



SC DEPARTMENT *of* **ENVIRONMENTAL SERVICES**

Bureau of Air Quality Response to Comments on Air Quality

New-Indy Catawba LLC Catawba, York County, South Carolina Permit Numbers CP-50000051 v1.0, CP-50000061 v1.0, and CP-50000175 v1.0

The following is the South Carolina Department of Environmental Services, Bureau of Air Quality's (SCDES or Department) response to the comments made during the formal comment period held May 13, 2024, through June 20, 2024, regarding two draft minor source construction permits (CP-50000051 and CP-50000061) and a draft synthetic minor construction permit (CP-50000175) for New-Indy Catawba LLC (New-Indy). The Department Decisions, construction permits, statements of basis, this response document, and a letter of notification are located for viewing at the SCDES Columbia office located at 2600 Bull Street, Columbia, SC 29201, and on our webpage www.des.sc.gov/programs/bureau-air-quality/air-quality-department-decisions. These documents, along with other documents and resources regarding New-Indy, may be found on SCDES's New-Indy Catawba webpage at <https://des.sc.gov/community/environmental-sites-projects/new-indy-catawba>.

Hard copies of all the above-listed documents and written comments received can be requested by contacting our Freedom of Information Office at (803) 898-3882.

A public hearing was held by the Department on June 13, 2024, to receive oral and written comments on the proposed projects. During the comment period, a total of nineteen written and oral comments were received. The Department has reviewed each comment and revised the draft permits where appropriate based on the Department's regulatory authority. The Department received additional comments after June 20, 2024. Individuals submitting comments after the comment period have been added to the notification list, along with those making comments during the open comment period and will receive notification of the Department decision and response document.¹

¹ In responding to comments made during the formal comment period, the Department has also addressed various concerns raised in comments received after the comment period had expired. The Department's acknowledgment of and response to concerns raised in any comments received after

The following is a summary of the changes to the draft permits and statements of basis made by the Department following the comment period:

- CP-50000051 - Condition B.13 was added to require the facility to maintain copies of the four documents referenced in the construction permit on-site. The accompanying statement of basis was also amended to include a section for indicating changes made to the draft construction permit after the public notice period.
- CP-50000061 - The following changes were made:
 - In the project description section, HVLC was defined as high volume low concentration.
 - In Condition B.1, a clause was added that the requirement to notify the public of stripper downtime would be in effect until the Department's Consent Order is terminated. See Item 4. Notifications below.
 - In Condition B.17, the total reduced sulfur (TRS) as hydrogen sulfide (H₂S) limit was corrected to 20 parts per million (ppm) for the No. 2 Recovery Furnace, which is an old design furnace as indicated in SC Regulation 61-62.5, Standard No. 4, Section XI.B.
 - In the project statement of the construction permit, under Scenario 3, the citation for the U.S. Environmental Protection Agency (EPA) consent decree was added at the end of the sentence - Civil Case No. 0:21-cv-02053-SAL, United States of America v. New-Indy Catawba, LLC, dated November 16, 2022.
 - The statement of basis for CP-50000061 was amended to include a section indicating the above changes made to the draft construction permit after the public notice period.

1. Permit Issuance

Several comments indicated that the construction permits had been issued or that New-Indy "had been given a construction permit."

Response: The Department placed the referenced draft construction permits on public notice and provided the opportunity to submit comments. The Department did not make a decision to issue, not issue, or to issue a modified version of these draft construction permits

the comment period should not be construed as an interpretation by the Department that a response to these comments is legally required.

until after public comments were received and reviewed. The date of construction permit issuance is listed on the first page of the permits.

2. Emission Increases

Comments raised concerns about a tradeoff of reductions in some pollutants for increases in the emissions of other pollutants. Comments also raised concerns about increasing fuel use/capacity and toxic gases and other materials in the fuels.

Response: The projects being permitted include the installation of a new foul condensate stripper and associated equipment (with the facility's existing stripper to be used as a backup) for reducing emissions of total reduced sulfur (TRS) and hydrogen sulfide (H₂S) consistent with the requirements of the U.S. Environmental Protection Agency's (EPA) underlying Consent Decree (EPA Consent Decree) and the Department's related consent order (Consent Order). TRS includes hydrogen sulfide, methyl mercaptan (MM), dimethyl disulfide (DMDS), and dimethyl sulfide (DMS). The new stripper will decrease actual emissions of H₂S and TRS. The emission changes shown in the public notice are from a regulatory analysis of New-Indy's actual emissions in their current configuration, or "baseline" emissions, compared to the proposed future configuration at a projected maximum production rate. This facility currently has an allowed production rate of 1,825 air dried tons per day under its existing permits. This allowed production rate will not change under the new construction permits being issued today. To demonstrate the project would not meet the regulatory threshold of a major modification, New-Indy provided conservative emissions estimates at a possible future projected maximum production rate of 2,700 air dried tons per day, compared to their baseline production rate of 1,365 air dried tons per day.

The strippers require steam to function and remove TRS and H₂S from the foul condensate stream. The increases in particulate, lead, and carbon monoxide (CO) emissions shown in the emissions calculations are directly from the increase in fuel burning needed to meet the increased steam demand for removing TRS and H₂S from the foul condensate and are specifically due to the new stripper having a higher capacity than the existing stripper and the expected decrease in stripper downtime. The strippers must be on and operating for at least 8,300 hours per year, compared to the baseline value of 8,004 hours.

The emissions associated with the new stripper equipment and operating scenarios, including the increases, were shown to comply with federal and state air quality regulations. Fuel usage records must be kept onsite and will be used to determine the facility's emissions compliance.

The federal and state air quality regulations are established to be protective of public health, using scientific data and human health risk exposure assessments. These regulations include

standards for ambient air quality and emission limits, controls, and/or operational requirements for industrial facilities. The Clean Air Act requires the EPA to establish National Ambient Air Quality Standards (NAAQS) for six common pollutants (“criteria” pollutants) considered harmful to public health and the environment. There are two types of NAAQS: primary standards and secondary standards. Primary standards are set to protect public health, including the health of sensitive populations such as asthmatics, children, and the elderly. Secondary standards are set to protect public welfare, such as protection against decreased visibility, and damage to animals, crops, vegetation, and buildings. The NAAQS include primary standards for CO, particulate matter less than 10 microns, and lead and primary and secondary standards for particulate matter less than 2.5 microns.

In accordance with South Carolina air quality regulations, “no permit to construct or modify a source will be issued if emissions interfere with attainment or maintenance of any state or federal standard.” The proposed facility operations were evaluated, and the emissions determined to not interfere with attainment of the NAAQS.

New, reconstructed, or modified sources of criteria emissions from specific industries are also regulated by New Source Performance Standards (NSPS) issued pursuant to the Clean Air Act and found in 40 CFR Part 60. NSPS regulations establish minimum control requirements based on the “best system of emissions reduction” for all sources within a specified category. Each standard is aimed at a specific industry and/or emission source and includes emission limits, monitoring, testing, recordkeeping, and reporting requirements and may include requirements for control equipment. Emissions of TRS from the new stripper system (includes the new stripper column and new condenser) and the existing stripper are subject to Subpart BBa - *Kraft Pulp Mill Affected Sources For Which Construction, Reconstruction, Or Modification Commenced After May 23, 2013*. The existing LVHC and SOG collection systems are also subject to design requirements under Subpart BBa. Emissions of particulate matter and TRS from the No. 3 Recovery Furnace are subject to Subpart BB - *Kraft Pulp Mills*.

Air emissions of non-criteria pollutants, called Hazardous Air Pollutants (HAPs), were also reviewed. HAPs are a list 187 pollutants considered hazardous to human health and regulated under the Clean Air Act. HAPs are regulated by the EPA under the regulations found in 40 CFR Part 61 or 40 CFR Part 63 (Maximum Achievable Control Technology (MACT) standards). The majority of the proposed facility’s operations are subject to 40 CFR Part 63 Subpart S (*Pulp and Paper Industry*) and Subpart MM (*Chemical Recovery Combustion Sources at Kraft, Soda, Sulfite, and Stand-Alone Semichemical Pulp Mills*). These regulations have undergone a risk and technology review (RTR) meant to assess residual health risk from all pollutants emitted from applicable pulp and paper sources. H₂S, TRS, and Methyl Mercaptan (MM) are not HAPs and thus are not subject to these regulations but are addressed by state regulations for toxic air pollutants and NSPS.

In addition to implementing and enforcing applicable MACT regulations, South Carolina regulates Toxic Air Pollutants (TAPs) under state regulations (S.C. Regulation 61-62.5, Standard No. 8, *Toxic Air Pollutants*). The list of TAPs includes the original HAP list plus additional pollutants South Carolina considers toxic air pollutants. The state regulation sets a maximum allowable average 24-hour average concentration for each TAP designed to be protective of human health. A compliance demonstration was submitted for H₂S, MM, and all TRS, expressed as an H₂S equivalent. The facility used maximum allowable emissions in their modeling analysis and demonstrated compliance with Std No. 8.

3. Stripper Operations

Comments and questions were received regarding the new stripper only operating 90% of the time, adequacy of the backup stripper to control emissions, and planning for when no stripper is operating. Some commenters asserted that there should be a stripper operating at full capacity at all times and questioned if New-Indy planned or would be required to reduce production if using the backup stripper and/or stop production if neither stripper was operational.

Response: New-Indy anticipates operating the new stripper much more than 90% of the time. The 90% operating time assumption in the construction permit application for the new stripper was used for estimating the maximum emissions for regulatory evaluation purposes.

New-Indy has plans to operate the existing stripper as a backup to the new stripper. Once the new stripper is operating, maintenance will be performed on the backup stripper to optimize it for better performance and to maintain its operational readiness. One of the strippers is required to be operating at all times during which the mill is producing unbleached pulp and generating foul condensate, except for scheduled and unscheduled downtimes (e.g. for maintenance), which are limited to no more than 460 hours per year (5.25% of the time).

The chemical treatment system used to treat the wastewater stream prior to entering the aeration stabilization basin (ASB), will operate continuously; even when a stripper is operating. That system uses hydrogen peroxide to oxidize H₂S, when present in wastewater, into elemental sulfur or sulfate prior to entering the ASB. An automated control system adjusts the dosage of hydrogen peroxide, and the system is required to be capable of treating the maximum amount of foul condensate produced if neither stripper is operational. Since chemical treatment will be required continuously, the permit does not require the facility to shutdown or reduce production when both strippers are down for maintenance.

4. Notifications

Comments were received asking if New-Indy would or could be required to notify nearby residents when no stripper is operating. Additional comments asked for notifications when “toxins” are released. There were some comments about evacuation vs. staying in place (shelter-in-place) during emergencies.

Response: Until the new stripper system has operated for six months and the actions set forth in the Department’s Consent Order regarding the wastewater treatment facility have been completed, the Consent Order requires New-Indy to maintain a process for receiving and responding to citizen odor reports within a five-mile radius of the facility, notify downwind areas immediately of an emergency situation, and provide the Department and the public notifications at least 48 hours prior to any scheduled downtime and within 24 hours of any unscheduled downtime of the strippers. Pursuant to the EPA Consent Decree and the relevant permit, the Department will continue to receive notifications regarding scheduled and unscheduled downtime after the period covered by the Consent Order.

The facility must comply with permit provisions governing timely notification to the Department of any emergencies or malfunctions, process upsets, or failures lasting more than an hour, including steps to minimize emissions and corrective actions. The facility is also required to notify the Department of any upsets in mill operations that could result in increased fence line concentrations of H₂S to exceed the fence line limits and must notify the Department of any H₂S fenceline concentration above the fenceline limits within 24 hours of the end of the averaging period. New-Indy has an emergency response team and coordinates related response activities with State and Local response agencies.

New-Indy provides notifications of onsite activities (e.g., monitoring data, updates, progress reports) on New-Indy’s website at www.newindycatawba.com or published on the New-Indy’s X®, formerly known as Twitter®, account.

Even when a stripper is operating, the chemical treatment system will remain in operation. If no stripper is operating, the chemical treatment system will automatically respond to the increase in H₂S in the wastewater stream to the ASB and adjust the dosage of the hydrogen peroxide accordingly.

5. Hydrogen Sulfide (H₂S) Monitor Locations

Comments received questioned the sufficiency of the H₂S fenceline monitoring and requested that New-Indy measure emissions at the stacks in addition to monitoring the fence-line concentrations. One commenter asked for all toxins to be monitored at the stacks.

Response: The main source of the H₂S emissions are the ground level emissions from the wastewater treatment plant. Monitoring for H₂S provides a sensitive, consistent, and specific indicator of the presence of total reduced sulfur compounds that can be emitted from the facility wastewater treatment systems.

The fence line monitors nearest the sources can provide the clearest and most immediate indication of problems and processes that contribute to emissions. Concentrations are higher at the ground level and are detected more quickly and can prompt a response that can minimize offsite impact. By contrast, stack monitoring of pollutant emissions would not be representative of ground-level pollutant concentrations for either H₂S or other pollutant concentrations. The underlying EPA Consent Decree and applicable regulations do not require any additional stack emissions monitoring beyond that specified in the air permits.

The existing and new air permits do include continuous emissions monitoring at the stacks in some instances. The new steam stripper will remove or strip total reduced sulfurs (TRS) and methanol from the foul condensates. TRS and methanol will exit the stripper in a gaseous state. These gases will be sent to the methanol condenser which will remove most of the methanol and a portion of the TRS from the gases and condenses it into a liquid. The liquid will be combusted along with the black liquor in one of the recovery furnaces. The gases from the condenser will be combusted in the No. 3 Recovery Furnace. Both Recovery Furnace No. 2 and No. 3 are equipped with continuous TRS emission monitors.

TRS converts to sulfur dioxide (SO₂) when combusted. The No. 3 Recovery Furnace will be the primary combustion control device of the TRS gases. The complex chemistry in the furnace works to keep the SO₂ emissions from forming. The recovery furnace is currently equipped with a continuous TRS emissions monitoring system inside the stack, and the facility will be adding a continuous SO₂ emissions monitoring system as required by the construction permit issued today. The recovery furnace will also continue to operate with an existing NO_x continuous emission monitor. Due to the conversion of TRS to SO₂, minimal TRS is expected to be emitted from the No. 3 Recovery Furnace.

The permit also requires the facility to comply with various other monitoring requirements in addition to operating continuous TRS emission monitors in the recovery furnaces. The facility is required to perform an initial performance test for liquid sampling and an analysis of TRS, H₂S, and methanol both at the inlet and outlet of the new stripper and the existing backup stripper to demonstrate the system's design removal efficiency. This testing and analysis will also be used to establish monitoring parameters based on test data (including stripper inlet feed rate, steam feed rate, and stripper inlet feed temperature). The facility must monitor these parameters for the purpose of demonstrating compliance on an ongoing basis. The facility must also conduct additional periodic source testing for the new stripper system and update monitoring parameters as necessary. The use of such

monitoring parameters for evaluating operational performance and compliance is a standard practice in air quality regulation and permitting.

6. Hydrogen Sulfide (H₂S) Monitor Detection/Calibration

Another commenter questioned the detection level of H₂S by the fence line monitors and suggested that the detection level should be lower. Specifically, the commenter stated that the monitoring data shows zero because the fence line monitors were calibrated at 70 parts per billion (ppb), smells and toxic releases are noticeable around 4 ppb, and that the monitors should be calibrated to around 5 ppb.

Response: New-Indy is required to maintain and operate the fence line H₂S monitors in accordance with the EPA approved monitoring Quality Assurance Project Plan (QAPP). Per the QAPP, the monitors have a lower detection level of 0.4 ppb. Calibrations and audits of the monitors document monitor response at multiple concentrations from the detection limit throughout the calibrated range using certified known concentration calibration gas. New-Indy's daily reports include the range of concentrations detected during the period and the daily average of 30-minute averages.

7. Production

Comments received inquired about a production increase and whether a newer stripper will be needed at that time.

Response: Although New-Indy currently has a federally enforceable limit on production of 1,825 air dried tons of pulp per day (ADTPD) in their operating permit, in their construction permit application, they elected to calculate their emissions using a higher production rate of 2,700 ADTPD; resulting in higher emission estimates. The facility demonstrated that it could meet the state and federal health protective standards using the currently proposed new stripper at the production rate of 2,700 ADTPD. However, the Department is not acting on or approving a production increase with this construction permit. Any action that would remove or exceed that federally enforceable production limit would require a separate permit and would be publicly noticed.

8. Compliance

Comments and questions were received regarding oversight and accountability that the work is performed in accordance with the construction permits. Comments asserted that a third party, as opposed to a consultant, should be supervising, and measuring to determine that operations are conducted properly.

Response: As part of the permitting process, all applicable requirements have associated monitoring that is required. For all emission limits, the facility will be required to keep records and submit documentation for determining compliance with the limits, on a semiannual basis. In addition, the facility has reporting requirements under the associated state and federal regulations and Consent Decree as outlined in the permit. The facility will also be required to source test their control devices to demonstrate compliance with the requirements outlined in the permit and state and federal regulations and Consent Decree as applicable. Third-party companies conduct air stack testing and water sampling analysis.

The monitoring, testing, recordkeeping, and reporting requirements in an air permit are the responsibility of the facility. The facility may perform the requirements of the permit itself or outsource it to a contractor. The reporting and self-certification requirements of the permit are consistent with those applicable to other permitted facilities and are the accepted practice in environmental permitting across the country. The Department will review all compliance information submitted by the facility (or obtained on site) to determine compliance and will take enforcement action against a permitted facility for violations occurring as a result of inaccurate reports or certifications, as appropriate.

The testing, monitoring, and additional requirements have been carefully considered based on the nature and scope of the facility's operations and emissions and are consistent with or more stringent than with those required by applicable regulations. The Department's regional inspectors will conduct routine, unannounced inspections to verify that the conditions of the permit are being met, as well as additional inspections on a complaint-driven basis. In general, the Department conducts routine inspections of major source facilities at least once a year. However, some facilities may be inspected more frequently. Alleged violations of any permit condition or any applicable state and federal regulation are detailed in the inspection report and would result in the facility being referred to the Department's Bureau of Air Quality's (BAQ) enforcement section. If the Enforcement Section determines that a violation has occurred, enforcement action may be taken requiring corrective action and the possible payment of civil penalties. Penalties are assessed in accordance with the Department's Uniform Enforcement Policy. The Department strongly encourages the public to report any concerns as soon as they are observed so that the Department can investigate and respond to any noncompliance and take enforcement action as needed.

9. Timeline

Commenters asked about the timeline for completion of work under the construction permits and any penalties incurred if not completed within the timelines. One commenter also asked to be notified that New-Indy has completed the work in accordance with the construction permits.

Response: The Department's consent order requires the new stripper to be installed and placed into operation no later than June 30, 2025. If New-Indy does not meet this date, then the Department can take additional enforcement action as needed. Each construction permit requires the facility to submit to the Department the following notifications: a start of construction notification submitted within 30 days of commencement, a certification that construction has been completed in accordance with the construction permit, and a start of operation notification upon the initial startup of each source within 15 days of initial startup. Also, the facility shall submit a Title V operating permit modification request for the sources covered in the construction permits, for incorporation of the equipment and requirements into the Title V Operating Permit. The Department will post these permitting submittals on our New-Indy Catawba webpage.

New-Indy also provides notifications of onsite activities (e.g., monitoring data, updates, progress reports) on New-Indy's website at www.newindycatawba.com or published on the New-Indy's X®, formerly known as Twitter®, account.

10. Cease and Desist or Mandatory Shutdown

Several comments raised the question of SCDES implementing a "cease and desist order," as mentioned in the Order to Correct Undesirable Level of Air Contaminants to New-Indy, dated May 7, 2021, if they did not comply as directed, if emissions were not controlled appropriately, and to protect the public. An additional comment asked if there was any situation where SCDES would initiate a mandatory shutdown to protect the public.

Response: The Department reserves all legal authorities as related to New-Indy (and any other permitted facility), including but not limited to the authority to issue a cease and desist order, if necessary, following a finding of undesirable levels pursuant to Section 48-1-120 of the S.C. Pollution Control Act. The relevant permitting documents and the Department's website include further information regarding corrective action being taken by the facility to correct issues underlying the previous Order to Correct Undesirable Level of Air Contaminants. These permits serve to address requirements of the Department's previous order, as well as the U.S. EPA's Consent Decree, in a manner consistent with regulatory requirements, and the Department therefore does not anticipate the need for a cease and desist order at this time.

11. Ash

A comment was received suggesting that ash should be considered hazardous waste and taken to a hazardous waste landfill.

Response: New-Indy's ash has been properly characterized in accordance with S.C. Regulation 61-107.19, Part I, Section C. Based on the characterization, the ash is non-hazardous. As such, New-Indy is approved to either dispose of the ash in their on-site landfill or manage it through their approved Innovative Reusable Byproduct Pilot program.

12. Emissions Control Technology

One commenter wanted to share information with New-Indy and the Department on technology in Europe to reduce the formation of dioxin and furans from combustion processes and inject inhibitors to control emissions monitored at the stack. The commenter relayed this technology is a best available control technology and could be for use on the new stripper. Another comment asserted there is technology to eliminate all toxins and that New-Indy should be required to use it.

Response: SCDES has shared the comment regarding technology in Europe with New-Indy.

Dioxins and furans are mainly byproducts of manufacturing processes, such as chlorine bleaching of pulp and paper, or created through combustion. Pulp and paper mills that bleach pulp can emit more dioxin and furans than unbleached pulp mills. In 2021, New-Indy converted from being a bleaching mill, where chlorine dioxide was used to bleach the pulp, to an unbleached mill for pulp and paper production. The dioxin and furan emissions from the facility's current operation are trace amounts from the combustion of wood, fuel oil, tire-derived fuel (TDF), and black liquor solids.

More generally, the permits being issued are based on the technology and controls detailed in the permit application. These technologies and processes implement relevant requirements of the U.S. EPA Consent Decree and are consistent with applicable regulatory requirements. The Department is not aware of any technology that can eliminate all pollutants, nor did the commenter provide details on such technology.

13. Others

A comment expressed concern about Per- and polyfluoroalkyl substances (PFAS) and dioxin in wells on-site and in the Catawba river, and dioxins from an unnamed wire manufacturing facility across the river. A statement was made that Chester County has the highest infant mortality rates.

Response: The Department's decision must be based on the technical review of the proposed projects, the state and federal air quality regulations, and the projects' ability to meet those regulations. The commenter's concerns about wells are outside the scope of the

Department air quality regulations and permitting and are addressed by other areas of federal and state oversight.

Notwithstanding the above, the Department notes that it has developed and is implementing multiple strategies for assessing PFAS in the state's waters. More information can be found here: <https://des.sc.gov/programs/bureau-water/and-polyfluoroalkyl-substances-pfas/pfas-bureau-water>.

New Indy is required to monitor for dioxin and other contaminants at its site, and that monitoring data is routinely provided to SCDES for additional review. No hazardous level of dioxin or dioxin-like compounds has been detected in any of the permanent monitoring wells at the facility and there have been no detections in the permanent monitoring wells located between the lagoons and the Catawba River.

If a significant change in the concentration of dioxins were to be detected in samples from the permanent perimeter groundwater monitoring wells, SCDES would immediately work with the facility to address the potential for offsite migration.

New Indy's application to renew its National Pollutant Discharge Elimination System (NPDES) permit is currently undergoing a technical review. If you wish to receive a notification when the draft NPDES permit goes on public notice for public review and comments, please send your request to Patty.Barnes@des.sc.gov.

Concerns about other facilities or sites are outside the scope of these air quality permits. No dioxins are known to be on-site at the unnamed plant across the river presumably referenced by the commenter. Further information regarding environmental assessments or activities at other facilities or locations may be obtained through the Department's Freedom of Information Office.

There are many variables associated with infant mortality. Some risk factors are genetic, some may be related to prenatal care (and access to care), and others may be related to the environment. We have no evidence tying infant mortality specifically to this site. More information about South Carolina infant mortality rates can be found at <https://dph.sc.gov/sites/scdph/files/media/document/CR-012142-2021.pdf>.