



Georgia-Pacific Consumer Operations LLC

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February 12, 2021

Loretta Carstens, Permit Engineer
Office of Water Quality
Arkansas Department of Environmental Quality
5301 Northshore Drive
North Little Rock, AR 72118-5317

RE: Georgia-Pacific Consumer Operations LLC - Crossett Paper Operations, Crossett, AR
NPDES Permit No. **AR0001210, AFIN 02-00013**
Cooling Water Intake Structure (CWIS) Supplemental Information and Certification

Dear Ms. Carstens:

To follow-up on the Department's August 19, 2020 request for further technical information on Georgia-Pacific Crossett Paper Operations (GP CPO) CWIS and related operations, GP CPO is submitting this letter. In addition, GP CPO is providing an updated certification under the rule.

Supplemental Information

GP CPO's incoming water is supplied from the Saline River in southeast Arkansas. The Saline River is a Water of the United States. Water is pumped from the Saline River Canal to Lake Georgia-Pacific (a 1700-acre, 4.5 billion-gal man-made water storage unit) by two (2) Low Lift Pumps. The Low Lift Pump Station is located on the North corner of Lake GP. During normal operation, there is only one (1) Low Lift Pump in use and the pumps are swapped periodically. Screens that filter out river debris are located below the pump room on each pump bay.

The Transmission Pump Station is located on the South corner of Lake GP. There are four (4) pumps in this station that supply the raw water to the facility roughly 6.5 miles away. Screens that filter out debris from the reservoir are located below the pump room on each of the four bays.

The once-through cooling water portion of this raw water is used primarily for cooling supply to major air compressors, cooling tower makeup, oil coolers and air conditioners in the GP-Crossett Paper Operations and the two neighboring facilities at this location, Georgia-Pacific Chemicals LLC (AFIN 02-00028) and Ingevity Arkansas, LLC (AFIN 02-00339).

Major Components of Incoming Water Supply System:

Low-Lift Pump Station:

- Pumps: Two (2) vertical shaft, electric motor driven pumps rated at 23000-gpm
 - Only one (1) pump in service as needed to resupply Lake GP
- Intake structure and pipes: 9-ft X 20.5-ft intake bay, 36-inch intake pump column
- Screen size: 9-ft X 20.5-ft height; Minimum level – 6.6ft
- Mesh size screen: 1-inch square openings
- Flow orientation: Perpendicular to the water flow
 - Intake Flow: Normal Screen velocity = 0.463 ft/s
 - Normal Screen velocity = $\frac{23000 \text{ gpm}}{(0.6 * 9\text{ft} * 20.5\text{ft} * 7.48\text{gal}/\text{ft}^3 * 60 \text{ sec}/\text{min})} = 0.463 \text{ ft/s}$
- Maximum through screen velocity at design/max/rate capacity
 - *Max Screen velocity = $\frac{\text{Max Flow}}{C_D * \text{Min Submerged Area}}$, where C_D is the discharge coefficient ≈ 0.6*
 - Max Screen velocity = $\frac{23000 \text{ gpm}}{(0.6 * 9\text{ft} * 6.6\text{ft} * 7.48\text{gal}/\text{ft}^3 * 60 \text{ sec}/\text{min})} = 1.438 \text{ ft/s}$

316(B) CWIS Applicability

EPA promulgated the Existing Facilities Rule pursuant to Clean Water Act Section 316(b) on August 15, 2014. The rule became effective on October 14, 2014. This Existing Facilities Rule is found in Subpart J of 40 CFR Part 125 (125.90 through 125.99). Subpart J establishes the 316(b) requirements that apply to CWIS at existing facilities for the purpose of minimizing adverse environmental impact associated with the use of CWIS. The requirements are established and implemented in NPDES permits. GP CPO was listed in EPA's existing facilities list published in 2015 for the Saline River intake.¹

Subpart J is applicable to existing facilities that commenced construction on or before January 17, 2002. Since GP CPO commenced construction prior to that date, this facility is defined as an existing facility as defined in 40 CFR 125.92(k). Existing facilities are subject to all provisions of Subpart J if all the following items are true:

- (1) The facility is a point source;
- (2) The facility uses or proposes to use one or more CWIS with a cumulative Design Intake Flow of greater than 2 million gallons per day (MGD) to withdraw water from waters of the United States; and
- (3) Twenty-five percent (25%) or more of the water the facility withdraws on an actual intake flow basis is used exclusively for cooling purposes.

GP Crossett Paper Operations is a point source, and the Design Intake Flow (DIF) of the CWIS from the Saline River associated with this facility is 33 MGD. However, GP CRO does not use 25% or more of the water withdrawn exclusively for cooling purposes based on an Actual Intake Flow (AIF) of approximately 25 MGD average for the past 60 months. Approximately 1.2MGD is used for once-through cooling purposes. Therefore, this facility is not subject to requirements under 40 CFR 125.94 through 125.99 of Subpart J for existing facilities. See the attached certification statement.

¹ https://www.epa.gov/sites/production/files/2016-05/316b-facilities-critical-habitat-range_sept-2015a.xlsx

Even though GP CPO is exempt from the full requirements of Section 316(b) based on the criteria above, pursuant to 40 CFR 125.90(b), the facility must meet 316(b) requirements established by the permitting authority on a case-by-case, best professional judgement (BPJ) basis for the Low Lift Pump Station from the Saline River.

Proposed BPJ Criteria

The CWIS at the Low Lift Pump Station consists of a 36-inch diameter intake pipe leading to two (2) fixed intake screens submerged in the Saline River Canal. Each Low Lift screen is 9 feet long and 20.5 feet wide for a total screen area of 184.5 ft². Each intake pump has a combined rated intake capacity of 33 million gallons per day.

All intake pumps operating at maximum pump capacity results in a maximum through screen design velocity of 1.5 ft/sec or less.

The following proposed permit language is based on the information above and NPDES Permit Number: AR0001830 AFIN: 15-00001 provided to GP by ADEQ to establish BPJ requirements that will minimize any Adverse Environmental Impacts (AEI) from the cooling water intake structure (CWIS):

1. The permittee shall operate a CWIS with a maximum through-screen design velocity of 1.5 ft/sec.
2. The permittee shall maintain the intake screens in good working condition at all times.
3. The permittee shall maintain the open area of the intake screens by back-flushing the screens at a minimum frequency of twice per year, or more frequently if intake flow decreases due to leaf litter, silt, sticks, etc.
4. The permittee shall maintain records of the back-flushing events. These records shall include the date and duration of each back-flush event. These records shall be kept on site and made available for inspection by Department personnel upon request.

If you have any questions regarding this information or the attached certification, please contact Rachel Johnson, Environmental Engineer at Rachel.Johnson2@gapac.com or (870) 415-6352.

Sincerely,




Sarah M. Ross
Environmental & Compliance Leader
GP Consumer Operations LLC
Crossett Paper Operations

Section 316(b) Certification Statement

GP Crossett Paper Operations (GP CRO) is a point source that commenced construction prior to January 17, 2002. The Design Intake Flow (DIF) of the CWIS from the Saline River associated with this facility is 33 MGD. However, GP CRO does not use 25% or more of the water withdrawn exclusively for cooling purposes based on an Actual Intake Flow (AIF) of approximately 25 MGD average for the past 60 months. Approximately 1.2MGD is used for once-through cooling purposes. Therefore, this facility is not subject to requirements under 40 CFR 125.94 through 125.99 of Subpart J for existing facilities.

In accordance with the requirements of Section 316(b) of the Clean Water Act, I hereby certify under penalty of law that this statement was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Tommy D. Smith

February 12, 2021
Date

Vice-President - Manufacturing
Title of Responsible Corporate Official