



June 7, 2024

Rachel Davis
New-Indy Catawba LLC
5300 Cureton Ferry Rd
Catawba, SC 29704

Re: Construction Permit No. IW021248v1,0
New-Indy Catawba LLC
Replacement ASB Baffle Curtains
York County

Dear Ms. Davis

Enclosed is a SC Wastewater Construction Permit for the above referenced project. Construction is to be performed in accordance with this permit and supporting engineering report, plans, and specifications approved by this Office.

This system cannot be placed into operation until final approval is granted by the appropriate Bureau of Environmental Health Services (BEHS) Regional Office. Your Regional contact is Gregory Harrington, in the Midlands EA Lancaster Office. This regional office should be notified when construction begins at the following address and phone number: 2475 DHEC Road, , Lancaster SC 29720, 803-285-7461.

Upon completion of any construction, a letter must be submitted to the BEHS Regional Office from the registered engineer certifying that the construction has been completed in accordance with the approved plans and specifications. An inspection may then be scheduled. The BEHS Regional Office will approve the system for operation upon successful completion of this project.

Sincerely,

Byron M Amick
Industrial Wastewater Permitting Section
Water Facilities Permitting Division

cc via email: Chris Corley, Midlands EA Lancaster
James Kirlin, TRC

Wastewater Construction Permit Bureau of Water



PROJECT NAME: New-Indy Catawba LLC Replacement ASB Baffle Curtains	COUNTY: YORK
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PERMISSION IS HEREBY GRANTED TO: **New-Indy Catawba LLC**
5300 Cureton Ferry Rd
Catawba, SC 29704-7700

For the construction of an upgrade to an existing wastewater treatment plant in accordance with the construction plans, specifications, engineering report and the Construction Permit Application signed by Jim Kirlin, Registered Professional Engineer, S.C. Registration Number: 19829.

The effluent will be discharged to the Catawba River at a daily average rate of 30,000,000 gallons per day.

The effluent concentrations of those constituents the wastewater treatment system is designed to remove or reduce are contained in the NPDES Permit for New-Indy Catawba LLC - SC0001015.

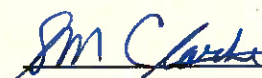
PROJECT DESCRIPTION: The installation of three new Baffle Curtain replacements in the Aerated Stabilization Basin (ASB). For a complete description of the treatment system See Pages 2 - 5.

TREATMENT PLANT CLASSIFICATION: Group IV-Biological

CONDITIONS: See Page 6.

In accepting this permit, the owner agrees to the admission of properly authorized persons at all reasonable hours for the purpose of sampling and inspection. This is a permit for construction only and does not constitute DHEC approval, temporary or otherwise, to place the system in operation. An Approval to Place in Operation is required and can be obtained following the completion of construction by contacting the Midlands EA Lancaster Office at 803-285-7461. Additional permits may be required prior to construction (e.g., Stormwater).

PERMIT NUMBER:	IW021248
ISSUANCE DATE:	June 7, 2024
EXPIRATION DATES:	June 07, 2026 (to begin construction) June 07, 2027 (to obtain Approval to Place in Operation)


 Shawn M. Clarke, P.E., Director
 Water Facilities Permitting Division

PROJECT DESCRIPTION

The existing wastewater treatment system with upgrades consists of the following:

*** items in underlined bold red text are the new construction**

- 1) The facility's process wastewater enters the treatment system through two (2) Bar Screens.
- 2) An existing 4,700,000-gallon Primary Clarifier (275-ft diameter by 9.5-ft side width depth (SWD) concrete tank) with a 1-HP automated rake.
- 3) The existing sanitary wastewater treatment system which consists of:
 - Two (2) in-ground in-series digester/settling tanks each with a capacity of approximately 32,600-gallons.
 - A chlorine contact chamber located at the end of the second tank of the series.
 - Mechanical agitator.
 - A 1150-gallon sodium hypochlorite solution storage poly-tank with secondary containment.
 - Sodium hypochlorite solution metering chemical feed pumps.
 - An 8-inch Palmer-Bowlus Flume flow measuring device.
 - All associated pumps, piping, and appurtenances.The treated sanitary wastewater enters the process wastewater system at the primary clarifier overflow structure.
- 4) The existing Raw Water addition to the primary clarifier overflow line.
- 5) A supplemental oxygen addition system which will withdraw wastewater from the clarifier overflow, supersaturate the wastewater with oxygen, then discharge the oxygenated wastewater back to the clarifier inlet ditch upstream of the clarifier. This 10,000-pound per day oxygen system will consist of:
 - A liquid oxygen storage tanker trailer (rented from vendor).
 - Two (2) 100-HP self-priming centrifugal pumps.
 - Pressured Oxygen Enrichment System. Contained within a single conex/intermodal shipping container may be either a single train or dual train system. Initially the facility will use a dual train system at this location but may swap it to a single train system as needed.
 - All associated piping, and appurtenances.
- 6) A ferric chloride addition system which will feed the solution into the Clarifier underflow sludge line. This system will consist of:
 - A 6,900-gallon poly bulk storage tank.
 - Two (2) variable speed chemical feed pumps each designed for 23-gph at 30 psi.
- 7) The existing 16.2-acre EQ/Sludge Thickener Basin (formerly known as the No. 3 Sludge Basin). This is an unlined earthen basin with a capacity of approximately 55,000,000-gallons which receives sludge from the Primary Clarifier.
- 8) The existing 89-acre No. 4 Sludge Basin. This is an unlined earthen basin with a capacity of approximately 3280 acre-feet, which receives sludge from the color removal system, the EQ/Sludge Thickener Basin and the Aerated Stabilization Basin (ASB). Included in this basin is the following:
 - Three (3) Geotextile Tube Pads in accordance with the Project Site Layout Map, Figure 3 dated February 2017.
- 9) The existing 31-acre No. 1 Sludge Basin. This is an unlined earthen basin with a capacity of approximately 840 acre-feet, which receives filter backwash and sediments from the river water treatment plant. The water plant treats river water for use in the manufacturing process. This unit's overflow discharges to the ASB.

- 10) The existing 16.3-acre No. 2 Sludge Basin. This is an unlined earthen basin with a capacity of approximately 495 acre-feet and has been out of service since December 1997. Legacy sludge from previous operations remains in place. This unit's overflow discharges to the ASB.
- 11) The Existing Defoamer addition system adds defoamer chemical into the ASB inlet ditch. This defoamer system consists of:
 - One (1) 5,000-gallon poly defoamer storage tank.
 - One (1) 12,150-gallon poly defoamer storage tank. This new tank will be located outside in place of one of the four (4) former alum storage tanks previously used with color plant system.
 - Two (2) 0.5-HP chemical metering pumps.
- 12) A supplemental oxygen addition system which will withdraw wastewater from the ASB inlet ditch, supersaturate the wastewater with oxygen, then discharges the oxygenated wastewater to a submerged discharge pipe in the ASB inlet ditch. This 10,000-pound per day oxygen system will consist of:
 - A liquid oxygen storage tanker trailer (rented from vendor).
 - Two (2) 100-HP self-priming centrifugal pumps.
 - Pressured Oxygen Enrichment System. Contained within a single conex/intermodal shipping container may be either a single train or dual train system. Initially the facility will use a dual train system at this location but may swap it to a single train system as needed.
 - All associated piping, and appurtenances.
- 13) A 48% hydrogen peroxide solution addition system which will feed the solution into the ASB inlet ditch. This system will consist of:
 - A 9,500-gallon stainless steel bulk storage tank.
 - A pump skid with two (2) chemical metering pumps.
 - All associated piping, and appurtenances.
- 14) A nutrient addition system which will feed the nutrient solution at a rate of between 200 and 600 gpd into the ASB inlet ditch. This system will consist of:
 - A 6,500-gallon poly bulk storage tank.
 - A chemical peristaltic metering pump.
 - All associated piping, and appurtenances.
- 15) The Existing H₂SO₄ addition system to feed into the ASB inlet ditch. This acid feed system consists of:
 - Two (2) 8,000-gallon steel storage tanks
 - Two (2) 1.5-inch diaphragm chemical feed pumps
- 16) A new 48% hydrogen peroxide solution addition system which will feed the solution into the foul condensate hard pipe prior to entering the ASB. There are two addition systems which will consist of:
 - Location 1, near the color plant will consist of:
 - A 9,500-gallon stainless steel bulk storage tank.
 - A pump skid with two (2) chemical metering pumps.
 - All associated piping, and appurtenances.
 - Location 2, near the water filter plant will consist of:
 - Two (2) 9,500-gallon stainless steel bulk storage tanks.
 - A pump skid with two (2) chemical metering pumps.
 - All associated piping, and appurtenances.
- 17) The existing 84-acre Pond 5 Temporary Wastewater Storage Basin. This is an unlined earthen basin with dikes and a capacity of approximately 400,000,000-gallons. This pond is operated only during extended drought and low stream flow. When conditions require this pond to be used water is taken from the ASB outlet ditch placed into Pond 5 for storage, and when conditions allow Pond 5 to be emptied water is released back into the ASB.

- 18) The existing 64-acre Aerated Stabilization Basin (ASB). This is an unlined earthen basin with dikes and a capacity of approximately 375,000,000-gallons. The ASB contains fifty-two (52) 75-HP Surface Aerators. **The installation of replacement Baffle Curtains. Each curtain is made up of 50-ft panels that are 9-ft deep and are constructed of nylon webbing reinforced XR-5 geomembrane material, with sealed 10-inch HPDE pipes for flotation and weighted chain with anchors to secure the bottom. The three curtains will be as follows:**
- **The first baffle curtain, furthest north and dividing the first two zones, will be 1,100-ft long (22 panels) with the opening on the east.**
 - **The second baffle curtain will be 950-ft long (19 panels) with the opening on the west. This baffle curtain will separate the second and third treatment zones.**
 - **The third baffle curtain, furthest south, will be 1,050-ft long (21 panels) with the opening on the east. It will separate the third and fourth zones.**
- 19) A ferric chloride addition system which will feed the solution into the dredge pump discharge lines from the dredging operations in the ASB. This system will consist of:
- A 6,900-gallon poly bulk storage tank.
 - Two (2) variable speed chemical feed pumps each designed for 23-gph at 30 psi.
 - The system can feed ferric chloride into two different dredge lines.
- 20) A 48% hydrogen peroxide solution addition system which will feed the solution into the ASB outlet ditch. This system will consist of:
- A 9,500-gallon stainless steel bulk storage tank.
 - A pump skid with two (2) chemical metering pumps.
 - All associated piping, and appurtenances.
- 21) A ferric chloride addition system which will feed a 40% solution into the ASB outlet ditch. This system will consist of:
- A 6,900-gallon poly bulk storage tank.
 - Two (2) variable speed chemical feed pumps each designed for 23-gph at 30 psi.
 - The system can feed ferric chloride into two different dredge lines.
- 22) The existing Raw Water addition to the ASB outlet ditch.
- 23) A supplemental oxygen addition system which will withdraw treated wastewater from the ASB outlet ditch, supersaturate the wastewater with oxygen, then the system will send the oxygenated wastewater to two places. One is to a submerged discharge pipe back into the ASB outlet ditch slightly downstream of the intake and the other is to be pumped to a perforated 8-inch HDPE diffuser pipe that will distribute the oxygen addition across the basin. This 10,000-pound per day oxygen system will consist of:
- A liquid oxygen storage tanker trailer (rented from vendor).
 - Two (2) 100-HP self-priming centrifugal pumps.
 - Pressured Oxygen Enrichment System. Contained within a single conex/intermodal shipping container may be either a single train or dual train system. Initially the facility will use a dual train system at this location but may swap it to a single train system as needed.
 - All associated piping, and appurtenances.
- 24) The existing 132-acre No. 1 Holding Basin. This is an unlined diked surface impoundment with a capacity of approximately 1,675,000,000-gallons.
- 25) A 48% hydrogen peroxide solution addition system which will feed the solution into the No. 1 Holding Pond at two locations (one near the pond outlet and the other in a 1.5-inch floating diffuser installed across the pond). This system will consist of:
- A 9,500-gallon stainless steel bulk storage tank.
 - A pump skid with two (2) chemical metering pumps.

- Two additional diffuser pipes will be added to allow solution addition to the pond during low pond water level conditions.
 - All associated piping, and appurtenances.
- 26) The existing 160-acre No. 2 Holding Basin. This is an unlined diked surface impoundment with a capacity of approximately 1,400,000,000-gallons. This pond is operated seasonally during low stream flow conditions. When use is required this pond water is taken from the top of the No.1 Holding Basin and transferred into the No. 2 basin, and when conditions allow the No. 2 basin will be drained to the Post Aeration Basin.
- 27) The existing Post Aeration Basin (PAB). This basin is a concrete structure of dimensions 80 feet long by 40 feet wide by 35 deep and is equipped with a spray shower system, a 75-HP surface aerator, a 75-HP aspirator aerator, and a 50-HP aspirator. Five (5) 48-inch valves will connect flow from the existing No.1 holding basin outfall pipe to the PAB via 48-inch ductile iron piping, as well as from the No. 2 holding basin outfall piping and from the PAB back to the existing outfall piping.
- 28) The Existing Defoamer addition system adds defoamer chemical into the PAB. The defoamer system consists of:
- One (1) 4,000-gallon poly defoamer storage tank with a heat trace module.
 - Two (2) chemical metering pumps.
- 29) The basin will have an access platform, a chemical defoaming supply system (with a heated fiberglass reinforced plastic tank and associated piping and pumps),
- 30) The existing Color Removal system consisting of:
- Four (4) 13,000-gallon Alum/Cationic Polymer storage tanks.
 - Two (2) 8,000-gallon acid storage tanks. Both are used to adjust pH in the ASB inlet ditch.
 - One (1) 3,000-gallon Polymer mix tank.
 - One (1) 3,000-gallon Polymer day tank.
 - One (1) 20,000-gallon coagulant contact tank.
 - One (1) 20,000-gallon Flocculent contact tank.
 - One (1) circular (70 ft. Dia.) Dissolved Air Flotation Clarifier.
 - One (1) 5,000-gallon sludge tank.
 - All associated pumps, piping, controls, monitoring equipment, and appurtenances.
- When color removal is necessary water is withdrawn from the ASB outlet ditch, processed through the color removal plant, and the decolorized effluent is returned to either the No.1 Holding Basin or directly into the PAB. (a plan has been submitted to close this plant)
- 31) The final effluent is release from the PAB in a hydrologically controlled manner through the existing effluent Diffuser. The Diffuser is 300 feet long and will extend approximately 350 feet into the river. The diffuser will consist of:
- Three (3) 100-foot sections of HDPE piping with each section's diameters being 48-inches, 36-inches, and 30-inches.
 - Fifty-one (51) 8-inch diffuser check valves as nozzles spaced equally along the diffuser.
 - All associated piping and appurtenances.
- 32) A defoamer feed system adds defoamer to the ASB outlet ditch. The defoamer system consists of:
- One (1) 2,750-gallon poly defoamer storage tank
 - One (1) chemical metering pump
 - All associated piping and appurtenances.

CONDITIONS

1. This Permit supersedes Permit to Construct: IW021183 issued March 21, 2023, and is an addition to Permit to Construct 18449-IW issued November 8, 1999.
2. All waste oil and solid and hazardous waste shall be properly disposed of in accordance with the rules and regulations of the Bureau of Land and Waste Management of SCDHEC.
3. Prior to obtaining the Approval to Operate, the permittee shall update and maintain at the permitted facility a complete Operations and Maintenance (O&M) Manual for the wastewater treatment system. The manual shall be made available for on-site review during normal working hours. The manual shall contain operation and maintenance instructions for all equipment and appurtenances associated with the wastewater treatment system. The manual shall contain a general description of the treatment process(es), operating characteristics that will produce maximum treatment efficiency and corrective action to be taken should operating difficulties be encountered. The updated manual shall contain a plan for curtain maintenance in the ASB to prevent or reduce wear and sludge accumulation, while maintaining the required water column depth.
4. In accordance with Regulation 61-67, Standards for Wastewater Facility Construction, all wastewater treatment facilities shall be closed out within one hundred eighty (180) days when the facility is closed or the effluent disposal permit is inactivated, terminated or revoked, unless otherwise determined by the Department. Closure of wastewater treatment facilities necessitates the submittal of a closure plan and approval of the plan by the Department in accordance with R.61-82 prior to closure of any wastewater treatment unit(s).