



**Foley Cellulose LLC**

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**CONSTRUCTION PERMIT  
APPLICATION**

**BOILER MACT COMPLIANCE PROJECT FOR THE  
NO. 1 BARK BOILER AND NO. 2 BARK BOILER**

**Foley Cellulose LLC Mill  
Perry, Florida**

**Submitted to the  
Florida Department of Environmental Protection**

**January 2015**

# TABLE OF CONTENTS

<b>1.</b>	<b>EXECUTIVE SUMMARY .....</b>	<b>1-1</b>
<b>2.</b>	<b>FACILITY AND PROJECT DESCRIPTION .....</b>	<b>2-1</b>
2.1.	FACILITY LOCATION .....	2-1
2.2.	PROJECT DESCRIPTION.....	2-1
2.2.1.	<i>No. 1 Bark Boiler</i> .....	2-1
2.2.2.	<i>No. 2 Bark Boiler</i> .....	2-2
2.2.3.	<i>Bark Dryer</i> .....	2-3
<b>3.</b>	<b>EMISSION CALCULATIONS .....</b>	<b>3-1</b>
3.1.	OVERVIEW OF EMISSION FACTORS .....	3-1
3.1.1.	<i>Stack Test Data</i> .....	3-1
3.1.2.	<i>Temporary Continuous Emissions Monitoring Systems (CEMS) Data</i> .....	3-2
3.1.3.	<i>NCASI Emission Factors</i> .....	3-3
3.1.4.	<i>U.S. EPA AP-42 Emission Factors</i> .....	3-4
3.1.5.	<i>U.S. EPA’s Mandatory Reporting Rule for Greenhouse Gas Emissions</i> .....	3-4
3.2.	BASELINE ACTUAL EMISSIONS .....	3-4
3.3.	PROJECTED ACTUAL EMISSIONS .....	3-5
3.4.	ASSOCIATED SOURCE EMISSIONS INCREASES .....	3-6
3.5.	PROJECT EMISSIONS INCREASES .....	3-6
<b>4.</b>	<b>REGULATORY APPLICABILITY .....</b>	<b>4-1</b>
4.1.	PREVENTION OF SIGNIFICANT DETERIORATION APPLICABILITY .....	4-1
4.2.	NEW SOURCE PERFORMANCE STANDARDS (NSPS) APPLICABILITY .....	4-2
4.2.1.	<i>NSPS Subpart D – Fossil Fuel-Fired Steam Generating Units</i> .....	4-2
4.2.2.	<i>NSPS Subpart Db – Industrial-Commercial-Institutional Steam Generating Units</i> .....	4-2
4.3.	NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS APPLICABILITY.....	4-3
4.3.1.	<i>Emission Unit Classification</i> .....	4-4
4.3.2.	<i>Emission Limits</i> .....	4-4
4.3.3.	<i>Work Practice Standards, Operating Limits, and Other Requirements</i> .....	4-5
4.4.	FLORIDA REGULATORY REQUIREMENTS.....	4-5
4.4.1.	<i>Emissions Limitations</i> .....	4-5
4.4.2.	<i>Construction Permit Requirements</i> .....	4-5
4.4.3.	<i>Title V Permitting</i> .....	4-5

<b>APPENDIX A</b>	<b>PROCESS FLOW DIAGRAMS</b>
<b>APPENDIX B</b>	<b>EMISSION CALCULATIONS</b>
<b>APPENDIX C</b>	<b>FDEP CONSTRUCTION PERMIT APPLICATION FORMS</b>

# 1. EXECUTIVE SUMMARY

Foley Cellulose LLC owns and operates a softwood Kraft pulp mill (referred to as the “Foley Mill”) located in Perry, Taylor County, Florida that manufactures bleached market pulp and dissolving cellulose pulp. The Foley Mill is a major source with respect to the Title V operating permit program and operates under a revised Title V Major Source Operating Permit (No. 1230001-045-AV), most recently issued by the Florida Department of Environmental Protection (FDEP) on August 19, 2014. The Foley Mill submitted a Title V permit renewal application to the FDEP on August 27, 2014, as required under the current permit based on its expiration date of April 9, 2015. As such, the facility will operate under a permit application shield in the event that the FDEP does not act upon the renewal application prior to the expiration date of the current permit. The Foley Mill is also a major source under the Prevention of Significant Deterioration (PSD) construction permitting program that the FDEP has incorporated into Rule 62-212.400 of the Florida Administrative Code (F.A.C).

The manufacturing processes at the Foley Mill include a woodyard, two Kraft pulp mills, chemical recovery, recausticizing, purification (i.e., bleaching), papermaking, and utility operations. The fuel burning sources at the Foley Mill consist of two power boilers, two bark boilers, three recovery furnaces, and one lime kiln. This permit application requests authorization to modify the No. 1 Bark Boiler (Emissions Unit [EU] No. 004) and the No. 2 Bark Boiler (EU No. 019) to meet the requirements of Subpart DDDDD of the National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (commonly known as the Boiler Maximum Achievable Control Technology [MACT] rule).

The Foley Mill has elected to comply with the hybrid suspension grate (HSG) boiler subcategory provisions of the Boiler MACT rule for both the No. 1 Bark Boiler and the No. 2 Bark Boiler. With this application, changes are being proposed to both bark boilers that will result in each boiler meeting the definition of an HSG boiler. These changes include:

- Discontinuing use of the bark dryer that currently dries bark fuel for both boilers;
- Replacing the existing mechanical fuel spreaders with air swept fuel distributors on the No. 1 Bark Boiler;
- Removing four of the eight existing No. 6 fuel oil-fired auxiliary burners on the No. 1 Bark Boiler and adding two or four natural gas burners;
- Installing a new economizer on the No. 2 Bark Boiler to capture the energy that was previously used in the bark dryer;
- Either replacing the two existing fuel oil-fired auxiliary burners on the No. 2 Bark Boiler with dual-fuel natural gas and fuel oil burners or keeping these burners and adding two natural gas burners.

Engineering work in support of the projects is ongoing and is expected to continue throughout 2015. The Foley Mill is planning to begin foundation/structural steel work in support of the boiler projects in the fourth quarter of 2015. Actual construction on the No. 1 Bark Boiler is presently scheduled to begin in August 2016 during the boiler’s annual outage. The outage for the No. 2 Bark Boiler is currently planned for October 2016. Given that the Boiler MACT rule has an existing source compliance date of January 31, 2016, the Foley Mill is requesting a compliance extension for the No. 1 Bark Boiler until

October 1, 2016 and for the No. 2 Bark Boiler until December 1, 2016. This request is being submitted to the FDEP concurrently with this construction permit application, but under separate cover.

As discussed in Section 3 of this application, the emission increases for all PSD-regulated pollutants are less than the applicable significant emission rates (SERs). Therefore, PSD permitting is not required for the proposed projects. However, a state construction permit is required for the proposed modifications pursuant to Rules 62-210.300, F.A.C. and 62-212.300, F.A.C. A Title V source that undergoes a modification of existing emissions units is required to submit an application for an operating permit at least 90 days prior to expiration of the construction permit, but no later than 180 days after the emissions units commence operation after the modification according to Florida Rule 62-213.420(1)(a)3., F.A.C. The Foley Mill will comply with this requirement and submit an application to revise the operating permit within the appropriate timeframe.

This application includes the following elements:

- Section 2 provides a description of the facility and proposed projects;
- Section 3 details the emissions calculation methodology used to estimate baseline actual and projected actual emissions from the bark boilers;
- Section 4 contains the regulatory applicability analysis;
- Appendix A provides process flow diagrams for the Nos. 1 and 2 Bark Boilers both before and after the projects are implemented;
- Appendix B provides detailed emission calculations; and
- Appendix C contains required FDEP construction permit application forms.

## 2. FACILITY AND PROJECT DESCRIPTION

### 2.1. FACILITY LOCATION

The Foley Mill is located in Taylor County east of US 19 and just south of SR 30, southeast of Perry, Florida. The Universal Transverse Mercator (UTM) coordinates of the Foley Mill are approximately 256.7 km East and 3328.7 km North, Zone 17, North American Datum 1983. Taylor County has been designated by the U.S. Environmental Protection Agency (EPA) as “attainment” or “unclassified” for all criteria pollutants.

### 2.2. PROJECT DESCRIPTION

The Foley Mill is proposing to make various changes to the Nos. 1 and 2 Bark Boilers to comply with the Boiler MACT standards. Both boilers will comply with the emission limits and requirements for the hybrid suspension grate (HSG) subcategory. A hybrid suspension grate boiler is defined under the Boiler MACT rule as:

*...a boiler designed with air distributors to spread the fuel material over the entire width and depth of the boiler combustion zone. The biomass fuel combusted in these units exceeds a moisture content of 40 percent on an as-fired annual heat input basis. The drying and much of the combustion of the fuel takes place in suspension, and the combustion is completed on the grate or floor of the boiler. Fluidized bed, dutch oven, and pile burner designs are not part of the hybrid suspension grate boiler design category.*

The Foley Mill is proposing to make certain changes to the boilers to ensure they meet this definition during future operation.

#### 2.2.1. No. 1 Bark Boiler

The No. 1 Bark Boiler was designed by Combustion Engineering, Inc. (C-E) as a continuous discharge spreader stoker boiler and was built in 1953. The maximum heat input rate of the boiler is 300 million British thermal units per hour (MMBtu/hr) using solid biomass fuel. The No. 1 Bark Boiler currently fires primarily biomass, but also burns fuel oil and/or tall oil as needed either in combination with biomass or alone. The boiler currently burns bark with a moisture content in the range of 30 to 35 percent from the bark dryer described below. In the future, the bark dryer will be taken out of service and the bark being fed to the boiler will then have a moisture content in excess of 40 percent on an annual average basis.

At present, this boiler uses mechanical fuel spreaders that distribute the biomass fuel from separate feeders to the back of a moving grate surface by means of high speed distributor blades. The Foley Mill is proposing to replace the existing mechanical fuel spreaders in the No. 1 Bark Boiler with air swept fuel distributors and discontinue firing dried bark from the existing bark dryer. The new bark distributors will be set above the level of the grate and the smaller particles of fuel will burn almost completely in suspension while the larger pieces will fall to the traveling grate and form a thin active layer of fuel on top of a layer of ash. With these changes, the No. 1 Bark Boiler will meet the definition of an HSG boiler under the Boiler MACT rule.

In addition to these changes, the Foley Mill is proposing to remove four of the eight existing fuel oil-fired auxiliary burners on the No. 1 Bark Boiler and replace them with natural gas burners. The Mill is investigating the needed natural gas capacity and number of burners. However, the total natural gas capacity in the No. 1 Bark Boiler will not exceed 200 MMBtu/hr. A new burner management system (BMS) will be installed to direct the use of the auxiliary burners. The natural gas burners will provide the Mill an option to comply with the Boiler MACT requirement to startup the boiler on a “clean fuel” as described in Item 5 of Table 3 to the rule.

Process flow diagrams of the No. 1 Bark Boiler are provided in Appendix A for both pre-project and post-project operation.

### **2.2.2. No. 2 Bark Boiler**

The No. 2 Bark Boiler was originally built by Babcock & Wilcox in 1954 as a black liquor recovery furnace. This boiler was converted to a bark boiler in 1981 and became the No. 2 Bark Boiler. The maximum heat input rate of the boiler is 601 MMBtu/hr using solid biomass fuel. The boiler currently fires primarily biomass, but also burns fuel oil and/or tall oil as needed either in combination with biomass or alone.

The boiler is already equipped with air-swept, distributor type fuel spouts. The biomass fuel fed to the stoker distributing spouts is uniformly dispersed into the combustion chamber by a variable flow of air through the spouts, which spreads the biomass fuel material over the entire width and depth of the boiler combustion zone. The fine particles of fuel entering the boiler dry and are burned rapidly in suspension. Coarser, heavier particles of fuel are partially dried and spread evenly on the grates, forming a fast burning fuel bed where combustion is completed.

Based on the basic design of the biomass fuel feed system and its combustion characteristics, the No. 2 Bark Boiler already satisfies the definition of an HSG boiler with the exception that it currently burns bark with a moisture content in the range of 30 to 35 percent from the bark dryer described below. In the future, the bark dryer will be taken out of service and the bark being fed to the boiler will then have a moisture content in excess of 40 percent on an annual average basis.

In addition to these changes, the Mill intends to add natural gas as an auxiliary fuel. The No. 2 Bark Boiler currently has two 90 MMBtu/hr fuel oil burners and the Mill is investigating either replacing these burners with new dual-fuel natural gas and fuel oil burners or keeping these two fuel oil burners and adding two new natural gas burners. The needed capacity of natural gas is also being studied, but will be no greater than 240 MMBtu/hr. A new BMS will be installed to direct the use of the auxiliary burners. The ability to fire natural gas will provide the Mill an option to comply with the Boiler MACT requirement to startup the boiler on a “clean fuel” as described in Item 5 of Table 3 to the rule.

The Foley Mill plans to install a new economizer in the flue gas stream of the No. 2 Bark Boiler to capture much of the energy that is currently being used in the bark dryer. The captured energy will be used to preheat boiler feedwater entering the No. 2 Bark Boiler. This system will enhance the efficiency of the boiler in its new configuration.

Process flow diagrams of the No. 2 Bark Boiler are provided in Appendix A for both pre-project and post-project operation.

### **2.2.3. Bark Dryer**

Both bark boilers currently burn solid biomass fuel that is first routed through a bark dryer that uses a portion of the hot flue gas from the No. 2 Bark Boiler to dry the solid biomass fuel. This bark dryer will be permanently decommissioned as part of the proposed projects to ensure the moisture content of the biomass fuel is at least 40 percent on an as-fired annual heat input basis. Recent spot sampling of the bark pile indicates that the biomass moisture content meets this requirement. The existing ductwork on the No. 2 Bark Boiler will be modified to bypass the bark dryer. No ductwork changes are needed to the No. 1 Bark Boiler to burn the higher moisture content biomass fuel. Both boilers are currently permitted to burn biomass without regard to its moisture content and the permit does not require the bark dryer to be utilized.

### 3. EMISSION CALCULATIONS

To determine the appropriate permitting path for the project, it is necessary to calculate the emission increases expected to occur as a result of the proposed project and compare those increases to each pollutant's PSD significant emission rate (SER). Under Florida's PSD Rules (Rule No. 62-212.400, F.A.C.), emissions increases for existing emissions units are calculated using the "baseline actual-to-projected actual" emissions applicability test. This test allows an applicant to calculate a projected actual emission rate, which is the maximum annual emission rate that an existing emissions unit is projected to emit in any one of the five years (or ten years in certain circumstances) following the completion of a project.<sup>1</sup>

Once project emission increases are determined, PSD permitting is triggered if both a significant emissions increase (*i.e.*, "Step 1" project emission calculations) and a significant net emissions increase (*i.e.*, "Step 2" netting analysis) occur. This project does not require a Step 2 netting analysis to demonstrate that PSD permitting is not required for any regulated air pollutant. The following sections detail the selected emission factors and calculation methods for baseline actual and projected actual emissions.

#### 3.1. OVERVIEW OF EMISSION FACTORS

To calculate emissions, the Foley Mill determined the appropriate emission factors to use for each boiler. Emission factors were obtained using various methods and sources. These include:

- Stack test data from testing conducted at the Foley Mill;
- Temporary continuous emissions monitoring systems (CEMS) installed on the Nos. 1 and 2 Bark Boilers for carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>);
- National Council for Air and Stream Improvement, Inc. (NCASI) publications;
- U.S. EPA's *AP-42 Compilation of Air Emission Factors (5<sup>th</sup> Edition, Revised)*; and
- U.S. EPA's Mandatory Reporting Rule for Greenhouse Gas Emissions.

The sources of information for emission factor determination and calculation methodologies are discussed in greater detail in the following sections.

##### 3.1.1. Stack Test Data

The Foley Mill is required to perform stack tests on the Nos. 1 and 2 Bark Boilers for filterable particulate matter (PM) every federal fiscal year. In addition, because non-condensable gases (NCGs) are combusted in the No. 1 Bark Boiler, the facility is also required to test for sulfur dioxide (SO<sub>2</sub>) on this boiler every federal fiscal year. As such, there are ample data points available to estimate both baseline actual emissions and projected actual emissions using the stack test results for these pollutants. The PM and SO<sub>2</sub> stack tests on the No. 1 Bark Boiler are performed when NCGs are being combusted in the unit. Therefore, separate emissions from

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<sup>1</sup> The ten year period applies if the project involves increasing the unit's design capacity or PTE and full utilization of the unit would result in a significant emissions increase or a significant net emissions increase for a regulated pollutant.



NCG destruction are not calculated for these pollutants. Fuel oil is not fired during stack testing events.

Florida Rule 62-210.370(2)(d), F.A.C., requires that the average of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are computed be used to estimate baseline actual emissions. Therefore, the Foley Mill averaged all stack tests conducted over the five-year period ending in the year in which baseline actual emissions are computed to calculate the baseline actual emission factor for that year. However, since stack test data used in the analysis began in 2004, the baseline emission factors for 2005 through 2008 are all the average of the stack tests performed from 2004 through 2008.

The projected actual emission factors for filterable PM for each boiler are selected as the median of all stack tests from 2005 through 2014 plus one standard deviation of the data set. The projected actual emission factor for SO<sub>2</sub> from the No. 1 Bark Boiler is selected as the higher of the median plus one standard deviation or the average plus one standard deviation of all stack test results from 2005 through 2014.

Each selected stack testing-based emission factor is explained in detail in the emission calculations included as Appendix B.

### **3.1.2. Temporary Continuous Emissions Monitoring Systems (CEMS) Data**

The Foley Mill operated temporary CEMS on each bark boiler to gather data on actual CO and NO<sub>x</sub> emission rates from each unit under current operating conditions and simulating future operation after the Boiler MACT compliance projects have been completed. The CEMS on the No. 1 Bark Boiler operated in September and October 2014. The unit on the No. 2 Bark Boiler operated from late August 2014 through early November 2014. Data from the temporary CEMS provide the most accurate means of estimating emissions for CO and NO<sub>x</sub> from the bark boilers given the lack of actual testing data for these two pollutants. No testing data exists for NO<sub>x</sub> emissions from either boiler. While some stack test data was gathered on each boiler for CO emissions in 2011 and 2013 in initial assessments for complying with the Boiler MACT rule, the amount of data is limited and does not provide information on the varying operating scenarios the Mill investigated with the temporary CEMS. Therefore, only the CEMS data has been used to estimate both baseline actual and projected actual emissions of CO and NO<sub>x</sub> from the bark boilers.

The Mill reviewed all hourly data points and identified those hours that represent current operation on each boiler. The average of all of those data points is used to calculate CO and NO<sub>x</sub> emission factors that represent baseline actual emissions from each of the two bark boilers.

In addition to analyzing current operating conditions, the Foley Mill ran various short operating scenarios designed to simulate operating conditions after the Boiler MACT compliance projects are completed. These scenarios included burning higher moisture content bark that had not been routed through the existing bark dryer and varying the firing rate of supplemental fossil fuel. The NO<sub>x</sub> data from each boiler were fairly consistent across all the future operating scenarios. The

selected projected actual NO<sub>x</sub> emission factors for each boiler are the average plus one standard deviation of all CEMS data determined to potentially represent future operation on wet bark.

The CO emission rates varied more than the NO<sub>x</sub> emissions during the wet bark operating scenarios and the projected actual emission factors for each boiler are determined by analyzing all available data on wet bark and selecting a factor for each boiler that provides a conservative estimate of future emissions using the limited data available. It should be noted that CEMS data for both current and future operation provided CO and NO<sub>x</sub> emission factors that are higher than any emission factor used in the past to represent actual or potential emissions from either boiler. As a result, the Foley Mill has recalculated potential emissions from each boiler using the new data. These updated potential emission rates are not increases due to the project, but are being increased from historic estimates due to the availability of new emissions data. The proposed projects do not change potential emissions of any pollutant from the level of potential emissions represented by the current operation of the boilers with the exception of volatile organic compounds (VOC).

The VOC emission factor for natural gas is higher than either the bark or No. 6 fuel oil emission factor. For pollutants without emission limits, total potential emissions after the modifications are calculated using a fuel hierarchy that starts with the fuel with the highest emission factor. Emissions are calculated assuming full utilization of that fuel and then any remaining heat input is assigned to the fuel with the next highest emission factor. This process is repeated until the full heat input of the boiler is utilized to calculate emissions. The total potential emission rate is the sum of the individual fuel emission rates. The updated potential emissions for each boiler are presented in Appendix B.

### **3.1.3. NCASI Emission Factors**

NCASI conducts research and provides technical information to all member companies through a variety of publications, including technical bulletins, special reports, handbooks, and newsletters. The emission factor information presented in these publications is typically deemed the most accurate available for the wood products industry if representative mill-specific test data are unavailable.

GP is an active member of NCASI and is using the following publications to estimate various baseline actual and projected actual emission rates, as detailed in Appendix B:

- Technical Bulletin No. 973, *Compilation of 'Air Toxic' and Total Hydrocarbon Emissions Data for Pulp and Paper Mill Sources – A Second Update*, (February 2010);
- Technical Bulletin No. 1013, *A Comprehensive Compilation and Review of Wood-Fired Boiler Emissions*, (March 2013);
- Technical Bulletin No. 1020, *Compilation of Criteria Air Pollutant Emissions Data for Sources at Pulp and Paper Mills including Boilers – An Update to Technical Bulletin 884*, (December 2013); and
- NCASI Memo, "Overview of Greenhouse Gas Emissions from Low Level Sources at Pulp and Paper Mills" (2/14/11, revised 3/21/11).

### **3.1.4. U.S. EPA AP-42 Emission Factors**

Emission factors from U.S. EPA's AP-42 database (5<sup>th</sup> edition unless otherwise noted) are used for estimating emissions of several pollutants due to fuel oil and natural gas combustion. The relevant sections used are:

- Section 1.3, *Fuel Oil Combustion* (May 2010); and
- Section 1.4, *Natural Gas Combustion* (July 1998).

### **3.1.5. U.S. EPA's Mandatory Reporting Rule for Greenhouse Gas Emissions**

Emission factors from U.S. EPA's Mandatory Reporting Rule for Greenhouse Gas Emissions are used to estimate emissions of greenhouse gases from combustion of bark, fuel oil, and natural gas.

## **3.2. BASELINE ACTUAL EMISSIONS**

For existing emissions units that are not electric utility steam generating units, the baseline actual emission rate is the average rate, in tons per year (tpy), that the emissions unit actually emitted during any consecutive 24-month period within the 10-year period immediately preceding the date a complete permit application is received by the FDEP. The baseline actual emission rate should include fugitive emissions, to the extent they are quantifiable, and emissions from startups and shutdowns. The baseline actual emission rate should be adjusted downward to exclude any non-compliant emissions that occurred when the source was operating at a level above an emission limitation that was enforceable at the time. The average rate should also be adjusted downward to exclude any emissions above an emission limitation that is currently in effect but was not in effect at the time of the occurrence. In addition, as this project involves more than one emissions unit, only one 24-month period may be selected for each pollutant, but a different 24-month period may be selected for each PSD pollutant.

The Foley Mill has calculated baseline actual emissions (BAE) for each boiler and each regulated PSD pollutant using emission factors described above and actual fuel throughput and NCG combustion data. There are no quantifiable fugitive emissions associated with the Nos. 1 and 2 Bark Boilers, and no emissions exceeded any past or current emission limitations and had to be adjusted downward. Emissions associated with startup of the boilers have been calculated and are included with the fuel oil emission rates. Emissions from shutdowns are not expected to be different than the emission rates estimated using the selected baseline actual emission factors and fuel flow rates.

Past actual emissions for each boiler and pollutant are calculated on a monthly basis for the time period beginning with February 2005, which represents the earliest month within the 10-year period immediately preceding the submittal of a complete application. For each 24-month period an annual emission rate is determined for each boiler individually and summed to provide the total of both boilers. The baseline period was then selected by choosing the 24-month period with the highest total annual average emission rate for both boilers combined, which ensures only one baseline period is selected for each pollutant.

The selected baseline periods and corresponding baseline actual emission rates for each boiler and pollutant are summarized in Table 3-1. Detailed baseline actual emission calculations are provided in Appendix B.

**TABLE 3-1. SUMMARY OF BASELINE ACTUAL EMISSIONS (BAE)**

Pollutant	Baseline Period	No. 1 Bark Boiler	No. 2 Bark Boiler	Total BAE (tpy)
		BAE (tpy)	BAE (tpy)	
PM	Feb-05 - Jan-07	123.86	325.27	449.12
PM <sub>10</sub>	Feb-05 - Jan-07	125.87	327.65	453.52
PM <sub>2.5</sub>	Feb-05 - Jan-07	125.86	327.64	453.51
CO	Jun-11 - May-13	1,134.43	2,123.76	3,258.19
NO <sub>x</sub>	Jun-11 - May-13	225.97	497.15	723.12
SO <sub>2</sub>	Jan-13 - Dec-14	883.30	29.17	912.47
VOC	Jun-11 - May-13	3.55	5.78	9.33
Lead	Jun-11 - May-13	0.04	0.08	0.11
SAM	Jun-05 - May-07	2.74	1.40	4.15
TRS	Sep-07 - Aug-09	2.55	-	2.55
GHG	Jun-11 - May-13	219,613	464,831	684,444
CO <sub>2e</sub>	Jun-11 - May-13	222,474	470,959	693,433

### 3.3. PROJECTED ACTUAL EMISSIONS

As mentioned previously, under the PSD permitting program, emission increases from existing emissions units are calculated as the difference between the future projected actual emissions (PAE) and BAE. The PSD rules state that in determining PAE, the owner or operator of a source shall consider all relevant information, including but not limited to, historical operational data, the company's own representations, the company's expected business activity and the company's highest projections of business activity, the company's filings with the State or Federal regulatory authorities, and compliance plans under the approved State Implementation Plan.<sup>2</sup>

Similar to BAE, PAE should also include fugitive emissions, to the extent they are quantifiable, and emissions from startups and shutdowns. There are no quantifiable fugitive emissions associated with the Nos. 1 and 2 Bark Boilers. Emissions associated with startup of the boilers have been accounted for in the projected natural gas and fuel oil throughput rates, and emissions from shutdowns are not expected to be different than the emission rates estimated using the selected projected actual emission factors and fuel flow rates.

By definition, PAE should exclude that portion of a unit's emissions following a project that the unit could have accommodated during the baseline period and are unrelated to the proposed changes. However, as demonstrated later in this section, because PAE minus BAE is less than the PSD SERs for

<sup>2</sup> Florida Rule 62-210.200(230)

all regulated PSD pollutants, the Foley Mill has elected not to exclude any emissions that could have been accommodated for simplicity of the analysis.

In selecting the projected actual fuel throughput rates for each boiler, the Foley Mill conducted extensive mass energy analyses of the anticipated future operation of the boilers with wet bark as the primary fuel. In addition, the Mill analyzed the needed fuel splits based on the estimated efficiency of the boilers, fuel cost, and fuel availability. The results of these analyses are bark, natural gas, and fuel oil projected actual usage rates for each boiler that are expected to provide an accurate, yet somewhat conservative, estimation of future operation on each fuel.

The projected actual emission rates are summarized in Table 3-2 for the Nos. 1 and 2 Bark Boilers. Detailed projected actual calculations are provided in Appendix B.

**TABLE 3-2. SUMMARY OF PROJECTED ACTUAL EMISSIONS (PAE)**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG (tpy)	CO <sub>2e</sub> (tpy)
<b>No. 1 Bark Boiler</b>												
Bark Emissions	126.45	127.78	127.78	1,176.67	215.72	905.94	2.52	3.4E-02	1.46	-	202,796	205,481
Natural Gas Emissions	0.26	1.06	1.06	11.71	31.46	0.08	0.77	7.0E-05	-	-	16,726	16,743
No. 6 Fuel Oil Emissions	0.06	0.19	0.19	0.44	4.16	11.84	0.02	1.3E-04	0.53	-	1,986	1,992
NCG Combustion <sup>a</sup>	-	-	-	-	-	-	0.88	-	1.44	2.58	956	957
<b>Total Projected Actual Emissions</b>	<b>126.78</b>	<b>129.03</b>	<b>129.03</b>	<b>1,188.82</b>	<b>251.34</b>	<b>917.86</b>	<b>4.19</b>	<b>3.4E-02</b>	<b>3.42</b>	<b>2.58</b>	<b>222,464</b>	<b>225,173</b>
<b>No. 2 Bark Boiler</b>												
Bark Emissions	303.99	305.09	305.09	2,119.45	401.96	5.81	4.70	6.4E-02	2.71	-	377,878	382,880
Natural Gas Emissions	0.66	2.66	2.66	29.39	78.97	0.21	1.92	1.7E-04	-	-	41,988	42,030
No. 6 Fuel Oil Emissions	0.07	0.23	0.23	0.53	4.96	14.12	0.03	1.6E-04	0.63	-	2,368	2,376
<b>Total Projected Actual Emissions</b>	<b>304.72</b>	<b>307.97</b>	<b>307.97</b>	<b>2,149.36</b>	<b>485.89</b>	<b>20.14</b>	<b>6.65</b>	<b>6.4E-02</b>	<b>3.34</b>	<b>-</b>	<b>422,233</b>	<b>427,286</b>

a. Emissions of PM, CO, NO<sub>x</sub>, and SO<sub>2</sub> from NCG combustion are included in the projected actual emission rates for bark burning.

### 3.4. ASSOCIATED SOURCE EMISSIONS INCREASES

There are no additional emission sources at the Foley Mill that will be affected by the proposed Boiler MACT compliance projects on the Nos. 1 and 2 Bark Boilers. Therefore, there are no associated emission increases from affected sources.

### 3.5. PROJECT EMISSIONS INCREASES

Under Step 1 of the PSD analysis, the emissions increases for the project are calculated by summing the individual emission increases of all new or modified emissions units, as well as the associated emission increases. These total project emission increases are then compared to the PSD SERs to identify pollutants that trigger further review under Step 2. As discussed above, the proposed projects involve only existing emissions units and there are no associated emission increases. Therefore, the project emission increases are defined by subtracting the baseline actual emissions from the projected actual emissions for each of the Nos. 1 and 2 Bark Boilers and summing the results to provide the total project emission increases.

A summary of the total project emissions increases is provided in Table 3-3. As shown, the proposed project does not trigger PSD permitting for any pollutant. Detailed emission calculations are presented in Appendix B.

**TABLE 3-3. SUMMARY OF PROJECT EMISSION INCREASES**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG <sup>a</sup> (tpy)	Total CO <sub>2e</sub> <sup>a</sup> (tpy)
<b>No. 1 Bark Boiler</b>												
Baseline Actual Emissions (BAE)	123.86	125.87	125.86	1,134.43	225.97	883.30	3.55	3.7E-02	2.74	2.55	219,613	222,474
Projected Actual Emissions (PAE)	126.78	129.03	129.03	1,188.82	251.34	917.86	4.19	3.4E-02	3.42	2.58	222,464	225,173
<b>PAE minus BAE<sup>b</sup></b>	<b>2.92</b>	<b>3.16</b>	<b>3.16</b>	<b>54.38</b>	<b>25.37</b>	<b>34.562</b>	<b>0.64</b>	<b>-</b>	<b>0.68</b>	<b>0.03</b>	<b>2,850</b>	<b>2,699</b>
<b>No. 2 Bark Boiler</b>												
Baseline Actual Emissions (BAE)	325.27	327.65	327.64	2,123.76	497.15	29.17	5.78	7.8E-02	1.40	-	464,831	470,959
Projected Actual Emissions (PAE)	304.72	307.97	307.97	2,149.36	485.89	20.14	6.65	6.4E-02	3.34	-	422,233	427,286
<b>PAE minus BAE<sup>b</sup></b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>25.60</b>	<b>-</b>	<b>-</b>	<b>0.87</b>	<b>-</b>	<b>1.94</b>	<b>-</b>	<b>-</b>	<b>-</b>
Total Emission Increases	2.92	3.16	3.16	79.98	25.37	34.562	1.51	-	2.62	0.03	2,850	2,699
PSD SER	25	15	10	100	40	40	40	0.6	7	10	0	75,000
<b>PSD Analysis</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

a. PSD can only be triggered for GHGs if it is first triggered for another pollutant and then only if emission increases of GHG are greater than zero and of total CO<sub>2e</sub> are greater than 75,000 tpy.

b. If PAE minus BAE is less than zero, this value is set equal to zero.

## 4. REGULATORY APPLICABILITY

### 4.1. PREVENTION OF SIGNIFICANT DETERIORATION APPLICABILITY

Florida's PSD regulatory program is prescribed at Florida Rule 62-212.400, F.A.C. The Foley Mill is an existing major source under the PSD permitting program as defined under Florida Rule 62-212.200(174), F.A.C. Based on the emission calculations described in Section 3 of this application, which utilize the baseline actual-to-projected actual applicability test for modified units, the total emissions increases associated with the project are all less than the PSD permitting thresholds and PSD permitting is not required for any pollutant.

As required under Florida Rule 62-212.300(e), F.A.C., because the Foley Mill has used projected actual emission in lieu of potential emissions to demonstrate that PSD permitting is not required for any pollutant, the facility is subject to post-project monitoring, reporting, and recordkeeping requirements related to actual emissions after the changes have been implemented. Subpart (e)(1) of this rule specifies,

*The permittee shall monitor the emissions of any PSD pollutant that the Department identifies could increase as a result of the construction or modification and that is emitted by any emissions unit that could be affected; and, using the most reliable information available, calculate and maintain a record of the annual emissions, in tons per year on a calendar year basis, for a period of 5 years following resumption of regular operations after the change, or for a period of 10 years following resumption of regular operations if the change increases the design capacity of that emissions unit or its potential to emit that PSD pollutant.*

These requirements are derived from the "reasonable possibility" provisions in the federal PSD regulations [40 CFR §52.21(r)(6)], except that FDEP's regulations are more stringent because post-project recordkeeping and reporting is required for any emissions increase, not just when there is a "reasonable possibility" of a significant increase as under the federal regulation.

Whether five or ten years of post-project recordkeeping and reporting are required is dependent upon whether the proposed project "increases the design capacity of that emissions unit or its potential to emit that PSD pollutant." As previously discussed, with the exception of VOC, the proposed project will not increase potential emissions of any pollutant above the level of potential emissions represented by the current operation of the boilers. However, the potential emission rates of CO and NO<sub>x</sub> from each boiler are being updated based on the availability of new emissions data gathered from the temporary CEMS the Mill operated on the boilers. While the new values are higher than the previous estimates, they do not represent increases due to the proposed projects and, therefore, do not trigger the ten-year recordkeeping requirement. In addition, while total potential emissions of VOC could increase after the projects because natural gas has a higher emission factor than either bark or No. 6 fuel oil, projected actual emissions are not needed to demonstrate that PSD permitting is not required for this pollutant. The total potential emission rate of each bark boiler, as well as the sum of both boilers, is less than the VOC PSD SER. Therefore, a baseline actual-to-potential emissions test could be performed for VOC to demonstrate PSD permitting is not required. As such, the Foley Mill will be subject to post-project monitoring, reporting, and recordkeeping requirements as required by Florida Rule No. 62-212.300(e), F.A.C., for a period of five years following resumption of regular operations after the changes are implemented.

## **4.2. NEW SOURCE PERFORMANCE STANDARDS (NSPS) APPLICABILITY**

NSPS require new, modified, or reconstructed sources in particular source categories to control emissions to the level achievable by the best-demonstrated technology as specified in the applicable provisions. NSPS potentially applicable to the Nos. 1 and 2 Bark Boilers include Subparts D and Db, each of which is discussed in detail below. All other NSPS are categorically not applicable to the bark boilers. Any source subject to an NSPS is also subject to the general provisions of the NSPS (40 CFR 60, Subpart A), unless specifically excluded.

### **4.2.1. NSPS Subpart D – Fossil Fuel-Fired Steam Generating Units**

NSPS Subpart D, Standards of Performance for Fossil Fuel-Fired Steam Generators, provides standards of performance for fossil fuel-fired steam generating units for which construction commenced after August 17, 1971. This subpart applies to fossil fuel fired steam generating units having a maximum rated heat input capacity in excess of 250 MMBtu/hr. The Nos. 1 and 2 Bark Boilers are not subject to this rule as these units do not currently, and will not in the future, have a fossil fuel heat input rating greater than 250 MMBtu/hr. Additionally, both of these units were constructed before the applicability date, and have not been modified or reconstructed as defined under the NSPS rules since they were originally constructed.

### **4.2.2. NSPS Subpart Db – Industrial-Commercial-Institutional Steam Generating Units**

NSPS Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units, provides standards of performance for steam generating units with fuel firing capacities greater than 100 MMBtu/hr for which construction, modification, or reconstruction commenced after June 19, 1984. The regulation has a secondary applicability date that invokes additional standards for construction, modification, or reconstruction activities after February 28, 2005.

The Nos. 1 and 2 Bark Boilers were constructed prior to 1984 and are not currently subject to NSPS Subpart Db. If the proposed projects constitute a “modification,” as defined in 40 CFR 60.2 or “reconstruction,” as defined under 40 CFR 60.15 of either unit, it would become subject to NSPS Subpart Db. A “modification” under NSPS is triggered if the maximum hourly emission rate of an NSPS pollutant is increased as the result of a physical change or change in the method of operation of the emissions unit. Table 4.1 provides a summary of the current and future maximum hourly emission rates of the NSPS Subpart Db pollutants (PM, NO<sub>x</sub>, and SO<sub>2</sub>). As shown in the table, even though the projects involve physical changes to both boilers, the maximum hourly emissions do not increase as a result of the proposed project for either boiler.

Reconstruction under the NSPS is defined as replacing components of an existing unit to the extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost of a comparable entirely new unit. The total capital cost of the proposed project on the No. 1 Bark Boiler is approximately \$5.1 million, which is well below 50 percent of the total replacement cost of the boiler itself of approximately \$35 million. The project costs for the No. 2 Bark Boiler are roughly \$11.5 million, which is also well below the total replacement cost of the boiler itself of approximately \$55 million. Therefore, neither boiler project results in



reconstruction under the NSPS. Consequently, upon completion of the proposed project, the Nos. 1 and 2 Bark Boilers will not be subject to NSPS Subpart Db.

**TABLE 4-1. NSPS MAXIMUM HOURLY EMISSION RATE COMPARISON**

	Maximum Heat Input Capacity <sup>a</sup> (MMBtu/hr)		Pre-Project Potential Emission Factors <sup>b</sup> (lb/MMBtu)			Pre-Project Maximum Hourly Emissions <sup>c</sup> (lb/hr)			Post-Project Potential Emission Factors <sup>b</sup> (lb/MMBtu)			Post-Project Maximum Hourly Emissions (lb/hr)		
	Pre-Project	Post-Project	NO <sub>x</sub>	PM	SO <sub>2</sub>	NO <sub>x</sub>	PM	SO <sub>2</sub>	NO <sub>x</sub>	PM	SO <sub>2</sub>	NO <sub>x</sub>	PM	SO <sub>2</sub>
<b>No. 1 Bark Boiler</b>														
Bark	300	300	0.22	0.158	-	66.00	47.40	675.10	0.22	0.158	-	66.00	47.40	675.10
Natural Gas	-	150	0.22	0.002	5.8E-04	-	-	-	0.22	0.002	5.8E-04	33.00	0.28	0.09
No. 6 Fuel Oil	92.4	92.4	0.35	0.100	-	32.03	9.24	675.10	0.35	0.100	-	32.03	9.24	675.10
<b>Worst-Case Fuel PTE =</b>						<b>66.00</b>	<b>47.40</b>	<b>675.10</b>				<b>66.00</b>	<b>47.40</b>	<b>675.10</b>
<b>No. 2 Bark Boiler</b>														
Bark	601	601	0.22	0.178	3.2E-03	132.22	106.98	1.91	0.22	0.178	3.2E-03	132.22	106.98	1.91
Natural Gas	-	240	0.22	0.002	5.8E-04	-	-	-	0.22	0.002	5.8E-04	52.80	0.44	0.14
No. 6 Fuel Oil	180	240	0.35	0.100	-	62.40	18.00	498.96	0.35	0.100	-	83.20	24.00	498.96
<b>Worst-Case Fuel PTE =</b>						<b>132.22</b>	<b>106.98</b>	<b>498.96</b>				<b>132.22</b>	<b>106.98</b>	<b>498.96</b>

- a. - The pre-project maximum heat input capacity for the No. 1 Bark Boiler on fuel oil is defined by a permit limit. The boiler currently has eight 21-MMBtu/hr fuel oil burners for a total capacity of 168 MMBtu/hr, but accepted a permit limit for fuel oil usage of 92.4 MMBtu/hr during a project to convert four of the fuel oil burners to natural gas. This project was never completed, but the 92.4 MMBtu/hr fuel oil usage rate limit remains in place.
- The post-project maximum heat input capacity for the No. 1 Bark Boiler on natural gas has not yet been finalized. The value presented here is anticipated to be the maximum amount needed, but the final capacity may be less than this value.
- The post-project maximum heat input capacities for the No. 2 Bark Boiler on natural gas and fuel oil have not yet been finalized. The values presented here are anticipated to be the maximum amount needed, but the final capacity for one or both fuels may be less than this value.
- b. The potential emission factors are defined by:
- The bark NO<sub>x</sub> emission factors from each boiler are derived from the temporary CEMS that were operated on each unit.
  - The bark and fuel oil PM emission factors for each boiler are the current permit limits.
  - The bark SO<sub>2</sub> emission factor from the No. 2 Bark Boiler is from NCASI TB 1013, Table 5.1, median value (March 2013).
  - The natural gas PM, SO<sub>2</sub>, and NO<sub>x</sub> emission factors for each boiler are from AP-42 Section 1.4 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.
  - The fuel oil NO<sub>x</sub> emission factors from each boiler are from AP-42, Section 1.3, Table 1.3-1 (May 2010).
- c. - The pre-project and post-project SO<sub>2</sub> emission rates for bark and fuel oil from the No. 1 Bark Boiler and fuel oil from the No. 2 Bark Boiler are defined by the hourly emission limits shown here. These limits will not change as a result of the proposed project.
- The hourly emission rates for all other pollutants are calculated by multiplying the maximum heat input capacity of the fuel by the appropriate emission factor.

### 4.3. NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS APPLICABILITY

The National Emissions Standards for Hazardous Air Pollutants (NESHAP) Subpart DDDDD (*i.e.*, Boiler MACT) applies to all new and existing industrial, commercial, and institutional boilers and process heaters located at major sources of HAP emissions. The original Boiler MACT rule was signed on February 27, 2004, and published in the *Federal Register* on September 13, 2004 [69 FR 55218]. This rule was vacated by the D.C. Circuit Court on July 30, 2007. The Boiler MACT rule was then reconsidered and repropose on June 4, 2010. A final reconsideration rule was signed on December 21, 2012 and published in the *Federal Register* on January 31, 2013 [78 FR 7138]. A more recent reconsideration rule was proposed on December 1, 2014, but has not yet been published in the *Federal Register* and is not expected to become final until later this year.

#### 4.3.1. Emission Unit Classification

The Nos. 1 and 2 Bark Boilers are currently considered existing affected sources under the Boiler MACT rule as they were both constructed prior to the new source applicability date of June 4, 2010 and have not been reconstructed since that time. The current projects are not considered “reconstruction” as defined under 40 CFR 63.2 as the replacement of components of an affected source to such an extent that the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost of constructing a new comparable unit. As discussed in Section 4.2.2., the project costs for each boiler are well below 50 percent of the estimated cost of replacing each boiler with a comparable new unit. Therefore, the boilers remain existing sources under Boiler MACT and the current compliance date for the rule is January 31, 2016 in the absence of a compliance extension. Concurrent with this permit application, but under separate cover, the Foley Mill is submitting a compliance extension request pursuant to 40 CFR 63.6(i)(4) that proposes an eight month extension for the No. 1 Bark Boiler (to October 1, 2016) and a ten month extension for the No. 2 Bark Boiler (to December 1, 2016).

As detailed earlier in this permit application, the Foley Mill is proposing specific changes to the Nos. 1 and 2 Bark Boilers such that they both qualify for the Hybrid Suspension Grate (HSG) subcategory under Boiler MACT. The Foley Mill submitted a request for concurrence with this categorization of the boilers to FDEP on October 7, 2014, and on November 17, 2014, DEP agreed that with the proposed changes the boilers would be classified as HSG units under the Boiler MACT rule.

#### 4.3.2. Emission Limits

The current limits in the January 31, 2013 final rule that would apply to each bark boiler under the HSG category include:

- CO (Table 2 to Subpart DDDDD, Item 13.a.)
  - 2,800 parts per million by volume on a dry basis at 3 percent oxygen (ppmvd 3% O<sub>2</sub>) for compliance demonstrated by stack tests (3-run average), or,
  - 900 ppmvd 3% O<sub>2</sub> for compliance demonstrated by a CEMS (30-day rolling average)
- Filterable PM / total selected metals (TSM) (Table 2 to Subpart DDDDD, Item 13.b.)
  - 0.44 lb/MMBtu of heat input for PM, or,
  - 0.00045 lb/MMBtu of heat input for TSM
- Hydrogen Chloride (HCl)
  - 0.022 lb/MMBtu of heat input (Table 2 to Subpart DDDDD, Item 1.a.)
- Mercury (Hg)
  - 5.7E-06 lb/MMBtu of heat input (Table 2 to Subpart DDDDD, Item 1.b.)

The proposed reconsideration rule that was signed by the U.S. EPA Administrator on December 1, 2014 would increase the stack testing compliance CO emission limit from 2,800 ppmvd 3% O<sub>2</sub> to 3,500 ppmvd 3% O<sub>2</sub>. As such, and since the Foley Mill has not yet decided if it will demonstrate compliance with the Boiler MACT CO limit using stack tests or CEMS, the Mill requests that the ability to comply with either CO limit be written into the issued permit.

The Foley Mill will comply with the filterable PM limit rather than the TSM limit. Each boiler has an existing filterable PM limit that is more stringent than the Boiler MACT limit (0.158 lb/MMBtu for the No. 1 Bark Boiler and 0.178 lb/MMBtu for the No. 2 Bark Boiler). The Mill will continue to comply with these more stringent limits.

#### **4.3.3. Work Practice Standards, Operating Limits, and Other Requirements**

In addition to the emission limits outlined above, the Boiler MACT rule also imposes several work practice standards, operating limits, performance testing requirements, etc. These requirements are given in Tables 3 through 10 to the Boiler MACT rule and include items such as boiler tune-ups, energy assessments, clean fuel startup methods, control device settings, and fuel analysis procedures, some of which may change with the recently proposed reconsideration rule. The Foley Mill will select appropriate compliance methods to meet all such requirements of the Boiler MACT rule.

### **4.4. FLORIDA REGULATORY REQUIREMENTS**

#### **4.4.1. Emissions Limitations**

The Nos. 1 and 2 Bark Boilers will continue to be operated in compliance with all applicable provisions of Florida's general requirements for stationary sources (Florida Rule 62-210, F.A.C.). There are no new sources of emissions being added as a result of the proposed changes to the bark boilers.

#### **4.4.2. Construction Permit Requirements**

Florida Rules 62-210.300, F.A.C., and 62-212.300, F.A.C., specify that owners or operators must obtain an air construction permit for any proposed new, reconstructed, or modified facility or emissions unit prior to beginning construction. The Foley Mill is requesting a state construction permit be issued for the Boiler MACT compliance projects on the Nos. 1 and 2 Bark Boilers. Because projected actual emissions were used to demonstrate that PSD permitting is not required for the proposed changes, pursuant to Rule 62-212.300(1)(e), F.A.C., and as discussed in Section 4.1 of this permit application, the facility will be subject to post-project monitoring, reporting, and recordkeeping requirements related to actual emissions for five years after the changes have been implemented. FDEP construction permit application forms are included in Appendix C.

#### **4.4.3. Title V Permitting**

The Foley Mill operates under Title V Major Source Operating Permit No. 1230001-045-AV, most recently issued by the FDEP on August 19, 2014. Florida Rule 62-213.420(1)(a)3., F.A.C., requires a Title V source that undergoes a modification of an existing emissions unit to submit an application for an operating permit at least 90 days prior to expiration of the construction permit, but no later than 180 days after the emissions unit commences operation after the modification. The Foley Mill will comply with this requirement and submit an application to revise the operating permit within the appropriate timeframe.

**APPENDIX A**  
**PROCESS FLOW DIAGRAMS**

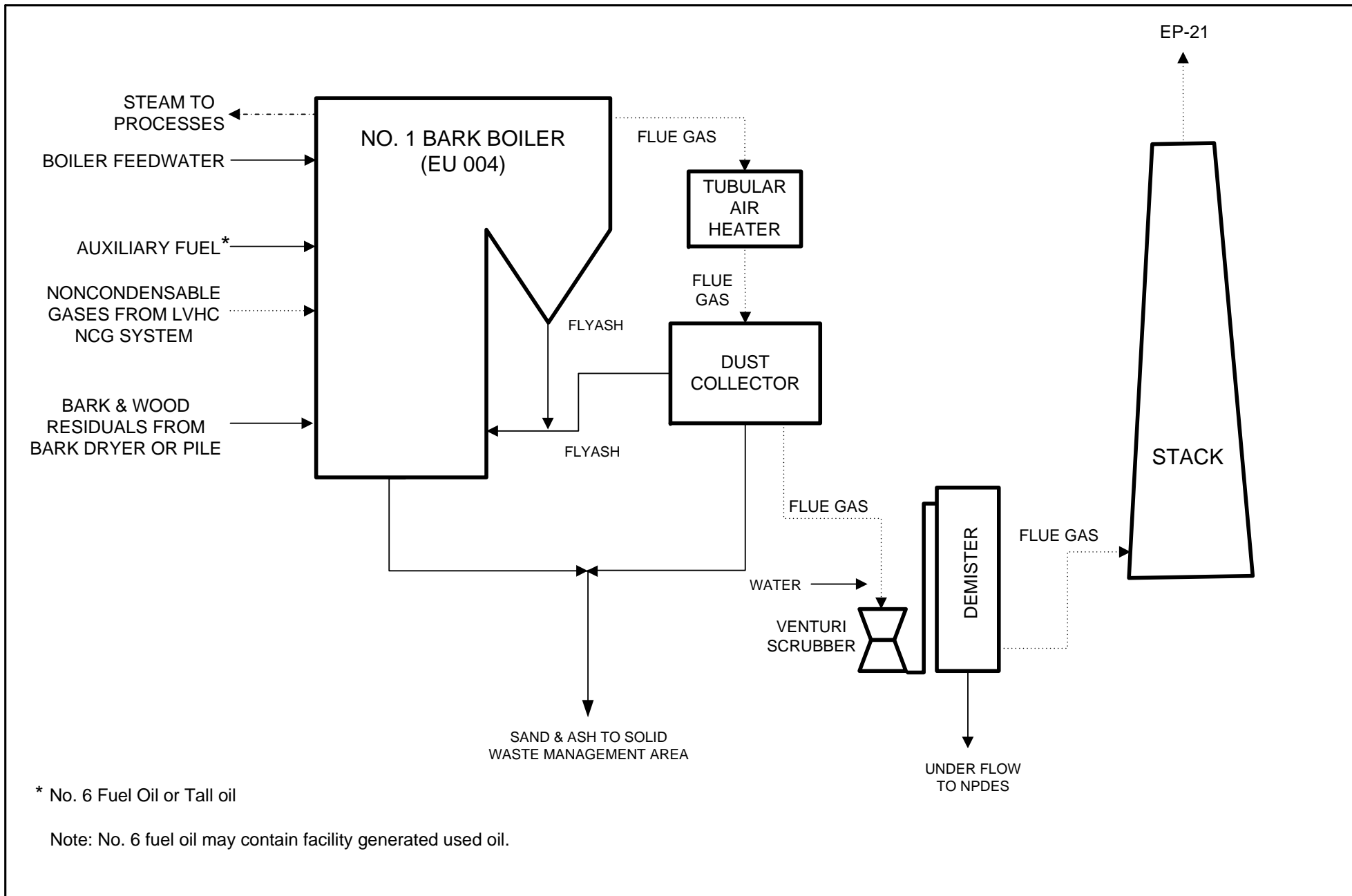


Figure A-1. Current Process Flow Diagram for the No. 1 Bark Boiler (EU004)

Process Flow Legend:  
 Solid / Liquid ———→  
 Gas .....→  
 Steam - - - - -→

Foley Cellulose LLC



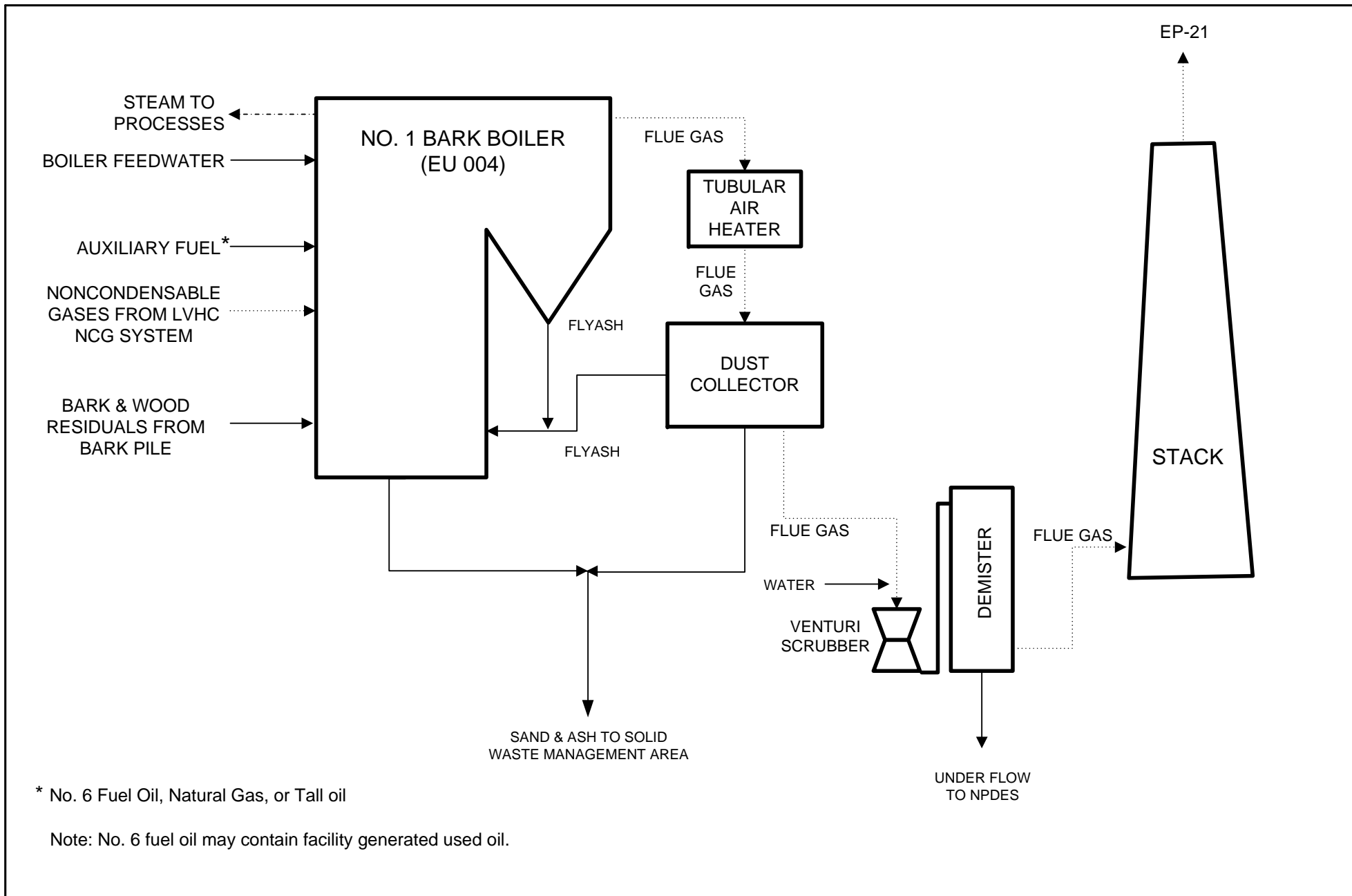


Figure A-2. Future Process Flow Diagram for the No. 1 Bark Boiler (EU004)

Process Flow Legend:  
 Solid / Liquid —————>  
 Gas .....>  
 Steam - - - - ->

Foley Cellulose LLC



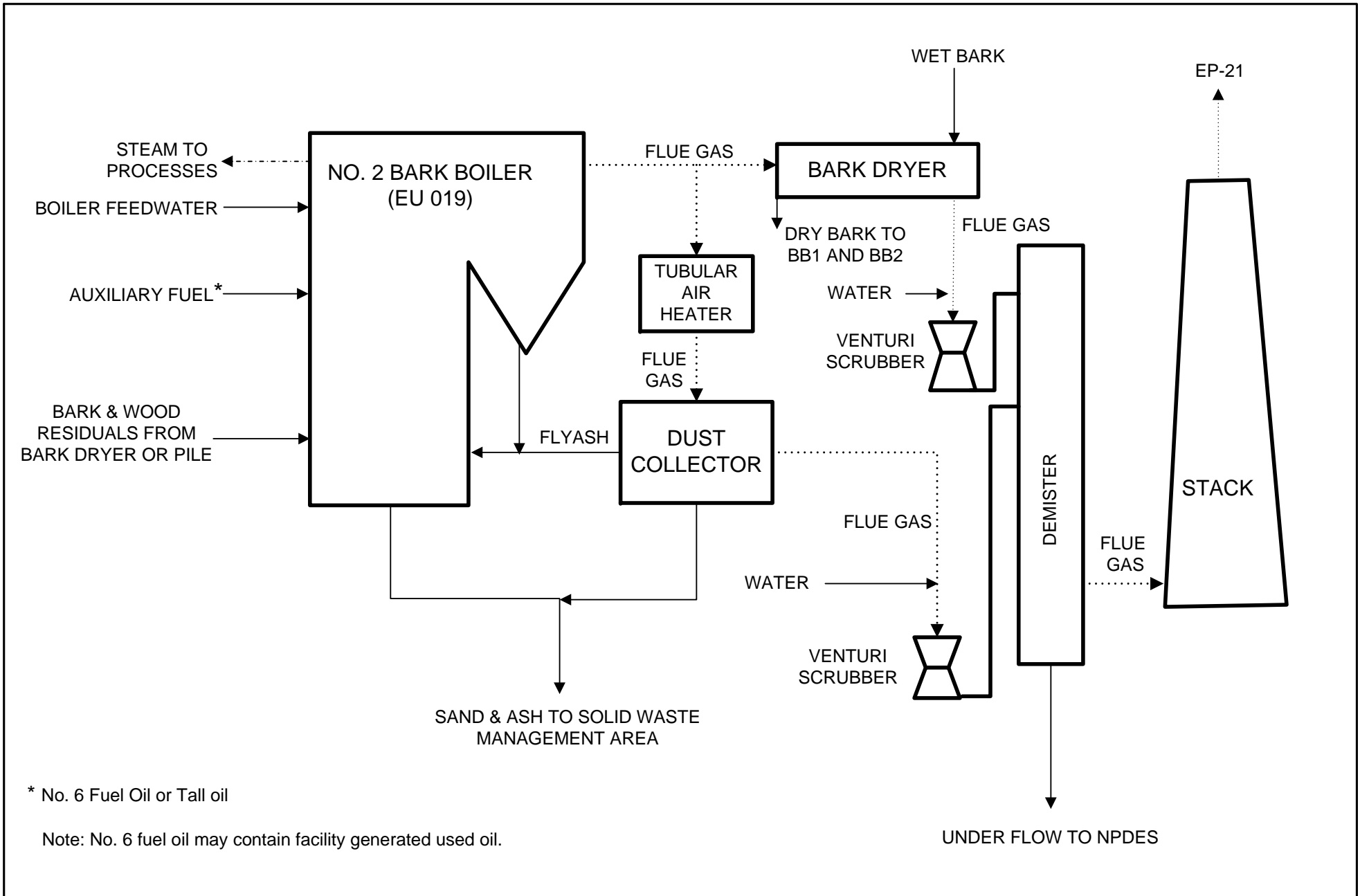


Figure A-3. Current Process Flow Diagram for the No. 2 Bark Boiler (EU019)

Process Flow Legend:

- Solid / Liquid
- Gas
- Steam

Foley Cellulose LLC



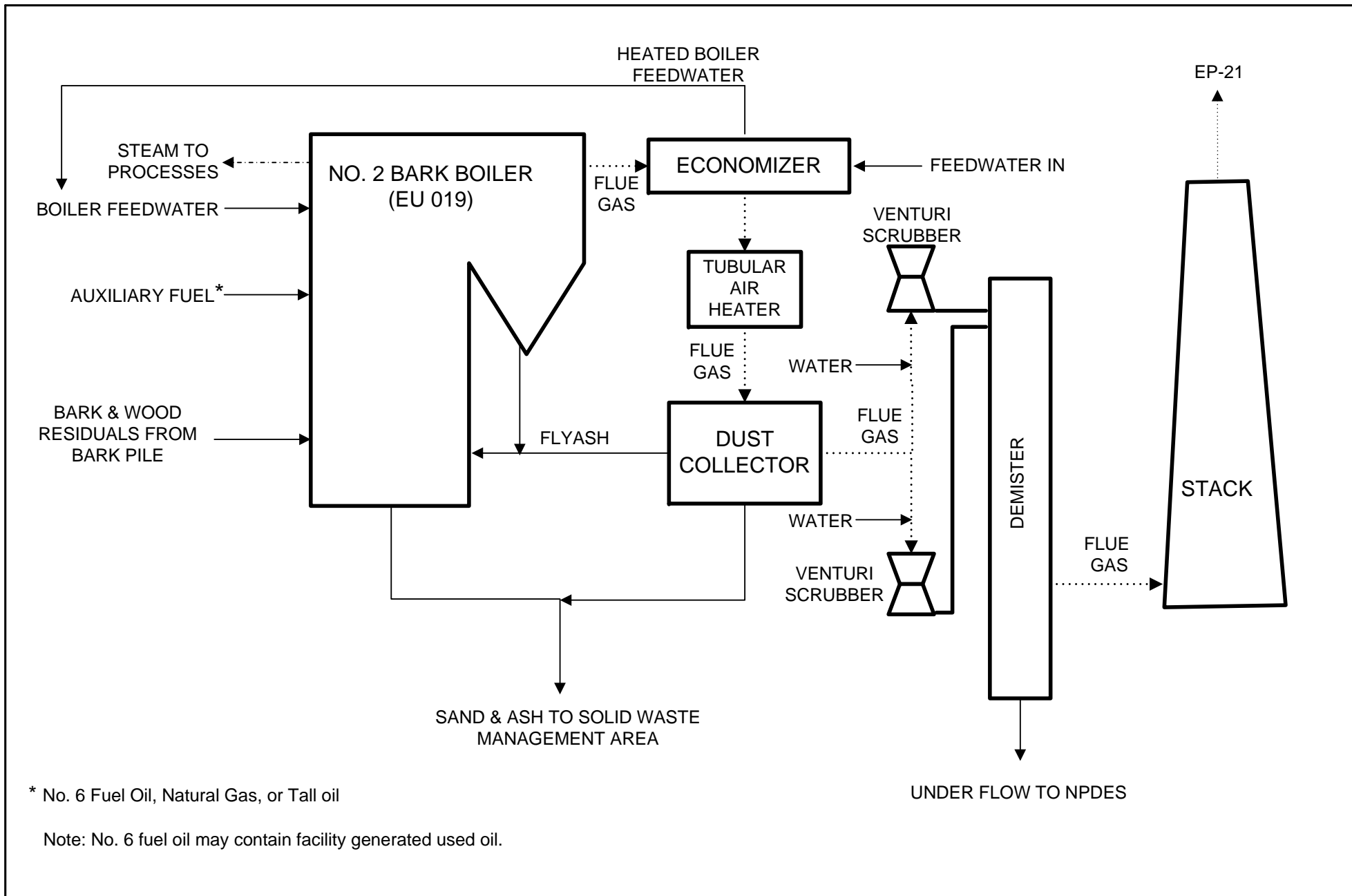


Figure A-4. Future Process Flow Diagram for the No. 2 Bark Boiler (EU019)

Process Flow Legend:  
 Solid / Liquid —————>  
 Gas .....>  
 Steam - - - - ->

Foley Cellulose LLC





# **APPENDIX B**

## **EMISSION CALCULATIONS**

**Table B-1. PSD Applicability Analysis**

<b>No. 1 Bark Boiler</b>	<b>PM (tpy)</b>	<b>PM<sub>10</sub> (tpy)</b>	<b>PM<sub>2.5</sub> (tpy)</b>	<b>CO (tpy)</b>	<b>NO<sub>x</sub> (tpy)</b>	<b>SO<sub>2</sub> (tpy)</b>	<b>VOC (tpy)</b>	<b>Pb (tpy)</b>	<b>SAM (tpy)</b>	<b>TRS (tpy)</b>	<b>GHG (tpy)</b>	<b>Total CO<sub>2</sub>e (tpy)</b>
Baseline Actual Emissions (BAE)	123.86	125.87	125.86	1,134.43	225.97	883.30	3.55	0.04	2.74	2.55	219,613	222,474
Projected Actual Emissions (PAE)	126.78	129.03	129.03	1,188.82	251.34	917.86	4.19	0.03	3.42	2.58	222,464	225,173
<b>PAE minus BAE <sup>1</sup></b>	<b>2.92</b>	<b>3.16</b>	<b>3.16</b>	<b>54.38</b>	<b>25.37</b>	<b>34.56</b>	<b>0.64</b>	<b>0.00</b>	<b>0.68</b>	<b>0.03</b>	<b>2,850.31</b>	<b>2,699.05</b>

1. If PAE minus BAE is less than zero, this value is set equal to zero.

<b>No. 2 Bark Boiler</b>	<b>PM (tpy)</b>	<b>PM<sub>10</sub> (tpy)</b>	<b>PM<sub>2.5</sub> (tpy)</b>	<b>CO (tpy)</b>	<b>NO<sub>x</sub> (tpy)</b>	<b>SO<sub>2</sub> (tpy)</b>	<b>VOC (tpy)</b>	<b>Pb (tpy)</b>	<b>SAM (tpy)</b>	<b>TRS (tpy)</b>	<b>GHG (tpy)</b>	<b>Total CO<sub>2</sub>e (tpy)</b>
Baseline Actual Emissions (BAE)	325.27	327.65	327.64	2,123.76	497.15	29.17	5.78	0.08	1.40	-	464,831	470,959
Projected Actual Emissions (PAE)	304.72	307.97	307.97	2,149.36	485.89	20.14	6.65	0.06	3.34	-	422,233	427,286
<b>PAE minus BAE <sup>1</sup></b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>25.60</b>	<b>0.00</b>	<b>0.00</b>	<b>0.87</b>	<b>0.00E+00</b>	<b>1.94</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

1. If PAE minus BAE is less than zero, this value is set equal to zero.

<b>Total Project</b>	<b>PM (tpy)</b>	<b>PM<sub>10</sub> (tpy)</b>	<b>PM<sub>2.5</sub> (tpy)</b>	<b>CO (tpy)</b>	<b>NO<sub>x</sub> (tpy)</b>	<b>SO<sub>2</sub> (tpy)</b>	<b>VOC (tpy)</b>	<b>Pb (tpy)</b>	<b>SAM (tpy)</b>	<b>TRS (tpy)</b>	<b>GHG (tpy)</b>	<b>Total CO<sub>2</sub>e (tpy)</b>
Total Emission Increases	2.92	3.16	3.16	79.98	25.37	34.56	1.51	0.00	2.62	0.03	2,850	2,699
PSD SER	25	15	10	100	40	40	40	0.6	7	10	75,000	75,000
<b>PSD Analysis</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>	<b>No</b>

**Table B-2. No. 1 Bark Boiler Emission Factors for Baseline Actual Emission Calculations**

**PM Emission Factors**

Year	Filterable PM Stack Test Results (lb/MMBtu)	Emission Factor		Bark Emission Factor Reference
		Bark & NCG <sup>a</sup> (lb/MMBtu)	No. 6 Fuel Oil <sup>b</sup> (lb/mgal)	
2004	0.125			
2005	0.116	0.118	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2006	0.121	0.118	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2007	0.125	0.118	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2008	0.103	0.118	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2009	-	0.116	0.66	Average of stack tests performed during the five-year period of 2005 - 2009
2010	0.112	0.115	0.66	Average of stack tests performed during the five-year period of 2006 - 2010
2011	0.138	0.120	0.66	Average of stack tests performed during the five-year period of 2007 - 2011
2012	0.106	0.115	0.66	Average of stack tests performed during the five-year period of 2008 - 2012
2013	-	0.119	0.66	Average of stack tests performed during the five-year period of 2009 - 2013
2014	0.097	0.113	0.66	Average of stack tests performed during the five-year period of 2010 - 2014
<b>Median</b>	<b>0.116</b>	(Repeat stack test values are not included in calculating these statistics.)		
<b>Maximum</b>	<b>0.138</b>			
<b>Standard Deviation</b>	<b>0.013</b>			
<b>Median + SD</b>	<b>0.129</b>			

a. Emission factors include only filterable particulate matter (FPM). Florida Rule 62-210.370(2)(d), F.A.C., requires that when stack test emission factors are used to estimate baseline actual emissions, the average of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are computed be used. Emissions from NCC combustion are included in the stack test emission factors.

b. AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers, includes only FPM

**PM<sub>10</sub> Emission Factors**

Year	Bark <sup>a</sup>		No. 6 Fuel Oil <sup>b</sup>		Total PM <sub>10</sub> Emission Factor <sup>c</sup>	
	FPM <sub>10</sub> (lb/MMBtu)	CPM (lb/MMBtu)	FPM <sub>10</sub> (lb/mgal)	CPM (lb/mgal)	Bark (lb/MMBtu)	No. 6 Fuel Oil (lb/mgal)
2005	0.116	3.93E-03	0.66	1.50	0.120	2.16
2006	0.116	3.93E-03	0.66	1.50	0.120	2.16
2007	0.116	3.93E-03	0.66	1.50	0.120	2.16
2008	0.116	3.93E-03	0.66	1.50	0.120	2.16
2009	0.114	3.93E-03	0.66	1.50	0.118	2.16
2010	0.113	3.93E-03	0.66	1.50	0.117	2.16
2011	0.117	3.93E-03	0.66	1.50	0.121	2.16
2012	0.113	3.93E-03	0.66	1.50	0.117	2.16
2013	0.116	3.93E-03	0.66	1.50	0.120	2.16
2014	0.111	3.93E-03	0.66	1.50	0.115	2.16

a. The bark FPM<sub>10</sub> emission factors are calculated as a percentage of FPM using data from Table 5.2 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers.

Filterable PM<sub>10</sub> = 98% % of Filterable PM

The bark CPM emission factor is the median value from Table 5.1 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers

b. The No. 6 fuel oil FPM<sub>10</sub> emission factor is calculated according to AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers

Sulfur Content = 0.85% Average % sulfur fuel oil over Jan 2011 through March 2014

The No. 6 fuel oil CPM emission factor is from AP-42, Section 1.3, Table 1.3-2 (May 2010) for No. 6 Fuel Oil

c. Total PM<sub>10</sub> Emission Factor = FPM<sub>10</sub> Emission Factor + CPM Emission Factor

**PM<sub>2.5</sub> Emission Factors**

Year	Bark <sup>a</sup>		No. 6 Fuel Oil <sup>b</sup>		Total PM <sub>2.5</sub> Emission Factor <sup>c</sup>	
	FPM <sub>2.5</sub> (lb/MMBtu)	CPM (lb/MMBtu)	FPM <sub>2.5</sub> (lb/mgal)	CPM (lb/mgal)	Bark (lb/MMBtu)	No. 6 Fuel Oil (lb/mgal)
2005	0.116	3.93E-03	0.64	1.50	0.120	2.14
2006	0.116	3.93E-03	0.64	1.50	0.120	2.14
2007	0.116	3.93E-03	0.64	1.50	0.120	2.14
2008	0.116	3.93E-03	0.64	1.50	0.120	2.14
2009	0.114	3.93E-03	0.64	1.50	0.118	2.14
2010	0.113	3.93E-03	0.64	1.50	0.117	2.14
2011	0.117	3.93E-03	0.64	1.50	0.121	2.14
2012	0.113	3.93E-03	0.64	1.50	0.117	2.14
2013	0.116	3.93E-03	0.64	1.50	0.120	2.14
2014	0.111	3.93E-03	0.64	1.50	0.115	2.14

a. The bark FPM<sub>2.5</sub> emission factors are calculated as a percentage of FPM using data from Table 5.2 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers.

Filterable PM<sub>2.5</sub> = 98% % of Filterable PM

The bark CPM emission factor is the median value from Table 5.1 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers

b. The No. 6 fuel oil FPM<sub>2.5</sub> emission factor is calculated according to AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers

Sulfur Content = 0.85% Average % sulfur fuel oil over Jan 2011 through March 2014

The No. 6 fuel oil CPM emission factor is from AP-42, Section 1.3, Table 1.3-2 (May 2010) for No. 6 Fuel Oil

c. Total PM<sub>2.5</sub> Emission Factor = FPM<sub>2.5</sub> Emission Factor + CPM Emission Factor

Table B-2. No. 1 Bark Boiler Emission Factors for Baseline Actual Emission Calculations

SO<sub>2</sub> Emission Factors

Year	Stack Test Result (lb/hr)	Bark & NCG	
		Emission Factor <sup>a</sup> (lb/hr)	Bark and NCG Emission Factor Reference
2004	191.0		
2005	142.1	148.6	Average of stack tests performed during the five-year period of 2004 - 2008
2006	121.2	148.6	Average of stack tests performed during the five-year period of 2004 - 2008
2007	179.8	148.6	Average of stack tests performed during the five-year period of 2004 - 2008
2008	108.9	148.6	Average of stack tests performed during the five-year period of 2004 - 2008
2009	-	138.0	Average of stack tests performed during the five-year period of 2005 - 2009
2010	167.6	144.4	Average of stack tests performed during the five-year period of 2006 - 2010
2011	189.4	161.4	Average of stack tests performed during the five-year period of 2007 - 2011
2012	248.1	178.5	Average of stack tests performed during the five-year period of 2008 - 2012
2013	-	201.7	Average of stack tests performed during the five-year period of 2009 - 2013
2014	291.2	224.1	Average of stack tests performed during the five-year period of 2010 - 2014

a. Emission factors include emissions from bark and NCG combustion but do not include No. 6 fuel oil emissions. Florida Rule 62-210.370(2)(d) requires that when stack test emission factors are used to estimate baseline actual emissions, the average of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are computed be used

Emission Factors for All Other PSD Pollutants

Pollutant	Bark (lb/MMBtu)	No. 6 Fuel Oil (lb/mgal)	Reference
CO	1.09	5	Bark: The average of CEMS data determined to represent current operation (331 hours). No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010).
NO <sub>x</sub>	0.21	47	Bark: The average of CEMS data determined to represent current operation (331 hours). No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010).
SO <sub>2</sub>	3.18E-03	133.85	Bark: NCASI TB 1013, Table 5.1, median value (March 2013), which is used only for SAM emissions; No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010), using the average % sulfur in the fuel oil from the last 3 years.
VOC	2.57E-03	0.28	Bark: NCASI TB 1013, Table 5.1, median value (March 2013); No. 6 FO: AP-42, Section 1.3, Table 1.3-3 (May 2010).
Pb	3.49E-05	1.51E-03	Bark: NCASI TB 1013, Table 4.3, median value (March 2013); No. 6 FO: AP-42, Section 1.3, Table 1.3-11 (May 2010).
SAM	1.49E-03 lb SAM/lb SO <sub>2</sub>	5.95	Bark: Emission factor is the average of two stack test results from the GP Cedar Springs Mill. No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010), using the average % sulfur fuel oil in last 3 years and ratio of H <sub>2</sub> SO <sub>4</sub> to SO <sub>3</sub> (98/80)
<u>Greenhouse Gases</u>		(lb/MMBtu)	
Biogenic CO <sub>2</sub>	206.79	-	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-1, converted from kg/MMBtu
CO <sub>2</sub>	-	165.57	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-1, converted from kg/MMBtu
CH <sub>4</sub>	1.59E-02	6.61E-03	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-2, converted from kg/MMBtu
N <sub>2</sub> O	7.94E-03	1.32E-03	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-2, converted from kg/MMBtu
GHG	206.82	165.57	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors.
CO <sub>2</sub> e	209.56	166.13	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors once global warming potentials are applied.

Global Warming Potentials (GWPs)

GHG	GWP <sup>a</sup>
CO <sub>2</sub>	1
CH <sub>4</sub>	25
N <sub>2</sub> O	298

a. EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table A-1

Emission Factors for LVHC NCG Combustion

Pollutant	NCG Combustion EF (lb/ADTUBP)	Reference
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	-	Stack test data includes emissions from NCG combustion.
CO	-	CEMS data includes emissions from NCG combustion.
NO <sub>x</sub>	-	CEMS data includes emissions from NCG combustion.
SO <sub>2</sub>	-	Stack test data includes emissions from NCG combustion.
VOC	0.003	NCASI TB 1020, Table 4.4, median value (December 2013).
SAM	4.90E-03	NCASI TB 973, Table 4.18, median value (February 2010).
TRS	0.6 lb/hr	Average of the last four TRS stack tests.
<u>Greenhouse Gases</u>		NCASI Memo (2/14/11, rev 3/21/11), "Overview of Greenhouse Gas Emissions from Low Level Sources at Pulp and Paper Mills":
Biogenic CO <sub>2</sub>	1.63E-03 ton/ADTUBP	Table 1 (700 metric tons of biogenic CO <sub>2</sub> per day for production of 1,179 metric tons of pulp per day)
CH <sub>4</sub>	2.32E-07 ton/ADTUBP	Table 1 (0.1 metric tons of CH <sub>4</sub> per day for production of 1,179 metric tons of pulp per day)
N <sub>2</sub> O	9.30E-08 ton/ADTUBP	Table 1 (0.04 metric tons of N <sub>2</sub> O per day for production of 1,179 metric tons of pulp per day)
GHG	1.63E-03 ton/ADTUBP	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors.
CO <sub>2</sub> e	1.63E-03 ton/ADTUBP	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors once global warming potentials are applied.

Additional Data

Parameter	Value	Reference
HHV - Bark =	10.4 MMBtu/ton	Bark Analysis at Foley Mill (2011)
HHV - No.6 FO =	0.136 MMBtu/gal	No.6 Fuel Oil Analysis at Foley Mill (2011-2014)
Density of No.6 FO =	7.88 lb/gal	AP-42, Table 1.3-12

**Table B-3. No. 2 Bark Boiler Factors for Baseline Actual Emission Calculations**

**PM Emission Factors**

Year	Filterable PM Stack Test Results (lb/MMBtu)	Emission Factor		Bark Emission Factor Reference
		Bark <sup>a</sup> (lb/MMBtu)	No. 6 Fuel Oil <sup>b</sup> (lb/mgal)	
2004	0.156			
2005	0.170	0.149	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2006	0.145	0.149	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2007	0.143	0.149	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2008	0.132	0.149	0.66	Average of stack tests performed during the five-year period of 2004 - 2008
2009	0.143	0.147	0.66	Average of stack tests performed during the five-year period of 2005 - 2009
2010	0.083	0.129	0.66	Average of stack tests performed during the five-year period of 2006 - 2010
2011	0.149	0.130	0.66	Average of stack tests performed during the five-year period of 2007 - 2011
2012	0.153	0.132	0.66	Average of stack tests performed during the five-year period of 2008 - 2012
2013	0.142	0.134	0.66	Average of stack tests performed during the five-year period of 2009 - 2013
2014	0.124	0.130	0.66	Average of stack tests performed during the five-year period of 2010 - 2014
<b>Median</b>	<b>0.143</b>	<b>0.140</b>		
<b>Maximum</b>	<b>0.170</b>	<b>0.149</b>		
<b>Standard Deviation</b>	<b>0.023</b>	<b>0.009</b>		
<b>Median + SD</b>	<b>0.166</b>	<b>0.150</b>		

- a. Emission factors include only filterable particulate matter (FPM). Florida Rule 62-210.370(2)(d), F.A.C., requires that when stack test emission factors are used to estimate baseline actual emissions, the average of all valid stack tests conducted during at least a five-year period encompassing the period over which the emissions are computed be used
- b. AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers, includes only FPM

**PM<sub>10</sub> Emission Factors**

Year	Bark <sup>a</sup>		No. 6 Fuel Oil <sup>b</sup>		Total PM <sub>10</sub> Emission Factor <sup>c</sup>	
	FPM <sub>10</sub> (lb/MMBtu)	CPM (lb/MMBtu)	FPM <sub>10</sub> (lb/mgal)	CPM (lb/mgal)	Bark (lb/MMBtu)	No. 6 Fuel Oil (lb/mgal)
2005	0.146	3.93E-03	0.66	1.50	0.150	2.16
2006	0.146	3.93E-03	0.66	1.50	0.150	2.16
2007	0.146	3.93E-03	0.66	1.50	0.150	2.16
2008	0.146	3.93E-03	0.66	1.50	0.150	2.16
2009	0.144	3.93E-03	0.66	1.50	0.148	2.16
2010	0.127	3.93E-03	0.66	1.50	0.131	2.16
2011	0.127	3.93E-03	0.66	1.50	0.131	2.16
2012	0.130	3.93E-03	0.66	1.50	0.133	2.16
2013	0.131	3.93E-03	0.66	1.50	0.135	2.16
2014	0.128	3.93E-03	0.66	1.50	0.132	2.16

- a. The bark FPM<sub>10</sub> emission factors are calculated as a percentage of FPM using data from Table 5.2 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers.  
Filterable PM<sub>10</sub> = 98% % of Filterable PM  
The bark CPM emission factor is the median value from Table 5.1 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers
- b. The No. 6 fuel oil FPM<sub>10</sub> emission factor is calculated according to AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers  
Sulfur Content = 0.85% Average % sulfur fuel oil over Jan 2011 through March 2014  
The No. 6 fuel oil CPM emission factor is from AP-42, Section 1.3, Table 1.3-2 (May 2010) for No. 6 Fuel Oil
- c. Total PM<sub>10</sub> Emission Factor = FPM<sub>10</sub> Emission Factor + CPM Emission Factor

**PM<sub>2.5</sub> Emission Factors**

Year	Bark <sup>a</sup>		No. 6 Fuel Oil <sup>b</sup>		Total PM <sub>2.5</sub> Emission Factor <sup>c</sup>	
	FPM <sub>2.5</sub> (lb/MMBtu)	CPM (lb/MMBtu)	FPM <sub>2.5</sub> (lb/mgal)	CPM (lb/mgal)	Bark (lb/MMBtu)	No. 6 Fuel Oil (lb/mgal)
2005	0.15	3.93E-03	0.64	1.50	0.15	2.14
2006	0.15	3.93E-03	0.64	1.50	0.15	2.14
2007	0.15	3.93E-03	0.64	1.50	0.15	2.14
2008	0.15	3.93E-03	0.64	1.50	0.15	2.14
2009	0.14	3.93E-03	0.64	1.50	0.15	2.14
2010	0.13	3.93E-03	0.64	1.50	0.13	2.14
2011	0.13	3.93E-03	0.64	1.50	0.13	2.14
2012	0.13	3.93E-03	0.64	1.50	0.13	2.14
2013	0.13	3.93E-03	0.64	1.50	0.14	2.14
2014	0.13	3.93E-03	0.64	1.50	0.13	2.14

- a. The bark FPM<sub>2.5</sub> emission factors are calculated as a percentage of FPM using data from Table 5.2 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers.  
Filterable PM<sub>2.5</sub> = 98% % of Filterable PM  
The bark CPM emission factor is the median value from Table 5.1 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers
- b. The No. 6 fuel oil FPM<sub>2.5</sub> emission factor is calculated according to AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers  
Sulfur Content = 0.85% Average % sulfur fuel oil over Jan 2011 through March 2014  
The No. 6 fuel oil CPM emission factor is from AP-42, Section 1.3, Table 1.3-2 (May 2010) for No. 6 Fuel Oil
- c. Total PM<sub>2.5</sub> Emission Factor = FPM<sub>2.5</sub> Emission Factor + CPM Emission Factor

Table B-3. No. 2 Bark Boiler Factors for Baseline Actual Emission Calculations

Emission Factors for All Other PSD Pollutants

Pollutant	Bark (lb/MMBtu)	No. 6 Fuel Oil (lb/mgal)	Reference
CO	0.95	5	Bark: The average of CEMS data determined to represent current operation (1,241 hours). No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010).
NO <sub>x</sub>	0.22	47	Bark: The average of CEMS data determined to represent current operation (1,241 hours). No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010).
SO <sub>2</sub>	3.18E-03	133.85	Bark: NCASI TB 1013, Table 5.1, median value (March 2013); No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010), using the average % sulfur in the fuel oil from the last 3 years.
VOC	2.57E-03	0.28	Bark: NCASI TB 1013, Table 5.1, median value (March 2013); No. 6 FO: AP-42, Section 1.3, Table 1.3-3 (May 2010).
Pb	3.49E-05	1.51E-03	Bark: NCASI TB 1013, Table 4.3, median value (March 2013); No. 6 FO: AP-42, Section 1.3, Table 1.3-11 (May 2010).
SAM	1.49E-03 lb SAM/lb SO <sub>2</sub>	5.95	Bark: Emission factor is the average of two stack test results from the GP Cedar Springs Mill. No. 6 FO: AP-42, Section 1.3, Table 1.3-1 (May 2010), using the average % sulfur fuel oil in last 3 years and ratio of H <sub>2</sub> SO <sub>4</sub> to SO <sub>3</sub> (98/80)
<u>Greenhouse Gases</u>		(lb/MMBtu)	
Biogenic CO <sub>2</sub>	206.79	-	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-1, converted from kg/MMBtu
CO <sub>2</sub>	-	165.57	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-1, converted from kg/MMBtu
CH <sub>4</sub>	1.59E-02	6.61E-03	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-2, converted from kg/MMBtu
N <sub>2</sub> O	7.94E-03	1.32E-03	EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table C-2, converted from kg/MMBtu
GHG	206.82	165.57	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors.
CO <sub>2</sub> e	209.56	166.13	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors once global warming potentials are applied.

Global Warming Potentials (GWPs)

GHG	GWP <sup>a</sup>
CO <sub>2</sub>	1
CH <sub>4</sub>	25
N <sub>2</sub> O	298

a. EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Table A-1

Additional Data

Parameter	Value	Reference
HHV - Bark =	10.4 MMBtu/ton	Bark Analysis at Foley Mill (2011)
HHV - No.6 FO =	0.136 MMBtu/gal	No.6 Fuel Oil Analysis at Foley Mill (2011-2014)
Density of No.6 FO =	7.88 lb/gal	AP-42, Table 1.3-12

Table B-4. Baseline Actual Emission Calculations for PM

Month	No. 1 Bark Boiler					No. 2 Bark Boiler					No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate			
	Hours of Operation	Total		Fuel-Specific Heat Input		Hours of Operation	Total		Fuel-Specific Heat Input		Bark & NCGs		Emission Rate		Bark		Emission Rate		Monthly (ton/mo)	Annual Avg. (tpy)		
		Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)		Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Emission Factor <sup>a</sup> (lb/MMBtu)	Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)	24-Month		Emission Factor <sup>a</sup> (lb/MMBtu)	Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)			24-Month	
														Monthly (ton/mo)	Annual Avg. (tpy)						Monthly (ton/mo)	Annual Avg. (tpy)
Feb-05	672	176,536	1,266	176,364	172	672	356,567	53,089	349,369	7,198	0.118	10.42	4.2E-04	10.42	0.149	26.07	1.8E-02	26.09	36.51			
Mar-05	744	200,027	7,264	199,043	985	744	414,317	24,873	410,944	3,372	0.118	11.76	2.4E-03	11.77	0.149	30.66	8.2E-03	30.67	42.44			
Apr-05	709	179,814	25,282	176,386	3,428	695	366,320	67,121	357,220	9,100	0.118	10.42	8.4E-03	10.43	0.149	26.66	2.2E-02	26.68	37.11			
May-05	739	194,201	18,130	191,743	2,458	739	404,414	15,661	402,290	2,123	0.118	11.33	6.0E-03	11.34	0.149	30.02	5.2E-03	30.02	41.36			
Jun-05	718	171,541	65,396	162,675	8,866	710	334,503	53,239	327,285	7,218	0.118	9.61	2.2E-02	9.64	0.149	24.42	1.8E-02	24.44	34.08			
Jul-05	725	176,351	180,760	151,844	24,507	725	375,865	117,903	359,880	15,985	0.118	8.97	6.0E-02	9.03	0.149	26.85	3.9E-02	26.89	35.93			
Aug-05	744	174,123	36,257	169,208	4,916	706	352,914	23,574	349,718	3,196	0.118	10.00	1.2E-02	10.01	0.149	26.10	7.8E-03	26.10	36.12			
Sep-05	712	182,801	199,623	155,737	27,064	501	272,104	67,147	263,000	9,104	0.118	9.20	6.6E-02	9.27	0.149	19.63	2.2E-02	19.65	28.92			
Oct-05	692	170,845	138,865	152,018	18,827	743	403,578	11,807	401,977	1,601	0.118	8.98	4.6E-02	9.03	0.149	30.00	3.9E-03	30.00	39.03			
Nov-05	619	146,290	42,720	140,498	5,792	670	338,333	27,281	334,634	3,699	0.118	8.30	1.4E-02	8.32	0.149	24.97	9.0E-03	24.98	33.30			
Dec-05	744	193,196	40,478	187,708	5,488	741	397,853	48,783	391,239	6,614	0.118	11.09	1.3E-02	11.11	0.149	29.19	1.6E-02	29.21	40.32			
Jan-06	543	140,832	5,974	140,022	810	731	392,646	28,365	388,801	3,846	0.118	8.28	2.0E-03	8.28	0.149	29.01	9.4E-03	29.02	37.30			
Feb-06	583	152,712	7,412	151,707	1,005	672	372,385	2,905	371,991	394	0.118	8.97	2.5E-03	8.97	0.149	27.76	9.6E-04	27.76	36.73			
Mar-06	742	194,029	2,461	193,695	334	744	397,339	6,420	396,469	870	0.118	11.45	8.1E-04	11.45	0.149	29.58	2.1E-03	29.59	41.03			
Apr-06	718	185,059	49,699	178,321	6,738	653	337,925	22,155	334,921	3,004	0.118	10.54	1.6E-02	10.56	0.149	24.99	7.3E-03	25.00	35.55			
May-06	741	192,898	12,392	191,218	1,680	742	386,443	17,445	384,078	2,365	0.118	11.30	4.1E-03	11.30	0.149	28.66	5.8E-03	28.67	39.97			
Jun-06	717	181,573	15,159	179,518	2,055	704	363,647	7,216	362,669	978	0.118	10.61	5.0E-03	10.61	0.149	27.06	2.4E-03	27.06	37.68			
Jul-06	705	175,649	4,038	175,102	547	742	379,483	2,553	379,137	346	0.118	10.35	1.3E-03	10.35	0.149	28.29	8.5E-04	28.29	38.64			
Aug-06	717	184,403	35,706	179,562	4,841	679	339,653	22,954	336,541	3,112	0.118	10.61	1.2E-02	10.62	0.149	25.11	7.6E-03	25.12	35.74			
Sep-06	720	177,655	19,749	174,977	2,677	717	360,921	40,245	355,465	5,456	0.118	10.34	6.5E-03	10.35	0.149	26.52	1.3E-02	26.54	36.89			
Oct-06	739	193,660	16,884	191,371	2,289	739	375,175	40,376	369,701	5,474	0.118	11.31	5.6E-03	11.32	0.149	27.59	1.3E-02	27.60	38.92			
Nov-06	720	185,683	8,327	184,554	1,129	720	365,692	25,892	362,181	3,510	0.118	10.91	2.8E-03	10.91	0.149	27.03	8.6E-03	27.03	37.94			
Dec-06	744	194,636	49,598	187,912	6,724	731	370,114	68,890	360,774	9,340	0.118	11.11	1.6E-02	11.12	0.149	26.92	2.3E-02	26.94	38.07			
Jan-07	742	196,790	15,410	194,700	2,089	735	373,215	69,658	363,771	9,444	0.118	11.51	5.1E-03	11.51	0.149	27.14	2.3E-02	27.17	38.68	449.12		
																			BAE (ton/yr):		449.12	
																			Start Baseline Period:		Feb-05	
																			End Baseline Period:		Jan-07	
																			BB1 BAE (ton/yr):		123.86	
																			BB2 BAE (ton/yr):		325.27	

a. Each monthly bark filterable PM emission factor is selected from available test data. Emissions from combustion of NCGs in the No. 1 Bark Boiler are included in the emission factors as NCGs are combusted during the testing events.  
b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBTU) \* (ton/2,000 lb)  
c. No. 6 Fuel Oil filterable PM emission factor is from Table 1.3-4 of AP-42, Section 1.3 (May 2010), for boilers with a wet scrubber control device.

Table B-5. Baseline Actual Emission Calculations for PM<sub>10</sub>

Month	No. 1 Bark Boiler					No. 2 Bark Boiler					No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate					
	Total		Fuel Oil		Fuel-Specific Heat Input	Total		Fuel Oil		Fuel-Specific Heat Input	Bark & NCGs		Fuel Oil		Emission Rate		Bark		Fuel Oil		Emission Rate		Total	Total
	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Emission Factor <sup>a</sup> (lb/MMBtu)	Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)	24-Month Monthly	24-Month Annual Avg. (tpy)	Emission Factor <sup>a</sup> (lb/MMBtu)	Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)	24-Month Monthly	24-Month Annual Avg. (tpy)	Monthly (ton/mo)	Annual Avg. (tpy)	Monthly (ton/mo)	Annual Avg. (tpy)
	Feb-05	672	176,536	1,266	176,364	172	672	356,567	53,089	349,369	7,198	0.120	10.56	1.4E-03	10.56	0.150	26.24	5.7E-02	26.29			36.85		
Mar-05	744	200,027	7,264	199,043	985	744	414,317	24,873	410,944	3,372	0.120	11.92	7.9E-03	11.93	0.150	30.86	2.7E-02	30.89			42.81			
Apr-05	709	179,814	25,282	176,386	3,428	695	366,320	67,121	357,220	9,100	0.120	10.56	2.7E-02	10.59	0.150	26.82	7.3E-02	26.90			37.49			
May-05	739	194,201	18,130	191,743	2,458	739	404,414	15,661	402,290	2,123	0.120	11.48	2.0E-02	11.50	0.150	30.21	1.7E-02	30.23			41.73			
Jun-05	718	171,541	65,396	162,675	8,866	710	334,503	53,239	327,285	7,218	0.120	9.74	7.1E-02	9.81	0.150	24.58	5.8E-02	24.63			34.45			
Jul-05	725	176,351	180,760	151,844	24,507	725	375,865	117,903	359,880	15,985	0.120	9.09	2.0E-01	9.29	0.150	27.02	1.3E-01	27.15			36.44			
Aug-05	744	174,123	36,257	169,208	4,916	706	352,914	23,574	349,718	3,196	0.120	10.13	3.9E-02	10.17	0.150	26.26	2.5E-02	26.29			36.46			
Sep-05	712	182,801	199,623	155,737	27,064	501	272,104	67,147	263,000	9,104	0.120	9.33	2.2E-01	9.54	0.150	19.75	7.3E-02	19.82			29.36			
Oct-05	692	170,845	138,865	152,018	18,827	743	403,578	11,807	401,977	1,601	0.120	9.10	1.5E-01	9.25	0.150	30.19	1.3E-02	30.20			39.45			
Nov-05	619	146,290	42,720	140,498	5,792	670	338,333	27,281	334,634	3,699	0.120	8.41	4.6E-02	8.46	0.150	25.13	2.9E-02	25.16			33.62			
Dec-05	744	193,196	40,478	187,708	5,488	741	397,853	48,783	391,239	6,614	0.120	11.24	4.4E-02	11.28	0.150	29.38	5.3E-02	29.43			40.72			
Jan-06	543	140,832	5,974	140,022	810	731	392,646	28,365	388,801	3,846	0.120	8.38	6.5E-03	8.39	0.150	29.20	3.1E-02	29.23			37.62			
Feb-06	583	152,712	7,412	151,707	1,005	672	372,385	2,905	371,991	394	0.120	9.08	8.0E-03	9.09	0.150	27.93	3.1E-03	27.94			37.03			
Mar-06	742	194,029	2,461	193,695	334	744	397,339	6,420	396,469	870	0.120	11.60	2.7E-03	11.60	0.150	29.77	6.9E-03	29.78			41.38			
Apr-06	718	185,059	49,699	178,321	6,738	653	337,925	22,155	334,921	3,004	0.120	10.68	5.4E-02	10.73	0.150	25.15	2.4E-02	25.17			35.91			
May-06	741	192,898	12,392	191,218	1,680	742	386,443	17,445	384,078	2,365	0.120	11.45	1.3E-02	11.46	0.150	28.84	1.9E-02	28.86			40.32			
Jun-06	717	181,573	15,159	179,518	2,055	704	363,647	7,216	362,669	978	0.120	10.75	1.6E-02	10.77	0.150	27.23	7.8E-03	27.24			38.01			
Jul-06	705	175,649	4,038	175,102	547	742	379,483	2,553	379,137	346	0.120	10.49	4.4E-03	10.49	0.150	28.47	2.8E-03	28.47			38.96			
Aug-06	717	184,403	35,706	179,562	4,841	679	339,653	22,954	336,541	3,112	0.120	10.75	3.9E-02	10.79	0.150	25.27	2.5E-02	25.30			36.09			
Sep-06	720	177,655	19,749	174,977	2,677	717	360,921	40,245	355,465	5,456	0.120	10.48	2.1E-02	10.50	0.150	26.69	4.4E-02	26.74			37.24			
Oct-06	739	193,660	16,884	191,371	2,289	739	375,175	40,376	369,701	5,474	0.120	11.46	1.8E-02	11.48	0.150	27.76	4.4E-02	27.81			39.28			
Nov-06	720	185,683	8,327	184,554	1,129	720	365,692	25,892	362,181	3,510	0.120	11.05	9.0E-03	11.06	0.150	27.20	2.8E-02	27.23			38.29			
Dec-06	744	194,636	49,598	187,912	6,724	731	370,114	68,890	360,774	9,340	0.120	11.25	5.4E-02	11.31	0.150	27.09	7.4E-02	27.17			38.47			
Jan-07	742	196,790	15,410	194,700	2,089	735	373,215	69,658	363,771	9,444	0.120	11.66	1.7E-02	11.68	0.150	27.32	7.5E-02	27.39	327.65		39.07	453.52		
																					BAE (ton/yr):		453.52	
																					Start Baseline Period:		Feb-05	
																					End Baseline Period:		Jan-07	
																					BB1 BAE (ton/yr):		125.87	
																					BB2 BAE (ton/yr):		327.65	

- a. Each monthly bark filterable PM<sub>10</sub> emission factor is calculated as a percentage of the monthly filterable PM emissions factors that are selected from available test data. The percentage of PM that is PM<sub>10</sub> is calculated based on data in Table 10.5 of NCASI Technical Bulletin 1020 (December 2013) for boilers with wet scrubber control devices. The condensable PM emission factor is from Table 1.6-1 of AP-42, Section 1.6 (September 2003) and is added to the filterable PM<sub>10</sub> factor.
- b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBtu) \* (ton/2,000 lb)
- c. No. 6 Fuel Oil filterable and condensable PM emission factors are from Tables 1.3-4 and 1.3-2, respectively, of AP-42, Section 1.3 (May 2010), for boilers with a wet scrubber control device.  
No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)



Table B-6. Baseline Actual Emission Calculations for PM<sub>2.5</sub>

Month	No. 1 Bark Boiler					No. 2 Bark Boiler					No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate				
	Total		Fuel Oil		Fuel-Specific Heat Input	Total		Fuel Oil		Fuel-Specific Heat Input	Bark & NCGs		Emission Rate		Bark		Fuel Oil		Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)	
	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Emission Factor <sup>a</sup> (lb/MMBtu)	Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)	Monthly (ton/mo)	Annual Avg. (tpy)	Emission Factor <sup>a</sup> (lb/MMBtu)	Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)	Monthly (ton/mo)	Annual Avg. (tpy)			
Feb-05	672	176,536	1,266	176,364	172	672	356,567	53,089	349,369	7,198	0.120	10.56	1.4E-03	10.56	0.150	26.24	5.7E-02	26.29			36.85		
Mar-05	744	200,027	7,264	199,043	985	744	414,317	24,873	410,944	3,372	0.120	11.92	7.8E-03	11.93	0.150	30.86	2.7E-02	30.89			42.81		
Apr-05	709	179,814	25,282	176,386	3,428	695	366,320	67,121	357,220	9,100	0.120	10.56	2.7E-02	10.59	0.150	26.82	7.2E-02	26.90			37.49		
May-05	739	194,201	18,130	191,743	2,458	739	404,414	15,661	402,290	2,123	0.120	11.48	1.9E-02	11.50	0.150	30.21	1.7E-02	30.23			41.73		
Jun-05	718	171,541	65,396	162,675	8,866	710	334,503	53,239	327,285	7,218	0.120	9.74	7.0E-02	9.81	0.150	24.58	5.7E-02	24.63			34.44		
Jul-05	725	176,351	180,760	151,844	24,507	725	375,865	117,903	359,880	15,985	0.120	9.09	1.9E-01	9.29	0.150	27.02	1.3E-01	27.15			36.44		
Aug-05	744	174,123	36,257	169,208	4,916	706	352,914	23,574	349,718	3,196	0.120	10.13	3.9E-02	10.17	0.150	26.26	2.5E-02	26.29			36.46		
Sep-05	712	182,801	199,623	155,737	27,064	501	272,104	67,147	263,000	9,104	0.120	9.33	2.1E-01	9.54	0.150	19.75	7.2E-02	19.82			29.36		
Oct-05	692	170,845	138,865	152,018	18,827	743	403,578	11,807	401,977	1,601	0.120	9.10	1.5E-01	9.25	0.150	30.19	1.3E-02	30.20			39.45		
Nov-05	619	146,290	42,720	140,498	5,792	670	338,333	27,281	334,634	3,699	0.120	8.41	4.6E-02	8.46	0.150	25.13	2.9E-02	25.16			33.62		
Dec-05	744	193,196	40,478	187,708	5,488	741	397,853	48,783	391,239	6,614	0.120	11.24	4.3E-02	11.28	0.150	29.38	5.2E-02	29.43			40.71		
Jan-06	543	140,832	5,974	140,022	810	731	392,646	28,365	388,801	3,846	0.120	8.38	6.4E-03	8.39	0.150	29.20	3.0E-02	29.23			37.62		
Feb-06	583	152,712	7,412	151,707	1,005	672	372,385	2,905	371,991	394	0.120	9.08	7.9E-03	9.09	0.150	27.93	3.1E-03	27.94			37.03		
Mar-06	742	194,029	2,461	193,695	334	744	397,339	6,420	396,469	870	0.120	11.60	2.6E-03	11.60	0.150	29.77	6.9E-03	29.78			41.38		
Apr-06	718	185,059	49,699	178,321	6,738	653	337,925	22,155	334,921	3,004	0.120	10.68	5.3E-02	10.73	0.150	25.15	2.4E-02	25.17			35.91		
May-06	741	192,898	12,392	191,218	1,680	742	386,443	17,445	384,078	2,365	0.120	11.45	1.3E-02	11.46	0.150	28.84	1.9E-02	28.86			40.32		
Jun-06	717	181,573	15,159	179,518	2,055	704	363,647	7,216	362,669	978	0.120	10.75	1.6E-02	10.77	0.150	27.23	7.7E-03	27.24			38.01		
Jul-06	705	175,649	4,038	175,102	547	742	379,483	2,553	379,137	346	0.120	10.49	4.3E-03	10.49	0.150	28.47	2.7E-03	28.47			38.96		
Aug-06	717	184,403	35,706	179,562	4,841	679	339,653	22,954	336,541	3,112	0.120	10.75	3.8E-02	10.79	0.150	25.27	2.5E-02	25.30			36.09		
Sep-06	720	177,655	19,749	174,977	2,677	717	360,921	40,245	355,465	5,456	0.120	10.48	2.1E-02	10.50	0.150	26.69	4.3E-02	26.74			37.23		
Oct-06	739	193,660	16,884	191,371	2,289	739	375,175	40,376	369,701	5,474	0.120	11.46	1.8E-02	11.48	0.150	27.76	4.3E-02	27.81			39.28		
Nov-06	720	185,683	8,327	184,554	1,129	720	365,692	25,892	362,181	3,510	0.120	11.05	8.9E-03	11.06	0.150	27.20	2.8E-02	27.22			38.29		
Dec-06	744	194,636	49,598	187,912	6,724	731	370,114	68,890	360,774	9,340	0.120	11.25	5.3E-02	11.31	0.150	27.09	7.4E-02	27.17			38.47		
Jan-07	742	196,790	15,410	194,700	2,089	735	373,215	69,658	363,771	9,444	0.120	11.66	1.6E-02	11.68	0.150	27.32	7.4E-02	27.39	327.64		39.07	453.51	
																					BAE (ton/yr):		453.51
																					Start Baseline Period:		Feb-05
																					End Baseline Period:		Jan-07
																					BB1 BAE (ton/yr):		125.86
																					BB2 BAE (ton/yr):		327.64

- a. Each monthly bark filterable PM<sub>2.5</sub> emission factor is calculated as a percentage of the monthly filterable PM emissions factors that are selected from available test data. The percentage of PM that is PM<sub>2.5</sub> is calculated based on data in Table 10.5 of NCASI Technical Bulletin 1020 (December 2013) for boilers with wet scrubber control devices. The condensable PM emission factor is from Table 1.6-1 of AP-42, Section 1.6 (September 2003) and is added to the filterable PM<sub>2.5</sub> factor.
- b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBtu) \* (ton/2,000 lb)
- c. No. 6 Fuel Oil filterable and condensable PM emission factors are from Tables 1.3-4 and 1.3-2, respectively, of AP-42, Section 1.3 (May 2010), for boilers with a wet scrubber control device.  
No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)

Table B-7. Baseline Actual Emission Calculations for CO<sup>a</sup>

Month	No. 1 Bark Boiler					No. 2 Bark Boiler					No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate			
	Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Emission Rate <sup>b</sup> (ton/mo)	Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)		
				Bark (MMBtu)	Fuel Oil (MMBtu)				Bark (MMBtu)	Fuel Oil (MMBtu)			Monthly (ton/mo)	24-Month Annual Avg. (tpy)			Monthly (ton/mo)	24-Month Annual Avg. (tpy)				
Jun-11	714	176,300	11,439	174,749	1,551	710	394,695	35,532	389,877	4,817	95.24	2.9E-02	95.27	1,114.10	185.19	8.9E-02	185.28	1,966.99	280.55	3,081.09		
Jul-11	744	185,531	1,125	185,378	153	744	420,037	7,242	419,055	982	101.03	2.8E-03	101.03	1,121.06	199.05	1.8E-02	199.07	2,019.00	300.10	3,140.06		
Aug-11	744	185,465	13,854	183,587	1,878	732	392,282	20,108	389,556	2,726	100.05	3.5E-02	100.09	1,120.39	185.04	5.0E-02	185.09	2,025.55	285.18	3,145.94		
Sep-11	720	184,443	25,239	181,021	3,422	720	395,433	80,253	384,552	10,880	98.66	6.3E-02	98.72	1,130.69	182.66	2.0E-01	182.86	2,028.36	281.58	3,159.06		
Oct-11	514	139,605	20,539	136,821	2,785	744	406,832	34,785	402,116	4,716	74.57	5.1E-02	74.62	1,117.03	191.01	8.7E-02	191.09	2,037.14	265.71	3,154.17		
Nov-11	720	194,191	28,865	190,278	3,913	720	396,977	7,700	395,933	1,044	103.70	7.2E-02	103.77	1,119.72	188.07	1.9E-02	188.09	2,044.90	291.86	3,164.62		
Dec-11	744	203,496	52,269	196,410	7,086	744	423,890	23,297	420,731	3,159	107.04	1.3E-01	107.17	1,122.42	199.85	5.8E-02	199.91	2,056.85	307.08	3,179.26		
Jan-12	744	193,650	48,576	187,064	6,586	742	397,796	9,832	396,463	1,333	101.95	1.2E-01	102.07	1,121.18	188.32	2.5E-02	188.34	2,054.89	290.42	3,176.07		
Feb-12	682	168,597	81,824	157,503	11,093	604	315,651	8,112	314,551	1,100	85.84	2.0E-01	86.04	1,121.12	149.41	2.0E-02	149.43	2,053.89	235.48	3,175.00		
Mar-12	741	196,132	2,487	195,795	337	741	418,402	22,883	415,299	3,102	106.71	6.2E-03	106.71	1,128.41	197.27	5.7E-02	197.32	2,060.09	304.04	3,188.50		
Apr-12	627	160,419	4,447	159,817	603	623	327,350	12,920	325,598	1,752	87.10	1.1E-02	87.11	1,124.76	154.66	3.2E-02	154.69	2,057.28	241.80	3,182.04		
May-12	732	179,356	38,662	174,115	5,242	719	365,104	3,622	364,612	491	94.89	9.7E-02	94.99	1,124.39	173.19	9.1E-03	173.20	2,056.62	268.19	3,181.01		
Jun-12	720	171,943	75,712	161,679	10,265	666	308,689	21,983	305,709	2,980	88.11	1.9E-01	88.30	1,129.04	145.21	5.5E-02	145.27	2,059.78	233.57	3,188.83		
Jul-12	519	130,199	32,814	125,750	4,449	744	384,382	12,040	382,749	1,632	68.53	8.2E-02	68.62	1,114.88	181.81	3.0E-02	181.84	2,065.40	250.45	3,180.28		
Aug-12	717	157,645	139,473	138,736	18,909	395	199,068	23,990	195,816	3,253	75.61	3.5E-01	75.96	1,107.41	93.01	6.0E-02	93.07	2,028.49	169.03	3,135.91		
Sep-12	720	178,987	3,536	178,507	479	713	378,505	23,221	375,357	3,148	97.29	8.8E-03	97.30	1,114.97	178.29	5.8E-02	178.35	2,044.61	275.65	3,159.58		
Oct-12	744	189,044	2,302	188,732	312	744	388,581	11,813	386,980	1,602	102.86	5.8E-03	102.86	1,116.87	183.82	3.0E-02	183.84	2,056.99	286.71	3,173.86		
Nov-12	720	185,203	19,482	182,562	2,641	673	369,359	19,653	366,694	2,665	99.50	4.9E-02	99.54	1,121.49	174.18	4.9E-02	174.23	2,074.39	273.77	3,195.87		
Dec-12	744	189,751	1,566	189,538	212	744	410,275	1,311	410,097	178	103.30	3.9E-03	103.30	1,121.59	194.80	3.3E-03	194.80	2,077.56	298.10	3,199.15		
Jan-13	667	168,413	15,260	166,345	2,069	735	389,940	14,648	387,954	1,986	90.66	3.8E-02	90.70	1,116.63	184.28	3.7E-02	184.31	2,075.84	275.01	3,192.47		
Feb-13	672	163,763	18,355	161,275	2,489	611	314,945	63,196	306,377	8,568	87.89	4.6E-02	87.94	1,125.84	145.53	1.6E-01	145.69	2,067.76	233.63	3,193.60		
Mar-13	744	183,646	1,903	183,388	258	744	413,125	633	413,039	86	99.95	4.8E-03	99.95	1,122.49	196.19	1.6E-03	196.20	2,071.48	296.15	3,193.97		
Apr-13	720	176,343	500	176,276	68	719	388,413	1,517	388,207	206	96.07	1.2E-03	96.07	1,129.71	184.40	3.8E-03	184.40	2,098.89	280.47	3,228.60		
May-13	743	185,273	3,677	184,775	499	744	403,018	4,761	402,372	646	100.70	9.2E-03	100.71	<b>1,134.43</b>	191.13	1.2E-02	191.14	<b>2,123.76</b>	291.85	<b>3,258.19</b>		
																			BAE (ton/yr):		<b>3,258.19</b>	
																			Start Baseline Period:		Jun-11	
																			End Baseline Period:		May-13	
																			BB1 BAE (ton/yr):		<b>1,134.43</b>	
																			BB2 BAE (ton/yr):		<b>2,123.76</b>	

a. The fuel-specific emission factors for this pollutant do not change over the baseline review period. The factors used are summarized in Table B-2 for BB1 and Table B-3 for BB2

b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBTU) \* (ton/2,000 lb)

c. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)

Table B-8. Baseline Actual Emission Calculations for NO<sub>x</sub><sup>a</sup>

Month	No. 1 Bark Boiler					No. 2 Bark Boiler					No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate			
	Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Bark & NCG Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Bark Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)	Monthly (ton/mo)	24-Month Annual Avg. (tpy)
				Bark (MMBtu)	Fuel Oil (MMBtu)				Bark (MMBtu)	Fuel Oil (MMBtu)			Monthly (ton/mo)	24-Month Annual Avg. (tpy)			Monthly (ton/mo)	24-Month Annual Avg. (tpy)				
Jun-11	714	176,300	11,439	174,749	1,551	710	394,695	35,532	389,877	4,817	18.35	0.27	18.62	221.71	42.89	0.84	43.72	464.55	62.34	686.26		
Jul-11	744	185,531	1,125	185,378	153	744	420,037	7,242	419,055	982	19.46	0.03	19.49	221.10	46.10	0.17	46.27	476.34	65.76	697.44		
Aug-11	744	185,465	13,854	183,587	1,878	732	392,282	20,108	389,556	2,726	19.28	0.33	19.60	221.05	42.85	0.47	43.32	477.90	62.93	698.95		
Sep-11	720	184,443	25,239	181,021	3,422	720	395,433	80,253	384,552	10,880	19.01	0.59	19.60	223.23	42.30	1.89	44.19	479.34	63.79	702.58		
Oct-11	514	139,605	20,539	136,821	2,785	744	406,832	34,785	402,116	4,716	14.37	0.48	14.85	220.69	44.23	0.82	45.05	481.41	59.90	702.10		
Nov-11	720	194,191	28,865	190,278	3,913	720	396,977	7,700	395,933	1,044	19.98	0.68	20.66	221.47	43.55	0.18	43.73	483.14	64.39	704.62		
Dec-11	744	203,496	52,269	196,410	7,086	744	423,890	23,297	420,731	3,159	20.62	1.23	21.85	222.54	46.28	0.55	46.83	486.03	68.68	708.57		
Jan-12	744	193,650	48,576	187,064	6,586	742	397,796	9,832	396,463	1,333	19.64	1.14	20.78	222.75	43.61	0.23	43.84	485.45	64.63	708.20		
Feb-12	682	168,597	81,824	157,503	11,093	604	315,651	8,112	314,551	1,100	16.54	1.92	18.46	223.21	34.60	0.19	34.79	485.12	53.25	708.34		
Mar-12	741	196,132	2,487	195,795	337	741	418,402	22,883	415,299	3,102	20.56	0.06	20.62	224.54	45.68	0.54	46.22	486.63	66.84	711.18		
Apr-12	627	160,419	4,447	159,817	603	623	327,350	12,920	325,598	1,752	16.78	0.10	16.89	223.81	35.82	0.30	36.12	486.00	53.00	709.80		
May-12	732	179,356	38,662	174,115	5,242	719	365,104	3,622	364,612	491	18.28	0.91	19.19	224.00	40.11	0.09	40.19	485.44	59.38	709.44		
Jun-12	720	171,943	75,712	161,679	10,265	666	308,689	21,983	305,709	2,980	16.98	1.78	18.76	225.17	33.63	0.52	34.14	486.01	52.90	711.17		
Jul-12	519	130,199	32,814	125,750	4,449	744	384,382	12,040	382,749	1,632	13.20	0.77	13.97	222.70	42.10	0.28	42.39	487.44	56.36	710.15		
Aug-12	717	157,645	139,473	138,736	18,909	395	199,068	23,990	195,816	3,253	14.57	3.28	17.84	222.50	21.54	0.56	22.10	479.07	39.95	701.58		
Sep-12	720	178,987	3,536	178,507	479	713	378,505	23,221	375,357	3,148	18.74	0.08	18.83	223.75	41.29	0.55	41.83	482.52	60.66	706.26		
Oct-12	744	189,044	2,302	188,732	312	744	388,581	11,813	386,980	1,602	19.82	0.05	19.87	224.06	42.57	0.28	42.85	484.27	62.72	708.33		
Nov-12	720	185,203	19,482	182,562	2,641	673	369,359	19,653	366,694	2,665	19.17	0.46	19.63	224.76	40.34	0.46	40.80	487.10	60.43	711.86		
Dec-12	744	189,751	1,566	189,538	212	744	410,275	1,311	410,097	178	19.90	0.04	19.94	224.77	45.11	0.03	45.14	487.72	65.08	712.49		
Jan-13	667	168,413	15,260	166,345	2,069	735	389,940	14,648	387,954	1,986	17.47	0.36	17.82	223.86	42.67	0.34	43.02	487.11	60.84	710.97		
Feb-13	672	163,763	18,355	161,275	2,489	611	314,945	63,196	306,377	8,568	16.93	0.43	17.37	225.55	33.70	1.49	35.19	485.38	52.55	710.93		
Mar-13	744	183,646	1,903	183,388	258	744	413,125	633	413,039	86	19.26	0.04	19.30	224.81	45.43	0.01	45.45	485.82	64.75	710.64		
Apr-13	720	176,343	500	176,276	68	719	388,413	1,517	388,207	206	18.51	0.01	18.52	225.55	42.70	0.04	42.74	491.86	61.26	717.41		
May-13	743	185,273	3,677	184,775	499	744	403,018	4,761	402,372	646	19.40	0.09	19.49	<b>225.97</b>	44.26	0.11	44.37	<b>497.15</b>	63.86	<b>723.12</b>		
																			BAE (ton/yr):		723.12	
																			Start Baseline Period:		Jun-11	
																			End Baseline Period:		May-13	
																			BB1 BAE (ton/yr):		225.97	
																			BB2 BAE (ton/yr):		497.15	

a. The fuel-specific emission factors for this pollutant do not change over the baseline review period. The factors used are summarized in Table B-2 for BB1 and Table B-3 for BB2.

b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBTU) \* (ton/2,000 lb)

c. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)

Table B-9. Baseline Actual Emission Calculations for SO<sub>2</sub>

Month	No. 1 Bark Boiler					No. 2 Bark Boiler					No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate	
	Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Emission Factor <sup>a</sup> (lb/hr)	Emission Rate <sup>b</sup> (ton/mo)	Emission Rate		Emission Rate <sup>d,e</sup> (ton/mo)	Emission Rate <sup>b,d</sup> (ton/mo)	Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)
				Bark (MMBtu)	Fuel Oil (MMBtu)				Bark (MMBtu)	Fuel Oil (MMBtu)			Monthly <sup>c</sup> (ton/mo)	24-Month Annual Avg. (tpy)			Monthly (ton/mo)	24-Month Annual Avg. (tpy)		
Jan-13	667	168,413	15,260	166,345	2,069	735	389,940	14,648	387,954	1,986	201.7	1.02	68.29	742.06	0.62	0.98	1.60	25.61	69.89	767.67
Feb-13	672	163,763	18,355	161,275	2,489	611	314,945	63,196	306,377	8,568	201.7	1.23	69.00	754.03	0.49	4.23	4.72	25.99	73.72	780.02
Mar-13	744	183,646	1,903	183,388	258	744	413,125	633	413,039	86	201.7	0.13	75.16	761.26	0.66	0.04	0.70	24.78	75.86	786.04
Apr-13	720	176,343	500	176,276	68	719	388,413	1,517	388,207	206	201.7	0.03	72.65	766.60	0.62	0.10	0.72	23.96	73.36	790.56
May-13	743	185,273	3,677	184,775	499	744	403,018	4,761	402,372	646	201.7	0.25	75.18	773.40	0.64	0.32	0.96	22.67	76.14	796.07
Jun-13	715	163,321	16,961	161,021	2,300	714	321,657	9,447	320,377	1,281	201.7	1.14	73.24	780.82	0.51	0.63	1.14	21.74	74.38	802.56
Jul-13	744	170,258	21,192	167,385	2,873	741	349,526	6,521	348,642	884	201.7	1.42	76.45	788.98	0.55	0.44	0.99	21.66	77.44	810.64
Aug-13	691	163,340	4,911	162,674	666	744	372,077	11,186	370,561	1,517	201.7	0.33	70.02	793.50	0.59	0.75	1.34	21.35	71.35	814.85
Sep-13	717	173,573	665	173,483	90	720	394,815	206	394,788	28	201.7	0.04	72.35	799.78	0.63	0.01	0.64	18.68	73.00	818.46
Oct-13	744	175,838	66,789	166,783	9,055	486	256,733	11,173	255,218	1,515	201.7	4.47	79.50	818.10	0.41	0.75	1.15	17.77	80.66	835.87
Nov-13	657	154,091	18,045	151,645	2,446	720	370,793	12,447	369,106	1,688	201.7	1.21	67.47	821.81	0.59	0.83	1.42	17.91	68.89	839.72
Dec-13	744	181,679	18,502	179,171	2,508	736	384,495	11,505	382,935	1,560	201.7	1.24	76.27	828.17	0.61	0.77	1.38	17.48	77.65	845.65
Jan-14	551	129,682	3,360	129,226	456	744	390,562	2,278	390,253	309	224.1	0.22	61.96	824.32	0.62	0.15	0.77	17.23	62.73	841.55
Feb-14	655	150,733	6,434	149,861	872	649	317,740	8,015	316,653	1,087	224.1	0.43	73.82	828.06	0.50	0.54	1.04	17.22	74.86	845.28
Mar-14	637	143,557	30,334	139,444	4,113	669	296,891	112,889	281,586	15,305	224.1	2.03	73.40	831.61	0.45	7.56	8.00	20.13	81.40	851.74
Apr-14	581	120,081	13,875	118,200	1,881	720	323,038	52,391	315,935	7,103	224.1	0.93	66.02	836.49	0.50	3.51	4.01	21.44	70.03	857.93
May-14	352	79,091	34,754	74,379	4,712	402	165,511	50,209	158,704	6,807	224.1	2.33	41.76	823.41	0.25	3.36	3.61	22.84	45.38	846.25
Jun-14	720	166,079	14,227	164,150	1,929	720	333,165	34,231	328,524	4,641	224.1	0.95	81.62	829.56	0.52	2.29	2.81	23.27	84.43	852.82
Jul-14	743	176,424	20,533	173,640	2,784	724	380,241	49,102	373,584	6,657	224.1	1.37	84.62	847.61	0.59	3.29	3.88	24.50	88.50	872.11
Aug-14	742	177,486	4,483	176,878	608	744	374,115	12,583	372,409	1,706	224.1	0.30	83.43	852.66	0.59	0.84	1.43	24.26	84.87	876.92
Sep-14	662	136,412	78,461	125,775	10,637	680	300,329	74,668	290,206	10,123	224.1	5.25	79.42	860.12	0.46	5.00	5.46	25.91	84.88	886.03
Oct-14	704	147,251	59,596	139,171	8,080	744	353,514	98,291	340,188	13,326	224.1	3.99	82.86	868.28	0.54	6.58	7.12	28.77	89.98	897.04
Nov-14	714	160,273	30,942	156,078	4,195	716	353,645	9,637	352,339	1,307	224.1	2.07	82.07	876.53	0.56	0.64	1.21	28.42	83.27	904.95
Dec-14	685	139,361	49,498	132,650	6,711	489	210,710	28,502	206,846	3,864	224.1	3.31	80.06	883.30	0.33	1.91	2.24	29.17	82.29	912.47
																			BAE (ton/yr):	912.47
																			Start Baseline Period:	Jan-13
																			End Baseline Period:	Dec-14
																			BB1 BAE (ton/yr):	883.30
																			BB2 BAE (ton/yr):	29.17

a. Emission factors are based on stack testing and include emissions from bark and destruction of the NCG stream  
b. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)  
c. Monthly Emissions (ton/mo) = Hours of Operation (hr/mo) \* Bark & NCG EF (lb/hr) \* (ton/2,000 lb) + No. 6 Fuel Oil Monthly Emissions (ton/mo)  
d. The fuel-specific SO<sub>2</sub> emission factors for BB2 do not change over the baseline review period. The factors used are summarized in Table B-3  
e. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBTU) \* (ton/2,000 lb)

Table B-10. Baseline Actual Emission Calculations for VOC <sup>a</sup>

Month	Pulp Mill Production (ADTUBP)	No. 1 Bark Boiler										No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate				
		Total		Fuel Oil		Fuel-Specific Heat Input		Total		Fuel Oil		Fuel-Specific Heat Input		Bark Emission Rate <sup>b</sup>	Fuel Oil Emission Rate <sup>c</sup>	NGC Emission Rate <sup>d</sup>	Emission Rate		Bark Emission Rate <sup>b</sup>	Fuel Oil Emission Rate <sup>c</sup>	Emission Rate		Monthly	24-Month Annual Avg.
		Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Monthly	24-Month Annual Avg.				Monthly	24-Month Annual Avg.			Monthly	24-Month Annual Avg.		
												(ton/mo)	(tpy)	(ton/mo)	(tpy)	(ton/mo)	(tpy)	(ton/mo)	(tpy)					
Jun-11	44,395	714	176,300	11,439	174,749	1,551	710	394,695	35,532	389,877	4,817	0.22	1.6E-03	0.07	0.29	3.51	0.50	5.0E-03	0.51	5.37	0.80	8.88		
Jul-11	50,379	744	185,531	1,125	185,378	153	744	420,037	7,242	419,055	982	0.24	1.6E-04	0.08	0.31	3.52	0.54	1.0E-03	0.54	5.51	0.85	9.03		
Aug-11	48,151	744	185,465	13,854	183,587	1,878	732	392,282	20,108	389,556	2,726	0.24	1.9E-03	0.07	0.31	3.52	0.50	2.8E-03	0.50	5.53	0.81	9.05		
Sep-11	46,509	720	184,443	25,239	181,021	3,422	720	395,433	80,253	384,552	10,880	0.23	3.5E-03	0.07	0.31	3.54	0.49	1.1E-02	0.51	5.54	0.81	9.08		
Oct-11	50,126	514	139,605	20,539	136,821	2,785	744	406,832	34,785	402,116	4,716	0.18	2.9E-03	0.08	0.25	3.51	0.52	4.9E-03	0.52	5.57	0.78	9.08		
Nov-11	45,216	720	194,191	28,865	190,278	3,913	720	396,977	7,700	395,933	1,044	0.24	4.0E-03	0.07	0.32	3.52	0.51	1.1E-03	0.51	5.59	0.83	9.11		
Dec-11	48,353	744	203,496	52,269	196,410	7,086	744	423,890	23,297	420,731	3,159	0.25	7.3E-03	0.07	0.33	3.53	0.54	3.3E-03	0.54	5.62	0.88	9.15		
Jan-12	47,849	744	193,650	48,576	187,064	6,586	742	397,796	9,832	396,463	1,333	0.24	6.8E-03	0.07	0.32	3.53	0.51	1.4E-03	0.51	5.61	0.83	9.15		
Feb-12	38,901	682	168,597	81,824	157,503	11,093	604	315,651	8,112	314,551	1,100	0.20	1.1E-02	0.06	0.27	3.53	0.40	1.1E-03	0.41	5.61	0.68	9.14		
Mar-12	48,899	741	196,132	2,487	195,795	337	741	418,402	22,883	415,299	3,102	0.25	3.5E-04	0.07	0.33	3.54	0.53	3.2E-03	0.54	5.63	0.86	9.17		
Apr-12	45,227	627	160,419	4,447	159,817	603	623	327,350	12,920	325,598	1,752	0.21	6.2E-04	0.07	0.27	3.54	0.42	1.8E-03	0.42	5.62	0.69	9.16		
May-12	50,071	732	179,356	38,662	174,115	5,242	719	365,104	3,622	364,612	491	0.22	5.4E-03	0.08	0.30	3.54	0.47	5.1E-04	0.47	5.62	0.77	9.15		
Jun-12	28,432	720	171,943	75,712	161,679	10,265	666	308,689	21,983	305,709	2,980	0.21	1.1E-02	0.04	0.26	3.54	0.39	3.1E-03	0.40	5.62	0.66	9.17		
Jul-12	43,464	519	130,199	32,814	125,750	4,449	744	384,382	12,040	382,749	1,632	0.16	4.6E-03	0.07	0.23	3.51	0.49	1.7E-03	0.49	5.64	0.72	9.15		
Aug-12	47,151	717	157,645	139,473	138,736	18,909	395	199,068	23,990	195,816	3,253	0.18	2.0E-02	0.07	0.27	3.49	0.25	3.4E-03	0.25	5.54	0.52	9.04		
Sep-12	46,324	720	178,987	3,536	178,507	479	713	378,505	23,221	375,357	3,148	0.23	5.0E-04	0.07	0.30	3.51	0.48	3.3E-03	0.49	5.58	0.78	9.10		
Oct-12	45,668	744	189,044	2,302	188,732	312	744	388,581	11,813	386,980	1,602	0.24	3.2E-04	0.07	0.31	3.52	0.50	1.7E-03	0.50	5.61	0.81	9.13		
Nov-12	47,840	720	185,203	19,482	182,562	2,641	673	369,359	19,653	366,694	2,665	0.23	2.7E-03	0.07	0.31	3.53	0.47	2.8E-03	0.47	5.65	0.78	9.18		
Dec-12	47,754	744	189,751	1,566	189,538	212	744	410,275	1,311	410,097	178	0.24	2.2E-04	0.07	0.32	3.53	0.53	1.8E-04	0.53	5.66	0.84	9.18		
Jan-13	48,665	667	168,413	15,260	166,345	2,069	735	389,940	14,648	387,954	1,986	0.21	2.1E-03	0.07	0.29	3.51	0.50	2.1E-03	0.50	5.65	0.79	9.17		
Feb-13	45,516	672	163,763	18,355	161,275	2,489	611	314,945	63,196	306,377	8,568	0.21	2.6E-03	0.07	0.28	3.54	0.39	8.8E-03	0.40	5.63	0.68	9.17		
Mar-13	49,398	744	183,646	1,903	183,388	258	744	413,125	633	413,039	86	0.24	2.7E-04	0.07	0.31	3.53	0.53	8.9E-05	0.53	5.64	0.84	9.17		
Apr-13	47,840	720	176,343	500	176,276	68	719	388,413	1,517	388,207	206	0.23	7.0E-05	0.07	0.30	3.54	0.50	2.1E-04	0.50	5.71	0.80	9.25		
May-13	49,910	743	185,273	3,677	184,775	499	744	403,018	4,761	402,372	646	0.24	5.1E-04	0.07	0.31	3.55	0.52	6.7E-04	0.52	5.78	0.83	9.33		
BAE (ton/yr):																							9.33	
Start Baseline Period:																							Jun-11	
End Baseline Period:																							May-13	
BB1 BAE (ton/yr):																							3.55	
BB2 BAE (ton/yr):																							5.78	

- a. The fuel-specific emission factors for this pollutant do not change over the baseline review period. The factors used are summarized in Table B-2 for BB1 and Table B-3 for BB2.
- b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBtu) \* (ton/2,000 lb)
- c. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)
- d. Emissions from NGC Combustion (ton/mo) = Emission Factor (lb/ADTUBP) \* Monthly Pulp Mill Production Rate (ADTUBP/mo) \* (ton/2,000 lb)

Table B-11. Baseline Actual Emission Calculations for Lead <sup>a</sup>

Month	No. 1 Bark Boiler					No. 2 Bark Boiler					No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate			
	Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Hours of Operation	Total Heat Input (MMBtu)	Fuel Oil Usage Rate (gal/mo)	Fuel-Specific Heat Input		Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)	Monthly (ton/mo)	24-Month Annual Avg. (tpy)
				Bark (MMBtu)	Fuel Oil (MMBtu)				Bark (MMBtu)	Fuel Oil (MMBtu)			Monthly (ton/mo)	Annual Avg. (tpy)			Monthly (ton/mo)	Annual Avg. (tpy)				
Jun-11	714	176,300	11,439	174,749	1,551	710	394,695	35,532	389,877	4,817	3.0E-03	8.6E-06	3.1E-03	3.6E-02	6.8E-03	2.7E-05	6.8E-03	7.3E-02	9.9E-03	0.108		
Jul-11	744	185,531	1,125	185,378	153	744	420,037	7,242	419,055	982	3.2E-03	8.5E-07	3.2E-03	3.6E-02	7.3E-03	5.5E-06	7.3E-03	7.4E-02	1.1E-02	0.110		
Aug-11	744	185,465	13,854	183,587	1,878	732	392,282	20,108	389,556	2,726	3.2E-03	1.0E-05	3.2E-03	3.6E-02	6.8E-03	1.5E-05	6.8E-03	7.5E-02	1.0E-02	0.111		
Sep-11	720	184,443	25,239	181,021	3,422	720	395,433	80,253	384,552	10,880	3.2E-03	1.9E-05	3.2E-03	3.6E-02	6.7E-03	6.1E-05	6.8E-03	7.5E-02	9.9E-03	0.111		
Oct-11	514	139,605	20,539	136,821	2,785	744	406,832	34,785	402,116	4,716	2.4E-03	1.6E-05	2.4E-03	3.6E-02	7.0E-03	2.6E-05	7.0E-03	7.5E-02	9.4E-03	0.111		
Nov-11	720	194,191	28,865	190,278	3,913	720	396,977	7,700	395,933	1,044	3.3E-03	2.2E-05	3.3E-03	3.6E-02	6.9E-03	5.8E-06	6.9E-03	7.5E-02	1.0E-02	0.111		
Dec-11	744	203,496	52,269	196,410	7,086	744	423,890	23,297	420,731	3,159	3.4E-03	3.9E-05	3.5E-03	3.6E-02	7.3E-03	1.8E-05	7.4E-03	7.6E-02	1.1E-02	0.112		
Jan-12	744	193,650	48,576	187,064	6,586	742	397,796	9,832	396,463	1,333	3.3E-03	3.7E-05	3.3E-03	3.6E-02	6.9E-03	7.4E-06	6.9E-03	7.6E-02	1.0E-02	0.112		
Feb-12	682	168,597	81,824	157,503	11,093	604	315,651	8,112	314,551	1,100	2.7E-03	6.2E-05	2.8E-03	3.6E-02	5.5E-03	6.1E-06	5.5E-03	7.6E-02	8.3E-03	0.112		
Mar-12	741	196,132	2,487	195,795	337	741	418,402	22,883	415,299	3,102	3.4E-03	1.9E-06	3.4E-03	3.6E-02	7.2E-03	1.7E-05	7.3E-03	7.6E-02	1.1E-02	0.112		
Apr-12	627	160,419	4,447	159,817	603	623	327,350	12,920	325,598	1,752	2.8E-03	3.4E-06	2.8E-03	3.6E-02	5.7E-03	9.8E-06	5.7E-03	7.6E-02	8.5E-03	0.112		
May-12	732	179,356	38,662	174,115	5,242	719	365,104	3,622	364,612	491	3.0E-03	2.9E-05	3.1E-03	3.6E-02	6.4E-03	2.7E-06	6.4E-03	7.6E-02	9.4E-03	0.112		
Jun-12	720	171,943	75,712	161,679	10,265	666	308,689	21,983	305,709	2,980	2.8E-03	5.7E-05	2.9E-03	3.6E-02	5.3E-03	1.7E-05	5.4E-03	7.6E-02	8.2E-03	0.112		
Jul-12	519	130,199	32,814	125,750	4,449	744	384,382	12,040	382,749	1,632	2.2E-03	2.5E-05	2.2E-03	3.6E-02	6.7E-03	9.1E-06	6.7E-03	7.6E-02	8.9E-03	0.112		
Aug-12	717	157,645	139,473	138,736	18,909	395	199,068	23,990	195,816	3,253	2.4E-03	1.1E-04	2.5E-03	3.6E-02	3.4E-03	1.8E-05	3.4E-03	7.5E-02	6.0E-03	0.111		
Sep-12	720	178,987	3,536	178,507	479	713	378,505	23,221	375,357	3,148	3.1E-03	2.7E-06	3.1E-03	3.6E-02	6.5E-03	1.8E-05	6.6E-03	7.5E-02	9.7E-03	0.111		
Oct-12	744	189,044	2,302	188,732	312	744	388,581	11,813	386,980	1,602	3.3E-03	1.7E-06	3.3E-03	3.6E-02	6.8E-03	8.9E-06	6.8E-03	7.6E-02	1.0E-02	0.112		
Nov-12	720	185,203	19,482	182,562	2,641	673	369,359	19,653	366,694	2,665	3.2E-03	1.5E-05	3.2E-03	3.6E-02	6.4E-03	1.5E-05	6.4E-03	7.6E-02	9.6E-03	0.113		
Dec-12	744	189,751	1,566	189,538	212	744	410,275	1,311	410,097	178	3.3E-03	1.2E-06	3.3E-03	3.6E-02	7.2E-03	9.9E-07	7.2E-03	7.7E-02	1.0E-02	0.113		
Jan-13	667	168,413	15,260	166,345	2,069	735	389,940	14,648	387,954	1,986	2.9E-03	1.2E-05	2.9E-03	3.6E-02	6.8E-03	1.1E-05	6.8E-03	7.6E-02	9.7E-03	0.112		
Feb-13	672	163,763	18,355	161,275	2,489	611	314,945	63,196	306,377	8,568	2.8E-03	1.4E-05	2.8E-03	3.6E-02	5.3E-03	4.8E-05	5.4E-03	7.6E-02	8.2E-03	0.112		
Mar-13	744	183,646	1,903	183,388	258	744	413,125	633	413,039	86	3.2E-03	1.4E-06	3.2E-03	3.6E-02	7.2E-03	4.8E-07	7.2E-03	7.6E-02	1.0E-02	0.112		
Apr-13	720	176,343	500	176,276	68	719	388,413	1,517	388,207	206	3.1E-03	3.8E-07	3.1E-03	3.6E-02	6.8E-03	1.1E-06	6.8E-03	7.7E-02	9.9E-03	0.114		
May-13	743	185,273	3,677	184,775	499	744	403,018	4,761	402,372	646	3.2E-03	2.8E-06	3.2E-03	3.7E-02	7.0E-03	3.6E-06	7.0E-03	7.8E-02	1.0E-02	0.115		
																			BAE (ton/yr):	0.115		
																			Start Baseline Period:	Jun-11		
																			End Baseline Period:	May-13		
																			BB1 BAE (ton/yr):	0.037		
																			BB2 BAE (ton/yr):	0.078		

a. The fuel-specific emission factors for this pollutant do not change over the baseline review period. The factors used are summarized in Table B-2 for BB1 and Table B-3 for BB2.

b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBTU) \* (ton/2,000 lb)

c. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)

Table B-12. Baseline Actual Emission Calculations for SAM <sup>a</sup>

Month	Pulp Mill Production (ADTUBP)	No. 1 Bark Boiler										No. 1 Bark Boiler			No. 2 Bark Boiler			Total BB1 + BB2 Emission Rate									
		Total		Fuel Oil		Fuel-Specific Heat Input		Hours of Operation	Total		Fuel Oil		Fuel-Specific Heat Input		Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	NGC Emission Rate <sup>d</sup> (ton/mo)	Emission Rate		Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)	Monthly (ton/mo)	24-Month Annual Avg. (tpy)
		Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Heat Input (MMBtu)	Usage Rate (gal/mo)		Bark (MMBtu)	Fuel Oil (MMBtu)	Monthly	24-Month Annual Avg.	Monthly	24-Month Annual Avg.													
		Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Monthly	24-Month Annual Avg.	Monthly	24-Month Annual Avg.	Monthly	24-Month Annual Avg.	Monthly	24-Month Annual Avg.								
Jun-05	46,830	718	171,541	65,396	162,675	8,866	710	334,503	53,239	327,285	7,218	3.8E-04	1.9E-01	0.07	0.27	7.7E-04	1.6E-01	0.16	0.42								
Jul-05	46,030	725	176,351	180,760	151,844	24,507	725	375,865	117,903	359,880	15,985	3.6E-04	5.4E-01	0.07	0.61	8.5E-04	3.5E-01	0.35	0.96								
Aug-05	49,611	744	174,123	36,257	169,208	4,916	706	352,914	23,574	349,718	3,196	4.0E-04	1.1E-01	0.07	0.18	8.3E-04	7.0E-02	0.07	0.25								
Sep-05	49,741	712	182,801	199,623	155,737	27,064	501	272,104	67,147	263,000	9,104	3.7E-04	5.9E-01	0.07	0.67	6.2E-04	2.0E-01	0.20	0.87								
Oct-05	50,669	692	170,845	138,865	152,018	18,827	743	403,578	11,807	401,977	1,601	3.6E-04	4.1E-01	0.08	0.49	9.5E-04	3.5E-02	0.04	0.53								
Nov-05	48,468	619	146,290	42,720	140,498	5,792	670	338,333	27,281	334,634	3,699	3.3E-04	1.3E-01	0.07	0.20	7.9E-04	8.1E-02	0.08	0.28								
Dec-05	49,839	744	193,196	40,478	187,708	5,488	741	397,853	48,783	391,239	6,614	4.4E-04	1.2E-01	0.07	0.20	9.2E-04	1.5E-01	0.15	0.34								
Jan-06	49,413	543	140,832	5,974	140,022	810	731	392,646	28,365	388,801	3,846	3.3E-04	1.8E-02	0.07	0.09	9.2E-04	8.4E-02	0.09	0.18								
Feb-06	44,461	583	152,712	7,412	151,707	1,005	672	372,385	2,905	371,991	394	3.6E-04	2.2E-02	0.07	0.09	8.8E-04	8.6E-03	0.01	0.10								
Mar-06	47,058	742	194,029	2,461	193,695	334	744	397,339	6,420	396,469	870	4.6E-04	7.3E-03	0.07	0.08	9.4E-04	1.9E-02	0.02	0.10								
Apr-06	45,358	718	185,059	49,699	178,321	6,738	653	337,925	22,155	334,921	3,004	4.2E-04	1.5E-01	0.07	0.22	7.9E-04	6.6E-02	0.07	0.28								
May-06	48,337	741	192,898	12,392	191,218	1,680	742	386,443	17,445	384,078	2,365	4.5E-04	3.7E-02	0.07	0.11	9.1E-04	5.2E-02	0.05	0.16								
Jun-06	44,699	717	181,573	15,159	179,518	2,055	704	363,647	7,216	362,669	978	4.2E-04	4.5E-02	0.07	0.11	8.6E-04	2.1E-02	0.02	0.13								
Jul-06	50,075	705	175,649	4,038	175,102	547	742	379,483	2,553	379,137	346	4.1E-04	1.2E-02	0.08	0.09	9.0E-04	7.6E-03	0.01	0.10								
Aug-06	48,355	717	184,403	35,706	179,562	4,841	679	339,653	22,954	336,541	3,112	4.2E-04	1.1E-01	0.07	0.18	7.9E-04	6.8E-02	0.07	0.25								
Sep-06	44,907	720	177,655	19,749	174,977	2,677	717	360,921	40,245	355,465	5,456	4.1E-04	5.9E-02	0.07	0.13	8.4E-04	1.2E-01	0.12	0.25								
Oct-06	47,291	739	193,660	16,884	191,371	2,289	739	375,175	40,376	369,701	5,474	4.5E-04	5.0E-02	0.07	0.12	8.7E-04	1.2E-01	0.12	0.24								
Nov-06	47,288	720	185,683	8,327	184,554	1,129	720	365,692	25,892	362,181	3,510	4.4E-04	2.5E-02	0.07	0.10	8.6E-04	7.7E-02	0.08	0.17								
Dec-06	48,636	744	194,636	49,598	187,912	6,724	731	370,114	68,890	360,774	9,340	4.4E-04	1.5E-01	0.07	0.22	8.5E-04	2.1E-01	0.21	1.19	0.43	3.49						
Jan-07	47,359	742	196,790	15,410	194,700	2,089	735	373,215	69,658	363,771	9,444	4.6E-04	4.6E-02	0.07	0.12	8.6E-04	2.1E-01	0.21	1.30	0.33	3.65						
Feb-07	43,790	545	147,718	12,538	146,019	1,700	665	344,142	34,301	339,491	4,650	3.4E-04	3.7E-02	0.07	0.10	8.0E-04	1.0E-01	0.10	1.27	0.21	3.64						
Mar-07	48,557	743	197,801	5,875	197,005	796	743	388,447	29,034	384,510	3,936	4.7E-04	1.7E-02	0.07	0.09	9.1E-04	8.6E-02	0.09	1.28	0.18	3.64						
Apr-07	49,585	717	185,304	77,656	174,776	10,528	653	336,187	45,084	330,075	6,112	4.1E-04	2.3E-01	0.07	0.31	7.8E-04	1.3E-01	0.13	1.24	0.44	3.69						
May-07	49,977	743	188,875	220,070	159,038	29,836	523	255,544	122,479	238,939	16,605	3.8E-04	6.6E-01	0.07	0.73	5.6E-04	3.6E-01	0.37	1.40	1.10	4.15						
														BAE (ton/yr):		4.15											
														Start Baseline Period:		Jun-05											
														End Baseline Period:		May-07											
														BB1 BAE (ton/yr):		2.74											
														BB2 BAE (ton/yr):		1.40											

- a. The fuel-specific emission factors for this pollutant do not change over the baseline review period. The factors used are summarized in Table B-2 for BB1 and Table B-3 for BB2.
- b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBtu) \* (ton/2,000 lb)
- c. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/mgal) \* Monthly No. 6 Fuel Oil Usage (gal/mo) \* (mgal/1,000 gal) \* (ton/2,000 lb)
- d. Emissions from NGC Combustion (ton/mo) = Emission Factor (lb/ADTUBP) \* Monthly Pulp Mill Production Rate (ADTUBP/mo) \* (ton/2,000 lb)

**Table B-13. Baseline Actual Emission Calculations for TRS <sup>a</sup>**

Month	Hours of NCG Combustion in BB1 (hr/mo)	NCG Emission Rate <sup>b</sup>	
		Monthly (ton/mo)	24-Month Annual Avg. (tpy)
Sep-07	717	0.22	2.49
Oct-07	741	0.22	2.49
Nov-07	720	0.22	2.51
Dec-07	744	0.22	2.51
Jan-08	741	0.22	2.54
Feb-08	585	0.18	2.54
Mar-08	734	0.22	2.54
Apr-08	713	0.21	2.54
May-08	742	0.22	2.54
Jun-08	714	0.21	2.54
Jul-08	667	0.20	2.53
Aug-08	579	0.17	2.51
Sep-08	710	0.21	2.53
Oct-08	744	0.22	2.53
Nov-08	680	0.20	2.53
Dec-08	741	0.22	2.53
Jan-09	732	0.22	2.52
Feb-09	668	0.20	2.55
Mar-09	715	0.21	2.54
Apr-09	690	0.21	2.54
May-09	744	0.22	2.54
Jun-09	719	0.22	2.54
Jul-09	726	0.22	2.54
Aug-09	743	0.22	<b>2.55</b>
		<b>BAE (ton/yr):</b>	<b>2.55</b>
		<b>Start Baseline Period:</b>	<b>Sep-07</b>
		<b>End Baseline Period:</b>	<b>Aug-09</b>

- a. The NCG combustion factor for this pollutant does not change over the baseline review period. The factor used is summarized in Table B-2.
- b. Emissions from NCG Combustion (ton/mo) = Emission Factor (lb/hr) \* Hours of NCG Combustion (hr/mo) \* (ton/2,000 lb)



Table B-14. Baseline Actual Emission Calculations for GHG <sup>a</sup>

Month	Pulp Mill Production (ADTUBP)	No. 1 Bark Boiler										No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate					
		Total		Fuel Oil		Fuel-Specific Heat Input		Total		Fuel Oil		Fuel-Specific Heat Input		Bark Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	NCG Emission Rate <sup>d</sup> (ton/mo)	Emission Rate		Bark Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)	
		Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Monthly	24-Month Annual Avg.				Monthly	24-Month Annual Avg.							
Jun-11	44,395	714	176,300	11,439	174,749	1,551	710	394,695	35,532	389,877	4,817	18,071	128.39	72.23	18,271	215,601	40,317	398.82	40,715	432,431	58,987	648,032			
Jul-11	50,379	744	185,531	1,125	185,378	153	744	420,037	7,242	419,055	982	19,170	12.63	81.97	19,264	216,014	43,334	81.28	43,415	443,633	62,679	659,647			
Aug-11	48,151	744	185,465	13,854	183,587	1,878	732	392,282	20,108	389,556	2,726	18,984	155.50	78.34	19,218	215,923	40,283	225.70	40,509	445,079	59,727	661,002			
Sep-11	46,509	720	184,443	25,239	181,021	3,422	720	395,433	80,253	384,552	10,880	18,719	283.28	75.67	19,078	217,972	39,766	900.76	40,667	446,061	59,745	664,032			
Oct-11	50,126	514	139,605	20,539	136,821	2,785	744	406,832	34,785	402,116	4,716	14,148	230.53	81.55	14,461	215,425	41,582	390.43	41,973	447,986	56,433	663,411			
Nov-11	45,216	720	194,191	28,865	190,278	3,913	720	396,977	7,700	395,933	1,044	19,676	323.98	73.57	20,074	216,057	40,943	86.42	41,029	449,647	61,103	665,704			
Dec-11	48,353	744	203,496	52,269	196,410	7,086	744	423,890	23,297	420,731	3,159	20,310	586.66	78.67	20,976	216,825	43,507	261.49	43,769	452,302	64,745	669,127			
Jan-12	47,849	744	193,650	48,576	187,064	6,586	742	397,796	9,832	396,463	1,333	19,344	545.22	77.85	19,967	216,799	40,998	110.35	41,108	451,820	61,075	668,619			
Feb-12	38,901	682	168,597	81,824	157,503	11,093	604	315,651	8,112	314,551	1,100	16,287	918.40	63.29	17,269	217,007	32,527	91.05	32,618	451,556	49,887	668,563			
Mar-12	48,899	741	196,132	2,487	195,795	337	741	418,402	22,883	415,299	3,102	20,247	27.92	79.56	20,354	218,354	42,946	256.83	43,202	452,941	63,557	671,295			
Apr-12	45,227	627	160,419	4,447	159,817	603	623	327,350	12,920	325,598	1,752	16,526	49.91	73.58	16,650	217,649	33,670	145.01	33,815	452,334	50,465	669,983			
May-12	50,071	732	179,356	38,662	174,115	5,242	719	365,104	3,622	364,612	491	18,005	433.94	81.46	18,520	217,700	37,704	40.65	37,745	452,004	56,265	669,704			
Jun-12	28,432	720	171,943	75,712	161,679	10,265	666	308,689	21,983	305,709	2,980	16,719	849.79	46.26	17,615	218,702	31,613	246.74	31,860	452,615	49,475	671,316			
Jul-12	43,464	519	130,199	32,814	125,750	4,449	744	384,382	12,040	382,749	1,632	13,004	368.30	70.71	13,443	216,135	39,580	135.14	39,715	453,901	53,157	670,036			
Aug-12	47,151	717	157,645	139,473	138,736	18,909	395	199,068	23,990	195,816	3,253	14,346	1,565.45	76.71	15,989	215,294	20,249	269.27	20,518	445,948	36,507	661,243			
Sep-12	46,324	720	178,987	3,536	178,507	479	713	378,505	23,221	375,357	3,148	18,459	39.69	75.37	18,574	216,631	38,815	260.63	39,076	449,322	57,650	665,954			
Oct-12	45,668	744	189,044	2,302	188,732	312	744	388,581	11,813	386,980	1,602	19,517	25.84	74.30	19,617	216,963	40,017	132.59	40,150	451,500	59,766	668,462			
Nov-12	47,840	720	185,203	19,482	182,562	2,641	673	369,359	19,653	366,694	2,665	18,878	218.66	77.83	19,175	217,755	37,919	220.59	38,140	454,729	57,315	672,483			
Dec-12	47,754	744	189,751	1,566	189,538	212	744	410,275	1,311	410,097	178	19,600	17.57	77.69	19,695	217,768	42,408	14.72	42,422	455,363	62,117	673,131			
Jan-13	48,665	667	168,413	15,260	166,345	2,069	735	389,940	14,648	387,954	1,986	17,201	171.28	79.18	17,452	216,846	40,118	164.41	40,282	454,893	57,734	671,740			
Feb-13	45,516	672	163,763	18,355	161,275	2,489	611	314,945	63,196	306,377	8,568	16,677	206.02	74.05	16,957	218,556	31,682	709.31	32,391	453,199	49,349	671,755			
Mar-13	49,398	744	183,646	1,903	183,388	258	744	413,125	633	413,039	86	18,964	21.36	80.37	19,066	217,879	42,712	7.11	42,719	453,814	61,785	671,693			
Apr-13	47,840	720	176,343	500	176,276	68	719	388,413	1,517	388,207	206	18,228	5.61	77.83	18,312	218,942	40,144	17.03	40,161	459,636	58,473	678,578			
May-13	49,910	743	185,273	3,677	184,775	499	744	403,018	4,761	402,372	646	19,107	41.27	81.20	19,230	219,613	41,609	53.44	41,662	464,831	60,892	684,444			
BAE (ton/yr):																							684,444		
Start Baseline Period:																							Jun-11		
End Baseline Period:																							May-13		
BB1 BAE (ton/yr):																							219,613		
BB2 BAE (ton/yr):																							464,831		

a. The fuel-specific emission factors for this pollutant do not change over the baseline review period. The factors used are summarized in Table B-2 for BB1 and Table B-3 for BB2.  
b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBtu) \* (ton/2,000 lb)  
c. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/MMBtu) \* Monthly No. 6 Fuel Oil Usage (MMBtu/mo) \* (ton/2,000 lb)  
d. Emissions from NCG Combustion (ton/mo) = Emission Factor (ton/ADTUBP) \* Monthly Pulp Mill Production Rate (ADTUBP/mo)

Table B-15. Baseline Actual Emission Calculations for GHG in terms of CO2e <sup>a</sup>

Month	Pulp Mill Production (ADTUBP)	No. 1 Bark Boiler										No. 1 Bark Boiler				No. 2 Bark Boiler				Total BB1 + BB2 Emission Rate					
		Total		Fuel Oil		Fuel-Specific Heat Input		Total		Fuel Oil		Fuel-Specific Heat Input		Bark Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	NCG Emission Rate <sup>d</sup> (ton/mo)	Emission Rate		Bark Emission Rate <sup>b</sup> (ton/mo)	Fuel Oil Emission Rate <sup>c</sup> (ton/mo)	Emission Rate		Monthly (ton/mo)	24-Month Annual Avg. (tpy)	
		Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Hours of Operation	Heat Input (MMBtu)	Usage Rate (gal/mo)	Bark (MMBtu)	Fuel Oil (MMBtu)	Monthly	24-Month Annual Avg.				Monthly	24-Month Annual Avg.							
Jun-11	44,395	714	176,300	11,439	174,749	1,551	710	394,695	35,532	389,877	4,817	18,310	128.82	72.33	18,511	218,411	40,850	400.14	41,251	438,112	59,762	656,523			
Jul-11	50,379	744	185,531	1,125	185,378	153	744	420,037	7,242	419,055	982	19,424	12.67	82.08	19,518	218,839	43,908	81.55	43,989	449,464	63,507	668,302			
Aug-11	48,151	744	185,465	13,854	183,587	1,878	732	392,282	20,108	389,556	2,726	19,236	156.02	78.45	19,470	218,746	40,817	226.45	41,043	450,929	60,514	669,675			
Sep-11	46,509	720	184,443	25,239	181,021	3,422	720	395,433	80,253	384,552	10,880	18,967	284.22	75.77	19,327	220,821	40,293	903.76	41,196	451,920	60,523	672,740			
Oct-11	50,126	514	139,605	20,539	136,821	2,785	744	406,832	34,785	402,116	4,716	14,336	231.30	81.67	14,649	218,240	42,133	391.73	42,525	453,871	57,173	672,110			
Nov-11	45,216	720	194,191	28,865	190,278	3,913	720	396,977	7,700	395,933	1,044	19,937	325.06	73.67	20,336	218,879	41,485	86.71	41,572	455,554	61,907	674,433			
Dec-11	48,353	744	203,496	52,269	196,410	7,086	744	423,890	23,297	420,731	3,159	20,579	588.62	78.78	21,247	219,654	44,083	262.36	44,346	458,243	65,592	677,897			
Jan-12	47,849	744	193,650	48,576	187,064	6,586	742	397,796	9,832	396,463	1,333	19,600	547.03	77.96	20,225	219,626	41,540	110.72	41,651	457,756	61,876	677,382			
Feb-12	38,901	682	168,597	81,824	157,503	11,093	604	315,651	8,112	314,551	1,100	16,503	921.46	63.38	17,488	219,834	32,958	91.35	33,049	457,488	50,537	677,322			
Mar-12	48,899	741	196,132	2,487	195,795	337	741	418,402	22,883	415,299	3,102	20,515	28.01	79.67	20,623	221,199	43,514	257.69	43,772	458,891	64,394	680,091			
Apr-12	45,227	627	160,419	4,447	159,817	603	623	327,350	12,920	325,598	1,752	16,745	50.08	73.68	16,869	220,485	34,115	145.50	34,261	458,276	51,130	678,762			
May-12	50,071	732	179,356	38,662	174,115	5,242	719	365,104	3,622	364,612	491	18,243	435.39	81.58	18,760	220,535	38,203	40.79	38,244	457,944	57,004	678,479			
Jun-12	28,432	720	171,943	75,712	161,679	10,265	666	308,689	21,983	305,709	2,980	16,940	852.62	46.32	17,839	221,549	32,031	247.56	32,279	458,563	50,118	680,113			
Jul-12	43,464	519	130,199	32,814	125,750	4,449	744	384,382	12,040	382,749	1,632	13,176	369.53	70.81	13,616	218,947	40,104	135.59	40,239	459,866	53,855	678,814			
Aug-12	47,151	717	157,645	139,473	138,736	18,909	395	199,068	23,990	195,816	3,253	14,536	1,570.67	76.82	16,184	218,090	20,517	270.16	20,787	451,807	36,971	669,897			
Sep-12	46,324	720	178,987	3,536	178,507	479	713	378,505	23,221	375,357	3,148	18,704	39.82	75.47	18,819	219,446	39,329	261.50	39,591	455,227	58,409	674,673			
Oct-12	45,668	744	189,044	2,302	188,732	312	744	388,581	11,813	386,980	1,602	19,775	25.92	74.40	19,875	219,782	40,547	133.04	40,680	457,439	60,555	677,220			
Nov-12	47,840	720	185,203	19,482	182,562	2,641	673	369,359	19,653	366,694	2,665	19,128	219.39	77.94	19,426	220,585	38,421	221.32	38,643	460,716	58,068	681,301			
Dec-12	47,754	744	189,751	1,566	189,538	212	744	410,275	1,311	410,097	178	19,859	17.63	77.80	19,955	220,598	42,969	14.76	42,984	461,360	62,939	681,958			
Jan-13	48,665	667	168,413	15,260	166,345	2,069	735	389,940	14,648	387,954	1,986	17,429	171.85	79.28	17,680	219,664	40,649	164.96	40,814	460,885	58,494	680,549			
Feb-13	45,516	672	163,763	18,355	161,275	2,489	611	314,945	63,196	306,377	8,568	16,898	206.71	74.15	17,179	221,398	32,101	711.68	32,813	459,167	49,992	680,565			
Mar-13	49,398	744	183,646	1,903	183,388	258	744	413,125	633	413,039	86	19,215	21.43	80.48	19,317	220,712	43,277	7.13	43,284	459,792	62,601	680,504			
Apr-13	47,840	720	176,343	500	176,276	68	719	388,413	1,517	388,207	206	18,470	5.63	77.94	18,553	221,792	40,675	17.09	40,692	465,693	59,246	687,485			
May-13	49,910	743	185,273	3,677	184,775	499	744	403,018	4,761	402,372	646	19,360	41.41	81.31	19,483	222,474	42,160	53.62	42,213	470,959	61,696	693,433			
																							BAE (ton/yr):		693,433
																							Start Baseline Period:		Jun-11
																							End Baseline Period:		May-13
																							BB1 BAE (ton/yr):		222,474
																							BB2 BAE (ton/yr):		470,959

a. The fuel-specific emission factors for this pollutant do not change over the baseline review period. The factors used are summarized in Table B-2 for BB1 and Table B-3 for BB2.  
b. Bark Monthly Emissions (ton/mo) = Bark Usage (MMBtu/mo) \* Bark EF (lb/MMBtu) \* (ton/2,000 lb)  
c. No. 6 Fuel Oil Monthly Emissions (ton/mo) = Emission Factor (lb/MMBtu) \* Monthly No. 6 Fuel Oil Usage (MMBtu/mo) \* (ton/2,000 lb)  
d. Emissions from NCG Combustion (ton/mo) = Emission Factor (ton/ADTUBP) \* Monthly Pulp Mill Production Rate (ADTUBP/mo)

**Table B-16. Summary of Baseline Actual Emissions (BAE)**

Pollutant	Baseline Period		No. 1 Bark Boiler	No. 2 Bark Boiler	Total BAE (tpy)
			BAE (tpy)	BAE (tpy)	
PM	Feb-05	- Jan-07	123.86	325.27	449.12
PM <sub>10</sub>	Feb-05	- Jan-07	125.87	327.65	453.52
PM <sub>2.5</sub>	Feb-05	- Jan-07	125.86	327.64	453.51
CO	Jun-11	- May-13	1,134.43	2,123.76	3,258.19
NO <sub>x</sub>	Jun-11	- May-13	225.97	497.15	723.12
SO <sub>2</sub>	Jan-13	- Dec-14	883.30	29.17	912.47
VOC	Jun-11	- May-13	3.55	5.78	9.33
Lead	Jun-11	- May-13	0.04	0.08	0.11
SAM	Jun-05	- May-07	2.74	1.40	4.15
TRS	Sep-07	- Aug-09	2.55	-	2.55
GHG	Jun-11	- May-13	219,613	464,831	684,444
CO <sub>2e</sub>	Jun-11	- May-13	222,474	470,959	693,433

**Table B-17. Emission Factors for Projected Actual Emission (PAE) Calculations**

Emission Unit	Fuel	PM <sup>a</sup> (lb/MMBtu)	PM <sub>10</sub> <sup>b</sup> (lb/MMBtu)	PM <sub>2.5</sub> <sup>b</sup> (lb/MMBtu)	CO <sup>c</sup> (lb/MMBtu)	NO <sub>x</sub> <sup>d</sup> (lb/MMBtu)	SO <sub>2</sub> <sup>e</sup> (lb/MMBtu)	VOC <sup>f</sup> (lb/MMBtu)	Pb <sup>g</sup> (lb/MMBtu)	SAM <sup>h</sup> (lb SAM/lb SO <sub>2</sub> )	GHG <sup>i</sup> (lb/MMBtu)	CO <sub>2</sub> e <sup>j</sup> (lb/MMBtu)
No. 1 Bark Boiler	Bark	0.129	0.130	0.130	1.20	0.22	209.5 lb/hr	2.57E-03	3.49E-05	1.49E-03	206.82	209.56
	Natural Gas	1.85E-03	7.41E-03	7.41E-03	0.082	0.22	5.85E-04	5.36E-03	4.87E-07	-	116.98	117.10
	No. 6 Fuel Oil	4.89E-03	1.59E-02	1.58E-02	0.037	0.35	9.87E-01	2.07E-03	1.11E-05	4.39E-02	165.57	166.13
No. 2 Bark Boiler	Bark	0.166	0.167	0.167	1.16	0.22	3.18E-03	2.57E-03	3.49E-05	1.49E-03	206.82	209.56
	Natural Gas	1.85E-03	7.41E-03	7.41E-03	0.082	0.22	5.85E-04	5.36E-03	4.87E-07	-	116.98	117.10
	No. 6 Fuel Oil	4.89E-03	1.59E-02	1.58E-02	0.037	0.35	9.87E-01	2.07E-03	1.11E-05	4.39E-02	165.57	166.13

- a. Bark (and NCG combustion): Filterable PM emission factor is the median plus one standard deviation of all test values from 2004 through 2014.  
 Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf  
 Fuel Oil: Filterable PM emission factor is the current permit limit when firing only fuel oil or tall oil.
- b. PM<sub>10</sub> and PM<sub>2.5</sub> include filterable PM<sub>10</sub>/PM<sub>2.5</sub> and condensable PM.  
 Bark: The bark FPM<sub>10</sub> emission factors are calculated as a percentage of FPM using data from Table 5.2 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers.  
 Filterable PM<sub>10</sub> = 98% % of Filterable PM  
 Filterable PM<sub>2.5</sub> = 98% % of Filterable PM  
 Condensable PM = 3.93E-03 NCASI Technical Bulletin 1013 (March 2013), Table 5.1, median value for boilers with wet scrubbers  
 Natural Gas: The FPM<sub>10</sub> and FPM<sub>2.5</sub> emission rates are calculated as a percentage of filterable PM.  
 Filterable PM<sub>10</sub> = 100% % of Filterable PM  
 Filterable PM<sub>2.5</sub> = 100% % of Filterable PM  
 Condensable PM = 0.006 AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf  
 Fuel Oil: The percent of FPM that is FPM<sub>10</sub> and FPM<sub>2.5</sub> are calculated using the emission factors in AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers  
 Filterable PM<sub>10</sub> = 100% % of Filterable PM  
 Filterable PM<sub>2.5</sub> = 96% % of Filterable PM  
 Condensable PM = 0.011 AP-42, Section 1.3, Table 1.3-2 (May 2010) for No. 6 Fuel Oil.
- c. Bark (and NCG Combustion): Emission factor selected based on analyzing the CEMS data for operation on wet bark. The factor is a conservative estimate based on the variability and limited availability of CEMS data (20 hours).  
 Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf  
 Fuel Oil: AP-42, Section 1.3, Table 1.3-1 (May 2010).
- d. Bark (and NCG Combustion): The factor is the average plus 1 standard deviation of all CEMS data determined to potentially represent future operation on wet bark.  
 Natural Gas: Expected emission factor for new natural gas burners.  
 Fuel Oil: AP-42, Section 1.3, Table 1.3-1 (May 2010).
- e. Bark (and NCG Combustion) for BB1: The emission factor is the average of all stack test values from 2004 through 2014 plus a 15% safety factor to account for variability.  
 Bark for BB2: NCASI TB 1013, Table 5.1, median value (March 2013); Natural Gas for Both: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.  
 Fuel Oil for Both: AP-42, Section 1.3, Table 1.3-1 (May 2010).
- f. Bark: NCASI TB 1013, Table 5.1, median value (March 2013); Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf  
 Fuel Oil: AP-42, Section 1.3, Table 1.3-3 (May 2010).
- g. Bark: NCASI TB 1013, Table 4.3, median value (March 2013); Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf  
 Fuel Oil: AP-42, Section 1.3, Table 1.3-11 (May 2010).
- h. Bark: Emission factor is the average of two stack test results from the GP Cedar Springs Mill. Fuel Oil: AP-42 Section 1.3, Table 1.3-1 (May 2010), using the average % sulfur fuel oil in last 3 years and ratio of H<sub>2</sub>SO<sub>4</sub> to SO<sub>3</sub> (98/80)
- i. The factors are the sum of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O factors from EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Tables C-1 and C-2, converted from kg/MMBtu
- j. The CO<sub>2</sub>e emission factors are the sum of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors once global warming potentials are applied.

**Emission Factors for LVHC NCG Combustion**

Pollutant	Emission Factor (lb/ADTUBP)	Reference
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	-	Stack test emission factor includes emissions from NCG combustion.
CO	-	CEMS data includes emissions from NCG combustion.
NO <sub>x</sub>	-	CEMS data includes emissions from NCG combustion.
SO <sub>2</sub>	-	Stack test emission factor includes emissions from NCG combustion.
VOC	0.003	NCASI TB 1020; Table 4.4
SAM	4.90E-03	NCASI TB 973; Table 4.18
TRS	0.6 lb/hr	Average of the last four TRS stack tests.
<b>Greenhouse Gases</b>		NCASI Memo (2/14/11, rev 3/21/11), "Overview of Greenhouse Gas Emissions from Low Level Sources at Pulp and Paper Mills":
Biogenic CO <sub>2</sub>	1.63E-03 ton/ADTUBP	Table 1 (700 metric tons of biogenic CO <sub>2</sub> per day for production of 1,179 metric tons of pulp per day)
CH <sub>4</sub>	2.32E-07 ton/ADTUBP	Table 1 (0.1 metric tons of CH <sub>4</sub> per day for production of 1,179 metric tons of pulp per day)
N <sub>2</sub> O	9.30E-08 ton/ADTUBP	Table 1 (0.04 metric tons of N <sub>2</sub> O per day for production of 1,179 metric tons of pulp per day)
GHG	1.63E-03 ton/ADTUBP	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors.
CO <sub>2</sub> e	1.63E-03 ton/ADTUBP	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors once global warming potentials are applied.

**Table B-18. Projected Actual Emission (PAE) Calculations**

**No. 1 Bark Boiler**

Projected Actual Boiler Total Annual Heat Input =	2,271,069	MMBtu/yr
Projected Bark Usage Percentage =	86.4%	
Projected Actual Annual Heat Input from Bark =	1,961,111	MMBtu/yr
Projected Natural Gas Usage Percentage =	12.6%	
Projected Actual Annual Heat Input from Natural Gas =	285,972	MMBtu/yr
Projected No. 6 Fuel Oil Usage Percentage =	1.1%	
Projected Actual Annual Heat Input from No. 6 Fuel Oil =	23,985	MMBtu/yr
Maximum Historical 12-Month Rolling Hours of Operation =	8,650	hr/yr

**NCG Combustion**

Projected Actual Annual Pulp Production =	587,429	ADTUBP/yr
Maximum Historical Hours of NCG Combustion in BB1 =	8,610	hr/yr

**Projected Actual Emission Estimates - No. 1 Bark Boiler**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG (tpy)	CO <sub>2</sub> e (tpy)
Bark Emissions	126.45	127.78	127.78	1,176.67	215.72	905.94	2.52	3.42E-02	1.46	-	202,796	205,481
Natural Gas Emissions	0.26	1.06	1.06	11.71	31.46	0.08	0.77	6.97E-05	-	-	16,726	16,743
No. 6 Fuel Oil Emissions	0.06	0.19	0.19	0.44	4.16	11.84	0.02	1.34E-04	0.53	-	1,985.66	1,992
NCG Combustion <sup>a</sup>	-	-	-	-	-	-	0.88	-	1.44	2.58	956	957
<b>Total Projected Actual Emissions</b>	<b>126.78</b>	<b>129.03</b>	<b>129.03</b>	<b>1,188.82</b>	<b>251.34</b>	<b>917.86</b>	<b>4.19</b>	<b>3.44E-02</b>	<b>3.42</b>	<b>2.58</b>	<b>222,464</b>	<b>225,173</b>

a. Emissions of PM, PM<sub>10</sub>, PM<sub>2.5</sub>, CO, NO<sub>x</sub>, and SO<sub>2</sub> from NCG combustion are included in the projected actual emission rates for bark burning.

**No. 2 Bark Boiler**

Projected Actual Boiler Total Annual Heat Input =	4,400,684	MMBtu/yr
Projected Bark Usage Percentage =	83.0%	
Projected Actual Annual Heat Input from Bark =	3,654,219	MMBtu/yr
Projected Natural Gas Usage Percentage =	16.3%	
Projected Actual Annual Heat Input from Natural Gas =	717,866	MMBtu/yr
Projected No. 6 Fuel Oil Usage Percentage =	0.6%	
Projected Actual Annual Heat Input from No. 6 Fuel Oil =	28,599	MMBtu/yr

**Projected Actual Emission Estimates - No. 2 Bark Boiler**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG (tpy)	CO <sub>2</sub> e (tpy)
Bark Emissions	303.99	305.09	305.09	2,119.45	401.96	5.81	4.70	6.38E-02	2.71	-	377,878	382,880
Natural Gas Emissions	0.66	2.66	2.66	29.39	78.97	0.21	1.92	1.75E-04	-	-	41,988	42,030
No. 6 Fuel Oil Emissions	0.07	0.23	0.23	0.53	4.96	14.12	0.03	1.59E-04	0.63	-	2,368	2,376
<b>Total Projected Actual Emissions</b>	<b>304.72</b>	<b>307.97</b>	<b>307.97</b>	<b>2,149.36</b>	<b>485.89</b>	<b>20.14</b>	<b>6.65</b>	<b>6.41E-02</b>	<b>3.34</b>	<b>-</b>	<b>422,233</b>	<b>427,286</b>

Table B-19. Emission Factors for Potential-to-Emit (PTE) Calculations

Emission Unit	Fuel	PM <sup>a</sup> (lb/MMBtu)	PM <sub>10</sub> <sup>b</sup> (lb/MMBtu)	PM <sub>2.5</sub> <sup>b</sup> (lb/MMBtu)	CO <sup>c</sup> (lb/MMBtu)	NO <sub>x</sub> <sup>d</sup> (lb/MMBtu)	SO <sub>2</sub> <sup>e</sup> (lb/MMBtu)	VOC <sup>f</sup> (lb/MMBtu)	Pb <sup>g</sup> (lb/MMBtu)	SAM <sup>h</sup> (lb/MMBtu)	GHG <sup>i</sup> (lb/MMBtu)	CO <sub>2e</sub> <sup>j</sup> (lb/MMBtu)
No. 1 Bark Boiler	Bark	0.158	0.159	0.159	1.20	0.22	675.1 lb/hr	2.57E-03	3.49E-05	4.72E-06	206.82	209.56
	No. 6 Fuel Oil	0.1	0.111	0.107	0.037	0.35	675.1 lb/hr	2.07E-03	1.11E-05	0.13	165.57	166.13
	Natural Gas	0.002	7.41E-03	7.41E-03	0.082	0.22	5.85E-04	5.36E-03	4.87E-07	-	116.98	117.10
	Current High Fuel	Bark	Bark	Bark	Bark	FO	Bark	Bark	Bark	FO	Bark	Bark
	Future High Fuel	Bark	Bark	Bark	Bark	FO	Bark	NG	Bark	FO	Bark	Bark
No. 2 Bark Boiler	Bark	0.178	0.178	0.178	1.16	0.22	3.18E-03	2.57E-03	3.49E-05	4.72E-06	206.82	209.56
	No. 6 Fuel Oil	0.1	0.111	0.107	0.037	0.35	498.96 lb/hr	2.07E-03	1.11E-05	0.13	165.57	166.13
	Natural Gas	0.002	7.41E-03	7.41E-03	0.082	0.22	5.85E-04	5.36E-03	4.87E-07	-	116.98	117.10
	Current High Fuel	Bark	Bark	Bark	Bark	FO	FO	Bark	Bark	FO	Bark	Bark
	Future High Fuel	Bark	Bark	Bark	Bark	FO	FO	NG	Bark	FO	Bark	Bark

- a. Bark: Filterable PM emission factor is the current permit limit when firing only carbonaceous fuel.  
Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.  
Fuel Oil: Filterable PM emission factor is the current permit limit when firing only fuel oil or tall oil.
- b. PM<sub>10</sub> and PM<sub>2.5</sub> include filterable PM<sub>10</sub>/PM<sub>2.5</sub> and condensable PM.  
Bark: The bark FPM<sub>10</sub> emission factors are calculated as a percentage of FPM using data from Table 5.2 of NCASI Technical Bulletin 1013 (March 2013) for boilers with wet scrubbers.  
Filterable PM<sub>10</sub> = 98% % of Filterable PM  
Filterable PM<sub>2.5</sub> = 98% % of Filterable PM  
Condensable PM = 3.93E-03 NCASI Technical Bulletin 1013 (March 2013), Table 5.1, median value for boilers with wet scrubbers.  
Natural Gas: The FPM<sub>10</sub> and FPM<sub>2.5</sub> emission rates are calculated as a percentage of filterable PM.  
Filterable PM<sub>10</sub> = 100% % of Filterable PM  
Filterable PM<sub>2.5</sub> = 100% % of Filterable PM  
Condensable PM = 0.006 AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.  
Fuel Oil: The percent of FPM that is FPM<sub>10</sub> and FPM<sub>2.5</sub> are calculated using the emission factors in AP-42, Section 1.3, Table 1.3-4 (May 2010) for boilers with wet scrubbers.  
Filterable PM<sub>10</sub> = 100% % of Filterable PM  
Filterable PM<sub>2.5</sub> = 96% % of Filterable PM  
Condensable PM = 0.011 AP-42, Section 1.3, Table 1.3-2 (May 2010) for No. 6 Fuel Oil.
- c. Bark: Emission factor selected based on analyzing all CEMS data and is representative of potential emissions both currently and in the future.  
CEMS data includes emissions from NCG Combustion in BB1.  
Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.  
Fuel Oil: AP-42, Section 1.3, Table 1.3-1 (May 2010).
- d. Bark: The factor is based on all CEMS data, which includes emissions from NCG Combustion in BB1. The value is also the AP-42, Section 1.6, Table 1.6-2 (September 2003) factor for bark.  
Natural Gas: Expected emission factor for new natural gas burners.  
Fuel Oil: AP-42, Section 1.3, Table 1.3-1 (May 2010).
- e. Bark, Fuel Oil, and NCG Combustion for BB1: The emission factor is the current permit limit.  
Natural Gas for Both Boilers: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.  
Bark for BB2: NCASI TB 1013, Table 5.1, median value (March 2013). Fuel Oil for BB2: The emission factor is the current permit limit.
- f. Bark: NCASI TB 1013, Table 5.1, median value (March 2013). Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.  
Fuel Oil: AP-42, Section 1.3, Table 1.3-3 (May 2010).
- g. Bark: NCASI TB 1013, Table 4.3, median value (March 2013). Natural Gas: AP-42, Section 1.4, Table 1.4-2 (July 1998), converted from lb/MMscf to lb/MMBtu using 1,026 Btu/scf.  
Fuel Oil: AP-42, Section 1.3, Table 1.3-11 (May 2010).
- h. Bark: Emission factor is the average of two stack test results from the GP Cedar Springs Mill given in terms of lb SAM/lb SO<sub>2</sub> and multiplied by the NCASI SO<sub>2</sub> emission factor for bark burning.  
Fuel Oil: AP-42, Section 1.3, Table 1.3-1 (May 2010), using the permit limit of 2.5% sulfur fuel oil and ratio of H<sub>2</sub>SO<sub>4</sub> to SO<sub>2</sub> (98/80).
- i. Bark, Natural Gas, and Fuel Oil: The factors are the sum of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O factors from EPA's Mandatory Reporting Rule for GHGs (40 CFR, Part 98), Tables C-1 and C-2, converted from kg/MMBtu.
- j. The CO<sub>2e</sub> emission factors are the sum of CO<sub>2</sub>, CH<sub>4</sub>, and N<sub>2</sub>O emission factors once global warming potentials are applied.

Emission Factors for LVHC NCG Combustion

Pollutant	Emission Factor (lb/ADTUBP)	Reference
PM/PM <sub>10</sub> /PM <sub>2.5</sub>	-	The current permit limit for bark is assumed to include emissions from NCG combustion (NCGs are combusted during compliance demonstrations).
CO	0.012	NCASI TB 1020; Table 4.4
NO <sub>x</sub>	0.047	NCASI TB 1020; Table 4.4
SO <sub>2</sub>	-	The current permit limit includes emissions from NCG combustion.
VOC	0.003	NCASI TB 1020; Table 4.4
SAM	4.90E-03	NCASI TB 973; Table 4.18
TRS	2.43 lb/hr	Current permit limit.
<u>Greenhouse Gases</u>		
Biogenic CO <sub>2</sub>	1.63E-03 ton/ADTUBP	NCASI Memo (2/14/11, rev 3/21/11), "Overview of Greenhouse Gas Emissions from Low Level Sources at Pulp and Paper Mills". Table 1 (700 metric tons of biogenic CO <sub>2</sub> per day for production of 1,179 metric tons of pulp per day)
CH <sub>4</sub>	2.32E-07 ton/ADTUBP	Table 1 (0.1 metric tons of CH <sub>4</sub> per day for production of 1,179 metric tons of pulp per day)
N <sub>2</sub> O	9.30E-08 ton/ADTUBP	Table 1 (0.04 metric tons of N <sub>2</sub> O per day for production of 1,179 metric tons of pulp per day)
GHG	1.63E-03 ton/ADTUBP	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors.
CO <sub>2e</sub>	1.63E-03 ton/ADTUBP	Sum of CO <sub>2</sub> , CH <sub>4</sub> , and N <sub>2</sub> O emission factors once global warming potentials are applied.

**Table B-20. No. 1 Bark Boiler Potential-to-Emit (PTE) Calculations**

**No. 1 Bark Boiler**

Maximum Heat Input Rating =	300	MMBtu/hr
Annual Maximum Heat Input Rating =	2,628,000	MMBtu/yr
Bark Maximum Heat Input Rating =	300	MMBtu/hr
Bark Potential Annual Heat Input =	2,628,000	MMBtu/yr
Fuel Oil/Tall Oil Maximum Heat Input Rating =	92.4	MMBtu/hr
Fuel Oil/Tall Oil Potential Annual Heat Input =	809,424	MMBtu/yr
Natural Gas Maximum Heat Input Rating =	200	MMBtu/hr
Natural Gas Potential Annual Heat Input =	1,752,000	MMBtu/yr
Maximum Annual Hours of Operation =	8,760	hr/yr
<b>NCG Combustion</b>		
Maximum Annual Pulp Production =	924,180	ADTUBP/yr
Maximum Hours of NCG Combustion in BB1 =	8,760	hr/yr

**Current Potential Emission Estimates - No. 1 Bark Boiler <sup>a</sup>**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG (tpy)	CO <sub>2</sub> e (tpy)
Bark Emissions	207	208.62	208.62	1,576.80	289.08	2,957	3.38	0.05	0.01	-	271,758	275,356
Fuel Oil / Tall Oil Emissions	40.47	44.95	43.33	14.93	140.30	2,957	0.84	0.005	52.11	-	67,010	67,233
NCG Combustion	-	-	-	5.55	21.72	-	1.39	-	2.26	10.64	1,504	1,506
<b>Total Current Potential Emissions</b>	<b>207.00</b>	<b>208.62</b>	<b>208.62</b>	<b>1,582.35</b>	<b>362.06</b>	<b>2,957</b>	<b>4.76</b>	<b>0.05</b>	<b>54.38</b>	<b>10.64</b>	<b>273,261</b>	<b>276,861</b>

a. Potential emissions are calculated using a fuel hierarchy starting with the fuel with the higher emission factor among bark and fuel oil. If fuel oil has a higher emission factor than bark, emissions from fuel oil are fully calculated and the remaining available annual heat input is then used with the bark emission factor. If bark has the higher emission factor, total potential emissions are defined only by bark as its maximum annual heat input is the boiler maximum. Emissions from NCG combustion are added to the fuel based calculations if they are calculated separately.

**Future Potential Emission Estimates - No. 1 Bark Boiler <sup>a</sup>**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG (tpy)	CO <sub>2</sub> e (tpy)
Bark Emissions	207	208.62	208.62	1,576.80	289.08	2,957	3.38	0.05	0.01	-	271,758	275,356
Fuel Oil / Tall Oil Emissions	40.47	44.95	43.33	14.93	140.30	2,957	0.84	0.005	52.11	-	67,010	67,233
Natural Gas	1.62	6.49	6.49	71.72	192.72	0.51	4.70	4.3E-04	-	-	102,474	102,578
NCG Combustion	-	-	-	5.55	21.72	-	1.39	-	2.26	10.64	1,504	1,506
<b>Total Current Potential Emissions</b>	<b>207.00</b>	<b>208.62</b>	<b>208.62</b>	<b>1,582.35</b>	<b>362.06</b>	<b>2,956.94</b>	<b>6.99</b>	<b>0.05</b>	<b>54.38</b>	<b>10.64</b>	<b>273,261</b>	<b>276,861</b>

a. Potential emissions are calculated using a fuel hierarchy starting with the fuel with the highest emission factor among bark, fuel oil, and natural gas. If fuel oil or natural gas has a higher emission factor than bark, emissions from that fuel are fully calculated and the remaining available annual heat input is then used with the bark emission factor. If bark has the highest emission factor, total potential emissions are defined only by bark as its maximum annual heat input is the boiler maximum. Emissions from NCG combustion are added to the fuel based calculations if they are calculated separately.

**Table B-21. No. 2 Bark Boiler Potential-to-Emit (PTE) Calculations**

**No. 2 Bark Boiler**

Maximum Heat Input Rating =	601	MMBtu/hr
Annual Maximum Heat Input Rating =	5,264,760	MMBtu/yr
Bark Maximum Heat Input Rating =	601	MMBtu/hr
Bark Potential Annual Heat Input =	5,264,760	MMBtu/yr
Fuel Oil/Tall Oil Maximum Heat Input Rating =	180	MMBtu/hr
Fuel Oil/Tall Oil Potential Annual Heat Input =	1,576,800	MMBtu/yr
Natural Gas Maximum Heat Input Rating =	240	MMBtu/hr
Natural Gas Potential Annual Heat Input =	2,102,400	MMBtu/yr
Maximum Annual Hours of Operation =	8,760	hr/yr

**Current Potential Emission Estimates - No. 2 Bark Boiler <sup>a</sup>**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG (tpy)	CO <sub>2e</sub> (tpy)
Bark Emissions	467.48	469.54	469.54	3,053.56	579.12	8.37	6.77	0.09	0.01	-	544,421	551,629
Fuel Oil / Tall Oil Emissions	78.84	87.56	84.41	29.08	273.31	2,185	1.63	0.009	101.51	-	130,539	130,974
<b>Total Current Potential Emissions</b>	<b>467.48</b>	<b>469.54</b>	<b>469.54</b>	<b>3,053.56</b>	<b>678.99</b>	<b>2,185</b>	<b>6.77</b>	<b>0.09</b>	<b>101.52</b>	<b>-</b>	<b>544,421</b>	<b>551,629</b>

a. Potential emissions are calculated using a fuel hierarchy starting with the fuel with the higher emission factor among bark and fuel oil. If fuel oil has a higher emission factor than bark, emissions from fuel oil are fully calculated and the remaining available annual heat input is then used with the bark emission factor. If bark has the higher emission factor, total potential emissions are defined only by bark as its maximum annual heat input is the boiler maximum. Emissions from NCG combustion are added to the fuel based calculations if they are calculated separately.

**Future Potential Emission Estimates - No. 2 Bark Boiler <sup>a</sup>**

	PM (tpy)	PM <sub>10</sub> (tpy)	PM <sub>2.5</sub> (tpy)	CO (tpy)	NO <sub>x</sub> (tpy)	SO <sub>2</sub> (tpy)	VOC (tpy)	Pb (tpy)	SAM (tpy)	TRS (tpy)	GHG (tpy)	CO <sub>2e</sub> (tpy)
Bark Emissions	467.48	469.54	469.54	3,053.56	579.12	8.37	6.77	0.09	0.01	-	544,421	551,629
Fuel Oil / Tall Oil Emissions	78.84	87.56	84.41	29.08	273.31	2,185	1.63	0.009	101.51	-	130,539	130,974
Natural Gas	1.95	7.79	7.79	86.06	231.26	0.61	5.64	5.1E-04	-	-	122,969	123,093
<b>Total Current Potential Emissions</b>	<b>467.48</b>	<b>469.54</b>	<b>469.54</b>	<b>3,053.56</b>	<b>678.99</b>	<b>2,185</b>	<b>8.90</b>	<b>0.09</b>	<b>101.52</b>	<b>-</b>	<b>544,421</b>	<b>551,629</b>

a. Potential emissions are calculated using a fuel hierarchy starting with the fuel with the highest emission factor among bark, fuel oil, and natural gas. If fuel oil or natural gas has a higher emission factor than bark, emissions from that fuel are fully calculated and the remaining available annual heat input is then used with the bark emission factor. If bark has the highest emission factor, total potential emissions are defined only by bark as its maximum annual heat input is the boiler maximum. Emissions from NCG combustion are added to the fuel based calculations if they are calculated separately.



# **APPENDIX C**

## **FDEP CONSTRUCTION PERMIT APPLICATION FORMS**



# Department of Environmental Protection

## Division of Air Resource Management

### APPLICATION FOR AIR PERMIT - LONG FORM

#### I. APPLICATION INFORMATION

**Air Construction Permit** – Use this form to apply for an air construction permit:

- For any required purpose at a facility operating under a federally enforceable state air operation permit (FESOP) or Title V air operation permit;
- For a proposed project subject to prevention of significant deterioration (PSD) review, nonattainment new source review, or maximum achievable control technology (MACT);
- To assume a restriction on the potential emissions of one or more pollutants to escape a requirement such as PSD review, nonattainment new source review, MACT, or Title V; or
- To establish, revise, or renew a plantwide applicability limit (PAL).

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

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

**To ensure accuracy, please see form instructions.**

#### Identification of Facility

1. Facility Owner/Company Name: <b>Foley Cellulose LLC</b>	
2. Site Name: <b>Foley Mill</b>	
3. Facility Identification Number: <b>1230001</b>	
4. Facility Location... Street Address or Other Locator: <b>One Buckeye Drive</b> City: <b>Perry</b> County: <b>Taylor</b> Zip Code: <b>32348</b>	
5. Relocatable Facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	6. Existing Title V Permitted Facility? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No

#### Application Contact

1. Application Contact Name: <b>Brooks Butler, Manager, Environmental Engineering</b>	
2. Application Contact Mailing Address... Organization/Firm: <b>Foley Cellulose LLC</b> Street Address: <b>One Buckeye Drive</b> City: <b>Perry</b> State: <b>Taylor</b> Zip Code: <b>32348</b>	
3. Application Contact Telephone Numbers... Telephone: <b>(850) 584 - 1626</b> ext. <b>Fax:</b>	
4. Application Contact E-mail Address: <b>brooks.butler@gpac.com</b>	

#### Application Processing Information (DEP Use)

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

## APPLICATION INFORMATION

### Purpose of Application

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

#### **Air Construction Permit**

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

#### **Air Operation Permit**

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

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

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

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

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

### Application Comment

**This Air Construction Permit application is being submitted to allow the Foley Mill to make physical modifications to the No. 1 Bark Boiler (EU No. 004) and the No. 2 Bark Boiler (EU No. 019) to comply with the Subpart DDDDD of the National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters, commonly known as the Boiler Maximum Achievable Control Technology (MACT) rule (40 CFR 63 Subpart DDDDD). The Foley Mill has elected to comply with the hybrid suspension grate (HSG) boiler subcategory provisions of the Boiler MACT rule for both bark boilers.**

## APPLICATION INFORMATION

### Scope of Application

Emissions Unit ID Number	Description of Emissions Unit	Air Permit Type	Air Permit Processing Fee
004	No. 1 Bark Boiler	AC1B	N/A
019	No. 2 Bark Boiler	AC1B	N/A

### Application Processing Fee

Check one:  Attached - Amount: \$ \_\_\_\_\_  Not Applicable

## APPLICATION INFORMATION

### Owner/Authorized Representative Statement

**Complete if applying for an air construction permit or an initial FESOP.**

1. Owner/Authorized Representative Name : <b>Lee Davis, Vice President – General Manager</b>
2. Owner/Authorized Representative Mailing Address... Organization/Firm: <b>Foley Cellulose LLC</b> Street Address: <b>One Buckeye Drive</b> City: <b>Perry</b> State: <b>FL</b> Zip Code: <b>32348</b>
3. Owner/Authorized Representative Telephone Numbers... Telephone: <b>(850) 584 - 1378</b> ext. Fax:
4. Owner/Authorized Representative E-mail Address: <b>lee.davis2@gapac.com</b>
5. Owner/Authorized Representative Statement:  <i>I, the undersigned, am the owner or authorized representative of the corporation, partnership, or other legal entity submitting this air permit application. To the best of my knowledge, the statements made in this application are true, accurate and complete, and any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department.</i>  _____ Signature  _____ Date

## APPLICATION INFORMATION

### Application Responsible Official Certification

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

1. Application Responsible Official Name:
2. Application Responsible Official Qualification (Check one or more of the following options, as applicable): <input type="checkbox"/> For a corporation, the president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation, or a duly authorized representative of such person if the representative is responsible for the overall operation of one or more manufacturing, production, or operating facilities applying for or subject to a permit under Chapter 62-213, F.A.C. <input type="checkbox"/> For a partnership or sole proprietorship, a general partner or the proprietor, respectively. <input type="checkbox"/> For a municipality, county, state, federal, or other public agency, either a principal executive officer or ranking elected official. <input type="checkbox"/> The designated representative at an Acid Rain source or CAIR source.
3. Application Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
4. Application Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
5. Application Responsible Official E-mail Address:

## APPLICATION INFORMATION

### 6. Application Responsible Official Certification:

I, the undersigned, am a responsible official of the Title V source addressed in this air permit application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof and all other applicable requirements identified in this application to which the Title V source is subject. I understand that a permit, if granted by the department, cannot be transferred without authorization from the department, and I will promptly notify the department upon sale or legal transfer of the facility or any permitted emissions unit. Finally, I certify that the facility and each emissions unit are in compliance with all applicable requirements to which they are subject, except as identified in compliance plan(s) submitted with this application.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# APPLICATION INFORMATION

## Professional Engineer Certification

1. Professional Engineer Name: <b>Melissa K. Antoine</b> Registration Number: <b>77449</b>
2. Professional Engineer Mailing Address... Organization/Firm: <b>Georgia-Pacific LLC</b> Street Address: <b>133 Peachtree Street N.E.</b> City: <b>Atlanta</b> State: <b>GA</b> Zip Code: <b>30303</b>
3. Professional Engineer Telephone Numbers... Telephone: <b>(404) 652 - 2822</b> ext. Fax: <b>(404) 924 - 3289</b>
4. Professional Engineer E-mail Address: <b>melissa.antoine@gapac.com</b>
5. Professional Engineer Statement: <i>I, the undersigned, hereby certify, except as particularly noted herein*, that:</i> <i>(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this application for air permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and</i> <i>(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.</i> <i>(3) If the purpose of this application is to obtain a Title V air operation permit (check here <input type="checkbox"/>, if so), I further certify that each emissions unit described in this application for air permit, when properly operated and maintained, will comply with the applicable requirements identified in this application to which the unit is subject, except those emissions units for which a compliance plan and schedule is submitted with this application.</i> <i>(4) If the purpose of this application is to obtain an air construction permit (check here <input type="checkbox"/>, if so) or concurrently process and obtain an air construction permit and a Title V air operation permit revision or renewal for one or more proposed new or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.</i> <i>(5) If the purpose of this application is to obtain an initial air operation permit or operation permit revision or renewal for one or more newly constructed or modified emissions units (check here <input type="checkbox"/>, if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.</i>  _____ Signature (seal)
_____ Date

\* Attach any exception to certification statement.



## APPLICATION INFORMATION

### **\* Exception to Professional Engineer Certification**

While this application is to obtain an air construction permit, Item 4 has not been checked as the engineering design of the modified emission units has not yet been finalized and is being directed by internal and external design engineers.

## II. FACILITY INFORMATION

### A. GENERAL FACILITY INFORMATION

#### Facility Location and Type

1. Facility UTM Coordinates... Zone <b>17</b> East (km) <b>256.7</b> North (km) <b>3328.7</b>		2. Facility Latitude/Longitude... Latitude (DD/MM/SS) <b>30/03/59</b> Longitude (DD/MM/SS) <b>83/33/12</b>	
3. Governmental Facility Code: <b>0</b>	4. Facility Status Code: <b>A</b>	5. Facility Major Group SIC Code: <b>26</b>	6. Facility SIC(s): <b>2611</b>
7. Facility Comment :			

#### Facility Contact

1. Facility Contact Name: <b>Brooks Butler, Manager, Environmental Engineering</b>
2. Facility Contact Mailing Address... Organization/Firm: <b>Foley Cellulose LLC</b> Street Address: <b>One Buckeye Drive</b> City: <b>Perry</b> State: <b>FL</b> Zip Code: <b>32348</b>
3. Facility Contact Telephone Numbers: Telephone: <b>(850) 584 - 1626</b> ext. Fax:
4. Facility Contact E-mail Address: <b>brooks.butler@gapac.com</b>

#### Facility Primary Responsible Official

**Complete if an "application responsible official" is identified in Section I that is not the facility "primary responsible official."**

1. Facility Primary Responsible Official Name:
2. Facility Primary Responsible Official Mailing Address... Organization/Firm: Street Address: City: State: Zip Code:
3. Facility Primary Responsible Official Telephone Numbers... Telephone: ( ) - ext. Fax: ( ) -
4. Facility Primary Responsible Official E-mail Address:

## FACILITY INFORMATION

### Facility Regulatory Classifications

Check all that would apply *following* completion of all projects and implementation of all other changes proposed in this application for air permit. Refer to instructions to distinguish between a “major source” and a “synthetic minor source.”

1. <input type="checkbox"/> Small Business Stationary Source	<input type="checkbox"/> Unknown
2. <input type="checkbox"/> Synthetic Non-Title V Source	
3. <input checked="" type="checkbox"/> Title V Source	
4. <input checked="" type="checkbox"/> Major Source of Air Pollutants, Other than Hazardous Air Pollutants (HAPs)	
5. <input type="checkbox"/> Synthetic Minor Source of Air Pollutants, Other than HAPs	
6. <input checked="" type="checkbox"/> Major Source of Hazardous Air Pollutants (HAPs)	
7. <input type="checkbox"/> Synthetic Minor Source of HAPs	
8. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS (40 CFR Part 60)	
9. <input type="checkbox"/> One or More Emissions Units Subject to Emission Guidelines (40 CFR Part 60)	
10. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NESHAP (40 CFR Part 61 or Part 63)	
11. <input type="checkbox"/> Title V Source Solely by EPA Designation (40 CFR 70.3(a)(5))	
12. Facility Regulatory Classifications Comment:	

## FACILITY INFORMATION

### List of Pollutants Emitted by Facility

1. Pollutant Emitted	2. Pollutant Classification	3. Emissions Cap [Y or N]?
PM	A	N
PM <sub>10</sub>	A	N
PM <sub>2.5</sub>	A	N
SO <sub>2</sub>	A	N
NO <sub>x</sub>	A	N
CO	A	N
VOC	A	N
H <sub>2</sub> S	A	N
SAM	A	N
TRS	A	N
NH <sub>3</sub>	A	N
H001 - Acetaldehyde	A	N
H038 - Chlorine	B	N
H043 - Chloroform	B	N
H095 - Formaldehyde	A	N
H106 - Hydrogen Chloride	B	N
H114 - Mercury	B	N
H115 - Methanol	A	N
H118 - Methyl Chloride	A	N
H144 - Phenol	A	N
HAPS - Total Hazardous Air Pollutants	A	N

**FACILITY INFORMATION**

**B. EMISSIONS CAPS**

**Facility-Wide or Multi-Unit Emissions Caps**

1. Pollutant Subject to Emissions Cap	2. Facility-Wide Cap [Y or N]? (all units)	3. Emissions Unit ID's Under Cap (if not all units)	4. Hourly Cap (lb/hr)	5. Annual Cap (ton/yr)	6. Basis for Emissions Cap

7. Facility-Wide or Multi-Unit Emissions Cap Comment:

## FACILITY INFORMATION

### C. FACILITY ADDITIONAL INFORMATION

#### Additional Requirements for All Applications, Except as Otherwise Stated

1.	Facility Plot Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <a href="#">August 2014</a>
2.	Process Flow Diagram(s): (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <a href="#">Appendix A</a> <input type="checkbox"/> Previously Submitted, Date: _____
3.	Precautions to Prevent Emissions of Unconfined Particulate Matter: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date: <a href="#">August 2014</a>

#### Additional Requirements for Air Construction Permit Applications

1.	Area Map Showing Facility Location: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (existing permitted facility)
2.	Description of Proposed Construction, Modification, or Plantwide Applicability Limit (PAL): <input checked="" type="checkbox"/> Attached, Document ID: <a href="#">See attached permit application text.</a>
3.	Rule Applicability Analysis: <input checked="" type="checkbox"/> Attached, Document ID: <a href="#">See attached permit application text.</a>
4.	List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable (no exempt units at facility)
5.	Fugitive Emissions Identification: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
6.	Air Quality Analysis (Rule 62-212.400(7), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
7.	Source Impact Analysis (Rule 62-212.400(5), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
8.	Air Quality Impact since 1977 (Rule 62-212.400(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9.	Additional Impact Analyses (Rules 62-212.400(8) and 62-212.500(4)(e), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10.	Alternative Analysis Requirement (Rule 62-212.500(4)(g), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**FACILITY INFORMATION**

**C. FACILITY ADDITIONAL INFORMATION (CONTINUED)**

**Additional Requirements for FESOP Applications**

1. List of Exempt Emissions Units: <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable (no exempt units at facility)
--

**Additional Requirements for Title V Air Operation Permit Applications**

1. List of Insignificant Activities: (Required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable (revision application)
2. Identification of Applicable Requirements: (Required for initial/renewal applications, and for revision applications if this information would be changed as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable (revision application with no change in applicable requirements)
3. Compliance Report and Plan: (Required for all initial/revision/renewal applications) <input type="checkbox"/> Attached, Document ID:_____ Note: A compliance plan must be submitted for each emissions unit that is not in compliance with all applicable requirements at the time of application and/or at any time during application processing. The department must be notified of any changes in compliance status during application processing.
4. List of Equipment/Activities Regulated under Title VI: (If applicable, required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Equipment/Activities Onsite but Not Required to be Individually Listed <input type="checkbox"/> Not Applicable
5. Verification of Risk Management Plan Submission to EPA: (If applicable, required for initial/renewal applications only) <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable
6. Requested Changes to Current Title V Air Operation Permit: <input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Not Applicable

## FACILITY INFORMATION

### C. FACILITY ADDITIONAL INFORMATION (CONTINUED)

#### Additional Requirements for Facilities Subject to Acid Rain, CAIR, or Hg Budget Program

<p>1. Acid Rain Program Forms:</p> <p>Acid Rain Part Application (DEP Form No. 62-210.900(1)(a)):</p> <p><input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Previously Submitted, Date:_____</p> <p><input checked="" type="checkbox"/> Not Applicable (not an Acid Rain source)</p> <p>Phase II NO<sub>x</sub> Averaging Plan (DEP Form No. 62-210.900(1)(a)1.):</p> <p><input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Previously Submitted, Date:_____</p> <p><input checked="" type="checkbox"/> Not Applicable</p> <p>New Unit Exemption (DEP Form No. 62-210.900(1)(a)2.):</p> <p><input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Previously Submitted, Date:_____</p> <p><input checked="" type="checkbox"/> Not Applicable</p>
<p>2. CAIR Part (DEP Form No. 62-210.900(1)(b)):</p> <p><input type="checkbox"/> Attached, Document ID:_____ <input type="checkbox"/> Previously Submitted, Date:_____</p> <p><input checked="" type="checkbox"/> Not Applicable (not a CAIR source)</p>

#### Additional Requirements Comment



## EMISSIONS UNIT INFORMATION

Section [1]of [2] No. 1 Bark Boiler

### III. EMISSIONS UNIT INFORMATION

**Title V Air Operation Permit Application** - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

**Air Construction Permit or FESOP Application** - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

**Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application** – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.

**EMISSIONS UNIT INFORMATION**

Section [1] of [2] **No. 1 Bark Boiler**

**A. GENERAL EMISSIONS UNIT INFORMATION**

**Title V Air Operation Permit Emissions Unit Classification**

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **No. 1 Bark Boiler**

3. Emissions Unit Identification Number: **004**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date: <b>1953</b>	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>26</b>
--	--	--------------------------	--

8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

9. Package Unit:  
Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:  
**No. 1 Bark Boiler is currently permitted to combust carbonaceous fuel consisting of wood materials such as bark, chips, sawdust and other such wood fiber material, No. 6 fuel oil, No. 2 fuel oil, facility-generated on-specification used oil, tall oil, natural gas, and any mixture of these fuels. The No. 1 Bark Boiler is also the primary combustion device for Low Volume, High Concentration (LVHC) Noncondensable Gases (NCGs).**

**EMISSIONS UNIT INFORMATION**

Section [1]of [2] **No. 1 Bark Boiler**

**Emissions Unit Control Equipment/Method:** Control 1 of 3

1. Control Equipment/Method Description: <b>Centrifugal Collector – Medium Efficiency</b>
2. Control Device or Method Code: <b>008</b>

**Emissions Unit Control Equipment/Method:** Control 2 of 3

1. Control Equipment/Method Description: <b>Venturi Scrubber</b>
2. Control Device or Method Code: <b>053</b>

**Emissions Unit Control Equipment/Method:** Control 3 of 3

1. Control Equipment/Method Description: <b>Direct Flame Afterburner</b>
2. Control Device or Method Code: <b>021</b>

**Emissions Unit Control Equipment/Method:** Control \_\_ of \_\_

1. Control Equipment/Method Description:
2. Control Device or Method Code:

**EMISSIONS UNIT INFORMATION**

Section [1] of [2] **No. 1 Bark Boiler**

**B. EMISSIONS UNIT CAPACITY INFORMATION**

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

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Process or Throughput Rate:
2. Maximum Production Rate:
3. Maximum Heat Input Rate: <b>300</b> million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: hours/day <b>24</b> days/week <b>7</b> weeks/year <b>52</b> hours/year <b>8,760</b>
6. Operating Capacity/Schedule Comment: <b>Maximum heat input rate due to bark firing is 300 MMBtu/hr.</b>  <b>Maximum heat input rate due to natural gas firing will be no greater than 200 MMBtu/hr.</b>  <b>Maximum heat input rate due to fuel oil firing is 84 MMBtu/hr (2 burners at 42 MMBtu/hr each), plus a maximum overfire rate of 10% (92.4 MMBtu/hr total).</b>

**EMISSIONS UNIT INFORMATION**

Section [1]of [2] **No. 1 Bark Boiler**

**C. EMISSION POINT (STACK/VENT) INFORMATION**

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

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EP21</b>	2. Emission Point Type Code: <b>2</b>
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:  	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: <div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p><b>002 No. 1 Power Boiler</b></p> <p><b>004 No. 1 Bark Boiler</b></p> <p><b>046 Pulping System MACT I</b></p> </div> <div style="width: 48%;"> <p><b>003 No. 2 Power Boiler</b></p> <p><b>019 No. 2 Bark Boiler</b></p> </div> </div>	
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>225</b> Feet
7. Exit Diameter: <b>13</b> Feet	
8. Exit Temperature: <b>150 °F BB1 Only</b>	9. Actual Volumetric Flow Rate: <b>119,400 acfm BB1 Only</b>
10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: <b>48,000 dscfm @ 0% O<sub>2</sub> for BB1 Only</b>	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment:  <p><b>The values presented above in Items 8, 9, 10, and 11 are only for the No. 1 Bark Boiler and are not the characteristics of the exhaust of the combined stack (EP21). These values are based on the best available data and may be updated as design work on the proposed projects continues.</b></p>	

**EMISSIONS UNIT INFORMATION**Section [1]of [2] **No. 1 Bark Boiler****D. SEGMENT (PROCESS/FUEL) INFORMATION****Segment Description and Rate:** Segment 1 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Wood/Bark Waste</b>		
2. Source Classification Code (SCC): <b>1-02-009-02</b>	3. SCC Units: <b>Tons Burned</b>	
4. Maximum Hourly Rate: <b>33.3 tons per hour</b>	5. Maximum Annual Rate: <b>292,000 tons per year</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>N/A</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>9 MMBtu/ton</b>
10. Segment Comment: <b>Based on 300 MMBtu/hr maximum heat input and higher heating value of 9 MMBtu/ton for wood/bark at 50% moisture content.</b>		

**Segment Description and Rate:** Segment 2 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Natural Gas</b>		
2. Source Classification Code (SCC): <b>1-02-006-01</b>	3. SCC Units: <b>Million Cubic Feet Burned</b>	
4. Maximum Hourly Rate: <b>0.195 MMscf/hr</b>	5. Maximum Annual Rate: <b>1708.2 MMscf/yr</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>N/A</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>1,026 Btu/scf</b>
10. Segment Comment: <b>Based on a maximum heat input of 200 MMBtu/hr and higher heating value of 1,026 Btu/scf for natural gas.</b>		

**EMISSIONS UNIT INFORMATION**

Section [1] of [2] **No. 1 Bark Boiler**

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

**Segment Description and Rate:** Segment 3 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Residual Oil; Grade 6 Oil</b>		
2. Source Classification Code (SCC): <b>1-02-004-01</b>	3. SCC Units: <b>1,000 Gallons Burned</b>	
4. Maximum Hourly Rate: <b>616 gal/hr (permit limit)</b>	5. Maximum Annual Rate: <b>5,396 mgal/yr</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>2.5</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>150 MMscf/hr</b>
10. Segment Comment: <b>Based on the maximum heat input rating of 92.4 MMBtu/hr, which includes 10% overfiring, for No. 6 fuel oil.</b>		

**Segment Description and Rate:** Segment 4 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Liquid Fuel (see Segment Comment)</b>		
2. Source Classification Code (SCC): <b>1-02-013-01</b>	3. SCC Units: <b>1,000 Gallons Burned</b>	
4. Maximum Hourly Rate: <b>616 gal/hr</b>	5. Maximum Annual Rate: <b>5,396 mgal/yr</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>2.5</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>142 MMscf/hr</b>
10. Segment Comment: <b>Tall oil (facility-generated and/or manufactured off-site). Maximum hourly and annual rates based on the No. 6 Fuel Oil burning rate.</b>		

**EMISSIONS UNIT INFORMATION**  
 Section [1] of [2] **No. 1 Bark Boiler**

**E. EMISSIONS UNIT POLLUTANTS**

**List of Pollutants Emitted by Emissions Unit**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>PM</b>	<b>008</b>	<b>053</b>	<b>EL</b>
<b>PM<sub>10</sub></b>	<b>008</b>	<b>053</b>	<b>NS</b>
<b>PM<sub>2.5</sub></b>	<b>008</b>	<b>053</b>	<b>NS</b>
<b>CO</b>			<b>NS</b>
<b>NO<sub>x</sub></b>			<b>NS</b>
<b>SO<sub>2</sub></b>			<b>EL</b>
<b>VOC</b>			<b>NS</b>
<b>Lead</b>			<b>NS</b>
<b>SAM</b>			<b>NS</b>
<b>TRS</b>	<b>021</b>		<b>EL</b>
<b>GHG</b>			<b>NS</b>
<b>H106</b>			<b>EL</b>
<b>H114</b>			<b>EL</b>



**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>PM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>47.3 lb/hour                      207.0 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.158 lb/MMBtu</b>  Reference: <b>Permit Limit</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required): <b>123.9 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Feb 2005</b> To: <b>Jan 2007</b>	
9.a. Projected Actual Emissions (if required): <b>126.8 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment:			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.158 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>47.3</b> lb/hour <b>207.0</b> tons/year
5. Method of Compliance: <b>EPA Method 5</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Existing permit limits.</b>	

**Allowable Emissions** Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>0.44 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>132</b> lb/hour <b>578.2</b> tons/year
5. Method of Compliance: <b>EPA Method 5</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Emissions in Item 4 are based on a Boiler MACT standard of 0.44 lb/MMBtu and a maximum heat input of 300 MMBtu/hr. However, this limit is not the most stringent emission limit that applies to the pollutant and emissions unit.</b>	

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>PM<sub>10</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>47.6 lb/hour                      208.6 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.159 lb/MMBtu</b> Reference: <b>Based on PM permit limit and % PM<sub>10</sub> from NCASI TB 1020. Condensable PM emission factor from NCASI TB1020.</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>125.9 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Feb 2005</b> To: <b>Jan 2007</b>	
9.a. Projected Actual Emissions (if required): <b>129.0 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>PM<sub>2.5</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>47.6 lb/hour                      208.6 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.159 lb/MMBtu</b> Reference: <b>Based on PM permit limit and % PM<sub>2.5</sub> from NCASI TB 1020. Condensable PM emission factor from NCASI TB1020.</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>125.9 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Feb 2005</b> To: <b>Jan 2007</b>	
9.a. Projected Actual Emissions (if required): <b>129.0 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

**Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>CO</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>361.3 lb/hour                      1,582.3 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>1.2 lb/MMBtu</b>  Reference: <b>Based on data collected with temporary CEMS.</b>		7. Emissions Method Code: <b>1</b>	
8.a. Baseline Actual Emissions (if required): <b>1,134.4 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2011</b>	
9.a. Projected Actual Emissions (if required): <b>1,188.8 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario and include separate emissions from NCG combustion.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>TBD</b>	4. Equivalent Allowable Emissions: <b>TBD</b> lb/hour <b>TBD</b> tons/year
5. Method of Compliance: <b>TBD</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>TBD = To Be Determined</b> <b>CO emissions will be limited by the Boiler MACT rule. However, the Foley Mill has not yet determined if it will comply with the CEMS compliance option or stack test compliance option. In addition, a recently proposed reconsideration rule may change the stack test compliance option emission limit.</b>	

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

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

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

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



**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>NO<sub>x</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>82.7 lb/hour                      362.1 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.35 lb/MMBtu for fuel oil and 0.22 lb/MMBtu for bark</b> Reference: <b>Fuel oil factor is from AP-42 and bark factor is from data collected with temporary CEMS.</b>		7. Emissions Method Code: <b>3 (FO), 1 (bark)</b>	
8.a. Baseline Actual Emissions (if required): <b>226.0 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>251.3 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Fuel oil is the worst-case fuel, but its use is less than the maximum rating of the boiler. Therefore, a fuel hierarchy is used to estimate the maximum emissions from the fuel oil and the emissions from the remaining available heat rating from bark. Potential emissions also include separate emissions from NCG combustion.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>675.1 lb/hour                      2,957 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>675.1 lb/hr</b>  Reference: <b>Permit Limit</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required): <b>883.3 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Jan 2013</b> To: <b>Dec 2014</b>	
9.a. Projected Actual Emissions (if required): <b>917.9 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment:			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>675.1 lb/hr and 2,957 tpy</b>	4. Equivalent Allowable Emissions: <b>675.1 lb/hour      2,957 tons/year</b>
5. Method of Compliance: <b>Annual stack test</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Existing permit limits.</b>	

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>2.5% Sulfur in Fuel</b>	4. Equivalent Allowable Emissions: <b>248.0 lb/hour      1,088 tons/year</b>
5. Method of Compliance: <b>Fuel analysis</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Existing permit limits.</b>	

**Allowable Emissions** Allowable Emissions    of   

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

**Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>VOC</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>1.6 lb/hour                      7.0 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.0054 lb/MMBtu for natural gas and 0.003 lb/MMBtu for bark</b> Reference: <b>AP-42 for natural gas combustion and NCASI TB 1020 for bark.</b>		7. Emissions Method Code: <b>3 (FO), 5 (bark)</b>	
8.a. Baseline Actual Emissions (if required): <b>3.6 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>4.2 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Natural gas is the worst-case fuel, but its use is less than the maximum rating of the boiler. Therefore, a fuel hierarchy is used to estimate the maximum emissions from the natural gas and the emissions from the remaining available heat rating from bark. Potential emissions also include separate emissions from NCG combustion.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
(Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>Lead</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>0.01 lb/hour                      0.05 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.000035 lb/MMBtu</b> Reference: <b>NCASI TB 1013</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>0.04 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>0.03 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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



**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**

(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>SAM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>12.4 lb/hour                      54.4 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.13 lb/MMBtu for fuel oil and 4.7E-06 lb/MMBtu for bark</b> Reference: <b>AP-42 for fuel oil combustion and testing from similar GP mill for bark.</b>		7. Emissions Method Code: <b>3 (FO), 5 (bark)</b>	
8.a. Baseline Actual Emissions (if required): <b>2.7 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2005</b> To: <b>May 2007</b>	
9.a. Projected Actual Emissions (if required): <b>3.4 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario and include separate emissions from NCG combustion.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>TRS</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>2.43 lb/hour                      10.64 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>5 ppmvd</b>  Reference: <b>Current permit limits.</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required): <b>2.6 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Sept 2007</b> To: <b>Aug 2009</b>	
9.a. Projected Actual Emissions (if required): <b>2.6 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Emissions are solely from NCG combustion.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>5 ppmvd @ 10% O<sub>2</sub></b>	4. Equivalent Allowable Emissions: <b>2.43 lb/hour      10.64 tons/year</b>
5. Method of Compliance: <b>EPA Method 16 or 16A</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Existing permit limits.</b>	

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>GHG</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>63,210 lb/hour      276,861 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>209.56 lb CO<sub>2</sub>e/MMBtu</b> Reference: <b>EPA's Mandatory Reporting Rule for Greenhouse Gases</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>222,474 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>225,173 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario and include separate emissions from NCG combustion.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>H106</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>6.6 lb/hour</b> <b>28.9 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.022 lb/MMBtu</b>  Reference: <b>Boiler MACT</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required):		8.b. Baseline 24-month Period: From:                      To:	
9.a. Projected Actual Emissions (if required):		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions:			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the Boiler MACT limit.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>0.022 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>6.6 lb/hour      28.9 tons/year</b>
5. Method of Compliance: <b>Stack test or fuel analysis</b>	
6. Allowable Emissions Comment (Description of Operating Method):	

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

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

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

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



**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
(Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>H114</b>	2. Total Percent Efficiency of Control:
3. Potential Emissions: <b>1.7E-03</b> lb/hour <b>7.5E-03</b> tons/year	4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year	
6. Emission Factor: <b>5.7E-06 lb/MMBtu</b>  Reference: <b>Boiler MACT</b>	7. Emissions Method Code: <b>0</b>
8.a. Baseline Actual Emissions (if required):	8.b. Baseline 24-month Period: From: To:
9.a. Projected Actual Emissions (if required):	9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years
10. Calculation of Emissions:	
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the Boiler MACT limit.</b>	

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>5.7E-06 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>1.7E-03 lb/hour 7.5E-02 tons/year</b>
5. Method of Compliance: <b>Stack test or fuel analysis</b>	
6. Allowable Emissions Comment (Description of Operating Method):	

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

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

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

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

**EMISSIONS UNIT INFORMATION**  
 Section [1] of [2] **No. 1 Bark Boiler**

**G. VISIBLE EMISSIONS INFORMATION**

**Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE30</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>30</b> %      Exceptional Conditions: <b>40</b> % Maximum Period of Excess Opacity Allowed: <b>2</b> min/hour	
4. Method of Compliance: <b>EPA Method 9</b>	
5. Visible Emissions Comment:	

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_ of \_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions:                    %      Exceptional Conditions:                    % Maximum Period of Excess Opacity Allowed:                    min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	

**EMISSIONS UNIT INFORMATION**  
**Section [1]of [2] No. 1 Bark Boiler**

**H. CONTINUOUS MONITOR INFORMATION**

**Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.**

**Continuous Monitoring System:** Continuous Monitor 1 of 3

1. Parameter Code: <b>TEMP</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: <b>Conax, Honeywell</b> Model Number: <b>STT3000</b> Serial Number: <b>1000-2400F</b>	
5. Installation Date: <b>04/01/1989</b>	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Monitoring of TRS incineration temperature. Rule 62-296.404(5)(c), F.A.C. and Permit Nos. 1230001-025-AC and 1230001-027-AC.</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 3

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Fuel flow meter used to monitor fuel consumption in the boiler (Permit No. 1230001-023-AC/PSD-FL-397).</b>	

**EMISSIONS UNIT INFORMATION**  
 Section [1]of [2] **No. 1 Bark Boiler**

**H. CONTINUOUS MONITOR INFORMATION (CONTINUED)**

**Continuous Monitoring System:** Continuous Monitor 3 of 3

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across scrubber. Required by CAM Plan per Permit No. 1230001-045-AV.</b>	

**Continuous Monitoring System:** Continuous Monitor \_\_\_ of \_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

**EMISSIONS UNIT INFORMATION**  
Section [1] of [2] **No. 1 Bark Boiler**

**I. EMISSIONS UNIT ADDITIONAL INFORMATION**

**Additional Requirements for All Applications, Except as Otherwise Stated**

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>Appendix A</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>August 2014</u>
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>August 2014</u>
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**  
Section [1] of [2] No. 1 Bark Boiler

**I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)**

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**Additional Requirements for Title V Air Operation Permit Applications**

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

**Additional Requirements Comment**

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## EMISSIONS UNIT INFORMATION

Section [2] of [2] No. 2 Bark Boiler

### III. EMISSIONS UNIT INFORMATION

**Title V Air Operation Permit Application** - For Title V air operation permitting only, emissions units are classified as regulated, unregulated, or insignificant. If this is an application for an initial, revised or renewal Title V air operation permit, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each regulated and unregulated emissions unit addressed in this application. Some of the subsections comprising the Emissions Unit Information Section of the form are optional for unregulated emissions units. Each such subsection is appropriately marked. Insignificant emissions units are required to be listed at Section II, Subsection C.

**Air Construction Permit or FESOP Application** - For air construction permitting or federally enforceable state air operation permitting, emissions units are classified as either subject to air permitting or exempt from air permitting. The concept of an “unregulated emissions unit” does not apply. If this is an application for an air construction permit or FESOP, a separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit subject to air permitting addressed in this application for air permit. Emissions units exempt from air permitting are required to be listed at Section II, Subsection C.

**Air Construction Permit and Revised/Renewal Title V Air Operation Permit Application** – Where this application is used to apply for both an air construction permit and a revised or renewal Title V air operation permit, each emissions unit is classified as either subject to air permitting or exempt from air permitting for air construction permitting purposes, and as regulated, unregulated, or insignificant for Title V air operation permitting purposes. A separate Emissions Unit Information Section (including subsections A through I as required) must be completed for each emissions unit addressed in this application that is subject to air construction permitting and for each such emissions unit that is a regulated or unregulated unit for purposes of Title V permitting. (An emissions unit may be exempt from air construction permitting but still be classified as an unregulated unit for Title V purposes.) Emissions units classified as insignificant for Title V purposes are required to be listed at Section II, Subsection C.

If submitting the application form in hard copy, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application must be indicated in the space provided at the top of each page.



**EMISSIONS UNIT INFORMATION**  
**Section [2]of [2] No. 2 Bark Boiler**

**A. GENERAL EMISSIONS UNIT INFORMATION**

**Title V Air Operation Permit Emissions Unit Classification**

1. Regulated or Unregulated Emissions Unit? (Check one, if applying for an initial, revised or renewal Title V air operation permit. Skip this item if applying for an air construction permit or FESOP only.)

The emissions unit addressed in this Emissions Unit Information Section is a regulated emissions unit.

The emissions unit addressed in this Emissions Unit Information Section is an unregulated emissions unit.

**Emissions Unit Description and Status**

1. Type of Emissions Unit Addressed in this Section: (Check one)

This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in this Section: **No. 2 Bark Boiler**

3. Emissions Unit Identification Number: **019**

4. Emissions Unit Status Code: <b>A</b>	5. Commence Construction Date: <b>1954</b>	6. Initial Startup Date:	7. Emissions Unit Major Group SIC Code: <b>26</b>
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8. Federal Program Applicability: (Check all that apply)

Acid Rain Unit

CAIR Unit

9. Package Unit:  
 Manufacturer: \_\_\_\_\_ Model Number: \_\_\_\_\_

10. Generator Nameplate Rating: **MW**

11. Emissions Unit Comment:  
**No. 2 Bark Boiler is currently permitted to combust carbonaceous fuel consisting of wood materials such as bark, chips, sawdust and other such wood fiber material, No. 6 fuel oil, No. 2 fuel oil, facility-generated on-specification used oil, tall oil, natural gas, and any mixture of these fuels.**

**EMISSIONS UNIT INFORMATION**

Section [2] of [2] **No. 2 Bark Boiler**

**Emissions Unit Control Equipment/Method:** Control 1 of 2

1. Control Equipment/Method Description: <b>Centrifugal Collector – Medium Efficiency</b>
2. Control Device or Method Code: <b>008</b>

**Emissions Unit Control Equipment/Method:** Control 2 of 2

1. Control Equipment/Method Description: <b>Two Venturi Scrubbers</b>
2. Control Device or Method Code: <b>053</b>

**Emissions Unit Control Equipment/Method:** Control \_\_ of \_\_

1. Control Equipment/Method Description:
2. Control Device or Method Code:

**Emissions Unit Control Equipment/Method:** Control \_\_ of \_\_

1. Control Equipment/Method Description:
2. Control Device or Method Code:

**EMISSIONS UNIT INFORMATION**  
 Section [2] of [2] **No. 2 Bark Boiler**

**B. EMISSIONS UNIT CAPACITY INFORMATION**  
 (Optional for unregulated emissions units.)

**Emissions Unit Operating Capacity and Schedule**

1. Maximum Process or Throughput Rate:
2. Maximum Production Rate:
3. Maximum Heat Input Rate: <b>601</b> million Btu/hr
4. Maximum Incineration Rate: pounds/hr tons/day
5. Requested Maximum Operating Schedule: hours/day <b>24</b> days/week <b>7</b> weeks/year <b>52</b> hours/year <b>8,760</b>
6. Operating Capacity/Schedule Comment: <b>Maximum heat input rate due to bark firing is 601 MMBtu/hr.</b>  <b>Maximum heat input rate due to natural gas firing will be no greater than 240 MMBtu/hr.</b>  <b>Maximum heat input rate due to fuel oil firing is 180 MMBtu/hr.</b>

**EMISSIONS UNIT INFORMATION**  
**Section [2]of [2] No. 2 Bark Boiler**

**C. EMISSION POINT (STACK/VENT) INFORMATION**  
**(Optional for unregulated emissions units.)**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram: <b>EP21</b>	2. Emission Point Type Code: <b>2</b>
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking:	
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: <b>002 No. 1 Power Boiler 003 No. 2 Power Boiler</b> <b>004 No. 2 Bark Boiler 019 No. 2 Bark Boiler</b> <b>046 Pulping System MACT I</b>	
5. Discharge Type Code: <b>V</b>	6. Stack Height: <b>225</b> Feet
7. Exit Diameter: <b>13</b> Feet	
8. Exit Temperature: <b>150</b> °F <b>BB2 Only</b>	9. Actual Volumetric Flow Rate: <b>240,000</b> acfm <b>BB2 Only</b>
10. Water Vapor: %	
11. Maximum Dry Standard Flow Rate: <b>96,160</b> dscfm @ <b>0% O<sub>2</sub></b> for <b>BB2 Only</b>	12. Nonstack Emission Point Height: feet
13. Emission Point UTM Coordinates... Zone: East (km): North (km):	14. Emission Point Latitude/Longitude... Latitude (DD/MM/SS) Longitude (DD/MM/SS)
15. Emission Point Comment:  <b>The values presented above in Items 8, 9, 10, and 11 are only for the No. 2 Bark Boiler and are not the characteristics of the exhaust of the combined stack (EP21). These values are based on the best available data and may be updated as design work on the proposed projects continues.</b>	

**EMISSIONS UNIT INFORMATION**

Section [2]of [2] **No. 2 Bark Boiler**

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

**Segment Description and Rate:** Segment 1 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Wood/Bark Waste</b>		
2. Source Classification Code (SCC): <b>1-02-009-02</b>	3. SCC Units: <b>Tons Burned</b>	
4. Maximum Hourly Rate: <b>66.78 tons per hour</b>	5. Maximum Annual Rate: <b>585,000 tons per year</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>N/A</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>9 MMBtu/ton</b>
10. Segment Comment: <b>Based on 601 MMBtu/hr maximum heat input and higher heating value of 9 MMBtu/ton for wood/bark at 50% moisture content.</b>		

**Segment Description and Rate:** Segment 2 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Natural Gas</b>		
2. Source Classification Code (SCC): <b>1-02-006-01</b>	3. SCC Units: <b>Million Cubic Feet Burned</b>	
4. Maximum Hourly Rate: <b>0.234 MMscf/hr</b>	5. Maximum Annual Rate: <b>2,050 MMscf/yr</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>N/A</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>1,026 Btu/scf</b>
10. Segment Comment: <b>Based on a maximum heat input of 240 MMBtu/hr and higher heating value of 1,026 Btu/scf for natural gas.</b>		

**EMISSIONS UNIT INFORMATION**

Section [2] of [2] **No. 2 Bark Boiler**

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

**Segment Description and Rate:** Segment 3 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Residual Oil; Grade 6 Oil</b>		
2. Source Classification Code (SCC): <b>1-02-004-01</b>	3. SCC Units: <b>1,000 Gallons Burned</b>	
4. Maximum Hourly Rate: <b>1,233 gal/hr (permit limit)</b>	5. Maximum Annual Rate: <b>10,800 mgal/yr</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>2.5</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>150 MMscf/hr</b>
10. Segment Comment: <b>Based on the maximum heat input rating of 180 MMBtu/hr.</b>		

**Segment Description and Rate:** Segment 4 of 4

1. Segment Description (Process/Fuel Type): <b>External Combustion Boilers; Industrial; Liquid Fuel (see Segment Comment)</b>		
2. Source Classification Code (SCC): <b>1-02-013-01</b>	3. SCC Units: <b>1,000 Gallons Burned</b>	
4. Maximum Hourly Rate: <b>1,233 gal/hr (permit limit)</b>	5. Maximum Annual Rate: <b>10,800 mgal/yr</b>	6. Estimated Annual Activity Factor: <b>N/A</b>
7. Maximum % Sulfur: <b>2.5</b>	8. Maximum % Ash: <b>N/A</b>	9. Million Btu per SCC Unit: <b>142 MMscf/hr</b>
10. Segment Comment: <b>Tall oil (facility-generated and/or manufactured off-site). Maximum hourly and annual rates based on the No. 6 Fuel Oil burning rate.</b>		

**EMISSIONS UNIT INFORMATION**  
 Section [2] of [2] **No. 2 Bark Boiler**

**E. EMISSIONS UNIT POLLUTANTS**

**List of Pollutants Emitted by Emissions Unit**

1. Pollutant Emitted	2. Primary Control Device Code	3. Secondary Control Device Code	4. Pollutant Regulatory Code
<b>PM</b>	<b>008</b>	<b>053</b>	<b>EL</b>
<b>PM<sub>10</sub></b>	<b>008</b>	<b>053</b>	<b>NS</b>
<b>PM<sub>2.5</sub></b>	<b>008</b>	<b>053</b>	<b>NS</b>
<b>CO</b>			<b>EL</b>
<b>NO<sub>x</sub></b>			<b>NS</b>
<b>SO<sub>2</sub></b>			<b>EL</b>
<b>VOC</b>			<b>NS</b>
<b>Lead</b>			<b>NS</b>
<b>SAM</b>			<b>NS</b>
<b>TRS</b>			<b>EL</b>
<b>GHG</b>			<b>NS</b>
<b>H106</b>			<b>EL</b>
<b>H114</b>			<b>EL</b>

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>PM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>106.7 lb/hour      467.48 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.178 lb/MMBtu</b>  Reference: <b>Permit Limit</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required): <b>325.3 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Feb 2005</b> To: <b>Jan 2007</b>	
9.a. Projected Actual Emissions (if required): <b>304.7 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment:			



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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **2**

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>0.178 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>106.7</b> lb/hour <b>467.48</b> tons/year
5. Method of Compliance: <b>EPA Method 5</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Existing permit limits.</b>	

**Allowable Emissions** Allowable Emissions **2** of **2**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>0.44 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>264.4</b> lb/hour <b>1,158.2</b> tons/year
5. Method of Compliance: <b>EPA Method 5</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Emissions in Item 4 are based on a Boiler MACT standard of 0.44 lb/MMBtu and a maximum heat input of 601 MMBtu/hr. However, this limit is not the most stringent emission limit that applies to the pollutant and emissions unit.</b>	

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>PM<sub>10</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>107.2 lb/hour                      469.5 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.178 lb/MMBtu</b> Reference: <b>Based on PM permit limit and % PM<sub>10</sub> from NCASI TB 1020. Condensable PM emission factor from NCASI TB1020.</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>327.7 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Feb 2005</b> To: <b>Jan 2007</b>	
9.a. Projected Actual Emissions (if required): <b>308.0 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>PM<sub>2.5</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>107.2 lb/hour                      469.5 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.178 lb/MMBtu</b> Reference: <b>Based on PM permit limit and % PM<sub>2.5</sub> from NCASI TB 1020. Condensable PM emission factor from NCASI TB1020.</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>327.6 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Feb 2005</b> To: <b>Jan 2007</b>	
9.a. Projected Actual Emissions (if required): <b>308.0 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

**Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.**

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>CO</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>697.2 lb/hour      3,053.6 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>1.16 lb/MMBtu</b>  Reference: <b>Based on data collected with temporary CEMS.</b>		7. Emissions Method Code: <b>1</b>	
8.a. Baseline Actual Emissions (if required): <b>2,123.8 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2011</b>	
9.a. Projected Actual Emissions (if required): <b>2,149.4 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>TBD</b>	4. Equivalent Allowable Emissions: <b>TBD</b> lb/hour <b>TBD</b> tons/year
5. Method of Compliance: <b>TBD</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>TBD = To Be Determined</b> <b>CO emissions will be limited by the Boiler MACT rule. However, the Foley Mill has not yet determined if it will comply with the CEMS compliance option or stack test compliance option. In addition, a recently proposed reconsideration rule may change the stack test compliance option emission limit.</b>	

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>NO<sub>x</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>155.0 lb/hour                      679.0 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.35 lb/MMBtu for fuel oil and 0.22 lb/MMBtu for bark</b> Reference: <b>Fuel oil factor is from AP-42 and bark factor is from data collected with temporary CEMS.</b>		7. Emissions Method Code: <b>3 (FO), 1 (bark)</b>	
8.a. Baseline Actual Emissions (if required): <b>497.2 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>485.9 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Fuel oil is the worst-case fuel, but its use is less than the maximum rating of the boiler. Therefore, a fuel hierarchy is used to estimate the maximum emissions from the fuel oil and the emissions from the remaining available heat rating from bark.</b>			



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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>SO<sub>2</sub></b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>498.96 lb/hour      2,185.4 tons/year</b>		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>498.96 lb/hr</b>  Reference: <b>Permit Limit</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required): <b>29.2 tons/year</b>		8.b. Baseline 24-month Period: From: <b>Jan 2013</b> To: <b>Dec 2014</b>	
9.a. Projected Actual Emissions (if required): <b>20.1 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment:			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions 1 of 1

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>498.96 lb/hr</b>	4. Equivalent Allowable Emissions: <b>498.96</b> lb/hour <b>2,185.4</b> tons/year
5. Method of Compliance: <b>Fuel analysis</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Existing permit limits.</b>	

**Allowable Emissions** Allowable Emissions 1 of 2

1. Basis for Allowable Emissions Code: <b>OTHER</b>	2. Future Effective Date of Allowable Emissions:
3. Allowable Emissions and Units: <b>2.5% Sulfur in Fuel</b>	4. Equivalent Allowable Emissions: <b>498.96</b> lb/hour <b>2,185.4</b> tons/year
5. Method of Compliance: <b>Fuel analysis</b>	
6. Allowable Emissions Comment (Description of Operating Method): <b>Existing permit limits.</b>	

**Allowable Emissions** Allowable Emissions    of   

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>VOC</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>2.0 lb/hour                      8.9 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.0054 lb/MMBtu for natural gas and 0.003 lb/MMBtu for bark</b> Reference: <b>AP-42 for natural gas combustion and NCASI TB 1020 for bark.</b>		7. Emissions Method Code: <b>3 (FO), 5 (bark)</b>	
8.a. Baseline Actual Emissions (if required): <b>5.8 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>6.7 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Natural gas is the worst-case fuel, but its use is less than the maximum rating of the boiler. Therefore, a fuel hierarchy is used to estimate the maximum emissions from the natural gas and the emissions from the remaining available heat rating from bark.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>Lead</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>0.02 lb/hour                      0.09 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.000035 lb/MMBtu</b> Reference: <b>NCASI TB 1013</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>0.08 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>0.06 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>SAM</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>23.2 lb/hour                      101.5 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.13 lb/MMBtu for fuel oil and 4.7E-06 lb/MMBtu for bark</b> Reference: <b>AP-42 for fuel oil combustion and testing from similar GP mill for bark.</b>		7. Emissions Method Code: <b>3 (FO), 5 (bark)</b>	
8.a. Baseline Actual Emissions (if required): <b>1.4 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2005</b> To: <b>May 2007</b>	
9.a. Projected Actual Emissions (if required): <b>3.3 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			



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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS  
 (Optional for unregulated emissions units.)**

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>GHG</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>125,943 lb/hour 551,629 tons/year</b>		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>209.56 lb CO<sub>2</sub>e/MMBtu</b> Reference: <b>EPA's Mandatory Reporting Rule for Greenhouse Gases</b>		7. Emissions Method Code: <b>5</b>	
8.a. Baseline Actual Emissions (if required): <b>470,959 tons/year</b>		8.b. Baseline 24-month Period: From: <b>June 2011</b> To: <b>May 2013</b>	
9.a. Projected Actual Emissions (if required): <b>427,286 tons/year</b>		9.b. Projected Monitoring Period: <input checked="" type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions: <b>See Appendix B of permit application.</b>			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the worst-case fuel firing scenario.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

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

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

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>H106</b>		2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>13.2</b> lb/hour <b>57.9</b> tons/year		4. Synthetically Limited? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year			
6. Emission Factor: <b>0.022 lb/MMBtu</b>  Reference: <b>Boiler MACT</b>		7. Emissions Method Code: <b>0</b>	
8.a. Baseline Actual Emissions (if required):		8.b. Baseline 24-month Period: From:                      To:	
9.a. Projected Actual Emissions (if required):		9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions:			
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the Boiler MACT limit.</b>			

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>0.022 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>13.2 lb/hour 57.9 tons/year</b>
5. Method of Compliance: <b>Stack test or fuel analysis</b>	
6. Allowable Emissions Comment (Description of Operating Method):	

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

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

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

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

**F1. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION –  
 POTENTIAL, FUGITIVE, AND ACTUAL EMISSIONS**  
 (Optional for unregulated emissions units.)

Complete a Subsection F1 for each pollutant identified in Subsection E if applying for an air construction permit or concurrent processing of an air construction permit and a revised or renewal Title V operation permit. Complete for each emissions-limited pollutant identified in Subsection E if applying for an air operation permit.

**Potential, Estimated Fugitive, and Baseline & Projected Actual Emissions**

1. Pollutant Emitted: <b>H114</b>	2. Total Percent Efficiency of Control:	
3. Potential Emissions: <b>3.4E-03</b> lb/hour <b>1.5E-02</b> tons/year		4. Synthetically Limited? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
5. Range of Estimated Fugitive Emissions (as applicable): to tons/year		
6. Emission Factor: <b>5.7E-06 lb/MMBtu</b>  Reference: <b>Boiler MACT</b>		7. Emissions Method Code: <b>0</b>
8.a. Baseline Actual Emissions (if required):	8.b. Baseline 24-month Period: From: To:	
9.a. Projected Actual Emissions (if required):	9.b. Projected Monitoring Period: <input type="checkbox"/> 5 years <input type="checkbox"/> 10 years	
10. Calculation of Emissions:		
11. Potential, Fugitive, and Actual Emissions Comment: <b>Potential emission rates correspond to the Boiler MACT limit.</b>		

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

**Complete Subsection F2 if the pollutant identified in Subsection F1 is or would be subject to a numerical emissions limitation.**

**Allowable Emissions** Allowable Emissions **1** of **1**

1. Basis for Allowable Emissions Code: <b>RULE</b>	2. Future Effective Date of Allowable Emissions: <b>October 1, 2016 (requested)</b>
3. Allowable Emissions and Units: <b>5.7E-06 lb/MMBtu</b>	4. Equivalent Allowable Emissions: <b>3.4E-03 lb/hour 1.5E-02 tons/year</b>
5. Method of Compliance: <b>Stack test or fuel analysis</b>	
6. Allowable Emissions Comment (Description of Operating Method):	

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

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

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

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

**EMISSIONS UNIT INFORMATION**  
 Section [2] of [2] **No. 2 Bark Boiler**

**G. VISIBLE EMISSIONS INFORMATION**

**Complete Subsection G if this emissions unit is or would be subject to a unit-specific visible emissions limitation.**

**Visible Emissions Limitation:** Visible Emissions Limitation 1 of 1

1. Visible Emissions Subtype: <b>VE30</b>	2. Basis for Allowable Opacity: <input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions: <b>30</b> %      Exceptional Conditions: <b>40</b> % Maximum Period of Excess Opacity Allowed: <b>2</b> min/hour	
4. Method of Compliance: <b>EPA Method 9</b>	
5. Visible Emissions Comment:	

**Visible Emissions Limitation:** Visible Emissions Limitation \_\_ of \_\_\_\_

1. Visible Emissions Subtype:	2. Basis for Allowable Opacity: <input type="checkbox"/> Rule <input type="checkbox"/> Other
3. Allowable Opacity: Normal Conditions:                    %      Exceptional Conditions:                    % Maximum Period of Excess Opacity Allowed:                    min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment:	



**EMISSIONS UNIT INFORMATION**  
**Section [2] of [2] No. 2 Bark Boiler**

**H. CONTINUOUS MONITOR INFORMATION**

**Complete Subsection H if this emissions unit is or would be subject to continuous monitoring.**

**Continuous Monitoring System:** Continuous Monitor 1 of 3

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Fuel flow meter used to monitor fuel consumption in the boiler (Permit No. 1230001-023-AC/PSD-FL-397).</b>	

**Continuous Monitoring System:** Continuous Monitor 2 of 3

1. Parameter Code: <b>FLOW</b>	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input checked="" type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Scrubbing liquid flow rate to each scrubber. Required by CAM Plan per Permit No. 1230001-045-AV.</b>	

**EMISSIONS UNIT INFORMATION**  
 Section [2]of [2] **No. 2 Bark Boiler**

**H. CONTINUOUS MONITOR INFORMATION (CONTINUED)**

**Continuous Monitoring System:** Continuous Monitor 3 of 3

1. Parameter Code: <b>PRS</b>	2. Pollutant(s):
3. CMS Requirement:	<input checked="" type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment: <b>Pressure drop across scrubber. Required by CAM Plan per Permit No. 1230001-045-AV.</b>	

**Continuous Monitoring System:** Continuous Monitor \_\_\_ of \_\_\_

1. Parameter Code:	2. Pollutant(s):
3. CMS Requirement:	<input type="checkbox"/> Rule <input type="checkbox"/> Other
4. Monitor Information... Manufacturer: Model Number: <span style="float: right;">Serial Number:</span>	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment:	

**EMISSIONS UNIT INFORMATION**  
Section [2] of [2] No. 2 Bark Boiler

**I. EMISSIONS UNIT ADDITIONAL INFORMATION**

**Additional Requirements for All Applications, Except as Otherwise Stated**

1. Process Flow Diagram: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input checked="" type="checkbox"/> Attached, Document ID: <u>Appendix A</u> <input type="checkbox"/> Previously Submitted, Date _____
2. Fuel Analysis or Specification: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>August 2014</u>
3. Detailed Description of Control Equipment: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Previously Submitted, Date <u>August 2014</u>
4. Procedures for Startup and Shutdown: (Required for all operation permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable (construction application)
5. Operation and Maintenance Plan: (Required for all permit applications, except Title V air operation permit revision applications if this information was submitted to the department within the previous five years and would not be altered as a result of the revision being sought) <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously Submitted, Date _____ <input checked="" type="checkbox"/> Not Applicable
6. Compliance Demonstration Reports/Records: <input type="checkbox"/> Attached, Document ID: _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input type="checkbox"/> Previously Submitted, Date: _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input type="checkbox"/> To be Submitted, Date (if known): _____ Test Date(s)/Pollutant(s) Tested: _____ _____ <input checked="" type="checkbox"/> Not Applicable Note: For FESOP applications, all required compliance demonstration records/reports must be submitted at the time of application. For Title V air operation permit applications, all required compliance demonstration reports/records must be submitted at the time of application, or a compliance plan must be submitted at the time of application.
7. Other Information Required by Rule or Statute: <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**EMISSIONS UNIT INFORMATION**  
**Section [2]of [2] No. 2 Bark Boiler**

**I. EMISSIONS UNIT ADDITIONAL INFORMATION (CONTINUED)**

**Additional Requirements for Air Construction Permit Applications**

1. Control Technology Review and Analysis (Rules 62-212.400(10) and 62-212.500(7), F.A.C.; 40 CFR 63.43(d) and (e)): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
2. Good Engineering Practice Stack Height Analysis (Rules 62-212.400(4)(d) and 62-212.500(4)(f), F.A.C.): <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
3. Description of Stack Sampling Facilities: (Required for proposed new stack sampling facilities only) <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable

**Additional Requirements for Title V Air Operation Permit Applications**

1. Identification of Applicable Requirements: <input type="checkbox"/> Attached, Document ID: _____
2. Compliance Assurance Monitoring: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
3. Alternative Methods of Operation: <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable
4. Alternative Modes of Operation (Emissions Trading): <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable

**Additional Requirements Comment**

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