Healthy People. Healthy Communities

November 18, 2021

Mr. Daniel Mallett
Environmental Manager
New-Indy Catawba LLC
PO Box 7
Catawba, SC 29704

Re: Corrective Action Plan Air Dispersion Modeling Analysis

Dear Mr. Mallett,

SCDHEC has reviewed the New-Indy corrective action plan air dispersion modeling analysis (modeling) and response to our original round of comments that was submitted to the Bureau of Air Quality on October 27, 2021. The following comments should include all our concerns at this time, but we reserve the right to ask additional questions should other issues come to our attention.

General

1. Please provide a drawing or picture that shows all the locations of the sources covered in the analysis, to include: Closed Trench No. 1, Ditch 0, Splitter, Open Sump No. 4, Closed Trench No. 5, Clarifier, Ditch 1, Ditch 2 with respect to the ASB, EQ Basin, Post-Aeration, Holding Pond, and Sludge Pond. Also provide an explanation of the wastewater flow through the wastewater treatment plant.
2. The emissions estimates and modeling do not include any H_2S/TRS emissions from the No. 1 and No. 2 Sludge Ponds, and the Temporary Effluent Holding Basin. Please explain whether these ponds/basins are part of the wastewater treatment process, how these units are used, why emissions were not estimated from these units, etc.
3. Please provide a rationale/explanation for all the assumptions that were made for the data presented in the analysis (e.g., why the closed trench No. 1 will not have emissions to the air, etc.). Also, please provide a discussion of the differences in the data between the current report and the August 2021 modeling analysis report.
4. Footnote 5, on Table A-8 provides the dimensions and area calculation for Ditch 0. This same footnote has been repeated starting with Table A-9 and thereafter and has not been corrected for the sources in those tables. Please revise to provide the correct source and dimensions for each table.
5. Regarding the SO_2 modeling submitted in October 2021: Besides a slight increase in emissions for emission point FUTNCG1, are there any differences in the modeling compared to the SO_2 modeling submitted in August 2021? If so, please provide a list of and reasons for the changes.

Primary Clarifier

6. Section 3.2 of the report narrative says "The July 2021 liquid sample results are coupled with the National Council for Air and Stream Improvement (NCASI) wastewater Hydrogen Sulfide Emissions Simulator (H2SSIM) emissions model for H_2S emission rom the primary clarifier

and ..." Please explain why inputs to the H2SSIM model changed from the August 2021 submittal – total sulfide, flow, temperature, pH, and length and width (diameter?) of clarifier.

7. Please explain why the modeled emission rate has increased from 2.07E-02 lb/hr to 1.63E-01 lb hr for H_2S (and a similar change for the TRS emissions).
8. A pH of 9.08 was used in the Water9 runs for DMS, DMDS, and MM, but 8.943333 was used in the H2SSIM model. Why? Also, for Ditch 0, that follows the clarifier, a pH of 9.08 was used in the Water9 run for H_2S.
9. Table A-9 – It appears the H2S rate, in g/s was not calculated correctly. A conversion from minutes to seconds was missed in the denominator, based on footnote 2. This will impact the TRS as H2S rates as well other calculations in this table. Please confirm correct emission rates throughout this table.

Aerated Stabilization Basin

10. Slightly larger areas than those in the August report were used for each of the zones in the ASB in Table A-13. Please explain.

Holding Pond

11. A smaller area has been used for the holding pond than that used in the August report. Please explain.

Post-Aeration Basin (Tank?)

12. Were the stack tests performed on the Post-Aeration Basin approved by BAQ? The referenced test dates in Table A-7 are different from those that supplied data for the Initial Performance Test (IPT), where testing was done at the Post-Aeration Tank. How and from where was the source test data derived for this basin? Just to make sure, the IPT refers to this source as a tank. Is this the same as the Post-Aeration Basin?

Please provide a response to these comments by December 2, 2021. Please contact me if you have any questions about this request.

Sincerely,

John P. Glass, Jr.
glassjp@dhec.sc.gov
BAQ Modeling Section Manager