Healthy People. Healthy Communities.

December 21, 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 your December 2, 2021 response to our comments that were sent to New-Indy on November 18, 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:

1. December 2, 2021 responses, Item 6 - The individual H2SSIM runs in the August 2021 modeling analysis used temperatures of 135.8 F, 133.4 F, 130.6 F, for an average of 133.27 F. Where did this data come from if it is not source specific data? The average value of these temperatures is different than the "average" used in the October 2021 H2SSIM run of 111.9 F. Please explain. In the IPT results, 111.9 F is shown as the inlet to the ASB. Is it appropriate to use this temperature at the Clarifier? Does the stream temperature drop as it flows from the Clarifier to the ASB? Is using 111.9 F more conservative, i.e., results in higher emissions from the Primary Clarifier? Please explain in regard to the Closed Trench No. 1, Splitter and Open Sump No. 4, and Ditch 0 as well.

2. December 2, 2021 responses, Item 8 - The response indicates that the pH of 8.943333 was used as a surrogate in the H2SSIM model until specific source data was available. The individual H2SSIM runs in the August report seemed to use source specific data. See table below:

	August 2021 report				October 2021 report	
	Run 1	Run 2	Run 3	Avg	Avg	Used in Water 9
pH	9.01	9.1	9.04	9.05	8.9433333	9.08

Where did the data in the August report come from and why was it used in the model runs for the August report? The 8.9433 pH was not used until the October 2021 report, which is

from the inlet to the ASB. What is the correct source specific data that should be used in the H2SSIM and Water9 runs for the Primary Clarifier?

For informational purposes, here is a comparison of the three individual runs and the average from the August 2021 report to the average run in the October 2021 report (see table below). The average flow drops by about 2.5 MGD between the August 2021 and October 2021 reports. Why are the total sulfide values so different between the August and October reports? It was assumed that the information in the three runs from August were averaged and used as input to the October report. If the averages of the runs in the August report were not used as the inputs for the October report, please explain where the information came from that was used in the October report for the Primary Clarifier and reason for the differences in many of the parameters between the two reports?

Clarifier, H2SSIM model inputs						
	August 2021 report				**October 2021 report**	
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	Run 1	Run 2	Run 3	Avg	Avg	Used in Water9
Flow, MGD	24.06	23.98	23.14	23.73	21.35	--
Total Sulfide, mg/L	114.2	96.9	46.9	86	0.0200371	--
Sulfate, mg/L	390	390	390	390	390	--
Temperature, F	135.8	133.4	130.6	133.27	111.9	111.9
pH	9.01	9.1	9.04	9.05	8.9433333	9.08
Clarifier, length, ft	275	275	275	275	243.7	--
width, ft	275	275	275	275	243.7	--
depth, ft	5.41	5.41	5.41	5.41	5.41	--
Emissions, lbs/yr	167.6	123.3	72.3	121.07	15.2	--
Emissions flux, gms/m2-yr	10.8	8	4.7	7.83	1.3	--
Liquid Conc. (total sulfide), mg/L	5.076	4.61	2.47	4.05	0.452	--
Liquid Sulfide Load (lb/yr)	58,634.3	53,070.2	27,436.2	46,380.23	4,637.2	--

3. December 2, 2021 responses, Item 12 - Table A-7 of the October 2021 modeling report indicates dates by each sampling run performed at the Post-Aeration Basin. The dates are Run 1 (7-15-21), Run 2 (7-21-21), Run 3 (7-28-21). These dates do not correspond to any testing dates or results in the Initial Performance Test (IPT). These results do not appear to match any of that in the IPT results. The response indicates results from measurements

using the Scentroid portable monitor were not part of the IPT performed July 7-11, 2021. These measurements were not observed by DHEC personnel and this method was not the required method in the EPA's 114 letter, nor the method approved for use in the test reports. The results appear to indicate the Scentroid monitor results, which are air emissions, were used as inputs to the water models. Is this correct and, if so, please explain how this is appropriate, what water model input(s) this air emissions data was used for, and how this air emissions data was converted to provide the input(s) used in the models. Also, please provide a detailed description of the sampling methodology used for the Scentroid measurements as well as information on the accuracy of the Scentroid data generated.

4. Tables A-8 and A-9, Footnotes 2 and 3 of the October 2021 modeling report indicate the input data to the Water9 and H2SSIM models for Ditch 0 + Splitter Box and the Primary Clarifier came from the Subpart S Initial Performance Test (IPT) done July 9-11, 2021. These sources were not part of the IPT. From where did the input data to these models come? Was data from other sources in the IPT used instead? If so, please provide a detailed explanation, to include why this was done, why the substituted data is representative of these sources, what exact values were used and where, what conversions were done on the IPT results to make it useable for other sources and in the models? In particular, the concentrations presented in Table A-40, indicated as inputs to the Water9 model, could not be matched to concentrations from the IPT.

Please provide a response to these comments by January 11, 2022. Please contact me if you have any questions about this request.

Sincerely,

John P. Glass, Jr.
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BAQ Modeling Section Manager