TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

APPLICANT

Foley Cellulose LLC
One Buckeye Drive
Perry, FL 32348

Foley Mill
Facility ID No. 1230001

PROJECT

Project No. 1230001-056-AC
Application for Air Construction Permit
Construction to EU041 No. 2 Purification Plant; and re-servicing
Washer No. 16 and Tower No. 17, and short-term trial testing.

COUNTY

Taylor, Florida

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Waste and Air Resource Management Program
Northeast District Office
8800 Baymeadows Way West, Suite 100
Jacksonville, Florida 32256

1/5/2014

1. GENERAL PROJECT INFORMATION

Air Pollution Regulations

Projects at stationary sources with the potential to emit air pollution are subject to the applicable environmental laws specified in Section 403 of the Florida Statutes (F.S.). The statutes authorize the Department of Environmental Protection (Department) to establish regulations regarding air quality as part of the Florida Administrative Code (F.A.C.), which includes the following applicable chapters: 62-4 (Permits); 62-204 (Air Pollution Control – General Provisions); 62-210 (Stationary Sources – General Requirements); 62-212 (Stationary Sources – Preconstruction Review); 62-213 (Operation Permits for Major Sources of Air Pollution); 62-296 (Stationary Sources - Emission Standards); and 62-297 (Stationary Sources – Emissions Monitoring). Specifically, air construction permits are required pursuant to Rules 62-4, 62-210 and 62-212, F.A.C.

In addition, the U. S. Environmental Protection Agency (EPA) establishes air quality regulations in Title 40 of the Code of Federal Regulations (CFR). Part 60 specifies New Source Performance Standards (NSPS) for numerous industrial categories. Part 61 specifies National Emission Standards for Hazardous Air Pollutants (NESHAP) based on specific pollutants. Part 63 specifies NESHAP based on the Maximum Achievable Control Technology (MACT) for numerous industrial categories. The Department adopts these federal regulations on a quarterly basis in Rule 62-204.800, F.A.C.

Glossary of Common Terms

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of this permit.

Facility Description and Location

Foley Cellulose LLC is an existing Kraft Process Pulp Mill, which is categorized under Standard Industrial Classification Code No. 2611. The facility is be located in Taylor County at east of US 19, south of SR 30, southeast of Perry, Florida. The UTM coordinates of the existing facility are Zone 17, 256.7 km East and 3328.7 km North; Latitude: 30°03’59” North and Longitude: 83°33’12” West. This site is in an area that is in attainment (or designated as unclassifiable) for all air pollutants subject to state and federal Ambient Air Quality Standards (AAQS).

Facility Regulatory Categories

- The facility **is** a major source of hazardous air pollutants (HAP).
- The facility **has no** units subject to the acid rain provisions of the Clean Air Act.
- The facility **is** a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility **is** a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

Project Description

This is the final air construction permit, which consist of: The re-servicing of Washer No. 16 and Tower No. 17 in (EU041) the No. 2 Purification Plant in order to produce a new pulp product, construction of supporting pumps, valves, piping, seal water boxes, and injection nozzles in the No. 2 Purification Plant to improve operation reliability; and short-term temporary trials to manufacture the new pulp product using the existing Washer No. 16 and Tower No. 17 in the equipment configuration.

Washer No. 16 and Tower No. 17 were removed from service when the Oxygen Delignification (O2 Delig.) System (EU 046) was installed in October 2013. The Foley Mill did not make any mention of the fact that Washer No. 16 and Tower No. 17 would be removed from service when the construction application for the O2 Delig. system was submitted. However, no emissions reduction credit was taken as part of the PSD applicability assessment in the construction permit application for the O2 Delig. System. Going forward, the Mill desires to utilize this equipment whenever the Mill is making the new pulp product. One new chemical additive will be used in the No. 2 Purification Plant to manufacture the new pulp product. The quantity of hydrogen peroxide, another chemical currently used in the No. 2 Purification Plant, will be increased when the new pulp product is being made. Foley anticipate using between 38 to 48 lbs of hydrogen peroxide per air dried metric ton of pulp. As part of the proposed project, Washer No. 16 and Tower No. 17 will be used whenever the Mill is making the new product.

Processing Schedule

12/23/14	Received the application for an air pollution construction permit.
12/31/14	Request For Additional Information
1/2/15	Received Additional Information
1/5/15	Received Additional Information

2. PSD APPLICABILITY

General PSD Applicability

For areas currently in attainment with the state and federal AAQS or areas otherwise designated as unclassifiable, the Department regulates major stationary sources of air pollution in accordance with Florida's PSD preconstruction review program as defined in Rule 62-212.400, F.A.C. Under preconstruction review, the Department first must determine if a project is subject to the PSD requirements ("PSD applicability review") and, if so, must conduct a PSD preconstruction review. A PSD applicability review is required for projects at new and existing major stationary sources. In addition, proposed projects at existing minor sources are subject to a PSD applicability review to determine whether potential emissions *from the proposed project itself* will exceed the PSD major stationary source thresholds. A facility is considered a major stationary source with respect to PSD if it emits or has the potential to emit:

- 250 tons per year or more of any regulated air pollutant; or
- 100 tons per year or more of any regulated air pollutant and the facility belongs to one of the following 28 PSD-major facility categories: fossil fuel-fired steam electric plants of more than 250 million British thermal units per hour heat input, coal cleaning plants (with thermal dryers), Kraft pulp mills, portland cement plants, primary zinc smelters, iron and steel mill plants, primary aluminum ore reduction plants, primary copper smelters, municipal incinerators capable of charging more than 250 tons of refuse per day, hydrofluoric, sulfuric, and nitric acid plants, petroleum refineries, lime plants, phosphate rock processing plants, coke oven batteries, sulfur recovery plants, carbon black plants (furnace process), primary lead smelters, fuel conversion plants, sintering plants, secondary metal production plants, chemical process plants, fossil fuel boilers (or combinations thereof) totaling more than 250 million British thermal units per hour heat input, petroleum storage and transfer units with a total storage capacity exceeding 300,000 barrels, taconite ore processing plants, glass fiber processing plants and charcoal production plants.

Once it is determined that a project is subject to PSD preconstruction review, the project emissions are compared to the "significant emission rates" defined in Rule 62-210.200, F.A.C. for the following pollutants: carbon monoxide (CO); nitrogen oxides (NO_X); sulfur dioxide (SO_2); particulate matter (PM); particulate matter with a mean particle diameter of 10 microns or less (PM_{10}); volatile organic compounds (VOC); lead (Pb); fluorides (Fl); sulfuric acid mist (SAM); hydrogen sulfide (H_2S); total reduced sulfur (TRS), including H_2S; reduced sulfur compounds, including H_2S; municipal waste combustor organics measured as total tetra- through octa-chlorinated dibenzo-p-dioxins and dibenzofurans; municipal waste combustor metals measured as particulate matter; municipal waste combustor acid gases measured as SO_2 and hydrogen chloride (HCl); municipal solid waste landfills emissions measured as non-methane organic compounds (NMOC); and mercury (Hg). In addition, significant emissions rate also means any emissions rate or any net emissions increase associated with a major stationary source or major modification which would construct within 10 kilometers of a Class I area and have an impact on such area equal to or greater than 1 $\mu g/m^3$, 24-hour average.

If the potential emission exceeds the defined significant emissions rate of a PSD pollutant, the project is considered "significant" for the pollutant and the applicant must employ the Best Available Control Technology (BACT) to minimize the emissions and evaluate the air quality impacts. Although a facility or project may be *major* with respect to PSD for only one regulated pollutant, it may be required to install BACT controls for several "significant" regulated pollutants.

PSD Applicability for Project

EU041 No. 2 Purification Plant and emissions from the project.

As provided in the application, the following table summarizes projected actual emissions and PSD applicability for the project.

Based on the projections, supporting information provided by the applicant, conclusions presented by the applicant, and the emissions summary presented in above tables, the Department agrees that the project does not trigger PSD preconstruction review.

All projected increases of PSD pollutants are below the PSD Significant Emission Rate thresholds presented in Chapter 62-210, F.A.C. Based upon this conclusion, no further PSD review is required.

Pursuant to Rule 62-212.300(1)(e), F.A.C., the applicant shall provide reports in summarizing actual emissions of all pollutants listed in the above table computed in accordance with the requirements of Rule 62-210.370, F.A.C. for each year during the 5-year period following completion of the project.

BASELINE ACTUAL EMISSIONS (TPY), PROJECTED ACTUAL EMISSIONS (TPY) and PSD APPLICABILITY

Pollutant	Emission Factors, lb/ODTUBP BP Scrubber (white liquor)	Emission Factors, lb/ODTUBP Extraction Tower Only	NCASI Reference	Baseline Actual Emissions, tpy (fluff pulp only)	Projected Actual Emissions, tpy (fluff pulp+Celluflex Pulp)	Emission Increases (PAE-BAE), tpy
VOCs	0.054	0.021	TB 1020, Table 4.9	8.35	6.32	0
CO	0.872	0.037	TB 1020, Table 4.9	134.9	93.0	0
TRS	0.0102	0.0102	TB 973, Table 4.1	1.58	1.38	0
H2S	0.00164	0.00164	TB 973, Table 4.1	0.25	0.22	0

The production records for the No. 2 Purification Plant using the look back period of January 2005 through November 2014. The highest 24-consecutive month production rate for the No. 2 Purification Plant during the look back period which occurred during the 24-consecutive month period of January 2005 – December 2006.

Calculate the emissions increase (in the units TPY), subtract the BAE from the PAE for each PSD regulated pollutant. Due to the integrated nature of production processes at the Foley Mill, increases in production in one part of the process can lead to increased utilization of other air emissions sources, both upstream and downstream of the modified unit. Increased utilization of such "affected" (but not modified) emissions units can result in associated emission increases AEI) which, according to EPA must be included in the PSD applicability determination. However, for this particular project there are no upstream or downstream affected sources since there will not be any production increases from the No. 2 Purification Plant and there was not any lost downtime or production that will be restored after the proposed project is implemented. The differences between the BAE and the PAE are compared to the PSD SERs to determine if PSD permitting is triggered. PSD was not triggered.

- If the difference between the PAE and BAE is less than zero, then the emissions increase is set to equal zero.
- **Note:** The table above does not include any "excludable emissions."

CURRENT PROCESS FLOW DIAGRAM

Figure 1a. Process Flow Diagram – No. 2 Purification Plant (EU 041)
Exisiting Configuration – Fluff Pulp Production
Foley Cellulose LLC

Process Flow Legend:
Material Flow
Air Flow

Golder Associates

NEW PROCESS FLOW DIAGRAM

December 2014

14-12917

Figure 1b. Process Flow Diagram – No. 2 Purification Plant (EU 041)
Proposed Configuration
Foley Cellulose LLC

Process Flow Legend:
Material Flow
Air Flow

Golder Associates

C:\Users\pcobb\Desktop\No. 2 Purification Cellulex\Figure 1b - Public Information Copy.vsd

3. APPLICATION REVIEW

Discussion of Emissions

None of this support equipment added during this construction permit are considered emission sources. This permit does not modify any permitted emission standards.

State Requirements

Rule 62-4.070(3), F.A.C., and Rule 62-210.200(PTE), F.A.C.

Other Draft Permit Requirements

The project therefore requires an air construction permit to authorize: The re-servicing of Washer No. 16 and Tower No. 17 in (EU041) the No. 2 Purification Plant in order to produce a new pulp product, construction of supporting pumps, valves, piping, seal water boxes, and injection nozzles in the No. 2 Purification Plant to improve operation reliability; and short-term temporary trials to manufacture the new pulp product using the existing Washer No. 16 and Tower No. 17 in the equipment configuration.

Authorized Construction. The Permittee is authorized to install the following equipment for the trial testing of the new pulp product production. None of this support equipment is considered emission sources:

- Installation of Tower No. 17 mining water pump. This pump would supplement the filtrate flow to the D-16 mining water pump. To execute the trial run, two valves will change orientation and then the pump will be used for Tower No. 17 mining water.
- Installation of a 14-inch fiberglass reinforced plastic (FRP) pipe and two 14-inch dampers in the No. 17 Washer hood vent line to enable operations to swap the venting back and forth between the White Liquor Scrubber and the mill E-Stage vent fan.
- Installation of a 10-inch FRP pipe and two dampers at the No. 17 seal box for the same capability described above.
- Installation of an injection nozzle in the No. 13 Washer Repulper Chute.
- Installation of an injection nozzle and valve at the D-16 MC pump.
- Installation of two 6-inch tie-ins with valves on each in the Nos. 17 and 13 shower piping and Washer No. 16 shower header to enable the delivery of No. 17 filtrate to the No. 16 washer showers.

Restricted Trial Testing Operation. Each trial operations periods is expected to last approximately 16 hours. The facility is authorized to conduct a total of 4 (four) trial periods. In the event of operational problems, Foley Cellulose LLC is allowed to request in writing for an additional 2 (two) trial periods to complete the testing. These trials will allow the Foley Mill the necessary satisfaction that the new pulp product has been successfully manufactured and meets all required specifications.

As part of the proposed project, Washer No. 16 and Tower No. 17 will be used whenever the Mill is making the new pulp product. During the trial testing, the new process chemical will be stored/ fed using temporary, portable totes.

OPERATION DURING AND AFTER THE TRIAL TEST

The maximum allowed operation rate for the 2 Purification Plant **shall not** exceed the current Title V air operation permit limit of 981 ODTUBP/day. Depending upon market conditions, the Mill may increase the production quantity of the new pulp product. However, every additional ton of new pulp shall replace a ton of the existing fluff pulp currently manufactured by the No. 2 Paper Machine. There will be no new added capacity to the No. 2 Purification Plant or the No. 2 Paper Machine as a result of making the new pulp product.

4. PRELIMINARY DETERMINATION

The Department, Northeast District Office, Waste and Air Resource Management Program makes a preliminary determination that the proposed project will comply with all applicable state and federal air pollution regulations as conditioned by the draft permit. This determination is based on a technical review of the complete application, reasonable assurances provided by the applicant, and the conditions specified in the draft permit. Leslie Maybin is the project engineer responsible for reviewing the application and drafting the permit. Additional details of this analysis may be obtained by contacting the project engineer at the Northeast District Office, Waste and Air Resource Management Program. The Northeast District Office's mailing address is 8800 Baymeadows Way West, Suite 100, Jacksonville, Florida 32256.