Company Name:	New-Indy Catawba LLC	**Permit Writer:**	Katharine K Buckner
Agency Air Number:	2440-0005	**Date:**	May 15, 2025
Permit Number:	CP-50000041 v1.0		

DATE APPLICATION RECEIVED: April 07, 2021

PROJECT DESCRIPTION

New-Indy is requesting a permit condition to document the removal of a legacy kraft pulp production limit from prior construction permits and the Title V operating permit for the facility. Previously, the facility operated the digester to produce pulp for bleaching. Under prior construction permits, including 2440-0005-DA (c/p-DA) and 2440-0005-DC (c/p-DC), the facility had the production rate identified at 1,825 air dried tones of unbleached pulp per day (ADTUBP) on a 12-month rolling average. This production rate was reflected in condition C.14 of the Title V operating permit for the facility. Under construction permit 2440-0005-DF (c/p-DF) (issued in 2019, revised 2020), the facility converted from producing pulp for bleaching to pulp for unbleached paper. This change affected the operation of the digester and allowed for increased production of pulp for unbleached paper.

The construction permit application for c/p-DF provided that: "The virgin pulp yield will be increased by tripling the Kappa from less than 30 for bleached pulp to over 90 for unbleached pulp. The higher Kappa **will produce more tons of virgin pulp using the same amount of raw materials (wood and cooking liquor). The change in pulp will also shorten the cook time in the continuous digester, further increasing production of virgin pulp.**" See July 2019 permit application at page 1 (emphasis added). The application specified that pulp production would increase with this change. The application-based emission calculations upon 2,700 ADTUBP/day.

C/p-DF provides standard language that "[a]*ll official correspondence, plans, **permit applications**, and written statements are an integral part of the permit." See permit at page 1 of 30 (emphasis added). c/p-DF provides that pulp production will increase as a result of the permit providing that: "**Virgin pulp yield will be increased** by tripling the Kappa number from less than 30 for bleach pulp to over 90 for unbleached pulp. The higher Kappa number **will produce more tons of virgin pulp using the same amount of raw materials** (wood and cooking liquor). Also, the change to unbleached pulp **will shorten the cook time in the continuous digester which will further increase virgin pulp production**." See c/p-DF, page 3 of 30 (emphasis added). Although c/p-DF does not list the specific value for the production increase as a permit condition, as explained, it does incorporate the production value of 2,700 ADTUBP/day from the permit application.*

New-Indy uses the kraft process to pulp wood. The kraft process uses white liquor, made of sodium hydroxide and sodium sulfide, to cook wood chips in a digester. In the digester, white liquor dissolves the lignin from the wood chips and leaves behind the wood fibers, or pulp. The pulp can then be further processed by bleaching to make white paper or left unbleached to make brown paper, or unbleached paper. Operation of the digester is different when producing pulp for bleaching from that when producing pulp for unbleached paper.

Simplistically, when producing pulp for bleaching, the wood chips are cooked longer in the digester to remove more of the lignin. When producing pulp for unbleached paper, the wood chips are not cooked as long as that for producing pulp for bleaching. The pulp yield from the same amount of wood chips is less for pulp used for bleaching than pulp used for unbleached paper. Also, over time, more pulp can be processed when producing pulp for unbleached paper than when producing pulp for bleaching.

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History of the 1,825 ADTUBP/day limit

Construction permit c/p-DA, issued March 16, 2006, was a PSD and Nonattainment New Source Review construction permit. This construction permit allowed the facility to modify the Kraft pulping and chemical recovery processes to increase kraft pulp production from an actual level of 1,458 ADTUBP/day (or 532,170 ADTUBP/year) to a projected production level of 1,825 ADTUBP/day (or 666,125 ADTUBP/year.) However, upon operation after these modifications were complete, the projected production level of 1,825 ADTUBP/day was not achieved.

In 2011, the facility was issued c/p-DC that allowed, among other changes, additional modifications to the method of operation of and physical modifications to the digester to optimize the kraft pulp yield from the digester since the projected production level of 1,825 ADTUBP/day, under c/p-DA, was not achieved. For c/p-DC, the PSD analysis for the project compared the baseline actual production rate of 1,532.5 ADTUBP/day to the projected actual production of 1,825 ADTUBP/day with the outcome being a PSD permit for exceeding the significant emission rate for SO_2. The increase in SO_2 emissions was a result of controlling the increased TRS emissions from the project by combustion in the combination boilers. (Incineration of sulfur containing compounds such as TRS results in SO_2 emissions.) The established BACT limit accounts for the TRS removal by the TRS pre-scrubber (aka. LVHC System Caustic Scrubber) prior to incineration of the TRS containing gases in the boilers and for the inherent sulfur capture by the wood ash in the combination wood boilers, as documented by NCASI, due to the alkalinity of the ash. The SO_2 BACT limits that result from the required incineration of TRS/HAP streams in the combination boilers were established as less than or equal to 10.1 lb SO_2/ADTUBP and less than or equal to 3,364 tons of SO_2 per year. The annual limit was determined by multiplying the emission factor limit by the projected production of 1,825 ADTUBP/day. Thus, the projected production rate became a limit in c/p-DC to ensure compliance with the annual SO_2 emissions BACT limit.

Subsequent PSD analyses

C/p-DF was first issued in July 2019 and revised in May 2020. C/p-DF approved the facility request to convert from bleached pulp production to unbleached pulp production. This project also involved the shutdown of equipment not needed for unbleached pulp production and new product sets. The initial PSD analysis compared the baseline actual emissions from a production rate of 1,542.9 ADTUBP/day to projected actual emissions based upon a production rate of 2,700 ADTUBP/day. The 2020 revision request included an updated PSD analysis, which compared baseline actual emissions from a production rate of 1,520 ADTUBP/day to projected actual emissions based on a rate of 2,700 ADTUBP/day. Both PSD analyses showed that PSD was not applicable, nor were synthetic minor limits required to avoid the applicability of PSD. However, VOC and TRS were greater than 50% of the significant emission rate and recordkeeping was required for 10 years after resumption of regular operations because the project increased the potential to emit.

The most recent project, to install a new foul condensate stripper system 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 (H_2S), was permitted under CP-50000061, and initially issued in July 2024. The PSD analysis was based on a baseline actual production rate of 1,365 ADTUBP/day and a projected actual rate of 2,700 ADTUBP/day and demonstrated that the facility could meet the state and federal health protective standards using the proposed new stripper at the higher production rate. The PSD analysis did not result in PSD requirements being applicable. However, the results of the analysis showed that PM_{10}, $PM_{2.5}$, NO_X, and VOC were greater than 50% of the significant emission rate and record keeping was required for 5 years after resumption of regular operations because the project did not increase the potential to emit for these pollutants. Additionally, the facility was also required to keep records for 5 years after resumption of regular operations of H_2S and TRS emissions as pollutants of concern. The record keeping should

show that the total of the baseline actual emissions for the project plus the significant emission rate for the pollutant has not resulted in a net significant emission increase. If the records show a net significant emission increase, the facility is to report such accordingly to the Department with an explanation as to why the emissions differ from the preconstruction projection.

The limit of 1,825 ADTUBP/day was established in previous PSD construction permits as detailed above, when the facility produced pulp for bleaching, but is not considered a BACT limit. The facility has since converted its operations to produce pulp for unbleached products where the digester is operated in a different manner. The subsequent PSD analyses, based on a projected actual production rate of 2,700 ADTUBP/day, show that PSD is not applicable and that the limit on production can be increased to 2,700 ADTUBP/day.

Dating back to construction permit c/p-DF, the facility has used the 2,700 ADTUBP/day production rate as the basis for any change in emissions and has demonstrated they can meet all applicable requirements in c/p-DF and CP-50000061. In addition, c/p-DF indicated that pulp production would increase for the facility and the permit incorporates by reference the application for c/p-DF, which included a maximum production rate of 2,700 ADTUBP/day. Therefore, it is appropriate for this permit to include a permit condition verifying that the 1,825 ADTUBP/day production limit is replaced for purposes of all permits with the updated kraft pulp production limit of 2,700 ADTUBP/day. Emissions at this production rate have previously been evaluated and addressed in prior construction permits, including the public notice for CP-50000061 – no increase in potential emissions is requested as a result of this update and potential emissions will not increase beyond those previously evaluated.

CHANGES INCLUDED IN THIS PERMIT

As part of this permitting action, the facility has requested to update the equipment IDs for the equipment listed below:

New Equipment ID	Old Equipment ID	Equipment Description
9803	9802	Chemical Oxidation Treatment System
9805	9803	Low-Pressure (LP) Steam Stripper, 850 gallons/minute foul condensate, 6.5 gallons/minute methanol
9806	9803	Stripper Rectified Liquid (SRL) Condenser
9807	9805	1,300-gallon LP Steam Stripper Rectified Liquid (SRL) Methanol Tank

FACILITY DESCRIPTION

SIC CODE: 2611 – Pulp Mills, 2621 – Paper Mills, 2631 – Paperboard Mills
NAICS CODE: 322110 – Pulp Mills, 322120 – Paper Mills, 322130 – Paperboard Mills

New-Indy Catawba LLC (New-Indy) operates an integrated pulp and paper mill located in Catawba, South Carolina. The original pulp mill was constructed in 1959. Previously, the facility produced bleached pulp and operated 3 paper machines and one pulp dryer. In 2019, the pulp production was converted from bleached to unbleached and utilized one paper machine and one pulp dryer. A second paper machine at the mill is currently idled. New-Indy Catawba is

comprised of seven distinct process areas that include the following: the woodyard area, the kraft pulp mill area, the paper mill area, the chemical recovery area, the utilities area, the waste treatment area, and a miscellaneous area.

OPERATING PERMIT INCORPORATION

The facility is requesting to remove a legacy kraft pulp production limit. Traditionally, a significant modification is required to remove requirements from the Title V operating permit. New-Indy Catawba's TV is expired, but the facility submitted a timely and complete renewal application, and the facility is continuing to operate under its existing Title V permit. Therefore, this "preconstruction review permit" will be public noticed with "procedural requirements substantially equivalent to the requirements of 70.7 and 70.8 that would be applicable to the change if it were subject to review as a [significant] permit modification. The facility can then submit an Administrative Permit Amendment to begin operation at the projected actual production rate of 2,700 ADTUBP/day.

REGULATIONS

Not Applicable - Standard No. 7 *(Prevention of Significant Deterioration)*

As discussed above under the Project Description, PSD was not applicable to either the conversion from a bleached to unbleached mill project (c/p-DF) or the project for the addition of the new foul condensate stripper system (CP-50000061). Results from the PSD analyses from c/p-DF and CP-50000061 are shown below. Additionally, the results of both PSD analyses showed that emission from some pollutants were greater than 50% of the significant emission rate and record keeping is required as specified in S.C. Regulation 61-62.5, Standard No. 7(R)(6)(d).

With respect to S.C. Regulation 61-62.5, Standard No. 7(R)(4), the removal (or relaxing) of the 1,825 ADTUBP/day limit did not make the project permitted under c/p-DF a major modification. The PSD analysis performed for the project demonstrates that emissions resulting from the project are not greater than the significant emission rate for any pollutant, and thus PSD is not applicable and the requirements of paragraphs (J) through (R) do not apply to the modification.

The tables below were taken from the respective statements of basis.

Summary of PSD Applicability from c/p-DF
Tons/year

Pollutant	TSP	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	TRS	H_2S	VOC as VOC	Pb	CO_2e
Total Baseline Emissions	105.70	28.32	13.19	2,039.90	263.25	264.19	147.16	9.66	1,027.20	0.37	55,428
Total Projected Actual Emissions	106.16	16.91	2.21	777.30	0.00	0.00	154.05	11.86	1,066.72	0.00	0.00
Net Emissions Increase	0.5	-11.4	-11.0	-1,262.6	-263.2	-264.2	6.9	2.2	39.5	-0.4	-55,428
NSR Threshold Rate	25	15	10	40	40	100	10	10	40	0.6	75,000
Trigger PSD?	No	No	No	No	No	No	No	No	No	No	No

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Summary of PSD Applicability from CP-50000061
Tons/year

Pollutant	PM	PM_{10}	$PM_{2.5}$	SO_2	NO_X	CO	H_2SO_4	TRS	H_2S	VOC	Pb
Baseline Actual Emissions	1.11	1.02	0.96	737.01	123.72	25.22	1.23	12.81	3.61	233.11	1.10E-4
Projected Actual Emissions	13.33	10.34	8.37	645.80	147.54	62.81	2.43	16.76	5.59	259.89	2.06E-3
New Emissions Change (PAE – BAE)	12.22	9.32	7.41	-91.21	23.82	37.60	1.20	3.95	1.98	26.79	1.95E-3
PSD Significant Emissions Rates	25	15	10	40	40	100	7	10	10	40	0.6
PSD Significant?	No	No	No	No	No	No	No	No	No	No	No

The facility will be limited to the maximum production rate of 2,700 ADTUBP/day (24-hour block). This production rate was used in the PSD analysis and is the rate at which emission rates comply with applicable provisions of S.C. Regulation 61-62.5 Standard Nos. 2 and 8.

PUBLIC NOTICE

This construction permit has undergone a 30-day public notice period and a 45-day EPA comment period in accordance with S.C. Regulation 61-62.1, Section II(N), S.C. Regulation 61-62.70.7(h), S.C. Regulation 61-62.70.8, and S.C. Regulation 61-62.70.7(d)(1)(v). he comment period was open from March 31, 2025 to April 29, 2025 and the draft permit was placed on the BAQ website during that time period. No comments were received during the comment period.

SUMMARY AND CONCLUSIONS

It has been determined that this source, if operated in accordance with the submitted application, will meet all applicable requirements and emission standards.