63, Subpart MM. SO_2 periodic rements for the scrubber (i.e., liquid flow rate, pH, cluded in proposed CAM Plan. No add-on controls for
Multiple Effect Evaporators	026	Lime Kiln/Nc Boile	ts.
Digester System	027	Lime Kiln/Nc Boile	ts.
Lime Slaker	005	Wet Cyclonic	of scrubber parameters (i.e., liquid flow rate) is alread ific Condition No. H8 of the Title V Permit.
Woodyard	030	None	ment or emission limits.
Bleach Plant	033	Wet Scru	re subject to 40 CFR 63, Subpart S.
Pulping Systems	034	Lime Kiln/Nc Combinatio	ts.

TABLE 2
SUMMARY OF UNCONTROLLED TRS EMISSION RATES FOR SMELT DISSOLVING TANKS
SSCE, PANAMA CITY MILL

			Uncontrolled TRS Emissions		
Emission Source	**Title V EU ID**	**Production/ Process Rate**	**Emission Factor**	**Ref.**	**Emission Rate [a] (TPY)**
No. 1 Smelt Dissolving Tank	021	123,700 lb/hr BLS	0.33 lb/ton BLS	1	90.30
No. 2 Smelt Dissolving Tank	020	123,700 lb/hr BLS	0.33 lb/ton BLS	1	88.32

1. Based on AP-42 Table 10.2-1, Emission Factors for Kraft Pulping (9/90). TRS = 0.5 lb/ton ADUP * 1 ton ADUP/1.5 tons BLS = 0.33 lb TRS/ton BLS.

Notes:

ADUP = Air-Dried Unbleached Pulp

BLS = Black Liquor Solids

[a] Based on 8,760 hr/yr operation.