



September 20, 2021

Mr. Tony Hobson  
New Indy Catawba, LLC  
5300 Cureton Ferry Road  
PO Box 7  
Catawba, SC 29704

**Re: No. 3 Paper Machine Dryer Vents, Pulp Dryer, No. 2 and No. 3 Smelt Dissolving Tanks, and No. 1 and No. 2 Combination Boilers: TRS and SO<sub>2</sub> Performance Test – Conducted June 21 - 27, 2021  
Condensate Collection and Treatment System: HAP, Methanol, and TRS Performance Test – Conducted June 23 - July 11, 2021**

Dear Mr. Hobson,

The Department, in coordination with EPA, have reviewed the referenced test reports and have the following questions and comments. Please provide responses by October 5, 2021. Responses must be submitted to Michael Shroup at [shroupmd@dhec.sc.gov](mailto:shroupmd@dhec.sc.gov). Responses to these comments and questions may elicit additional questions. Once all items are addressed, a final revision to the test reports will be requested.

**No. 3 Paper Machine Dryer Vents, Pulp Dryer, No. 2 and No. 3 Smelt Dissolving Tanks, and No. 1 and No. 2 Combination Boilers: TRS and SO<sub>2</sub> Testing – Conducted June 21- 27, 2021**

1. Please include in the report summaries of the H<sub>2</sub>S emissions from the testing conducted on each source.
2. Were any blank samples run to determine/verify the MDLs? If so, please provide.
3. The MDL must be used in all calculations when the analysis of the sample is below the detection limit.
4. Provide a discussion as to why the SO<sub>2</sub> emissions were higher in Combination Boiler No. 1 when combusting NCGs only and no SOGs as compared to when both types were combusted together.
5. Table 2-15 provided a summary of results for Paper Machine No. 3 whitewater sampling. The average H<sub>2</sub>S concentration on 6/24/2021 was 184,285 micrograms per liter (ug/l), on 6/25/2021 was 154,444 ug/l, and on 6/26/2021 was 57,333 ug/l. Provide a detailed discussion as to why the concentration decreased. The discussion should include information as to any mill operational changes or Paper Machine No. 3 changes during the time the samples were taken.
6. Table 2-15 provided a summary of results for the paper machine #3 whitewater sampling. The sampling data for methyl mercaptan seems to show an increase in concentration on 6/26/2021. Provide a detailed discussion as to why the concentration increased. The discussion should include information as to any mill operational changes or paper machine #3 changes during the time the samples were taken.
7. Table 2-15 provided a summary of results for the paper machine #3 whitewater sampling, and table 2-17 provided a summary of results for the steam stripper inlet foul condensate sampling. Provide a detailed discussion as to why the H<sub>2</sub>S concentration was higher in the paper machine #3 whitewater than the steam stripper inlet foul condensate.
8. The test report does not appear to provide any information about the sulfur recovery system for the NCGs and SOGs streams prior to being combusted in combination boiler #1 or combination boiler #2. Provide a discussion as to how the sulfur recovery system works, of how the system was operated during the test, and provide a block diagram of the sulfur recovery system.

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**Condensate Collection and Treatment System: HAP, Methanol, and TRS Performance Test – Conducted June 23 - July 11, 2021**

1. The calibrations, recoveries, and other QA/QC information from the NCASI 94.03 and 99.01 lab reports are missing.
2. The MLVSS lab report is missing.
3. For the RSK-175 TRS analysis, the chain of custody and dimethyl disulfide calibrations are missing.
4. Please provide the following data on a 1-hour average for each collection and treatment sampling day.
  - a. Steam stripper inlet foul condensate feed flow rate
  - b. Steam stripper steam flow rate
  - c. Foul condensate to steam stripper feed temperature
  - d. Stripped condensate temperature
  - e. Stripped condensate flow
5. Please provide the following data on a 24-hour average for each collection and treatment sampling day.
  - a. ASB wastewater inlet flow (there is a table stating this parameter, but it matches with the total foul condensate flow only).
  - b. ASB outlet flow rate.
  - c. Number of aerators operating per zone.
  - d. Post-Aeration tank flow
6. Please provide the following instantaneous data from each sampling day.
  - a. Post-Aeration tank number of aerators operating.
  - b. Post-Aeration tank total aerator hp-hrs.
7. What are the units for Dissolved Oxygen and Temperature on the sample property sheets? Pages 890-896 in part 2 of the electronic report.
8. What does data in red mean on the sample property sheets? Pages 893-894 in part 2 of the electronic report.
9. When was the most recent depth survey of the ASB completed?
10. Please revise the NCASI 94.03 and 99.01 data to reflect the MDL requirements from 63.457(j)(4)(i) & (ii).
11. For the individual TRS compounds, the MDL must be used in all calculations when the analysis of the sample is below the detection limit.
12. For the various test methods, how were the MDLs established?

13. In Table 2-10, the ASB inlet liquid flow rate does not match what is reported in Table G-4. Please explain.
14. Please revise the ASB zone 1 sample locations to indicate the alternate location used on 7/10 and 7/11. Please provide the flight map for the drone as requested on-site.
15. Was hydrogen peroxide added to the ASB during the condensate collection and treatment test?
16. During the site visit on 7/10, the Mill stated that the actual number of aerators operating was 29 during the daytime and 37 at night. For each day of testing, how many aerators were operating during the day vs. night?
17. Was the density of any of the liquid condensate streams ever measured to confirm the density of 8.34 lb/gal?
18. For the RSK-175 report:
  - a. In Table I-1, why were samples above the calibration curve not included in the duplicate averages?
  - b. In Table I-1, please elaborate on the samples that were over diluted and did not meet the minimum peak requirements.
  - c. Why were the RSK-175 TRS samples blank corrected?
  - d. Why does the lab report not have sample times for samples dates 7-10 and 7-11?
  - e. Where is the discussion of the sample preparation and analysis? Was the EPA's 114 requirement for acid preservation completed?
19. For the Tracer Study report:
  - a. Is there a laboratory report for the Li analysis performed for the tracer study?
  - b. Please provide the daily flow rates for the ASB Inlet, ASB outlet, and Hardpipe from during the tracer study. This would apply for 6/8/2021 to 6/22/2021.
  - c. Are compounds that would interfere with the Li tracer study analysis present in the ASB?
  - d. How was it determined that 84% of the Li was recovered during the tracer study?
  - e. How was the calculated retention time determined?
  - f. What is "short-circuiting" in the context of the curtains that were once installed to direct flow in the ASB?
  - g. Please provide additional information regarding the selection of 3 zones for the ASB.
  - h. Why is the volume used for tracer study calculations from a depth survey performed in 2015?
20. Why was the production on 7/5/2021 not representative of typical Mill operations?
21. Condensate report page 1-1, states that a hard pipe was installed to send the condensate from the condensate tank to the ASB. Provide the depth of the ASB when it was originally put into operation, the current depth of the ASB, and the depth of the liquid. Also provide the depth that the hard pipe for the foul condensate is discharged below the liquid surface.

22. Condensate report page 1-1, states that the mill will treat the condensate with a combined system of steam stripping and the ASB. Provide the regulatory citation in MACT subpart S that applies to using two control devices as a treatment option.
23. Condensate report page 1-7, states that the continuous digester was modified. Provide a description of the modifications that were made. Also provide a list of federal regulations that apply to the digester.
24. Condensate report page 1-7, states that the #1 evaporator train was modified. Provide a description of the modifications that were made. Also provide a list of federal regulations that apply to the #1 evaporator train.
25. Condensate report page 1-8 states that the turpentine underflow started to be collected on 7/19/2021. Provide a discussion of where the underflow was piped prior to 7/19/2021, and provide a discussion of why the mill began to collect the underflow after 7/19/2021.
26. Page 2-6 states that curtains were installed in the ASB to direct flow in the ASB, and that sludge deposition has impacted the flow and not directing flow as originally designed. Provide the date the curtains were installed, a map of the location of the curtains and a discussion of the original design flow of the ASB. Provide a discussion as to how the sludge deposition has impacted the flow in the ASB, and provide a discussion of the corrective actions taken by the company to return the ASB flow back to the original design.
27. Page 2-8 states that the solids accumulation limits the amount of flow to some areas of the ASB. Provide a discussion of the corrective actions taken by the company to address this issue.
28. Page 2-8 states that the mill could not exactly follow the guidance in the technical document to subdivide the ASB. Provide a detailed explanation as to why the mill could not follow the technical document. Also, provide a discussion and justification as to why the mill decided to divide the ASB into three zones.
29. Page 2-13 and page 3-2 discuss the effective steam to feed ratio for the foul condensate steam stripper, and that the correlation would be used to monitor compliance with MACT Subpart S. Provide a discussion as to why the company wants to monitor this parameter, and provide the citation in MACT subpart S that requires this parameter.
30. Page 3-3, table 3-1, indicates that the foul condensate average H<sub>2</sub>S concentration on 7/9/2021 was about 2.5 times higher than the average H<sub>2</sub>S concentration on 7/11/2021. Provide a discussion as why there is a large variation in the concentrations.
31. Pages 3-7 and 3-8 indicate that low oxygen levels and the sludge deposition in zone 1 of the ASB the model predicted H<sub>2</sub>S generation from anaerobic digestion. Provide a discussion of the corrective actions the company is taking to resolve low oxygen levels and sludge deposition in the ASB.
32. Section 3.4 states in several locations that the results for the model were unexpected, and the summary of results in Table 3-3 appear to be inconsistent and unrepeatable. Provide a detailed explanation as to why the results were unexpected, and provide a detailed explanation to what the company expected the results to be. Also provide a discussion of the actions the company has taken to correct these issues, and timeline for the corrective measures to be completed.

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33. Appendix B, tracer study report table 1, indicates that the calculated retention time in the ASB was 3.7 days, and that the theoretical retention time was 4.7 days. Provide an explanation as to why there is a difference in retention time.
34. Appendix B, tracer study report page 2, indicates that the peak lithium concentration was detected in 1.3 days. Provide an explanation as the meaning and significance of the peak lithium concentration being detected more than 2 days prior to the calculated retention time of 3.7 days.
35. Appendix F, Page F-2, Appendix C, Fbio, indicates the average depth of zone 1, 2 and 3 are 4.5 feet, 3.2 feet and 3 feet, respectively. Provide the depth of the zones when the ASB first began operation.
36. Appendix F, Page F-4 indicates that the average residence times is 2.39 days (and appendix J indicates 2.15 days). Provide a discussion as to why the residence time is less than the calculated retention time of 3.7 days, and provide a discussion of the actions the company will take to increase the residence time.
37. Appendix G, table G-2, provides condensate steam stripper information. Provide a discussion as to why the stripped condensate methanol concentration was not included for 6/26/2021 through 7/8/2021.
38. Appendix I, table I-1, provides a comparison of the original and duplicate data for hydrogen sulfide, dimethyl disulfide, dimethyl sulfide and methyl mercaptan. The data shows large variation between the original sample results and the duplicate sample results. Provide a discussion as the why there was a large variation in the results.

If I can be of further assistance, please contact me at (803) 898-3856 or email me at [monroedn@dhec.sc.gov](mailto:monroedn@dhec.sc.gov).

Sincerely,



David N. Monroe  
Environmental Health Manager  
Source Evaluation Section  
SC DHEC Bureau of Air Quality

Cc: Compliance File 2440-0005

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