Buckner, Katharine

From: Tourville, Bob <BOB.TOURVILLE@NEW-INDYCB.COM>
Sent: Thursday, March 16, 2023 2:44 PM
To: Buckner, Katharine
Cc: Hardee, Christopher; McCaslin, Steven; Pete Cleveland; Sparks, Mallory S.
Subject: EPA Consent Decree Construction Permit Application
Attachments: Construction Permit with Cover Letter - Stripper final version 2023-0316.pdf

Katharine
Just a heads up. A courier is delivering the attached construction permit application to your attention this afternoon. We have had a delay in submission due Fedex misplacing a package with the PE original seal. The courier package contains a photocopy of the PE seal and "wet" signatures from the mill. We will submit the original PE seal as soon as we can recover it from FedEx. The PE has also placed a "backup" sealed form in another Fedex package scheduled for delivery to the mill tomorrow. Please let me know if you have any questions.

New-Indy Catawba LLC
P.O. Box 7
5300 Cureton Ferry Road
Catawba, SC 29704
T 803-981-8000
New-indycb.com

March 16, 2023

Ms. Katharine Buckner
South Carolina Department of Health and Environmental Control
Bureau of Air Quality – Air Permitting Division
2600 Bull Street
Columbia, South Carolina 29201

Re: **New-Indy Catawba LLC – EPA Consent Decree Construction Permit Application**

Ms. Buckner,

New-Indy Catawba LLC (New-Indy Catawba) operates a pulp and paper mill located in Catawba, South Carolina (Mill) and currently operates under Title V Operating Permit No. TV-2440-0005 (Title V Operating Permit or TV-2440-0005).

New-Indy Catawba has prepared this construction permit application as required by Consent Decree Civil No. 0:21-cv-02053-SAL, United States of America v. New-Indy Catawba, LLC, dated November 16, 2022 (Consent Decree).

The attached document represents the construction permit application for this Project (Application). Sections 2 through 7 of this Application have been formatted to correlate with sections I through VI of Appendix A of the Consent Decree. Each section of this Application contains the subsections described below.

- **Subsection X.1 – Process and Project Description** provides a description of the processes affected by the Project.
- **Subsection X.2 – Emissions Changes/Calculations** provides a description of associated emissions changes for the Project.
- **Subsection X.3 – Regulatory Applicability** provides an analysis of the U.S. Environmental Protection Agency (U.S. EPA) and South Carolina Department of Health and Environmental Control (SCDHEC) regulations potentially applicable to the Project,

as well as the requirements applicable to New-Indy Catawba as specified in the Consent Decree.

The following equipment will be modified under this Application:

- Foul Condensate Hard Pipe (Equipment ID 9802)
- Post Aeration Tank (Equipment ID 2901)

The following equipment will be added under this Application:

- Powerhouse Dry Ash Handling System (Equipment ID 3790)
- Hydrogen Sulfide (H_2S) Fence Line Monitoring (Equipment ID 1000)
- Black Liquor Storage Tank Secondary Containment (Equipment ID 2490)

Appendix A of the application contains the required completed SCDHEC construction permit application forms and Appendix B provides Project-related emissions calculations and supporting information. In addition, the table of contents contains a detailed listing of tables, figures, and appendices. The enclosed construction permit application includes a scanned copy of Sheryl Watkins' Licensed Professional Engineer (PE) stamp. Ms. Watkins wet stamped the application and sent it to New-Indy Catawba via overnight priority delivery on March 14, 2023 (FedEx tracking number 395752377379). As of the afternoon of March 16, 2023, that package has not been delivered to New-Indy. Therefore, we have included a scanned copy of the form with the required PE stamp and will provide a wet stamped version of the form to DHEC upon receipt.

I certify under penalty of perjury that this document and all attachments were 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 have no personal knowledge that the information submitted is other than 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.

Sincerely,

Charles Cleveland
Technical Manager

cc: Steven Moore – ALL4
Environmental File 200-air-205-air_permits

EPA Consent Decree Construction Permit Application

NEW-INDY CATAWBA LLC – CATAWBA, SC MILL

March 2023

Submitted by:

New-Indy Catawba LLC – Catawba, SC Mill
5300 Cureton Ferry Road
Catawba, SC 29704

Submitted to:

SC Department of Health and Environmental Control
Bureau of Air Quality – Division of Air Permitting
2600 Bull Street
Columbia, SC 29201

TABLE OF CONTENTS

Section Name **Page Number**

LIST OF FIGURES

LIST OF APPENDICES

1. INTRODUCTION AND APPLICATION OVERVIEW

New-Indy Catawba LLC (New-Indy Catawba) operates a pulp and paper mill located in Catawba, South Carolina (Mill) and currently operates under Title V Operating Permit No. TV-2440-0005 (Title V Operating Permit or TV-2440-0005).

New-Indy Catawba has prepared this construction permit application as required by Consent Decree Civil No. 0:21-cv-02053-SAL, United States of America v. New-Indy Catawba, LLC, dated November 16, 2022 (Consent Decree).

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- **Subsection X.1 – Process and Project Description** provides a description of the processes affected by the Project.
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Appendix A contains the required completed SCDHEC construction permit application forms and Appendix B provides Project-related emissions calculations and supporting information. In addition, the table of contents contains a detailed listing of tables, figures, and appendices.

2. FOUL CONDENSATE MONITORING AND TREATMENT

As required by Item I.a. of Appendix A of the Consent Decree, New-Indy Catawba will operate the existing condensate steam stripper (steam stripper) at all times during which unbleached kraft pulp is being produced at New-Indy Catawba and foul condensate is being generated other than for periods of scheduled and unscheduled steam stripper downtime, which shall not exceed 576 hours annually for the first year and 460 hours annually thereafter.

New-Indy Catawba is preparing a separate construction permit application as part of a Consent Order with SCDHEC addressing construction of a new steam stripper. Requirements related to foul condensate monitoring and treatment related to steam stripping and the aerated stabilization basin will be addressed in a separate construction permit application submitted in accordance with the SCDHEC Consent Order. New-Indy Catawba is currently operating and will continue to operate the existing steam stripper system until the new steam stripper is constructed and operational.

Item I.b and I.c of Appendix A of the Consent Decree required New-Indy Catawba to maintain, operate, and calibrate a system to chemically treat the unstripped foul condensate before it is discharged into the aerated stabilization basin (ASB) by November 16, 2022. The system is capable of continuously measuring the oxidation reduction potential (ORP) of the foul condensate, automatically controlling the dosage of a chemical oxidant to maintain a rolling 90-minute average of the ORP of the foul condensate above zero (0) millivolts (mV) before it is discharged to the ASB, and treating the maximum amount of foul condensate produced when the steam stripper is down. New-Indy Catawba has this system in place and will continue to maintain and operate the system in accordance with the requirements set forth in the Consent Decree.

2.1 PROCESS AND PROJECT DESCRIPTION

New-Indy Catawba currently treats pulping process foul condensates using a steam stripper for compliance with 40 CFR Part 63, Subpart S. The current steam stripper does not process the entire volume of collected foul condensates. The untreated foul condensates that are not processed through the steam stripper are directed to the ASB for additional Subpart S treatment through an enclosed pipe (i.e., hard pipe). The chemical treatment system will add a chemical oxidant (e.g., hydrogen peroxide) to the untreated foul condensates being sent to the ASB through the hard pipe prior to discharge below the liquid surface of the ASB. The chemical treatment system will reduce the potential for H_2S formation from the foul condensates discharged to the ASB.

2.2 EMISSIONS CHANGES

The chemical treatment system reduces the potential release of H_2S from the untreated foul condensates discharged to the ASB by oxidizing the compounds to elemental sulfur, sulfate ion. However, New-Indy Catawba has not prepared emissions calculations to quantify any emissions decreases.

2.3 REGULATORY APPLICABILITY

The applicable Federal and State regulations for the Steam Stripper are not changing with this Application and include the following:

- 40 CFR Part 63, Subpart S – Pulp and Paper Industry
- 40 CFR Part 70 – Title V Operating Permits
- 40 CFR Part 60, Subparts BB and BBa – Standards of Performance for Kraft Pulp Mills

The following section evaluates applicable Federal and State regulations, as well as requirements from the Consent Decree.

2.3.1 Federal Air Quality Regulations

2.3.1.1 40 CFR Part 63, Subpart S – Pulp and Paper Industry

New-Indy Catawba is subject to 40 CFR Part 63, Subpart S, also referred to as Maximum Achievable Control Technology (MACT) I for the pulp and paper industry. This standard regulates hazardous air pollutant (HAP) emissions from pulping and bleaching systems. The affected source under this standard is the total of all HAP emission points in the pulping and bleaching systems.

The chemical treatment system is not designed to treat HAPs and no change in HAP emissions is expected due to operation of the chemical treatment system. Therefore, Subpart S is not further evaluated within this Application.

2.3.1.2 40 CFR Part 70 – Title V Operating Permit

New-Indy Catawba currently operates under Title V Operating Permit TV-2440-0005. New-Indy Catawba will submit a request for operating permit and revised Title V Permit application forms for this source within 15 days of issuance of the construction permit. The Title V application will address monitoring, recordkeeping, and reporting requirements.

2.3.1.3 40 CFR Part 60, Subparts BB and BBa – Standards of Performance for Kraft Pulp Mills

40 CFR Part 60, Subpart BB – Standards of Performance for Kraft Pulp Mills applies to TRS emissions from digesters, brown stock washers, multiple-effect evaporators, recovery furnaces, smelt dissolving tanks, lime kilns, and condensate strippers that commenced construction, reconstruction, or modification after September 24, 1976, and on or before May 23, 2013. Subpart BBa applies to the same sources that commence construction, reconstruction, or modification after May 23, 2013.

The hard pipe and ASB are not included in the definition of condensate stripper system under §60.281 or §60.281a and are not affected sources under Subparts BB or BBa. Therefore, Subparts BB and BBa are not further evaluated within this Application.

2.3.2 Requirements from the Consent Decree

2.3.2.1 Operational Requirements

New-Indy Catawba will have no more than 576 hours annually of stripper downtime for the first year, and a maximum of 460 hours of stripper downtime annually after the first year. New-Indy Catawba will provide notification at least 48 hours prior to any scheduled downtime and within 24 hours of any unscheduled downtime. New-Indy Catawba shall monitor the steam stripper according to parameters consistent with the NESHAP at 40 CFR Part 63, Subpart S, and the Subpart S Notification of Compliance Status submitted July 1, 2022.

Additionally, the unstripped foul condensate treatment system will:

1. continuously measure the ORP of the foul condensate, and

2. automatically (using feedback and feed-forward control logic) control the dosage of a chemical oxidant (e.g., hydrogen peroxide) to maintain a rolling 90-minute average of the ORP of the foul condensate above zero (0) mV before it is discharged to the ASB, and

3. treat the maximum amount of foul condensate produced when the Steam Stripper is down.

New-Indy Catawba will comply with all requirements set forth in the Consent Decree.

2.3.2.2 Recordkeeping and Reporting Requirements

New-Indy Catawba will maintain continuous records of the ORP monitoring and provide said records to the U.S. EPA or SCDHEC upon request. Additionally, New-Indy Catawba will include in the semiannual reporting the date, time, and value of any instance of a rolling 90-

minute average of the ORP falling below zero (0) mV when untreated foul condensates are sent to the ASB through the hard pipe during the previous six months.

3. FENCE LINE MONITORING

Item II of Appendix A of the Consent Decree required New-Indy Catawba to maintain and operate continuous H_2S fence-line monitors at the three locations identified in Figure 3-1 in accordance with the June 25, 2021, U.S. EPA-approved Quality Assurance Project Plan, and any subsequent U.S. EPA-approved versions, by November 16, 2022. New-Indy Catawba has this system in place and will continue to maintain and operate the system in accordance with the requirements set forth in the Consent Decree.

Figure 3-1
Fence Line Monitoring Locations

3.1 PROCESS AND PROJECT DESCRIPTION

The Fence Line Monitoring system measures H_2S concentrations at three locations along the New-Indy Catawba property boundary.

3.2 EMISSIONS CHANGES

The fence line monitoring equipment is included in this Application and will be incorporated into New-Indy Catawba's Title V Operating Permit to comply with the Consent Decree. However, this equipment does not generate any emissions, therefore no emissions calculations have been prepared.

3.3 REGULATORY APPLICABILITY

The following section evaluates applicable Federal and State regulations, as well as requirements from the Consent Decree.

3.3.1 Federal and State Air Quality Regulations

There are no Federal or State regulations that apply to the Fence Line Monitoring system.

New-Indy Catawba currently operates under Title V Operating Permit TV-2440-0005. New-Indy Catawba will submit a request to incorporate the new applicable requirements into its operating permit within 15 days of issuance of the construction permit.

3.3.2 Requirements from the Consent Decree

3.3.2.1 Operational Requirements

The monitors shall have a minimum detection limit of 10 parts per billion (ppb) by volume (ppbV) or lower, shall have a span range up to 1,000 ppbV or higher, and shall be operated in accordance with the manufacturer's recommendations. The monitors shall also be equipped with wind speed and wind direction monitors.

The average H_2S fence line concentrations shall not exceed 600 ppb in any 30-minute period or 70 ppb in any seven-day period (the Fence Line Limits).

3.3.2.2 Recordkeeping and Reporting Requirements

On a weekly basis (by 5:00 p.m. each Friday), New-Indy Catawba will make available to the U.S. EPA and SCDHEC each monitor's rolling 30-minute average concentrations for the previous seven days and the rolling seven-day average concentration for the previous seven days. New-Indy Catawba will post this information (as well as the results of the offsite monitoring it is conducting pursuant to the U.S. EPA's May 13, 2021, CAA Section 114 Request) each day (other than holidays) to its publicly available website at https://newindycatawba.com/. New-Indy Catawba will use commercially reasonable efforts to cause this website to be indexed with the major search engines (e.g., Google, Bing, Yahoo) to allow the public to easily find the website (including, but not limited to the following search terms, "hydrogen sulfide," "H_2S," "fence line monitoring," and "New-Indy" [and other name variations]).

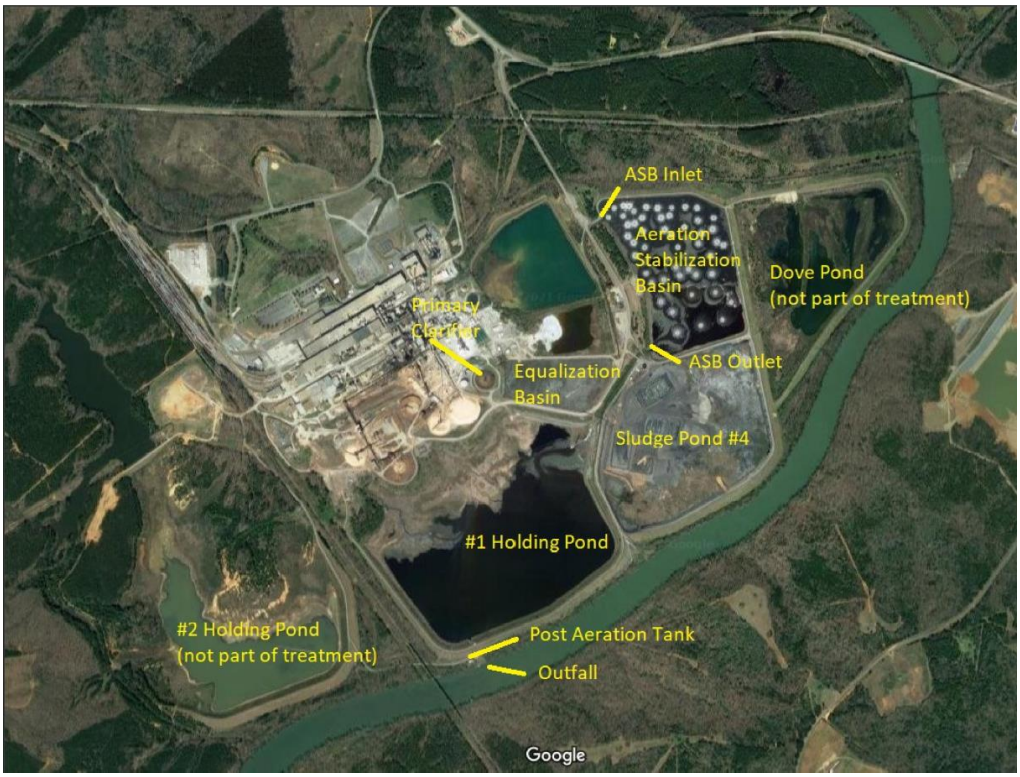
New-Indy Catawba will notify the U.S. EPA of any H_2S fence line concentrations above the Fence Line Limits within 24 hours of the end of the averaging period. New-Indy Catawba will also notify the U.S. EPA within 24 hours of an occurrence of any upset in mill operations that

could reasonably be expected to result in a material increase in biochemical oxygen demand (BOD) or sulfides being discharged to the wastewater treatment system, and which could reasonably be expected to cause New-Indy Catawba's average H_2S fence line concentrations to exceed the Fence Line Limits.

4. WASTEWATER TREATMENT SYSTEM

As mandated by Item III of Appendix A of the Consent Decree, New-Indy Catawba will operate and maintain the wastewater treatment system (consisting of the Primary Clarifier, Equalization Stabilization (EQ) Basin, ASB, No. 1 Holding Pond, Post Aeration Holding Tank, and all connecting inlets, outlets and ditches as depicted in Figure 4-1 (Wastewater Treatment System Diagram) in a manner consistent with safety and good wastewater treatment and air pollution control practices, with a goal of minimizing emissions of H_2S at the fence line.

Figure 4-1
Wastewater Treatment Configuration



4.1 GENERAL REQUIREMENTS

4.1.1 Process and Project Description

The wastewater treatment system is designed to treat process effluents to meet the requirements of the New-Indy Catawba National Pollutant Discharge Elimination System (NDPES) permit. The wastewater treatment system also is currently used as one of the treatment components to meet the pulping process treatment requirements under 40 CFR Part 63, Subpart S.

4.1.2 Emissions Changes

The activities discussed in this section do not result in any changes in emissions from the Wastewater Treatment Plant (WWTP). New-Indy Catawba currently operates the WWTP in a manner consistent with safety and good wastewater treatment and air pollution control practices, with a goal of minimizing emissions of H_2S at the fence line while maintaining compliance with discharge limits.

4.1.3 Regulatory Applicability

As mentioned above, the wastewater treatment system currently is used as one of the treatment components that meet the pulping process treatment requirements under 40 CFR Part 63, Subpart S. This application does not affect how the Mill complies with any current Subpart S requirements. The following additional requirements for the wastewater treatment system are mandated by the Consent Decree.

4.1.3.1 Operation Requirements

New-Indy Catawba will perform the following activities to comply with the requirements of the Consent Decree:

1) Periodic dredging of the ASB, as needed based on solids monitoring, and excavation of the EQ Basin;

2) Operation and maintenance of aerators in the ASB;

3) Biological and chemical analysis and monitoring (of at least dissolved oxygen [DO] and sulfides) of the ASB and No. 1 Holding Pond;

4) Pre-Clarifier solids removal (upon approval by SCDHEC). This requirement is discussed further in Section 4.2; and

5) Implement chemical strategies to improve the treatment of BOD in the ASB and to inhibit the generation of H_2S in the ASB and No. 1 Holding Pond.

4.1.3.2 Recordkeeping and Reporting

Within the semi-annual report, New-Indy Catawba will provide an update summarizing the actions taken during the previous six months regarding the operation and maintenance of the wastewater treatment system. The update will include a discussion of the items set forth in III.a.i through III.a.v. of the Consent Decree, which are outlined in Section 4.1.3.1, and will include locations of chemical additions and the amount and frequency of such additions, as applicable.

New-Indy Catawba will maintain the records of DO and sulfides monitoring results and provide them to the U.S. EPA or SCDHEC upon request.

4.2 PRE-CLARIFIER SOLIDS REMOVAL

New-Indy Catawba plans to replace its current wet ash system with a new dry ash system to shift ash management from the onsite wastewater treatment system to a dry disposal location. The proposed ash collection system will utilize enclosed mechanical conveyors to deliver the collected ash from each combination boiler (Emission ID Nos. 2605 and 3705) to the new ash silo. The new ash silo will discharge through a rotary valve into the enclosed ash conditioning system where the ash will be wetted using fresh water. The wetted ash will then be loaded into a container in the ash collection structure. The ash collection structure will protect the wetted ash from becoming airborne during windy conditions while loading the wetted ash into containers. Once a container is loaded it will be tarped prior to leaving the ash collection structure to minimized dust emissions from the container during transport. New-Indy Catawba continues discussions with SCDHEC regarding the ultimate disposal of the collected fly ash.

The dry ash handling system will consist of a new ash silo equipped with a bin vent filter for filtration of emissions resulting from conveying the ash from each combination boiler. The ash collection system is not a pneumatic system and operates at atmospheric pressure, therefore minimal emissions of particulate matter (PM) are expected.

4.2.1 Process and Project Description

The new dry ash handling system will feed ash from the existing hopper of each combination boiler to the top of the new ash collection silo via an enclosed conveyance system. The 4,200 cubic foot ash silo will be equipped with a bin vent dust collector for control of PM emissions. The bin vent dust collector will contain a fabric filter designed to remove 99.99% of total PM emissions. Once collected, the ash will then be moved through an enclosed conditioning system. The ash conditioning system will spray the material with water causing it to clump, where it will then be transferred to one of two containers housed within an ash collection structure. The containers will then be tarped prior to being transported out of the ash collection structure to the disposal site. New-Indy Catawba continues discussions with SCDHEC regarding the ultimate site for disposal of the collected ash.

4.2.2 Emissions Calculations

Emissions calculations have been completed for the new dry ash handling system. PM emissions will be generated from the new dry ash collection silo. Emissions are calculated using the maximum amount of ash (in pounds) that can be conveyed through the system on a per hour basis.

Combination Boiler No. 1 – No. 7 conveyor to fly ash silo = 3,900 lb/hr

Combination Boiler No. 2 – No. 6 conveyor to fly ash silo = 5,800 lb/hr

Total Ash Silo throughput = 8,900 lb/hr

The PM and particulate matter less than 10 microns (PM_{10}) emissions from fly ash handling are calculated using U.S. EPA AP-42 emissions factors for Concrete Batching supplemental materials in Table 11.12-2. As described in AP-42, Section 11.12 for Concrete Batching, concrete consists of several key ingredients, including water, cement, fine aggregates (e.g., sand), coarse aggregates (e.g., gravel), and supplementary cementitious materials such as natural pozzolans (e.g., fly ash). Table 11.12-2 provides uncontrolled and controlled PM and PM_{10} emissions factors for cement supplement (fly ash) pneumatic unloading to elevated silos. Section 11.12 does not include emissions factors for particulate matter less than 2.5 microns ($PM_{2.5}$); therefore, emissions were assumed equal to PM_{10} for permitting purposes. The AP-42 emissions factors are expected to provide conservative over-estimates of the emissions from the fly ash silo at New-Indy Catawba, which uses belt conveyors rather than pneumatic conveying of the fly ash to the silo.

The fly ash also may include trace amounts of HAP metals. Emissions of HAP metals are estimated using the emissions factors in AP-42 Table 11.12-8 for cement supplement silo filling equipped with a fabric filter.

Emissions calculations for the proposed new dry ash handling system are presented in Attachment B. Information regarding the bin vent dust collector is provided in Attachment C.

4.2.3 Regulatory Applicability

The following sections evaluate air regulatory applicability on a State and Federal level, as well as requirements mandated by the Consent Decree.

4.2.3.1 Federal Air Quality Regulations

4.2.3.1.1 40 CFR Part 64 – Compliance Assurance Monitoring (CAM)

The U.S. EPA developed the CAM rule at 40 CFR Part 64 as a means for providing reasonable assurance that continuous compliance with applicable requirements is achieved for certain emissions units located at major stationary sources subject to Title V permitting. CAM applies to pollutant-specific emissions units (PSEUs) that (1) are subject to an emissions limit or standard, (2) use a control device to achieve compliance with that emissions limit or standard, and (3) have potential pre-control device emissions in the amount required to classify the unit as a major

source under Part 70 of the Clean Air Act (CAA). Part 64 does not apply to emissions limitations or standards proposed after November 15, 1990, pursuant to Section 111 or 112 of the CAA (e.g., post-1990 NSPS or NESHAP).

The dry ash handling system is not subject to CAM requirements because its maximum annual uncontrolled emissions of PM are approximately 61.2 tons per year, well below the 100 ton per year Title V major source threshold.

4.2.3.2 State of South Carolina Air Pollution Control Regulations

4.2.3.2.1 South Carolina Regulation 61-62.5, Standard No. 2 – Ambient Air Quality Standards

Standard No. 2 regulates maintenance of the National Ambient Air Quality Standards (NAAQS). New-Indy Catawba has reviewed the SCDHEC modeling guidance entitled Modeling Guidelines for Air Quality Permits (October 2018). Per this guidance, emissions rates from the installation of the new dry ash handling system are exempt from air quality analysis because emissions rates for both PM_{10} and $PM_{2.5}$ are 0.022 pound per hour. These rates are below the 1.14 pounds per hour and 5 tons per year thresholds provided for PM_{10} and $PM_{2.5}$ in Table 2.1 of the referenced SCDHEC modeling guidance. The lead emissions are 2.31E-06 pounds per hour, which also are below the lead modeling exemption level of 1.14 pounds per hour in Table 2.1 of the referenced SCDHEC modeling guidance. Attachment B outlines all emissions from the new dry ash handling system.

4.2.3.2.2 South Carolina Regulation 61-62.5, Standard No. 4 – Emissions from Process Industries

Standard No. 4 regulates emissions from specific types of industries. Emissions limits for PM under Section VIII (Other Manufacturing, PM emissions not specified elsewhere) are calculated using process weight-based equations as follows:

For process weights up to 30 tons per hour:

$$E = (F)\ 4.10\ P^{0.67}$$

For process weights greater than 30 tons per hour:

$$E = (F)\ (55.0\ P^{0.11} - 40)$$

where: E = the allowable emission rate in pounds per hour

P = process weight in tons per hour

F = effect factor from Table B

P = 8,900 lb/hr × 1 ton/2,000 lb = 4.45 tons/hr

F = 1.0 (Table B, material a – all materials not specifically listed)

$$E = 1.0 \times 4.10 \times 4.45^{0.67} = 4.10 \times 2.72 = 11.2 \text{ lb/hr}$$

Under Section IX, visible emissions from sources not otherwise specified in the regulation are limited to no greater than 40 percent for units that began construction or modification on or before December 31, 1985. Where construction or modification began after December 31, 1985, visible emissions are limited to no more than 20 percent.

The dry ash handling system has a maximum process weight rate of 4.45 tons per hour. The source will be subject to the Section VIII PM emission limit of 11.1 pounds per hour and the section IX opacity limit of 20%. Compliance will be achieved through operation of the bin vent filter.

4.2.3.2.3 South Carolina Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration (PSD) Permit Requirements

Standard No. 7 applies to construction of a new major stationary source, or a "project" conducted at an existing major stationary source located in an area designated as attainment or unclassifiable in 40 CFR 81.341. New-Indy Catawba is considered a major stationary source because it emits or has the potential to emit 100 tons per year or more of a regulated New Source Review (NSR) pollutant as defined in SC Reg. 61-62.5, Standard No. 7. New-Indy Catawba is located in York County, which is classified as attainment or unclassifiable for all pollutants. Because it includes physical changes to New-Indy Catawba, the installation of the new dry ash handling system is a "project" as defined in Standard No. 7(b)(40).

4.2.3.2.3.1 Baseline Emissions

The proposed dry ash handling system is a new source, therefore the baseline emissions for this project are zero.

4.2.3.2.3.2 Potential Emissions

Because the proposed dry ash handling system is a new source, potential to emit (PTE) calculations were performed. PTE is defined by Standard No. 7(B)(22) as "the maximum capacity of a stationary source to emit a pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the source to emit a pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of

material combusted, stored, or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is federally enforceable."

Federally enforceable is defined by Standard No. 7(B)(37) as "all limitations and conditions which are enforceable by the Administrator, including those requirements developed pursuant to 40 CFR Parts 60 and 61, requirements within any applicable State Implementation Plan, any permit requirements established pursuant to 40 CFR 52.21 or under regulations approved pursuant to 40 CFR Part 51, Subpart I, including operating permits issued under an U.S. EPA-approved program that is incorporated into the State implementation plan and expressly requires adherence to any permit issued under such program."

The uncontrolled PM emissions from the fly ash silo are 14.0 pounds per hour, which exceeds the Standard No. 4 emissions limit of 11.2 pounds per hour. Use of the bin vent filter to meet a federally enforceable emissions limit makes the bin vent filter part of the design of the source under the PSD definition of PTE. Considering the bin vent filter part of the design of the source reduces the PM emissions to less than 0.2 tons per year, well below the PSD significant emissions rates (PSERs) for PM, PM_{10} and $PM_{2.5}$.

PTE was calculated for the ash collection silo using the maximum pound per hour rate that ash can be conveyed from the two combination boilers to the dry ash handling system, including the use of a fabric filter to control dust and meet the Standard No. 4 PM emissions limit.

4.2.3.2.3.3 PSD Non-Applicability

Controlled emissions from the dry ash handling system were compared to the PSERs in Standard No. 7(B)(49). Based on the emissions calculations described above, presented in Attachment B, and summarized in Table B-1, the new source is not subject to the PSD permitting requirements in paragraphs (j) though (r) of Standard No. 7. As shown in Table B-1, the emissions are less than 1% of the PSER for PM, PM_{10}, and $PM_{2.5}$.

4.2.3.2.4 South Carolina Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration Air Dispersion Modeling Requirements

Standard No. 7 also includes PSD air quality increments that apply to all increases and decreases in PSD pollutant emissions following the PSD minor source baseline date. In York County the minor source baseline dates are December 1, 1981, for PM_{10} and March 3, 2017 for $PM_{2.5}$. Emissions from the dry ash handling system are 0.022 pound per hour for both PM_{10} and $PM_{2.5}$. Both emissions rates from the dry ash handling system are below the 1.14 pound per hour modeling exemption threshold in Section 2.2.3 of the *South Carolina Modeling Guidelines for Air Quality Permits*. In addition, this application does not trigger PSD review as discussed in

Section 4.2.3.2.3.3 of this application. This demonstrates the project is unlikely to interfere with attainment or maintenance of State or Federal ambient air quality standards.

4.2.3.2.5 South Carolina Regulation 61-62.5, Standard No. 8 – Toxic Air Pollutants (TAP)

Standard No. 8 regulates emissions of air toxics compounds from new and existing sources. The Standard does not apply to fuel burning sources that burn only virgin fuel or specification used oil. Section I.D(1) of the rule exempts sources subject to a Federal NESHAP. New-Indy Catawba is subject to Federal NESHAP for the pulp and paper source category (Subparts S and MM), industrial boilers (Subpart DDDDD) and reciprocating internal combustion engines (Subpart ZZZZ). Section I.D(2) exempts non-NESHAP sources after a facility-wide residual risk analysis is completed. U.S. EPA published the results of facility-wide residual risk analyses for Subpart S on December 27, 2011, and for Subpart MM on December 30, 2017. The residual risk analyses completed by U.S. EPA concluded there was no unacceptable risk from pulp and paper mill sources. Therefore, all existing emission sources of HAP at New-Indy Catawba are exempt from Standard No. 8 under D(1) and/or D(2).

As the metals emissions from the dry ash collection silo were not considered in the latest facility-wide residual risk analysis performed by U.S. EPA (Subpart MM in 2017), the dry ash collection silo was considered a stand-alone source under Standard No. 8. As shown in Attachment B, the controlled emissions are well below the de minimis emission rates requiring modeling; therefore, no modeling is required for demonstrating compliance with Standard No. 8.

4.2.3.2.6 South Carolina Regulation 61-62.70 – Title V Operating Permit Program

New-Indy Catawba currently operates under Title V Operating Permit TV-2440-0005. New-Indy Catawba will submit a request for operating permit and revised Title V Permit application forms for this source within 15 days of startup of the new equipment. The revised Title V application will address monitoring, recordkeeping, and reporting requirements.

4.2.3.3 Operation Requirements

The new dry ash handling system will be installed to satisfy the pre-clarifier solids removal requirements mandated by the Consent Decree.

4.2.3.4 Recordkeeping and Reporting

Recordkeeping and reporting requirements (if any) will be determined in the construction permit.

5. POST AERATION TANK COVER

As mandated by Item IV of Appendix A of the Consent Decree, prior to January 15, 2023, New-Indy Catawba submitted a plan, subject to U.S. EPA approval, to install a cover on the Post Aeration Tank that utilizes a carbon filtration system to ensure no detectable emissions of volatile organic compounds (VOCs) (defined as 500 ppm total VOC above background).

As required, before the date of March 16, 2023, New-Indy Catawba will install, maintain, and operate the cover and carbon filtration system on the Post Aeration Tank, consistent with the U.S. EPA-approved plan.

5.1 PROCESS AND PROJECT DESCRIPTION

New-Indy Catawba installed a permanent carbon filtration system and cover over the Post Aeration Tank to collect vapors and reduce emissions of potentially odorous compounds. The initially installed carbon filtration system included a temporary cover over the Post Aeration Tank, a collection system, a carbon adsorption tank holding 3,000 pounds of activated carbon, a 3,000 cubic feet per minute (cfm) blower, and a vent to atmosphere. A permanent carbon filtration system and cover over the Post Aeration Tank was installed and placed into operation on June 29, 2022 (Note: A notification letter was sent to U.S. EPA on July 28, 2022.)

The outlet to the carbon adsorption tank is monitored weekly for breakthrough using a portable VOC monitor. The permanent carbon filtration system contains 6,000 pounds of activated carbon. The permanent system has a 2,500-cfm blower and vent to atmosphere.

5.2 EMISSIONS CALCULATIONS

The Post Aeration Tank cover and carbon filtration system reduces the potential release of TRS and VOC compounds from the Post Aeration Tank. However, New-Indy Catawba has not prepared emissions calculations to quantify any emissions decreases.

5.3 REGULATORY APPLICABILITY

The following requirements were evaluated for applicability to the Post Aeration Tank or are mandated by the Consent Decree.

5.3.1 Federal Air Quality Regulations

5.3.1.1 South Carolina Regulation 61-62.70 - Title V Operating Permit Program

New-Indy Catawba currently operates under Title V Operating Permit TV-2440-0005. New-Indy Catawba will submit a request to incorporate the system into the operating permit and Title V

permit application forms for the Post Aeration Tank following installation and startup of the permanent carbon filtration system. The Title V application will address monitoring, recordkeeping, and reporting requirements.

5.3.1.2 40 CFR Part 60, Subparts BB and BBa

40 CFR Part 60, Subparts BB and BBa regulate emissions of PM and TRS from affected sources at Kraft Pulp Mills. Wastewater treatment systems, including the Post Aeration Tank, are not regulated under Subpart BB or BBa.

5.3.1.3 40 CFR Part 63, Subpart S – National Emission Standards for Hazardous Air Pollutants from the Pulp and Paper Industry

40 CFR Part 63, Subpart S regulates emissions of HAPs from pulping, bleaching, and condensate handling operations located at pulp and paper mills that are a major source of HAP. New-Indy Catawba emits greater than 10 tons per year of several individual HAPs and greater than 25 tons per year of total HAPs qualifying it as a major source of HAP emissions. New-Indy Catawba is regulated by Subpart S.

The biological treatment system at New-Indy Catawba is one component used to treat the pulping process condensates to comply with 40 CFR 63.446(e)(2) and consists of the hard pipe and the ASB. The Post Aeration Tank follows the holding pond located after the ASB and is used to oxygenate the final effluent prior to discharge into the receiving stream. The Post Aeration Tank is not designed or operated as a biological treatment system, and there is negligible biological activity occurring in the Post Aeration Tank. The Post Aeration Tank is not a component of the pulping system listed under 40 CFR 63.443(a), and therefore the permanent cover and collection system are not subject to the standards for enclosures and closed-vent systems under 40 CFR 63.450. For these reasons, the Post Aeration Tank is not regulated by Subpart S.

5.3.2 State of South Carolina Air Pollution Control Regulations

5.3.2.1 South Carolina Regulation 61-62.5, Standard No. 2 – Ambient Air Quality Standards

Standard No. 2 regulates maintenance of the national ambient air quality standards. There are no emissions of any Standard No. 2 pollutants from the Post Aeration Tank.

5.3.2.2 South Carolina Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration (PSD) Permit Requirements

Standard No. 7 applies to construction of a new major stationary source, or a “project” conducted at an existing major stationary source located in an area designated as attainment or

unclassifiable in 40 CFR 81.341. New-Indy Catawba is considered a major stationary source because it emits or has the potential to emit 100 tons per year or more of a regulated NSR pollutant as defined in SC Reg. 61-62.5, Standard No. 7. New-Indy Catawba is located in York County, which is classified as attainment or unclassifiable for all pollutants. The Post Aeration Tank cover and carbon filtration system reduces the potential release of TRS and VOC compounds from the Post Aeration Tank. New-Indy Catawba has not prepared emissions calculations to quantify any emissions decreases; however, the Post Aeration Tank is not subject to the PSD permitting requirements in paragraphs (j) though (r) of Standard No. 7.

5.3.2.3 South Carolina Regulation 61-62.5, Standard No. 7 – Prevention of Significant Deterioration Air Dispersion Modeling Requirements

Standard No. 7 also includes PSD air quality increments that apply to all increases and decreases in PSD pollutant emissions following the PSD minor source baseline date. In York County the minor source baseline dates are December 1, 1981, for PM_{10} and SO_2, April 5, 2001, for NO_X and March 3, 2017, for $PM_{2.5}$. There are no emissions of any Standard No. 7 pollutants with established PSD ambient air quality increments from the Post Aeration Tank.

5.3.2.4 South Carolina Regulation 61-62.5, Standard No. 8 – Toxic Air Pollutants (TAP)

Standard No. 8 regulates emissions of air toxics compounds from new and existing sources. The Standard does not apply to fuel burning sources that burn only virgin fuel or specification used oil. Section I.D(1) of the rule exempts sources subject to a Federal NESHAP. New-Indy Catawba is subject to Federal NESHAP for the pulp and paper source category (Subparts S and MM), industrial boilers (Subpart DDDDD), and reciprocating internal combustion engines (Subpart ZZZZ). Section I.D(2) exempts non-NESHAP sources after a facility-wide residual risk analysis is completed. U.S. EPA published the results of facility-wide residual risk analyses for Subpart S sources on December 27, 2011, and for Subpart MM sources on December 30, 2017. The residual risk analyses completed by U.S. EPA concluded there was no unacceptable risk from pulp and paper mills. Therefore, all existing sources of HAP at New-Indy Catawba are exempt from Standard No. 8 under D(1) and/or D(2). As the Post Aeration Tank is an existing source, but not an affected source under Subpart S, HAP emissions are exempt under Standard No. 8, Section I.D(2).

Although New-Indy Catawba is exempt from Standard No. 8 for HAP, a compliance demonstration for emissions of H_2S and TRS as H_2S from all sources at New-Indy Catawba was submitted to SCDHEC on October 27, 2021. In September 2022, SCDHEC performed additional modeling demonstrating the H_2S and methyl mercaptan emissions from New-Indy Catawba are below the maximum 24-hour acceptable ambient concentrations (MAAC) for H_2S and methyl mercaptan. The summary of the SCDHEC modeling is included in Appendix D.

5.3.2.5 South Carolina Regulation 61-62.70 – Title V Operating Permit Program

New-Indy Catawba currently operates under Title V Operating Permit TV-2440-0005. New-Indy Catawba will submit revised Title V permit application forms for the Post Aeration Tank following installation and startup of the permanent carbon filtration system. The revised Title V application will address monitoring, recordkeeping, and reporting requirements.

5.3.3 Requirements from the Consent Decree

5.3.3.1 Operation Requirements

- Any piping and duct work will include test sample ports on the inlet and outlet of the filtration system.
- New-Indy Catawba will monitor, on a weekly basis, the VOC outlet concentration of the filtration system to ensure the filtration system is operating effectively. New-Indy Catawba will follow the manufacturer's maintenance, operations, and calibration requirements for the VOC monitor.
- New-Indy Catawba will change out the filtration media before it reaches its breakthrough point, defined as 500 ppm total VOC above background.

5.3.3.2 Recordkeeping and Reporting

New-Indy Catawba will provide a completion report, within 30 days of approval of this application, describing the cover and carbon filtration system on the Post Aeration Tank, including how New-Indy Catawba will monitor and change out the filtration media to ensure that breakthrough does not occur.

New-Indy Catawba will maintain records of the weekly VOC monitoring and records of any filtration media change-outs and make such records available to the U.S. EPA or SCDHEC upon request.

6. BLACK LIQUOR STORAGE TANK SECONDARY CONTAINMENT

As required by Item V of Appendix A of the Consent Decree, before April 25, 2023, New-Indy Catawba will install, maintain, and operate a containment system (i.e., containment constructed of materials impervious to pulping liquors) using sumps, sewer systems, etc. to prevent any uncontrolled black liquor overflows or releases from reaching the ASB.

An air permit application/exemption request for the secondary containment system was submitted on January 20, 2023. The application content has been reproduced in this section for completeness. Following approval of the application, New-Indy Catawba will begin operation of the secondary containment by April 25, 2023.

Before November 16, 2023, New-Indy Catawba will install, maintain, and operate a containment system (i.e., containment constructed of materials impervious to pulping liquors) equivalent to the volume of the largest tank plus sufficient freeboard for precipitation to prevent any uncontrolled black liquor overflows or releases from reaching the ASB.

6.1 PROCESS AND PROJECT DESCRIPTION

Occasionally, the production of black liquor will outpace the capacity of the steam stripper, and it is possible for black liquor to overflow the available storage. Therefore, New-Indy Catawba will install secondary containment (a spill tank) to allow for additional storage of weak black liquor until it can be processed, preventing black liquor overflows or spills from reaching the wastewater treatment system. New-Indy Catawba is installing this secondary containment to fulfill the requirements of Item V in Appendix A of the Consent Decree.

6.2 EMISSIONS CALCULATIONS

Emissions of VOC, TRS compounds, HAPs, and TAPs were calculated using the median emissions factors from National Council for Air and Stream Improvement (NCASI) Technical Bulletin 858, Table 10A. The emissions factors do not depend on the size of the tank but are in the format pounds per hour per tank (lb/hr/tank).

The normal concentration of weak black liquor in storage is 14% solids, but the Mill expects the new spill tank to hold diluted weak black liquor that has a solids content of around 4%. Therefore, emissions from the new spill tank have been calculated at 50% of the emissions rate from a weak black liquor tank.

Emissions calculations are included in Appendix B and use the following formula:

Emissions, lb/time period = (emissions factor, lb/hr/tank) x (1 tank) x (# hours/time period) x 50%

The emissions of VOC from the new spill tank will be less than 5 tons per year (tpy) and the emissions of HAPs and TAPs from the tank will be less than 1,000 pounds per month. Therefore, the new spill tank will be an insignificant activity per SC Regulation 61-62.70.5(c).

6.3 REGULATORY APPLICABILITY

The following sections outline State and Federal regulatory applicability, as well as requirements for the black liquor storage tank secondary containment as mandated by the Consent Decree.

6.3.1 Federal Air Quality Regulations

6.3.1.1 40 CFR Part 60 NSPS

There are no NSPS at 40 CFR Part 60 that apply to spill tanks. Subpart Kb applies to storage vessels that meet certain criteria but does not apply to process tanks[1].

6.3.1.2 40 CFR Part 63 NESHAP

The new spill tank is not subject to any requirements under 40 CFR Part 63. The HAP emissions from the pulping operations at New-Indy Catawba are subject to 40 CFR Part 63, Subpart S. The affected source in Subpart S is the total of all HAP emission points in the pulp and bleaching system. This project does not constitute addition of a new affected source or reconstruction of an existing affected source. There are no specific requirements for black liquor spill tanks at existing affected sources in Subpart S.

6.3.1.3 40 CFR Part 70 – Title V Operating Permits

New-Indy Catawba operates under Title V Operating Permit No. TV-2440-0005. The new spill tank is an insignificant source and does not require a modification to the Title V Operating Permit per permit condition H.1. However, due to the requirements of the Consent Decree, it has been

[1] *Process tank* means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

included in this Application and we will request to add it to the Title V Operating Permit following receipt of a construction permit for the items in this Application.

6.3.2 State of South Carolina Air Pollution Control Regulations

6.3.2.1 South Carolina Regulation 61-62.5, Standard No. 2 - Ambient Air Quality Standards

SCDHEC Regulation 61-62.5, Standard No. 2 sets maximum ambient air quality standards (AAQS) for certain pollutants. This standard does not apply to the black liquor secondary containment because the new spill tank does not emit any pollutants that are covered by Standard No. 2.

6.3.2.2 South Carolina Regulation 61-62.5, Standard No. 4 – Emissions from Process Industries

SCDHEC Regulation 61-62.5, Standard No. 4 establishes standards for opacity and certain other pollutants for specific sources in specific industries and establishes PM and opacity standards for industrial processes not otherwise regulated. The standard does not contain requirements for black liquor spill tanks, and the new spill tank will not emit PM or exhibit any opacity. Therefore, this standard does not apply to the new spill tank.

6.3.2.3 South Carolina Regulation 61-62.5, Standard No. 7 - Prevention of Significant Deterioration (PSD)

Implementation of the PSD regulations (i.e., 40 CFR §51.166) has been delegated in full to the State of South Carolina. The PSD regulations apply to major modifications at major stationary sources, which are considered those sources belonging to any one of the 28 source categories listed in the regulations that have the PTE more than 100 tpy of a regulated NSR pollutant, or any other source that has the PTE more than 250 tpy of a regulated NSR pollutant. New-Indy Catawba belongs to one of the 28 listed sources categories and is a major stationary source. The new spill tank does not constitute a major modification because the potential emissions from the tank are less than the PSERs for VOC and TRS. Therefore, the installation of the tank is not subject to PSD review and does not require updated Standard No. 7 modeling.

6.3.2.4 South Carolina Regulation 61-62.5, Standard No. 8 – Toxic Air Pollutants

In a meeting on February 10, 2023, SCDHEC requested New-Indy Catawba include the black liquor spill tank in the air dispersion modeling performed by SCDHEC in September 2022. New-Indy Catawba will submit the updated modeling including the spill tank under separate cover. The results of the updated modeling also are included in Appendix E.

6.3.2.5 South Carolina Regulation 61-62.60 – New Source Performance Standards (NSPS)

There are no NSPS at 40 CFR Part 60 that apply to spill tanks. Subpart Kb applies to storage vessels that meet certain criteria but does not apply to process tanks[2].

6.3.3 Requirements Promulgated by the Consent Decree

6.3.3.1 Operation Requirements

- The secondary containment will be large enough to prevent any uncontrolled black liquor overflows or releases from reaching the ASB.
- On or before November 16, 2023, New-Indy Catawba will install, maintain, and operate a containment system (i.e., containment constructed of materials impervious to pulping liquors) equivalent to the volume of the largest tank plus sufficient freeboard for precipitation to prevent any uncontrolled black liquor overflows or releases from reaching the ASB.

6.3.3.2 Recordkeeping and Reporting

No recordkeeping or reporting requirements have been outlined by the Consent Decree.

[2] *Process tank* means a tank that is used within a process (including a solvent or raw material recovery process) to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process, to a product or by-product storage vessel, or to a vessel used to store recovered solvent or raw material. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottoms receivers, however, may not involve unit operations.

7. TITLE V PERMIT

As required by Item VI of Appendix A of the Consent Decree, New-Indy Catawba is required to incorporate certain requirements into its Title V Operating Permit. Following issuance of the construction permit(s), New-Indy Catawba will request the construction permit(s) requirements be incorporated into the Title V Operating Permit.

7.1 OPERATIONAL REQUIREMENTS

- New-Indy Catawba will maintain and operate a system to chemically treat the unstripped foul condensate before discharging it into the ASB, as outlined in Section 2.3.
- New-Indy Catawba will continue to operate and maintain the fence line monitors as described in Section 3.3.2.1.
- New-Indy Catawba will operate and maintain the wastewater treatment system as described in Sections 4.1.3.1 and 4.2.3.3.
- New-Indy Catawba will maintain and operate the cover and filtration system on the Post-Aeration Tank described in Section 5.3.3.1; monitor, on a daily basis, the VOC outlet concentration of the filtration system to ensure it is operating effectively; change out the filtration media before it reaches its breakthrough point, defined as 500 ppm total VOC above background; and maintain records of the daily VOC monitoring, and of any filtration media-change outs, for five years.
- New-Indy Catawba will maintain and operate the containment system described in Section 6 to prevent any uncontrolled black liquor overflows or releases from reaching the ASB.

7.2 RECORDKEEPING AND REPORTING REQUIREMENTS

- New-Indy Catawba will notify SCDHEC in a semiannual report the date, time, and value of any instance of the rolling 90-minute average of ORP falling below 0 mV when untreated foul condensates are sent to the ASB through the hard pipe during the previous six months.
- New-Indy Catawba will monitor and maintain records of H_2S concentrations at the fence line. If New-Indy Catawba records any average H_2S concentration above 600 ppb over 30 minutes or 70 ppb over seven days at any monitor, they will investigate the root cause of that average concentration recorded and, within 30 days of the monitoring event, make available to SCDHEC a root cause analysis report, including recommended corrective measures, and which corrective measures it plans to take and when. New-Indy Catawba shall comply with such corrective measures unless directed otherwise by SCDHEC.

APPENDIX A -
PERMIT APPLICATION FORMS

SECTION 1 - FACILITY IDENTIFICATION

SC Air Permit Number (8-digits only) *(Leave blank if one has never been assigned)* 2440 - 0005	Application Date March 2023
Facility Name/Legal Identity *(This should be the official legal name under which the facility is owned/operated and should be consistent with the name registered with the S.C. Secretary of State's office, as applicable.)* New-Indy Catawba LLC	
Facility Site Name (Optional) *(Please provide any alternative or additional identifier of the facility, such as a specific plant identifier (e.g., Columbia plant) or any applicable "doing business as" (DBA) identity. This name will be listed on the permit and used to identify the facility at the physical address listed below.)*	
Facility Federal Tax Identification Number *(Established by the U.S. Internal Revenue Service to identify a business entity)* 83-1904423	

REQUEST TYPE (Check all that apply)

Exemption Request: ☐
Complete Section 1 and attach documentation to support exemption request.

Construction Application:
☒ Minor New Source Review Project
☐ Synthetic Minor Project
☐ Prevention of Significant Deterioration Project
☐ 112(g) Project

Expedited Review Request: ☐
If checked, include Expedited Form D-2212 in the construction application package.

Construction Permit Modification: ☐
Provide the construction permit ID (e.g. CA, CB, etc.) for which modification is requested:

Application Revision: ☐

CONSTRUCTION PERMIT APPLICATION FORMS BEING REVISED
(Amended construction permit forms must be filled out completely and attached to this modification request.)

Form #	Date of Original Submittal	Brief Description of Revision
D-2566	N/A	N/A
D-2573	N/A	N/A

FACILITY PHYSICAL ADDRESS

Physical Address: 5300 Cureton Ferry Road		County: York
City: Catawba	State: SC	City: Catawba

Facility Coordinates (Facility coordinates should be based at the front door or main entrance of the facility)
Latitude: 34°50’37”N Longitude: 80°53’25”W

FACILITY'S PRODUCTS / SERVICES	
Primary Products / Services *(List the primary product and/or service)* Linerboard/Pulp Manufacturing	
Primary SIC Code *(Standard Industrial Classification Codes)* 2631	Primary NAICS Code *(North American Industry Classification System)* 322130
Other Products / Services *(List other products and/or services)*	
Other SIC Code(s):	Other NAICS Code(s):

PROJECT DESCRIPTION
Project Description (What, why, how, etc.): Installation of powerhouse dry ash handling system. The current system is a wet system that discharges to onsite wastewater treatment. Installation of new dry ash handling system will allow dry ash to be sent to another approved disposal location. For description of the foul condensate oxidation reduction potential monitoring see Section 2 of the attached narrative. For description of the H_2S ambient monitoring see Sections 3 and 4 of the attached narrative. For description of the Post Aeration Tank cover and carbon filtration system see Section 5 of the attached narrative. For description of the black liquor tank secondary containment see Section 6 of the attached narrative.

AIR PERMIT FACILITY CONTACT *(Person listed will be in our files as the point of contact for all air permitting related questions and will receive all air permitting notifications.)*			
Title/Position: Sr. Environ. Engineer	Salutation: Mr.	First Name: Bob	Last Name: Tourville
Mailing Address: PO Box 7			
City: Catawba		State: SC	Zip Code: 29704
E-mail Address: bob.tourville@newindycb.com		Primary Phone No.: (803) 981-8009	Alternate Phone No.:

The signed permit will be e-mailed to the designated Air Permit Contact. If additional individuals need copies of the permit, please provide their names and e-mail addresses.	
Name	**E-mail Address**
Steven Moore	smoore@all4inc.com

CONFIDENTIAL INFORMATION / DATA
Is confidential information or data being submitted under separate cover? ☒ No ☐ Yes*

If yes, submit **ONLY ONE COMPLETE CONFIDENTIAL APPLICATION , with original signature, along with the public version of the application.*

CO-LOCATION DETERMINATION
Are there other facilities in close proximity that could be considered collocated? ☒ No ☐ Yes*
If yes, list potential collocated facilities, including air permit numbers if applicable:

**If yes, please submit collocation applicability determination details in an attachment to this application.*

OWNER OR OPERATOR			
Title/Position: Mill Manager	Salutation: Mr.	First Name: Charles	Last Name: Cleveland
Mailing Address: PO Box 7			
City: Catawba		State: SC	Zip Code: 29704
E-mail Address: pete.cleveland@new-indycb.com		Primary Phone No.: 803-981-8000	Alternate Phone No.:

OWNER OR OPERATOR SIGNATURE

I certify, to the best of my knowledge and belief, that no applicable standards and/or regulations will be contravened or violated. I certify that any application form, supporting documentation, report, or compliance certification submitted in this permit application is true, accurate, and complete based on information and belief formed after reasonable inquiry. I understand that any statements and/or descriptions, which are found to be incorrect, may result in the immediate revocation of any permit issued for this application.

Signature of Owner or Operator — Date: 03/16/2023

APPLICATION PREPARER (if other than Professional Engineer below)			
Title/Position: Senior Managing Consultant	Salutation: Mr.	First Name: Steven	Last Name: Moore
Mailing Address: 630 Davis Drive, Suite 203			
City: Durham		State: NC	Zip Code: 27560
E-mail Address: smoore@all4inc.com		Phone No.: (919) 234-5981	Cell No.: (864) 616-4711

PROFESSIONAL ENGINEER INFORMATION			
Consulting Firm Name: ALL4 LLC		SC Certificate of Authority License No.: 6409	
Title/Position: PE	Salutation: Ms.	First Name: Sheryl	Last Name: Watkins
Mailing Address: 300 Chastain Center Blvd, Suite 395			
City: Kennesaw		State: Georgia	Zip Code: 30144
E-mail Address: swatkins@all4inc.com		Phone No.: (678) 293-9428	Cell No.: (386) 503-0266
SC License/Registration No.: 34347			

PROFESSIONAL ENGINEER SIGNATURE

I have placed my signature and seal on the engineering documents submitted, signifying that I have reviewed this construction permit application as it pertains to the requirements of *South Carolina Regulation 61-62, Air Pollution Control Regulations and Standards*.

Sheryl Watkins 3-16-23
Signature of Professional Engineer — Date

SOUTH CAROLINA LICENSED PROFESSIONAL ENGINEER No. 34347 SHERYL WATKINS

This form is subject to Retention Schedule 16303.

EQUIPMENT / PROCESS INFORMATION					
Equipment ID/ Process ID	**Action**	**Equipment / Process Description**	**Maximum Design Capacity (Units)**	**Control Device ID(s)**	**Emission Point ID(s)**
3790	☒ Add ☐ Remove ☐ Modify ☐ Existing	Powerhouse Dry Ash Handling System	8,900 lb/hr	3790C	3790S
9802	☒ Add ☐ Remove ☐ Modify ☐ Existing	Foul Condensate Hard Pipe Oxidation Reduction Potential Monitoring	NA	N/A	N/A
1000	☒ Add ☐ Remove ☐ Modify ☐ Existing	H2S Ambient Monitoring	N/A	N/A	N/A
2901	☒ Add ☐ Remove ☐ Modify ☐ Existing	Post Aeration Tank Cover And Carbon Filtration System	6,000 lb carbon	2901C	2901S
2490	☒ Add ☐ Remove ☐ Modify ☐ Existing	Black Liquor Storage Tank Secondary Containment Spill Tank	1,250,447 gallons	N/A	NEWSPLTK

CONTROL DEVICE INFORMATION								
Control Device ID	**Action**	**Control Device Description**	**Maximum Design Capacity (Units)**	**Inherent/ Required/ Voluntary**	**Pollutants Controlled** (Include CAS #)	**Capture Efficiency**	**Destruction/ Removal Efficiency**	**Emission Point ID(s)**
3790C	☒ Add ☐ Remove ☐ Modify ☐ Existing	Bin Vent Fabric Filter	8,900 lb/hr	Required	PM, PM10, PM2.5	100%	99.99%	3790S
2901C	☒ Add ☐ Remove ☐ Modify ☐ Existing	Post Aeration Tank Cover and Carbon Filtration System	6,000 lb carbon	Required	VOC	99%	Maintain outlet VOC concentration < 500 ppm above back ground	2901S
	☐ Add ☐ Remove ☐ Modify ☐ Existing							

Check Box for information addressed	Required Information
Source identification and emissions:	
☒	• Name of each source, process, and control device.
☒	• Assign each source an Equipment ID. The IDs must match the IDs listed in Section 2 of this application.
☒	• Assign an Emission Point ID for each source.
☒	• Assign a Control Device ID for each control device.
☒	• List each pollutant the source will emit.
☒	• List the Uncontrolled, Controlled, and PTE emissions for each source or equipment in lb/hr and tons/year.
☒	• Emission rates for each pollutant should be totaled and listed in lb/hr and tons/year.
☒	• Provide the CAS# for each Hazardous Air Pollutant (HAP) and/or Toxic Air Pollutant (TAP).
Information to support emission rates:	
☒	• Sample calculations.
☒	• Emission factors. Include the source, revision date, specific table and/or chapters. Include source test data if factors were derived from source testing.
☒	• Explanation of assumptions, bottlenecks, etc.
☐	• Source test information: A copy of the source test results may be requested. If the test results are not included in the application, the application should cite whether this was a DHEC approved test, and if not, explain where the test was conducted and other identifying information.
☐	• Manufacturer's data.
☒	• Vendor guarantees that support control device efficiencies.
☒	• New Source Review (NSR) analysis.
☐	• Other (e.g. example particle size analysis)

Existing (Permitted) Facilities		
Check Box	**Required Information**	**Location in Application**
☒	Facility-wide emissions prior to construction/modification: • Include an explanation if these emissions do not match the facility-wide emissions submitted in the last application.	Appendix C

Existing (Permitted) Facilities		
Check Box	**Required Information**	**Location in Application**
☒	Facility-wide emissions after construction/modification: • Include net change, if applicable.	Appendix C
As applicable for the construction/ modification:		
☒	• Name of each source.	See Equipment/Process Information Above
☒	• Assign each source an Equipment ID. The IDs must match the IDs listed in Section 2 of this application or on your current construction / operating permit.	See Equipment/Process Information Above
☒	• Assign a Control Device ID for each control device.	See Equipment/Process Information Above
☒	• Assign an Emission Point ID for each source.	See Equipment/Process Information Above
☒	• List each pollutant the source will emit.	Appendix B
☒	• List the Uncontrolled, Controlled, and PTE (if applicable) emissions for each source or equipment.	Appendix B
☒	• Emission rates for each pollutant should be totaled and listed in lb/hr and tons/year.	Appendix B
☒	• Provide the CAS# for each HAP and/or TAP.	Appendix B
Information to support facility-wide emission rates:		
☒	• Sample calculations.	Appendix B
☒	• Emission factors. Include the source, revision date, specific table and/or chapters. Include source test data if factors were derived from source testing.	Narrative, Appendix B
☒	• Explanation of assumptions, bottlenecks, etc.	Narrative
☐	• Source test information: A copy of source the test results may be requested. If the results are not included in the application, the application should cite whether this was a DHEC approved test and if not, explain where the test was conducted and other identifying information.	
☐	• Manufacturer's data.	
☒	• Vendor guarantees that support control device efficiencies.	Appendix C
☒	• NSR analysis.	Narrative, Appendix B
☐	• Other (please explain)	

Check Box	State and Federal Air Pollution Control Regulations and Standards
☐	S.C. Regulation 61-62.1 Section II.E Synthetic Minor Construction Permits
☒	S.C. Regulation 61-62.5 Air Pollution Control Standards
☐	• Standard No. 1 Emissions from Fuel Combustion
☒	• Standard No. 2 Ambient Air Quality
☐	• Standard No. 3 Waste Combustion and Reduction (state only)
☒	• Standard No. 4 Emissions from Process Industries *(Note: If Section VIII of this Standard applies, include the process weight rate (PWR) in ton per hour for each applicable source or process.)*
☐	• Standard No. 5 Volatile Organic Compounds
☐	• Standard No. 5.2 Nitrogen Oxides Lowest Achievable Emission Rate
☒	• Standard No. 7 Prevention of Significant Deterioration (PSD)
☐	• Standard No. 7.1 Nonattainment New Source Review (NSR)
☒	• Standard No. 8 Toxic Air Pollutants (TAPs) (state only)
☐	S.C. Regulation 61-62.6 Control of Fugitive Particulate Matter
☒	S.C. Regulation 61-62.60 and 40 CFR Part 60 New Source Performance Standards (NSPS)
☐	S.C. Regulation 61-62.61 and 40 CFR Part 61 National Emission Standards for Hazardous Air Pollutants (NESHAP)
☒	S.C. Regulation 61-62.63 and 40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants (NESHAP) for Source Categories
☒	40 CFR Part 64 Compliance Assurance Monitoring (CAM)
☐	S.C. Regulation 61-62.68 and 40 CFR Part 68 Chemical Accident Prevention Provisions
☒	S.C. Regulation 61-62.70 and 40 CFR Part 70 Title V Operating Program
☐	Other S.C. Air Pollution Control Regulations, as applicable.
☐	Other Federal Air Pollution Control Regulations, as applicable.
☐	40 CFR 98 Green House Gas (GHG) emissions *(Note: Quantify GHG emissions, if S.C. Regulation 61-62.5, Standard No. 7 or S.C. Regulation 61-62.5, Standard No. 7.1 is triggered.)*

Check Box	Completeness Checklist:
	Applicability Determination:
☒	• Is this regulation *applicable, reasonably applicable, potentially applicable,* or *not applicable?*
☒	• Is the basis for the applicability determination explained?
	Affected Sources:
☒	• Is the name and identification of each emission source or process included?
	Compliance Demonstration:
☒	• How will compliance be demonstrated?
☒	• Are specific methods or activities to be utilized by the facility to demonstrate compliance with each specific limitation and/or requirement provided?
☒	• Are control devices and control device requirements included?
☒	• Are monitoring, recordkeeping, and reporting requirements necessary to demonstrate compliance included?
	Regulatory Citations:
☒	• Are the regulatory citations identified?

Bureau of Air Quality
Emission Point Information

A. APPLICATION IDENTIFICATION	
1. Facility Name: New-Indy Catawba LLC	
2. SC Air Permit Number (if known; 8-digits only): 2440 - 0005	3. Application Date: March 2023
4. Project Description: EPA Consent Decree Permit Application	
5. Are other facilities collocated for air compliance? ☐ Yes ☒ No	6. If Yes, provide permit numbers of collocated facilities:

B. AIR CONTACT			
Consulting Firm Name (if applicable):			
Title/Position: Senior Environmental Engineer	Salutation: Mr.	First Name: Bob	Last Name: Tourville
Mailing Address: PO Box 7			
City: Catawba		State: SC	Zip Code: 29704
E-mail Address: bob.tourville@new-indycb.com		Phone No.: (803) 981-8009	Cell No.:

C. EMISSION POINT DISPERSION PARAMETERS

- Source data requirements are based on the appropriate source classification.
- Each emission point is classified as a point, flare, area, area circular, area polygon, volume, open pit, line, or buoyant line source.
- Contact the Bureau of Air Quality for clarification of data requirements.
- Include sources on a scaled site map. Also, a picture of area or volume sources would be helpful but is not required.
- A user generated document or spreadsheet may be substituted in lieu of this form provided all of the required emission point parameters are submitted in the same order, units, etc. as presented in these tables.

Abbreviations / Units of Measure

- AGL = Above Ground Level
- BTU/hr = British Thermal Unit per hour
- o = Degrees
- oF = Degrees Fahrenheit
- ft = feet
- ft/s = feet per second
- K = Kelvin
- m = meters
- UTM = Universal Transverse Mercator

Reminder: For all Emission Points, list the unique Emission Point ID for that source. Use the same emission point ID as shown in the current permit and provided in the last modeling submittal (as applicable). If the emission point ID has been changed from what was previously submitted, please list the current emission point ID with the old emission point ID in parenthesis

D. POINT SOURCE

Emission Point ID	Description/Name	UTM Coordinates (NAD83)		Release Height AGL (ft)	Exit Temp. (oF)	Exit Velocity (ft/s)	Inside Diameter (ft)	Discharge Orienta-tion	Rain Cap? (Y/N)	Distance To Nearest Property Boundary (ft)	Building		
		Easting (m)	Northing (m)								Height (ft)	Length (ft)	Width (ft)
3790S	Bin Vent Fabric Filter	510002	3855702	70.0	amb. to 350	2.9	1 x 2	hor.	N	1,095.0	148.0	183.0	179.0
2901S	Post Aeration Tank Cover and Carbon Filtration System	510296	3854460	10.0	amb	28.0	1.51	hor.	N	98.4	10.0	84.0	49.2

E. FLARE SOURCE

Emission Point ID	Description/Name	UTM Coordinates (NAD83)		Release Height AGL (ft)	Heat Release Rate (BTU/hr)	Exit Velocity (ft/s)	Exit Temp. (oF)	Heat Loss Fraction	Distance To Nearest Property Boundary (ft)	Building		
		Easting (m)	Northing (m)							Height (ft)	Length (ft)	Width (ft)

Bureau of Air Quality
Emission Point Information

F. AREA SOURCE									
Emission Point ID	Description/Name	UTM Coordinates (NAD83)		Release Height AGL (ft)	Easterly Length (ft)	Northerly Length (ft)	Angle From North (o)	Initial Vertical Dimension σz (ft)	Distance To Nearest Property Boundary (ft)
		Easting (m)	Northing (m)						

G. AREA CIRCULAR SOURCE								
Emission Point ID	Description/Name	UTM Coordinates (NAD83)		Release Height AGL (ft)	Radius of Area (ft)	Number of Vertices	Initial Vertical Dimension σz (ft)	Distance To Nearest Property Boundary (ft)
		Easting (m)	Northing (m)					

H. AREA POLYGON SOURCE								
Emission Point ID	Description/Name	UTM Coordinates (NAD83)		Release Height AGL (ft)	Initial Vertical Dimension (ft)	Number of Vertices	Area (ft2)	Distance To Nearest Property Boundary (ft)
		Easting-1 (m)	Northing-1 (m)					

Bureau of Air Quality
Emission Point Information
Page 4 of 7

I. VOLUME SOURCE									
Emission Point ID	Description/Name	UTM Coordinates (NAD83)		Release Height AGL (ft)	Physical Horizontal Dimension (ft)	Initial Horizontal Dimension σy (ft)	Physical Vertical Dimension (ft)	Initial Vertical Dimension σz (ft)	Distance To Nearest Property Boundary (ft)
		Easting (m)	Northing (m)						
NEWSPLTK	Black Liquor Storage Tank Secondary Containment Spill Tank	510016	3855803	60	60	13.9	60	27.9	660

J. OPEN PIT SOURCE								
Emission Point ID	Description/Name	UTM Coordinates (NAD83)		Release Height AGL (ft)	Easterly Length (ft)	Northerly Length (ft)	Pit Volume (ft3)	Angle From North (o)
		Easting (m)	Northing (m)					

K. LINE SOURCE									
Emission Point ID	Description/Name	UTM Coordinates (NAD83)				Release Height AGL (ft)	Line Length (ft)	Line Width (ft)	Initial Vertical Dimension σz (ft)
		Start Easting (m)	Start Northing (m)	End Easting (m)	End Northing (m)				

L. BUOYANT LINE SOURCE (must complete Line Source and Buoyant Line Source tables)							
Emission Point ID	Description/Name	Average Building Length (ft)	Average Building Height (ft)	Average Building Width (ft)	Average Line Source Width (ft)	Average Building Separation (ft)	Average Buoyancy Parameter (m4/s3)

M. EMISSION RATES						
Emission Point ID	Pollutant Name	CAS #	Emission Rate (lb/hr)	Same as Permitted? (1)	Controlled or Uncontrolled	Averaging Period
3790S	PM	N/A	0.040	☐ Yes ☒ No	Controlled	1 year
3790S	PM_{10}	N/A	0.022	☐ Yes ☒ No	Controlled	1 year
3790S	$PM_{2.5}$	N/A	0.022	☐ Yes ☒ No	Controlled	1 year
3790S	Arsenic	7440-38-2	4.45E-06	☐ Yes ☒ No	Controlled	1 year
3790S	Beryllium	7440-41-7	4.02E-07	☐ Yes ☒ No	Controlled	1 year
3790S	Cadmium	7440-43-9	8.81E-10	☐ Yes ☒ No	Controlled	1 year
3790S	Chromium	7440-47-3	5.43E-06	☐ Yes ☒ No	Controlled	1 year
3790S	Lead(5)	7439-92-1	2.31E-06	☐ Yes ☒ No	Controlled	1 year
3790S	Manganese	7439-96-5	1.14E-06	☐ Yes ☒ No	Controlled	1 year
3790S	Nickel	7440-02-0	1.01E-05	☐ Yes ☒ No	Controlled	1 year
3790S	Selenium	7782-49-2	3.22E-07	☐ Yes ☒ No	Controlled	1 year
3790S	Phosphorus	7723-14-0	1.58E-05	☐ Yes ☒ No	Controlled	1 year
2901S	Hydrogen sulfide	7783-06-4	1.1E-03	☐ Yes ☒ No	Controlled	1 year
2901S	Methyl mercaptan	74-93-1	4.1E-03	☐ Yes ☒ No	Controlled	1 year
2901S	Dimethyl disulfide	624-92-0	1.1E-02	☐ Yes ☒ No	Controlled	1 year
2901S	Dimethyl sulfide	75-18-3	1.3E-02	☐ Yes ☒ No	Controlled	1 year
2901S	Total Reduced Sulfur (as Hydrogen Sulfide)	NA	1.9E-02	☐ Yes ☒ No	Controlled	1 year

M. EMISSION RATES						
Emission Point ID	Pollutant Name	CAS #	Emission Rate (lb/hr)	Same as Permitted? (1)	Controlled or Uncontrolled	Averaging Period
NEWSPLTK	VOC	NA	0.37	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Hydrogen sulfide	7783-06-4	1.9E-02	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Methyl mercaptan	74-93-1	9.0E-03	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Dimethyl disulfide	624-92-0	5.5E-02	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Dimethyl sulfide	75-18-3	9.3E-02	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Total Reduced Sulfur (as Hydrogen Sulfide)	NA	5.8E-02	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	1,1,1-Trichloroethane	71556	2.0E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	1,2-Dichloroethane	107062	6.8E-05	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	1,2,4-Trichlorobenzene	120821	1.8E-05	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Acetaldehyde	75070	3.9E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Acrolein	107028	5.5E-05	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Benzene	71432	2.4E-05	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Carbon tetrachloride	56235	3.2E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Methanol	67561	6.0E-02	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Methyl ethyl ketone	78933	7.9E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Methyl isobutyl ketone	108101	2.9E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	m-Xylene	108383	2.3E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	n-Hexane	110543	7.2E-05	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	o-Xylene	95476	4.5E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	p-Xylene	106423	2.3E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Styrene	100425	2.4E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Tetrachloroethylene	127184	1.7E-05	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Toluene	108883	1.6E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Trichloroethylene	79016	1.7E-05	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	1,2-dichloroethylene	156-59-2	3.2E-04	☐ Yes ☒ No	Uncontrolled	1 year
NEWSPLTK	Acetone	67-64-1	1.6E-02	☐ Yes ☒ No	Uncontrolled	1 year

M. EMISSION RATES						
Emission Point ID	Pollutant Name	CAS #	Emission Rate (lb/hr)	Same as Permitted? (1)	Controlled or Uncontrolled	Averaging Period
NEWSPLTK	Terpenes	NA	1.4E-01	☐ Yes ☒ No	Uncontrolled	1 year

(1) Any difference between the rates used for permitting and the air compliance demonstration must be explained in the application report.

APPENDIX B -
POTENTIAL EMISSIONS RATES

Table B-1
Summary of Potential Emissions Rates
Powerhouse Dry Ash Handling System
New-Indy Catawba LLC - Catawba, SC Mill

Total Ash Throughput

Maximum Throughput of Ash[1]	
(lbs/hr)	(tons/yr)
8,900	38,982

Maximum Uncontrolled PM Emissions

Pollutant	Uncontrolled Emissions Factor for PM[2]	Uncontrolled Emissions	
	(lbs/ton)	(lbs/hr)	(tons/yr)
PM	3.14	14.0	61.2
PM_{10}	1.10	4.90	21.4
$PM_{2.5}$ [3]	1.10	4.90	21.4

Maximum Controlled PM Emissions

Pollutant	Controlled Emissions Factor for PM[2]	Controlled Emissions		PSD Significant Emissions Rate	Percent of PSER	PSD Review Required?
	(lbs/ton)	(lbs/hr)	(tons/yr)	(tons/yr)		(Yes/No)
PM	0.0089	0.040	0.17	25	0.69%	No
PM_{10}	0.0049	0.022	0.10	15	0.64%	No
$PM_{2.5}$ [3]	0.0049	0.022	0.10	10	0.96%	No

Maximum Controlled HAP Metals Emissions

Pollutant	CAS Number	Controlled Emissions Factor[4]	Controlled Emissions		Unontrolled Emissions[6]		Standard No. 8 De minimis Emissions Rate
		(lbs/ton)	(lbs/hr)	(lbs/day)	(lbs/hr)	(lbs/day)	(lbs/day)
Arsenic	7440-38-2	1.00E-06	4.45E-06	1.07E-04	4.45E-02	1.07E+00	0.012
Beryllium	7440-41-7	9.04E-08	4.02E-07	9.65E-06	4.02E-03	9.65E-02	0.000
Cadmium	7440-43-9	1.98E-10	8.81E-10	2.11E-08	8.81E-06	2.11E-04	0.003
Chromium	7440-47-3	1.22E-06	5.43E-06	1.30E-04	5.43E-02	1.30E+00	0.030
Lead[5]	7439-92-1	5.20E-07	2.31E-06		2.31E-02		
Manganese	7439-96-5	2.56E-07	1.14E-06	2.73E-05	1.14E-02	2.73E-01	0.300
Nickel	7440-02-0	2.28E-06	1.01E-05	2.44E-04	1.01E-01	2.44E+00	0.006
Selenium	7782-49-2	7.24E-08	3.22E-07	7.73E-06	3.22E-03	7.73E-02	0.012
Phosphorus	7723-14-0	3.54E-06	1.58E-05	3.78E-04	1.58E-01	3.78E+00	0.006

Footnotes

1. Maximum ash throughput calculated by summing the ash conveying rates for Combination Boiler No. 1 (3,100 pounds of ash per hour) and Combination Boiler No. 2 (5,800 pounds of ash per hour).
2. Emissions factor for PM and PM_{10} from Concrete Batching, cement supplement (fly ash) unloading to elevated silo (pneumatic), Table 11.12-2 of AP-42.
3. No AP-42 emissions factor, $PM_{2.5}$ emissions factor assumed equal to PM_{10}.
4. Controlled emissions factor for metals from Concrete Batching, cement supplement (fly ash) silo filling w/ fabric filter, Table 11.12-8 of AP-42.
5. Lead emissions are less than the Standard No. 2 modeling exemption threshold of 0.114 lb/hr.

Table B-2
Summary of Potential Emissions Rates
Black Liquor Spill Tank
New-Indy Catawba LLC - Catawba, SC Mill

Spill Tank Emissions Calculations

PROCESS EMISSION SOURCE	MAXIMUM PRODUCTION	ACTUAL PRODUCTION	PRODUCTION UNITS	MAXIMUM HOURS PER DAY	MAXIMUM DAYS PER WEEK	MAXIMUM DAYS PER YEAR
Spill Tank (Diluted Weak Black Liquor - Insignificant Source)	1	1	tanks	24	7	365

		EMISSION FACTOR INFORMATION			PROCESS VARIABILITY FACTOR	CONTROL EFFICIENCY	6. MAXIMUM UNCONTROLLED EMISSIONS		7. MAXIMUM CONTROLLED EMISSIONS	
3. POLLUTANT	4. CAS #	FACTOR	UNITS	NOTE			(lb/hr)	(tons/yr)	(lb/hr)	(tons/yr)
Volatile organic compounds (as carbon)		5.4E-01	lb/hr/tank	A	0.5		0.27	1.18	0.27	1.18
Volatile organic compounds (as VOC)		7.3E-01	lb/hr/tank	B	0.5		0.37	1.60	0.37	1.60
Total Reduced Sulfur (as TRS)		1.8E-01	lb/hr/tank	C	0.5		8.8E-02	3.9E-01	8.8E-02	3.9E-01
Total Reduced Sulfur (as Sulfur)		1.1E-01	lb/hr/tank	A	0.5		5.5E-02	2.4E-01	5.5E-02	2.4E-01
Total Reduced Sulfur (as Hydrogen Sulfide)		1.2E-01	lb/hr/tank	A	0.5		5.8E-02	2.6E-01	5.8E-02	2.6E-01
Hydrogen sulfide	7783-06-4	1.9E-02	lb/hr/tank	A	0.5		9.5E-03	4.2E-02	9.5E-03	4.2E-02
Methyl mercaptan	74-93-1	9.0E-03	lb/hr/tank	A	0.5		4.5E-03	2.0E-02	4.5E-03	2.0E-02
dimethyl disulfide	624-92-0	5.5E-02	lb/hr/tank	A	0.5		2.8E-02	1.2E-01	2.8E-02	1.2E-01
dimethyl sulfide	75-18-3	9.3E-02	lb/hr/tank	A	0.5		4.7E-02	2.0E-01	4.7E-02	2.0E-01
Total 112(b) Hazardous Air Pollutants							3.2E-02	1.4E-01	3.2E-02	1.4E-01
1,1,1-Trichloroethane	71556	2.0E-04	lb/hr/tank	A	0.5		1.0E-04	4.4E-04	1.0E-04	4.4E-04
1,2-Dichloroethane	107062	6.8E-05	lb/hr/tank	A	0.5		3.4E-05	1.5E-04	3.4E-05	1.5E-04
1,2,4-Trichlorobenzene	120821	1.8E-05	lb/hr/tank	A	0.5		9.0E-06	3.9E-05	9.0E-06	3.9E-05
Acetaldehyde	75070	3.9E-04	lb/hr/tank	A	0.5		2.0E-04	8.5E-04	2.0E-04	8.5E-04
Acrolein	107028	5.5E-05	lb/hr/tank	A	0.5		2.8E-05	1.2E-04	2.8E-05	1.2E-04
Benzene	71432	2.4E-05	lb/hr/tank	A	0.5		1.2E-05	5.3E-05	1.2E-05	5.3E-05
Carbon tetrachloride	56235	3.2E-04	lb/hr/tank	A	0.5		1.6E-04	7.0E-04	1.6E-04	7.0E-04
Methanol	67561	6.0E-02	lb/hr/tank	A	0.5		3.0E-02	1.3E-01	3.0E-02	1.3E-01
Methyl ethyl ketone	78933	7.9E-04	lb/hr/tank	A	0.5		4.0E-04	1.7E-03	4.0E-04	1.7E-03
Methyl isobutyl ketone	108101	2.9E-04	lb/hr/tank	A	0.5		1.5E-04	6.4E-04	1.5E-04	6.4E-04
m-Xylene	108383	2.3E-04	lb/hr/tank	A	0.5		1.2E-04	5.0E-04	1.2E-04	5.0E-04
n-Hexane	110543	7.2E-05	lb/hr/tank	A	0.5		3.6E-05	1.6E-04	3.6E-05	1.6E-04
o-Xylene	95476	4.5E-04	lb/hr/tank	A	0.5		2.3E-04	9.9E-04	2.3E-04	9.9E-04
p-Xylene	106423	2.3E-04	lb/hr/tank	A	0.5		1.2E-04	5.0E-04	1.2E-04	5.0E-04
Styrene	100425	2.4E-04	lb/hr/tank	A	0.5		1.2E-04	5.3E-04	1.2E-04	5.3E-04
Tetrachloroethylene	127184	1.7E-05	lb/hr/tank	A	0.5		8.5E-06	3.7E-05	8.5E-06	3.7E-05
Toluene	108883	1.6E-04	lb/hr/tank	A	0.5		8.0E-05	3.5E-04	8.0E-05	3.5E-04
Trichloroethylene	79016	1.7E-05	lb/hr/tank	A	0.5		8.5E-06	3.7E-05	8.5E-06	3.7E-05
Total Other Air Pollutants							7.8E-02	3.4E-01	7.8E-02	3.4E-01
1,2-dichloroethylene	156-59-2	3.2E-04	lb/hr/tank	A	0.5		1.6E-04	7.0E-04	1.6E-04	7.0E-04
acetone	67-64-1	1.6E-02	lb/hr/tank	A	0.5		8.0E-03	3.5E-02	8.0E-03	3.5E-02
terpenes		1.4E-01	lb/hr/tank	A	0.5		7.0E-02	3.1E-01	7.0E-02	3.1E-01

REFERENCES:

A) Median emission factors from NCASI Technical Bulletin 858, Table 10A.

B) Emission factor adjusted from VOC as carbon to total VOC based on molecular weight of predominate VOC species.

C) Total reduced sulfur emission are the sum of emissions of hydrogen sulfide, methyl mercaptan, dimethyl sulfide, and dimethyl disulfide.

Process variability factor accounts for diluted weak black liquor (< 5% solids) collected in spill tank compared to weak black liquor (14%-18% solids).

APPENDIX C -
ASH SILO BIN VENT FILTER INFORMATION

Pricing to provide engineering, materials, and labor to supply one (1) 4,200 cubic foot capacity Silo. Silo cylinder and cone will be constructed with A36 plate:

- 3/8" thick on cone and lower portion of cylinder
- 5/16" thick on middle section of cylinder
- 1/4" thick on top of cylinder and top of silo
- Angle stiffeners around silo 3 places
- Dynatrol CL-10J level detection system
- Handrails around top of silo
- Structural steel to support ash silo, feeder, and conditioner.
- Handrails and Grating
- Structural Steel to be Galvanized.

Vibratory Cone - 10 ' Bin Discharger equipped with:

- Two Slope Cone
- Pre-assembled mounting ring, with pre-welded hanger brackets
- 12 forged one piece vibration isolator hangers with special rubber bushings for vibration isolation
- Nominal 3 HP, oil lubricated gyrator, 480 volt, 3 phase, 60 hertz, TEFC motor (vibration force preset at factory). Guaranteed for 20,000 hrs
- Integral baffle mounted on cross-members
- Black Neoprene flexible sleeve with four (4) molded beads, 5/16 thick, nylon reinforced (sleeve is endless)
- (2) 304 stainless steel sleeve clamps.
- 3/16" wire beads on activator and mounting ring to prevent slippage of sleeve.

SPECIAL OPTIONS INCLUDED:

- Conical baffle
- 40 cm x 70 cm (15.7" x 27.5") Flanged outlet and transition

Bin Vent
Design Conditions for Each Unit:

- Volume: 350 CFM @ 350° F
- Temperature: Ambient to 350° F+ with Hi-Temp Coatings
- Service: Fly Ash Silo
- Fabric Filter Design: Modular Top Access Fabric Filters with pulse controls, OSHA ladder and handrails and passive ventilation hood with optional hi-temp ID Fan.
- Maximum Air to Cloth Ratio: 2.89: 1.00; Can Velocity = 48 FPM
- Filter Area: 121 square feet - Estimated Removal Efficiency > 99.99 %
- Unit Weight 1,900 Lbs.
- Approximate Dimensions: 42" square x 11'-0" height.

One Hi-Temp pulse-jet fabric filter process dust collector with the following features:

- Filter Bags: 16 - 6" nominal diameter by 5' long, top access snap band design 14 ounce/square yard Nomex/Aramid with PTFE Membrane at an air permeability of 25 to 30 cfm at 0.5" w.g.
- Filter Cages: 16 - 6" nominal diameter galvanized carbon steel; 11 gauge wire with girths on 8" centers and twelve longitudinals. Includes integral venturi.
- Clean Air Plenum: Constructed of 10 gauge carbon steel reinforced to withstand up to +/-17" w.g. Clean air plenum is

equipped with 12" x 24" passive ventilation outlet hood with birdscreen. Filters are accessed via two top/roof doors.

- Filter Housing: Constructed of 10 gauge carbon steel and reinforced to withstand up to +/-17" w.g. Housing and clean air plenum are integrally constructed. Bag-Catch safety grid is integral to housing base. Housing includes one 18" square bolted access door.
- Tubesheet and Blowpipe Assembly: The tubesheet is constructed of 3/16" thick carbon steel stiffened and continuously welded for structural integrity. Blowpipes are 1" NPS schedule 40 and are easily removed without special tools.
- Compressed Air Cleaning System: Compressed air required up to 7-12 cfm @ 90-100 PSIG, free of oil and water. The compressed air manifold is 6" NPS ASTM A53 - GR B - ERW with dial pressure gauge and 1" FNPT compressed air inlet connection. Asco Diaphragm valves are 1" diameter die - cast aluminum with 1/8" Asco solenoid valves Solenoids are contained in one NEMA 4 enclosure. Interconnecting signal pressure tubing and compression fittings are Gr 304 stainless steel @ 1/4" diameter. System is located on front wall of unit.
- Control Logic Sequencer: Consists of two solid state timers adjustable to control the pulse duration and the pulse interval. Unit is mounted in a 16" x 14" NEMA 4 enclosure-Bulkhead fittings are stainless. Power connection 120/1/60 by others.
- DP module for dedicated 'Cleaning on Demand' function is included with selector switch for 'Continuous Clean' or 'Clean on Demand.'
- Differential Pressure Gauge: Above Magnehelic gauge is used to monitor pressure drop across the filter media. Range is 0 - 10" w.g. in 0.5" minor divisions.
- Caged Access Ladder and Handrail System: OSHA approved, handrails close full periphery on unit roof. Topcoat Safety Yellow.

APPENDIX D -
FACILITY-WIDE EMISSIONS

Table D-1
Summary of Facility-wide Emissions
New-Indy Catawba LLC - Catawba, SC Mill

SUMMARY OF PROJECTED CHANGE IN FACILITY WIDE POTENTIAL EMISSIONS (Calculated at maximum design capacity)										
Pollutants	Emission Rates Prior to Construction / Modification (tons/year)			Dry Ash Handling System		Black Liquor Secondary Containment		Emission Rates After Construction / Modification (tons/year)		
	Uncontrolled tpy	Controlled tpy	PTE	Uncontrolled tpy	Controlled tpy	Uncontrolled tpy	Controlled tpy	Uncontrolled tpy	Controlled tpy	PTE
Particulate Matter (PM)	111,340	1,799	NA	3.14	0.17			111,343	1,799	NA
Particulate Matter <10 Microns (PM_{10})	77,683	1,109	NA	1.10	0.10			77,684	1,109	NA
Particulate Matter <2.5 Microns ($PM_{2.5}$)	65,506	891	NA	1.10	0.10			65,507	891	NA
Sulfur Dioxide (SO_2)	22,430	22,430	NA					22,430	22,430	NA
Nitrogen Oxides (NO_x)	3,028	3,028	NA					3,028	3,028	NA
Carbon Monoxide (CO)	3,144	3,144	NA					3,144	3,144	NA
Volatile Organic Compounds (VOC)	8,738	1,335	NA			1.60	1.60	8,740	1,337	NA
Lead (Pb)	14	14	NA	1.01E-01	1.01E-05			14	14	NA
Highest HAP Prior to Construction (CAS #: 67561)	5,985	884	NA			0.1314	0.1314	5,985	884	NA
Highest HAP After Construction (CAS #: 67561)	5,985	884	NA			0.1314	0.1314	5,985	884	NA
Total HAP Emissions	6,297	1,066	NA	1.75E+00	1.75E-04	0.1392	0.1392	6,299	1,066	NA

APPENDIX E -
UPDATED SCDHEC AIR DISPERSION MODELING ANALYSIS

NEW INDY
CONTAINERBOARD

March 8, 2023

BY EMAIL

Bryan McAvoy
Bureau of Air Quality, Meteorologist
South Carolina Department of
Health and Environmental Control
2600 Bull Street
Columbia, South Carolina 29201

Re: Response to Request for Air Dispersion Modeling for Addition of Secondary Containment Tank for Black Liquor Storage

Dear Bryan:

New-Indy Catawba LLC (New-Indy Catawba) is submitting this notification to the South Carolina Department of Health and Environmental Control (SCDHEC) of the Mill's ambient air dispersion modeling analysis for the addition of a secondary containment tank for black liquor storage at the Mill. As requested in your email dated February 13, 2023, New-Indy Catawba has conducted an ambient air dispersion modeling analysis of hydrogen sulfide (H_2S), methyl mercaptan (MM), and total reduced sulfur (TRS) and is providing additional information regarding the analysis below. The modeling files will be submitted to SCDHEC electronically in a separate submittal.

Background

On May 7, 2021, SCDHEC issued *an Order to Correct Undesirable Level of Contaminants* (Order) to New-Indy Catawba. Paragraph 5 of the Order required New-Indy to conduct a facility-wide air dispersion modeling analysis for sulfur dioxide (SO_2), H_2S, and TRS. New-Indy submitted an analysis for these pollutants in August 2021. In response to comments from SCDHEC and the United States Environmental Protection Agency (U.S. EPA), an updated analysis was submitted in October 2021. SCDHEC made an additional request for the emissions of each TRS constituent for each emission point that had been previously modeled as part of the Order. SCHDEC used this information, which was provided to SCDHEC on June 30, 2022, to conduct a modeling analysis for MM to address community concerns and to update H_2S and TRS modeling.

On September 26, 2022, SCDHEC concluded its modeling analysis. During the course of updating the modeling, SCDHEC identified a small number of anomalously high modeled concentrations at a few, isolated receptors. SCDHEC and U.S. EPA reviewed the source of the anomalously high concentrations and concluded they were a result of a bug in the AERMOD (American Meteorological Society/EPA Regulatory Model) code triggered by rare combinations of meteorological and topographic conditions. For the New-Indy Catawba modeling, SCDHEC concluded that only the 1-hour averaging period results were affected and was associated with the DITCH2 modeled source. SCDHEC implemented an alternate characterization methodology for the DITCH2 source by reorganizing the order of vertices of the source in the modeling, which eliminated the trigger for the model code bug. U.S. EPA Region 4 concurred that the alternate characterization was appropriate for the analysis.

SCDHEC Request for Air Dispersion Modeling for the Addition of a Secondary Containment Tank for Black Liquor Storage

As mandated by Item V of Appendix A of the November 16, 2022, Consent Decree Civil No. 0:21-cv-02053-SAL, United States of America v. New Indy Catawba, LLC (Consent Decree), New-Indy Catawba must install, maintain, and operate a containment system to prevent any uncontrolled black liquor overflows or releases from reaching the Mill's Aeration Stabilization Basin (ASB). To meet this requirement, New-Indy Catawba is submitting a construction permit application (Application) to add the Black Liquor Storage Tank Secondary Containment (Equipment ID 2490) system to the Mill.

On February 13, 2023, New-Indy Catawba received the following email from SCDHEC:

As was touched-upon in the recent pre-application meeting for the stripper project, we request that a modeling analysis be submitted to account for facility-wide increases of hydrogen sulfide, methyl mercaptan and total reduced sulfur (TRS - modeled as H2S) as a result of the addition of a secondary containment tank for black liquor storage at the facility.

The modeled emissions and stack parameters should reflect those used in the 9/26/2022 modeling conducted by DHEC as part of the Order to Correct Undesirable Level of Air Contaminants (dated 5/7/2021). Both 24 hour and 1 hour averaging periods should be used, consistent with the previous modeling.

Air Quality Modeling

On February 15, 2023, SCDHEC provided the AERMOD files used in their September 26, 2022 modeling to ALL4, Inc. (ALL4), who is conducting air dispersion modeling on behalf of New-Indy Catawba. As directed by SCDHEC, ALL4 used the SCDHEC-provided modeling, including the reorganized DITCH2 characterization only for the 1-hour analysis of H_2S, as the basis for modeling the addition of a secondary containment tank for black liquor storage.

Facility-wide modeling of H2S, MM, and TRS was conducted using the emissions rates, source parameters, meteorology, and receptor network provided by SCDHEC, with the exception of the additional secondary containment tank (Source ID NEWSPLTK) and associated structure (Structure ID NEWSPLTK). New-Indy Catawba has not reviewed the emissions rates provided in any of the SCDHEC modeling files and makes no claims, promises, or guarantees about their accuracy, completeness, or adequacy. Results of the air dispersion modeling analysis, which demonstrate that ambient concentrations are below the relevant standards for H_2S, MM, and TRS for each averaging period, are provided in Attachment A.

Please feel free to contact me via phone at 803-981-8009 or email at bob.tourville@new-indycb.com if you have any additional questions.

Sincerely,

Bob Tourville
Process Engineering

Attachment A
Privileged and Confidential - Attorney Work Product
Black Liquor Storage Secondary Containment - Modeling Results

Pollutant	Standard[a]	Averaging Period[b]	Modeled Concentration ($\mu g/m^3$)	UTM Easting (m)	UTM Northing (m)	Rank[a]	Standard[a][c][d] ($\mu g/m^3$)
H_2S	MAAC	24-hour	13.39	511,397.27	3,856,649.76	1st High	140
	EPA Action Level	30-minute	60.57	511,348.28	3,856,641.25	1-hour 1st High	837
MMM	MAAC	24-hour	8.81	510,115.55	3,856,041.31	1st High	10
	EPA Action Level	30-minute	47.80	510,209.41	3,856,039.95	1-hour 1st High	57,000
TRS	MAAC	24-hour	51.93	509,395.89	3,855,424.89	1st High	140
	EPA Action Level	30-minute	385.25	510,143.86	3,855,999.18	1-hour 1st High	837

(a) https://scdhec.gov/sites/default/files/media/document/BAQ_SC%20Modeling%20Guidelines_10.15.18_revised%204.15.19.pdf.

(b) 30-minute averaging period to be compared against maximum 1-hour modeled concentration, per DHEC October 6, 2021 request.

(c) TRS does not have a SC Standard - compare to H_2S.

(d) Methyl Mercaptan does not have an established AEGL-1 value due to insufficient data. Comparison of modeled concentrations are to the 30-minute AEGL-2 value for MMC only.

Buckner, Katharine

From: Caleb Fetner <cfetner@all4inc.com>
Sent: Monday, April 29, 2024 3:43 PM
To: Buckner, Katharine
Cc: Steven Moore; Sheryl Watkins; Rachel Davis; Chris Loach
Subject: RE: New-Indy Updated New Stripper Construction permit application

Hi Katharine,

You are correct – I should have just specified the Consent Decree permit document package.

Thanks,
Caleb

Caleb Fetner / Managing Consultant
678.293.9431 / Profile / LinkedIn

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From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Monday, April 29, 2024 3:06 PM
To: Caleb Fetner <cfetner@all4inc.com>
Cc: Steven Moore <smoore@all4inc.com>; Sheryl Watkins <swatkins@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>; Chris Loach <chris.loach@new-indycb.com>
Subject: RE: New-Indy Updated New Stripper Construction permit application

Hey Caleb,
Thank you for the attached revised application. I am checking on the compiled permit package for the Consent Decree permit because attachments were specifically mentioned in that SOB. However, there were no attachments mentioned in the Ash Handling SOB, unless I am missing something.

Thanks,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

Office: (803) 898-3213
bucknekk@dhec.sc.gov

S.C. Dept. of Health & Environmental Control
2600 Bull Street
Columbia, SC 29201

Connect: www.scdhec.gov Facebook Twitter

From: Caleb Fetner <cfetner@all4inc.com>
Sent: Monday, April 29, 2024 1:46 PM
To: Buckner, Katharine <bucknekk@dhec.sc.gov>
Cc: Steven Moore <smoore@all4inc.com>; Sheryl Watkins <swatkins@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>; Chris Loach <chris.loach@new-indycb.com>
Subject: New-Indy Updated New Stripper Construction permit application

Hi Katharine,

Attached is the electronic version of the updated stripper construction permit application. Rachel plans to hand you the wet-ink hard copy tomorrow while you're visiting the mill.

All of the changes in the application are updates that we've discussed before, so nothing should be a surprise, but we wanted to send you this electronic version so that you could review and let us know if anything is unclear.

Also – another quick request on the Ash Hndlg and Consent Decree permits – **can you send us the compiled permit packages that you plan to put on public notice for these two permits once you have them?** We just want to confirm that we have the correct attachments to the permit.

Thank you much!
Caleb

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Buckner, Katharine

From: Caleb Fetner <cfetner@all4inc.com>
Sent: Tuesday, April 23, 2024 2:08 PM
To: Buckner, Katharine
Cc: Rachel Davis; Steven Moore; Sheryl Watkins
Subject: RE: Questions on new stripper project
Attachments: Response to DHEC questions posed in March 27 email (4-22-24).docx

Hi Katharine,

Attached are New-Indy's responses to your questions below. Let us know if you have any questions.

Also – here are our comments on the Consent Decree and Ash Handling construction permits and SOBs.

DRAFT-2024-03-14_CP-50000175.v1.0 (Ash Handling CP)

- The current project description states that there is a "requirement to discontinue the practice of adding solids to the clarifier." The inherent operation of the clarifier involves sending solids, including fiber solids, in order to allow the solids to settle out of the wastewater for removal. The existing permit language would be at odds with the inherent operation of a clarifier. New-Indy is proposing to add the following clarifying sentence to the C/P to reconcile this issue.

  Page 3 of 11: *Permission is hereby granted to install and operate new equipment as part of meeting the requirement to discontinue the practice of adding solids to the clarifier, as directed by the federal Consent Decree entered in Civil No. 0:21-cv-02053-SAL, United States of America v. New-Indy Catawba, LLC, dated November 16, 2022 (Consent Decree). Specifically, the solids referred to in the Consent Decree are understood to be wet sluiced solids collected from the combination boilers.*

DRAFT-2024-03-14_CP-50000175.v1.0sob (Ash Handling SOB)

- Page 2 of 7: Combination Boiler No. 1, No. 7 conveyor to fly ash silo should be 3,100 lb/hr rather than 3,900 lb/hr.
- Page 3 of 7: PM_{10} and $PM_{2.5}$ controlled emissions should be both 0.096 tons/yr rather than 0.96 tons/yr.
- Page 5 of 7: 40 CFR 61 section edit as follows:
  Not Applicable
  The Dry Ash Handling System does not have any emissions of asbestos, coke oven emissions, radio nuclide, radon, vinyl chloride, benzene, and mercury. ~~However, t~~The system does emit beryllium and arsenic contained in the ash, however, these emissions are not from the types of industries or sources covered by the Part 61 NESHAPs.

Suggested edit to the facility descriptions in all four documents: *In 2021, the pulp production was converted from bleached to unbleached and utilizes one ~~two~~ paper machine and one pulp dryer. A second paper machine at the mill is currently idled.*

Caleb Fetner / Managing Consultant
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From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Wednesday, March 27, 2024 3:23 PM
To: Rachel Davis <Rachel.Davis@new-indycb.com>; Sheryl Watkins <swatkins@all4inc.com>; Caleb Fetner <cfetner@all4inc.com>; Steven Moore <smoore@all4inc.com>
Subject: Questions on new stripper project

Hey Everyone,

I am working on addressing the comments in the SOB for the new stripper. I have some questions that pertain to or have arisen from that.

1. Each stripper has a condensate feed tank. What happens to the contents of one tank when the other stripper is operating? For example, the existing stripper will need to be operated, yet there is condensate in the new LP Steam Stripper Feed Tank. What happens to the contents of the new LP Steam Stripper Feed Tank? Will the contents stay put until the new stripper is operated again so that there are breathing losses from this tank that vent to the LVHC Collection System? Or will the contents be transferred to the existing stripper feed tank?
2. Is it expected that the LP Steam Stripper Rectified Liquid (SRL) Methanol Tank will always have material in it so that there are breathing losses from this tank that vent to the LVHC Collection System?
3. In comments in the SOB received on March 16, 2024, a request has been made to use the October 2021 SO2 testing of the combination boilers instead of conducting new testing. Will the operating scenario for the existing stripper during the October 2021 be the same after the equipment for the new stripper is installed? Will the operating scenario be the same as October 2021 with the new LP Steam Stripper Feed Tank and new LP Steam Stripper Rectified Liquid (SRL) Methanol Tank also venting to the LVHC collection system?
4. One of EPA's comments was is there vendor/company documentation to show the existing stripper can meet the removal targets, especially at the maximum foul condensate throughput of 850 gallons per minute?
5. DHEC's consent order says New-Indy shall optimize, operate, and maintain the existing steam stripper… (Conclusions of Law, item 5.). It is understood that this will be done once the new stripper is on line. How will the optimization be assessed for the existing stripper?
6. EPA commented that it was not clear that emission increases were presented for the No. 2 Recovery Furnace. Here is what the SOB says about it. Is there some language that can be added to make it clearer? Is the black liquor in a tank? Is the SRL added to that tank? Does that tank directly feed both No. 2 and No. 3 Recovery Furnaces? So what does the emission calculations present as far as the combustion of the black liquor in the recovery furnaces and increase in emissions? Is that the increase for one or both?

> SRL combustion in Nos. 2 or 3 Recovery Furnaces – SRL is added to the black liquor, which is combusted in the Nos. 2 and 3 Recovery Furnaces. Emissions from the combustion of SRL in the recovery furnaces were estimated. The SRL is expected to contain approximately 40% of the TRS, based on information provided by the vendor. Approximately 99% of the sulfur from the combustion of the TRS will be absorbed within the salt fume inside the recovery furnaces.

Please provide responses as soon as you can.

Thank you,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

Office: (803) 898-3213

bucknekk@dhec.sc.gov

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Buckner, Katharine

From: Sheryl Watkins <swatkins@all4inc.com>
Sent: Wednesday, January 17, 2024 6:30 PM
To: Buckner, Katharine; Rachel Davis; Steven Moore; Caleb Fetner
Subject: RE: responses to comments on EPA's consent decree c/p and SOB

Hi, Katharine – the answer to item #3 is YES, both systems are installed and operating [i.e., the "containment system (i.e., containment constructed of materials impervious to pulping liquors) using sumps, sewer systems, etc., to prevent any uncontrolled black liquor overflows or releases from reaching the ASB is installed (B.6) and containment system (i.e., containment constructed of materials impervious to pulping liquors) equivalent to the volume of the largest tank plus sufficient freeboard for precipitation to prevent any uncontrolled black liquor overflows or releases from reaching the ASB is installed (B.7).]

As items 1 and 2 below appear to be non-negotiable, we do not have any further comments on the revised c/p and SOB. Thank you for your time and consideration of these requests.

Sheryl Watkins, PE / Sr. Technical Manager / ATL Office
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From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Wednesday, January 17, 2024 12:19 PM
To: Rachel Davis <Rachel.Davis@new-indycb.com>; Sheryl Watkins <swatkins@all4inc.com>; Steven Moore <smoore@all4inc.com>; Caleb Fetner <cfetner@all4inc.com>
Subject: responses to comments on EPA's consent decree c/p and SOB

Hey Rachel, Sheryl, Steve, and Caleb,
I have a few more responses to comments on the c/p and SOB for EPA's consent decree.

1. Condition B.4: I suggested yesterday that perhaps I could put more explanation in the SOB on the "pre-clarifier solids removal." However, management wants to stick with the consent decree language for this condition, especially in this case where there are other solids that will need to be removed from sending to the clarifier. So clarifying language that was suggested for both the c/p and SOB will not be added.
2. Condition B.11: it was suggested to add in after "[owner or operator…" "or designated representative". I discussed with the Compliance Division Director, Michael Shroup. Since New-Indy was issued the consent decree, New-Indy is ultimately responsible for complying with the requirements of it, not a designated representative. However, you can still designate a representative to handle this for you, the condition will not reflect that. Therefore the language will not be added.
3. Are both B.6 and B.7 installed? I know one of these is the BL Spill Tank that was exempted and the 502b10 has been received on it. I changed B.6 to "shall…maintain" to indicate it has been installed. If this is not correct let me know and I will change it back. I know we talked about it yesterday, but lost track of it.

I am attaching the revised c/p and SOB for one last look.

Thank you,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

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bucknekk@dhec.sc.gov

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Buckner, Katharine

From: Buckner, Katharine
Sent: Friday, December 15, 2023 12:35 PM
To: Rachel Davis
Cc: Robert Tourville; Steve Moore (smoore@all4inc.com); Sheryl Watkins; Caleb Fetner; Hardee, Christopher; McCaslin, Steven
Subject: revised draft c/p and SOB for the EPA consent decree
Attachments: 2023-12-15_2440-0005_c1-draft for facility.docx; 2023-12-15_2440-0005_c1_sob-draft for facility.docx

Hey Rachel,

Attached is the revised drafts of the construction permit and statement of basis for the EPA consent decree requirements. Please review and provide comments by Friday, January 5, 2024. If you should need additional time, please let me know prior to this date and provide a date when comments will be submitted.

In response to some of the suggested changes made to the previous draft c/p and SOB by New-Indy's reviewing team:

> The purpose of this construction permit is to incorporate the conditions of the EPA's consent decree into a non-Title V federally enforceable permit. Only the requirements of EPA's consent decree are being addressed in this construction permit. After discussing the EPA, they are in agreement with us, so no language will be added referencing SC DHEC's consent order. And any references to DHEC's consent order made by the permit writer have been removed.
>
> EPA is requiring that all conditions in permits contain the regulatory citations. Therefore, the Consent Decree citations will remain.
>
> Wording that was struck is the exact wording from the consent decree. This wording will remain in the permit, including the allowed downtimes of the steam stripper.
>
> Where wording was changed is denoted by brackets "[ ]".
>
> The requirements of the consent decree do not expire so no language will be added about termination of the Consent Decree.

Thank you,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

Office: (803) 898-3213
bucknekk@dhec.sc.gov

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Buckner, Katharine

From: Tourville, Bob <BOB.TOURVILLE@NEW-INDYCB.COM>
Sent: Tuesday, June 13, 2023 11:19 AM
To: Buckner, Katharine
Subject: RE: construction application to fulfill EPA's consent decree

Katharine
The 180,000 gallons tank was taken out of service in 2000 due to an incident with the tank.

From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Tuesday, June 13, 2023 10:22 AM
To: Tourville, Bob <BOB.TOURVILLE@NEW-INDYCB.COM>
Subject: RE: construction application to fulfill EPA's consent decree

Thank you for the information Bob. Do you know when the foul condensate tank was replaced? The TV has the installation date of the 180,000 gallon one in 1999.

I will add a discussion to the SOB on the difference in this tank size.

Thanks,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

Office: (803) 898-3213
bucknekk@dhec.sc.gov

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2600 Bull Street
Columbia, SC 29201

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From: Tourville, Bob <BOB.TOURVILLE@NEW-INDYCB.COM>
Sent: Tuesday, June 13, 2023 9:52 AM
To: Buckner, Katharine <bucknekk@dhec.sc.gov>
Subject: RE: construction application to fulfill EPA's consent decree

Katharine
Good morning. Couple of items:

Condensate collection tank (Equipment ID 9800) – I believe this tank was replaced by the stripper feed tank. The stripper feed tank is 15'x30' with a nominal volume of 40,000 gallons. We do not have a 180,000 gallons foul condensate collection tank onsite.

Ash System Bin Vent - Engineering of the project has not been completed and it is possible that the bin will not have a point source at all. If a point source is needed the description of "ash silo fabric filter" would be a better description.

From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Monday, June 12, 2023 7:34 AM
To: Tourville, Bob <BOB.TOURVILLE@NEW-INDYCB.COM>
Subject: construction application to fulfill EPA's consent decree

External Email

Hey Bob,

The section manager and division director have reviewed a draft of the construction permit to fulfill the consent decree. A comment that came up is about the "bin vent" fabric filter. Typically, bin vents are passive control devices on silos which would not have a pressure drop gauge. Bin vents tend to be considered inherent to a silo because it is there to keep the product in the silo when it is filled. And when bin vents are inherent the uncontrolled emissions are estimated after the bin vent. The division director actually questioned this being called "bin vent".

I had advised the division director, based on the few pages of the specification sheet in the application, that there is a pressure drop gauge, etc. The question being asked now is can "bin vent" be dropped from the equipment description to avoid the confusion with true bin vents? Can the description be something like "ash silo fabric filter"?

Thanks,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

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Buckner, Katharine

From: Tourville, Bob <BOB.TOURVILLE@NEW-INDYCB.COM>
Sent: Wednesday, April 5, 2023 3:46 PM
To: Buckner, Katharine
Cc: Hardee, Christopher; McCaslin, Steven; Pete Cleveland
Subject: RE: App for EPA Consent Decree requirements
Attachments: Responses to DHEC (4-5-23).docx

Katharine
Comments attached. Have a nice week.

From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Tuesday, March 28, 2023 7:37 AM
To: Tourville, Bob <BOB.TOURVILLE@NEW-INDYCB.COM>
Cc: Hardee, Christopher <hardeecd@dhec.sc.gov>; McCaslin, Steven <mccaslsd@dhec.sc.gov>; Pete Cleveland <pete.cleveland@new-indycb.com>
Subject: App for EPA Consent Decree requirements

Hey Bob,
I am working on the construction permit (c/p) to include the requirements EPA outlined in the Consent Decree. I have some comments for you.

1. The existing stripper has requirements that need to be included in this c/p; Decree – App. A.1.a. This associated equipment was not included in the permit application. Will all three sources that previously comprised the stripper system be used? Specifically, emission Unit ID 09, equipment IDs 9800, 9801, 9820 – foul condensate collection tank, steam stripper, and SOG collection system, respectively.
2. Emission Unit ID 09, Wastewater Treatment – has requirements in the consent decree. The equipment listed in this emission unit will need to be included in the c/p. Do the Mix Box and Bar Screen need to be listed as belonging to "…and all connecting inlets, outlets and ditches."
3. As seen in the TV OP, EU 09, Tertiary Treatment Plant – is this the same as the Post Aeration Tank Cover and Carbon Filtration System? Should we/can we change the name to fit the Post Aeration …?
4. This permit will also need to be public noticed for synthetic minor limits on the dry ash handling system. The application suggested that the Std No. 4 PM limit would make the bin vent part of the source and federally enforceable. However, it is only the PM emission limit assigned by Std No. 4 that is enforceable. Unfortunately, the emission limit from Std No. 4 is not below the significant level for PM. And so, emissions of PM, PM10, and PM2.5 will all need to be limited to below their respective significant levels to avoid PSD.

I have gotten all the applicable parts of the consent decree in the permit. I am still working on the statement of basis. I will send any other comments or questions your way as I encounter them.

Please provide responses by April 7, 2023. If you should need additional time please let me know prior to this date and provide a date when the information will be submitted.

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Responses in Blue

1. The existing stripper has requirements that need to be included in this c/p; Decree – App. A.1.a. This associated equipment was not included in the permit application. Will all three sources that previously comprised the stripper system be used? Specifically, emission Unit ID 09, equipment IDs 9800, 9801, 9820 – foul condensate collection tank, steam stripper, and SOG collection system, respectively.
   Yes all three sources will be utilized when the 150 lb steam stripper is in operation.

2. Emission Unit ID 09, Wastewater Treatment – has requirements in the consent decree. The equipment listed in this emission unit will need to be included in the c/p. Do the Mix Box and Bar Screen need to be listed as belonging to "…and all connecting inlets, outlets and ditches."
   New-Indy Catawba believes that only the EU ID 09 equipment that would be affected by the foul condensates and needs to be included are the ASB, holding pond, and post-aeration basin.

3. As seen in the TV OP, EU 09, Tertiary Treatment Plant – is this the same as the Post Aeration Tank Cover and Carbon Filtration System? Should we/can we change the name to fit the Post Aeration?
   No, the Tertiary Treatment Plant is a different source under equipment ID 2901.

4. This permit will also need to be public noticed for synthetic minor limits on the dry ash handling system. The application suggested that the Std No. 4 PM limit would make the bin vent part of the source and federally enforceable. However, it is only the PM emission limit assigned by Std No. 4 that is enforceable. Unfortunately, the emission limit from Std No. 4 is not below the significant level for PM. And so, emissions of PM, PM10, and PM2.5 will all need to be limited to below their respective significant levels to avoid PSD.
   Yes, we agree.

Buckner, Katharine

From: Caleb Fetner <cfetner@all4inc.com>
Sent: Tuesday, April 23, 2024 2:08 PM
To: Buckner, Katharine
Cc: Rachel Davis; Steven Moore; Sheryl Watkins
Subject: RE: Questions on new stripper project
Attachments: Response to DHEC questions posed in March 27 email (4-22-24).docx

Hi Katharine,

Attached are New-Indy's responses to your questions below. Let us know if you have any questions.

Also – here are our comments on the Consent Decree and Ash Handling construction permits and SOBs.

DRAFT-2024-03-14_CP-50000175.v1.0 (Ash Handling CP)

- The current project description states that there is a "requirement to discontinue the practice of adding solids to the clarifier." The inherent operation of the clarifier involves sending solids, including fiber solids, in order to allow the solids to settle out of the wastewater for removal. The existing permit language would be at odds with the inherent operation of a clarifier. New-Indy is proposing to add the following clarifying sentence to the C/P to reconcile this issue.

  Page 3 of 11: *Permission is hereby granted to install and operate new equipment as part of meeting the requirement to discontinue the practice of adding solids to the clarifier, as directed by the federal Consent Decree entered in Civil No. 0:21-cv-02053-SAL, United States of America v. New-Indy Catawba, LLC, dated November 16, 2022 (Consent Decree). Specifically, the solids referred to in the Consent Decree are understood to be wet sluiced solids collected from the combination boilers.*

DRAFT-2024-03-14_CP-50000175.v1.0sob (Ash Handling SOB)

- Page 2 of 7: Combination Boiler No. 1, No. 7 conveyor to fly ash silo should be 3,100 lb/hr rather than 3,900 lb/hr.
- Page 3 of 7: PM_{10} and $PM_{2.5}$ controlled emissions should be both 0.096 tons/yr rather than 0.96 tons/yr.
- Page 5 of 7: 40 CFR 61 section edit as follows:
  Not Applicable
  The Dry Ash Handling System does not have any emissions of asbestos, coke oven emissions, radio nuclide, radon, vinyl chloride, benzene, and mercury. ~~However, t~~The system does emit beryllium and arsenic contained in the ash, however, these emissions are not from the types of industries or sources covered by the Part 61 NESHAPs.

Suggested edit to the facility descriptions in all four documents: *In 2021, the pulp production was converted from bleached to unbleached and utilizes one ~~two~~ paper machine and one pulp dryer. A second paper machine at the mill is currently idled.*

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From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Wednesday, March 27, 2024 3:23 PM
To: Rachel Davis <Rachel.Davis@new-indycb.com>; Sheryl Watkins <swatkins@all4inc.com>; Caleb Fetner <cfetner@all4inc.com>; Steven Moore <smoore@all4inc.com>
Subject: Questions on new stripper project

Hey Everyone,

I am working on addressing the comments in the SOB for the new stripper. I have some questions that pertain to or have arisen from that.

1. Each stripper has a condensate feed tank. What happens to the contents of one tank when the other stripper is operating? For example, the existing stripper will need to be operated, yet there is condensate in the new LP Steam Stripper Feed Tank. What happens to the contents of the new LP Steam Stripper Feed Tank? Will the contents stay put until the new stripper is operated again so that there are breathing losses from this tank that vent to the LVHC Collection System? Or will the contents be transferred to the existing stripper feed tank?
2. Is it expected that the LP Steam Stripper Rectified Liquid (SRL) Methanol Tank will always have material in it so that there are breathing losses from this tank that vent to the LVHC Collection System?
3. In comments in the SOB received on March 16, 2024, a request has been made to use the October 2021 SO2 testing of the combination boilers instead of conducting new testing. Will the operating scenario for the existing stripper during the October 2021 be the same after the equipment for the new stripper is installed? Will the operating scenario be the same as October 2021 with the new LP Steam Stripper Feed Tank and new LP Steam Stripper Rectified Liquid (SRL) Methanol Tank also venting to the LVHC collection system?
4. One of EPA's comments was is there vendor/company documentation to show the existing stripper can meet the removal targets, especially at the maximum foul condensate throughput of 850 gallons per minute?
5. DHEC's consent order says New-Indy shall optimize, operate, and maintain the existing steam stripper… (Conclusions of Law, item 5.). It is understood that this will be done once the new stripper is on line. How will the optimization be assessed for the existing stripper?
6. EPA commented that it was not clear that emission increases were presented for the No. 2 Recovery Furnace. Here is what the SOB says about it. Is there some language that can be added to make it clearer? Is the black liquor in a tank? Is the SRL added to that tank? Does that tank directly feed both No. 2 and No. 3 Recovery Furnaces? So what does the emission calculations present as far as the combustion of the black liquor in the recovery furnaces and increase in emissions? Is that the increase for one or both?

> SRL combustion in Nos. 2 or 3 Recovery Furnaces – SRL is added to the black liquor, which is combusted in the Nos. 2 and 3 Recovery Furnaces. Emissions from the combustion of SRL in the recovery furnaces were estimated. The SRL is expected to contain approximately 40% of the TRS, based on information provided by the vendor. Approximately 99% of the sulfur from the combustion of the TRS will be absorbed within the salt fume inside the recovery furnaces.

Please provide responses as soon as you can.

Thank you,

Katharine K. Buckner
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Buckner, Katharine

From: Sheryl Watkins <swatkins@all4inc.com>
Sent: Thursday, January 18, 2024 6:54 PM
To: Buckner, Katharine; Caleb Fetner
Cc: Steven Moore; Rachel Davis
Subject: RE: Anything you can send ahead of time
Attachments: 2440-0005-ash handling sob comment NIC V2.docx; 2440-0005-ash handling cp comment NIC V2.docx

Hi, Katharine. Attached are the revised draft permit and sob with some additional comments on the dry ash handling system to address the uncertainty in the project description. We proposed language that we believe will generalize some of the specifics of the current design to accommodate possible changes in the future. We propose using "conditioning agent" and "conditioned ash" in lieu of "wetted ash" or "fresh water", removal of specific information on discharge of the ash from the ash silo, and using "conveyors" instead of "mechanical conveyors". This necessitates a few other markups to the draft permit and sob. We are not changing the emissions calculations or controls.

Let us know if you have any questions or concerns. Thank you!

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From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Thursday, January 18, 2024 10:36 AM
To: Sheryl Watkins <swatkins@all4inc.com>; Caleb Fetner <cfetner@all4inc.com>
Cc: Steven Moore <smoore@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>
Subject: RE: Anything you can send ahead of time

Hey y'all,

I have looked through the comments on the ash handling system. There was some discussion on perhaps being more generic in the project description due to uncertainty of what may actually get installed. I did not see any mark up of that, so I will assume what is written is okay.

Also, I asked about the emission calculations versus the algorithm on Tuesday in an email with subject "couple follow up questions". Can you provide a response? Here is the question from the other day:

> The emission calculations in the consent decree application were based on amount conveyed from each boiler. The emission factors used are related to conveying the material to silos. Do these need to be revised to be consistent with how you plan to calculate the actual emissions – amount collected in trucks minus water added?

The changes made to the verbal description of how the calculations will be made does not match that of what the algorithms says.

Thanks,

Katharine K. Buckner
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From: Sheryl Watkins <swatkins@all4inc.com>
Sent: Wednesday, January 17, 2024 6:45 PM
To: Caleb Fetner <cfetner@all4inc.com>; Buckner, Katharine <bucknekk@dhec.sc.gov>
Cc: Steven Moore <smoore@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>
Subject: RE: Anything you can send ahead of time

Katharine: Attached are the comments on the draft permit and sob for the dry ash handling system. Please let us know if you have any questions or require additional discussion to incorporate the comments.

p.s. response to your question regarding the existing steam stripper will be provided shortly in a separate email.

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From: Sheryl Watkins
Sent: Wednesday, January 17, 2024 3:02 PM
To: Caleb Fetner <cfetner@all4inc.com>; 'Buckner, Katharine' <bucknekk@dhec.sc.gov>
Cc: Steven Moore <smoore@all4inc.com>; 'Rachel Davis' <Rachel.Davis@new-indycb.com>
Subject: RE: Anything you can send ahead of time

Katharine: Here is the next item (additional information around total VOC question) for your review:

VOC emissions from the pulping condensates are determined as the sum of the following pollutants: methanol, acetaldehyde, methyl ethyl ketone, propionaldehyde, and TRS VOCs [i.e., methyl mercaptan (MMC), dimethyl disulfide (DMDS), and dimethyl sulfide (DMS)]. New-Indy Catawba proposes that DHEC approve that the removal efficiency of methanol demonstrated across the steam stripper is representative of the removal efficiency for acetaldehyde, methyl ethyl ketone, and propionaldehyde based on the following information:

- Methanol and the TRS VOCs comprise more than 95% of the total VOC emissions in the pulping condensates treated in the Aerated Stabilization Basin (ASB). This is based on historical liquid concentration data, site-specific ASB configuration, and 40 CFR 63 Appendix C/Form XIII (Methanol) and EPA's WATER9 model (all other VOC).
- Methanol is highly soluble in water and is less volatile/more difficult to remove from water than acetaldehyde, methyl ethyl ketone, and propionaldehyde. This is evident from the henry's law constants that represent the volatility of each compound in water at lower concentrations (Note: Henry's Law states that the solubility of a gas in a liquid is directly proportional to the partial pressure of the gas above the liquid). The higher the Henry's Law value, the more volatile the compound is. From 40 CFR 63 Appendix C, the Henry's law constants in atm/mole fraction at 25 C are as follows, showing that methanol is the least volatile of these compounds:
    - Acetaldehyde: 4.87
    - Methanol: 0.289
    - Methyl ethyl ketone: 7.22
    - Propionaldehyde: 3.32
- Therefore, we can assume that the removal efficiency of acetaldehyde, methyl ethyl ketone, and propionaldehyde across the steam stripper will be at or above the removal efficiency of methanol.

Let us know if you have any questions or need additional information.

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From: Sheryl Watkins
Sent: Wednesday, January 17, 2024 12:01 PM
To: Caleb Fetner <cfetner@all4inc.com>; Buckner, Katharine <bucknekk@dhec.sc.gov>
Cc: Steven Moore <smoore@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>
Subject: RE: Anything you can send ahead of time

Katharine: Attached are the proposed markups for condition B.20 per our discussion yesterday. Let us know if you have any questions.

Still working on the additional information around total VOC, periodic maintenance around the existing stripper, and comments on the ash handling system draft permit and sob.

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From: Caleb Fetner <cfetner@all4inc.com>
Sent: Wednesday, January 17, 2024 10:56 AM
To: Buckner, Katharine <bucknekk@dhec.sc.gov>
Cc: Sheryl Watkins <swatkins@all4inc.com>; Steven Moore <smoore@all4inc.com>; Rachel Davis <Rachel.Davis@new-

indycb.com>
Subject: RE: Anything you can send ahead of time

Hi Katharine – here is the explanation. Let me know if you have any questions or need more information.

The New Stripper emissions calculations were updated in the version dated 1-11-24 as follows: (1) the hardpipe (no stripper online) operating scenario was increased to the maximum allowable steam stripper downtime of 460 hours to reflect worst-case annual emissions; (2) the recovery furnace NOX increase expected from mixing SRL and black liquor was increased from 1% to 2% to reflect up to 2% SRL by volume.

Neither of these changes impact the short-term hourly emissions rates of hydrogen sulfide (H2S), methyl mercaptan (MMC), or total reduced sulfur (TRS). Therefore, a revision to the ambient air dispersion modeling analysis (last provided to DHEC via email on 10/2/2023) is not necessary.

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From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Tuesday, January 16, 2024 5:18 PM
To: Caleb Fetner <cfetner@all4inc.com>
Cc: Sheryl Watkins <swatkins@all4inc.com>; Steven Moore <smoore@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>
Subject: RE: Anything you can send ahead of time

Hello Caleb,
Forgot to include this. Will you explain why the modeling will not need to be updated based on the latest emissions changes?

Thank you,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

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From: Caleb Fetner <cfetner@all4inc.com>
Sent: Thursday, January 11, 2024 3:30 PM

To: Buckner, Katharine <bucknekk@dhec.sc.gov>
Cc: Sheryl Watkins <swatkins@all4inc.com>; Steven Moore <smoore@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>
Subject: RE: Anything you can send ahead of time

Hi Katharine – here are the updated emissions calculations with updates as follows:

1. Increased hardpipe (No Stripper) operating scenario to maximum allowable steam stripper downtime of 460 hours.
2. Increased from 1% to 2% SRL by volume mixed with BLS firing, resulting in small change in NOx emissions.
3. Added Project Emissions for Statement of Basis on each pollutant tab.

I'm unfortunately going to be out of office on Tuesday during our scheduled time to do final review of permits, but if you're able to review these tomorrow – I'm general available all day to discuss any questions or comments you have on these calculations.

Appreciate it! We are hard at work trying to get you the permit comments ASAP.

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From: Buckner, Katharine <bucknekk@dhec.sc.gov>
Sent: Thursday, January 11, 2024 11:52 AM
To: Sheryl Watkins <swatkins@all4inc.com>; Steven Moore <smoore@all4inc.com>; Caleb Fetner <cfetner@all4inc.com>; Rachel Davis <Rachel.Davis@new-indycb.com>
Subject: Anything you can send ahead of time

Hey Y'all,
Thanks for the time today. Just wanted to add if there is anything you can send to me before tomorrow that will be great – comments on one permit, etc.

Thanks,

Katharine K. Buckner
Wood and Surface Coating Permit Section
Bureau of Air Quality – Air Permitting Division

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