PRETREATMENT RATIONALE FOR ISSUANCE

Weyerhaeuser NR Company, Bruce Facility

Calhoun County

Bruce, MS

Water Branch II

MSP092455

SIC: 2421

August 27, 2021

Permit Engineer: Rajeev Gupta

# FACILITY INFORMATION

## Nature of Business: The facility operates as a Lumber Mill.

## Process Wastewater Description: The discharge from the facility will consist of Kiln Condensate from the facility’s existing and proposed CDK’s.

## Proposed Flowrate: Monthly Average: 50,000 gallons per day = 0.050 MGD

1. Applicable Federal Guidelines: 40 CFR Part 429 – Timber Products Processing Point Source Category; Subpart K – Sawmills and Planning Mills Subcategory; Section 429.125 (PSES). Section 429.125 states the following “Any existing source subject to this subpart which introduces process wastewater [pollutants](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=0d89e8d7076bc1372976137880905986&term_occur=999&term_src=Title:40:Chapter:I:Subchapter:N:Part:429:Subpart:K:429.125) into a [publicly owned treatment works](https://www.law.cornell.edu/definitions/index.php?width=840&height=800&iframe=true&def_id=6aae3e5003daf0ce6d9931522e617144&term_occur=999&term_src=Title:40:Chapter:I:Subchapter:N:Part:429:Subpart:K:429.125) must comply with [40 CFR part 403](https://www.law.cornell.edu/cfr/text/40/part-403).”
2. Treatment - The Kiln Condensate is currently being routed through an oil/water separator prior to being discharged to the sanitary sewer system. The facility submitted plans for a treatment basin after the oil/water separator which will consist of an aeration cell and settling cell.

# RECEIVING POTW INFORMATION

1. POTW Name; AI No.; and Permit No.: Bruce POTW; 13040; MS0042129
2. POTW Treatment Type: Wastewater is collected and treated via an aerated lagoon, followed by chlorine disinfection. After disinfection the wastewater is dispersed through a land application/overland flow system. Overflow from the land application system is then discharged from four (4) outfalls.
3. POTW Design Flowrate: 0.337MGD(May-October) and 0.5 MGD (Nov.-April)
4. POTW Receiving Stream: Skuna River
5. POTW Receiving Stream 7Q10 (Q7/10): 1.6 MGD

# PERTINENT FLOWRATE AND LOADING DATA

1. POTW 12-month Average Flowrate (QPOTW): 0.22 MGD (Maximum Weekly Average for 2020 calendar year)

**IV. CATEGORICAL LIMITATIONS**

40 CFR Part 429 – Timber Products Processing Point Source Category; Subpart K – Sawmills and Planing Mills Subcategory

40 CFR 429.126 – Pretreatment Standards for New Sources (PSNS): “Any new source subject to this subpart which introduces process wastewater pollutants into a publicly owned treatment works must comply with 40 CFR Part 403.”

**V. PROPOSED PERMIT LIMITATIONS**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | **Allowable Limitations (ALL)** | **Current Permit Limits (CPL)** | **Proposed Permit Limits (PPL)** | **Sampling Frequency** | **Sample Type** | **Basis of Decision** |
| **Avg.****lb/day** | **Max.****lb/day** | **Avg.****mg/L** | **Max.****mg/L** | **Avg.****lb/day** | **Max.****lb/day** | **Avg.****mg/L** | **Max.****mg/L** | **Avg.****lb/day** | **Max.****lb/day** | **Avg.****mg/L** | **Max.****mg/L** |
| BOD5 | --- | --- | --- | --- | --- | --- | --- | --- | Report | Report | Report | Report | Twice/ Month | 24-hour Composite | TJ |
| TSS | --- | --- | --- | --- | --- | --- | --- | --- | Report | Report | Report | Report | Twice/ Month | 24-hour Composite | TJ |
| Oil and Grease | --- | --- | --- | --- | --- | --- | --- | --- | Report | Report | Report | Report | Twice/ Month | Grab | TJ |
| Ammonia | --- | --- | --- | --- | --- | --- | --- | --- | Report | Report | Report | Report | Twice/ Month  | 24-hour Composite | TJ |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  **Parameter** | **Current Permit Limits (CPL)** | **Proposed Permit Limits (PPL)** | **Sampling Frequency** | **Sample Type** | **Basis of Decision** |
| **Avg.** | **Max.** | **Avg.** | **Max.** |
| pH | --- | --- | 5.0 SU (min.) | 9.0 SU | Twice/ Month | Grab  | TJ |
| Flow | --- | --- | 0.050 MGD | Report  | Daily  | Totalizer | TJ |

TJ = Technical Judgment

**VI.** **STATEMENT OF BASIS (narrative)**

Two special conditions have been added to the draft permit:

1. Within 180 days after the commencement of discharge, the permittee shall submit a complete Form 2P Application to Mississippi Environmental Quality Permit Board.

2. The permittee shall notify MDEQ within fifteen (15) days after the commencement of discharge.

A public notice will be required for this permitting action.

Monitoring data for all parameters shall be submitted on a monthly DMR.

**ADEQUACY OF TREATMENT**

Date: August 4, 2021

Permit Writer: Rajeev Gupta

Proposed Site: Weyerhaeuser NR Company, Bruce Facility

Pretreatment Permit No. MSP092455

Calhoun County

Address: 106 Railroad Street

Bruce, MS 38915

Proposed Hydraulic Loading: 0.050 MGD

Proposed Organic Loading: 300 mg/L (The facility is planning to add secondary treatment to reduce BOD5 concentration of wastestream to domestic sewage levels)

0.050 MGD\*8.34\*300 mg/L = 125.1 lb/day

Bruce POTW, NPDES Permit No. MS0042129, AI No. 13040

Permitted Flow: 0.337 MGD (May-October) and 0.5 MGD (Nov.-April)

12 Months Flow: 0.22 MGD max. weekly avg. value (from January – December 2020 DMRs)

12 Months BOD5: 300 mg/L representative influent value

Design BOD5: 0.337 MGD\*8.34\*300 mg/L = 843 lb/day

Potential Max. BOD5: 0.22 MGD\*8.34\*300 mg/L = 550 lb/day

Evaluation of Flow

0.337 MGD permitted – 0.22 MGD actual = 0.117 MGD

0.117 MGD available vs. 0.050 MGD proposed

Evaluation of BOD5

843 lb/day available – 550 lb/day potential max. = 293 lb/day

293 lb/day available vs. 125.1 lb/day proposed