Weyerhaeuser

SUSTAINABLE FORESTRY INITIATIVE SFI-00008

Longview Lumber • PO BOX 518 • Longview, WA 98632

2901 Industrial Way
Weyerhaeuser Lumber Storeroom
Longview, WA 98632

July 12, 2024

Ms. Kelsey Brotherton, PE
Environmental Engineer
Washington State Department of Ecology
Waste 2 Resources, Industrial Section
P.O. Box 47600
Olympia, WA 98504-7600

Subject: Weyerhaeuser NR Company – Longview Lumber
NPDES Permit No. WA0991014
Written Report for Outfall 003B Flow Meter Failure

Ms. Holbrook:

This letter is to provide written follow-up information specified in permit condition S3.F(e) for a failure in the flow meter equipment resulting in missed flow measurements at the 003B outfall between 06:18 AM on June 20, 2024 and 07:55 on July 11, 2024. We have conducted an investigation to determine the root cause of this failure, resulting in the findings below.

Description of Incident

Weyerhaeuser has been working for some time to allow the flow meter used to measure flow of water out of outfall 003B to transmit data directly into the site's Programmable Logic Controller (PLC) rather than to a laptop located in the Timberlands Office Building (TOB). This change was being pursued in order to allow us to generate an alarm should the signal become interrupted for any reason while also eliminating the single point of failure that currently exists. Weyerhaeuser's IT department worked with the vendor (Moore Industries) to allow the signal from the instrument to be sent simultaneously to the site's PLC and to the TOB. Since the signal was being duplicated rather than changing the feed from the TOB to the PLC, there should have been no risk for data loss, which was confirmed by the vendor. On the morning of June 20, 2024, the change was made to allow the instrument to duplicate the signal. Our IT department then confirmed that the correct signal was still being transmitted to the TOB after the change and it was. No further checks were made to confirm system functionality. The system was left in this state until July 9, 2024.

On July 9, 2024 the data was sent from the TOB to the Environmental Manager for compilation into the monthly Discharge Monitoring Report (DMR). Upon reviewing the data it was noted that the exact same reading (2.369984 feet) had been being transmitted since 06:18, 2024. At this time, Weyerhaeuser staff confirmed that the laptop was still able to connect to the transmitter and that data was still being transmitted, but that the number remained static. This value was then compared to the display on the instrument, which was reading 2.375 feet. This indicated something was not working in the process of transferring the information from the instrument to the laptop. At this point, manual measurements began to be taken on an hourly basis at the 003B outfall. The reading on the instrument was confirmed with a tape measure to ensure it was accurate and it was confirmed that the reading would change when a piece of lumber was placed under the sensor (indicating it would react to changes in elevation), and then the instrument reading was recorded during these manual readings.

On July 11, 2024 the changes that had been made on June 20 were reverted and the system began to successfully collect data again.

Causes of Data Loss

The loss of data was the result of an unexpected error that occurred when changing the IP address used to transmit the signal from the instrument to the laptop in the TOB. Although checks were conducted afterwards to ensure that a signal was being transmitted and that it was correct, no checks were made to ensure that changes in pond elevation (or perceived pond elevation) would result in a change in the value being transmitted to the TOB. This is the only way that this error would have been caught, and even then it would have been unlikely as the display on the instrument does not have the resolution required to differentiate between the two readings (2.369 feet vs 2.375 feet).

It is still not fully understood why the change to IP addresses made caused the error in the first place.

Steps to Reduce, Eliminate, and Prevent Recurrence

In order to eliminate the possibility of recurrence for this error or one similar to it, the Longview Export Yard is continuing down the path of having the flow meter at the 003B outfall transmit into our PLC rather than to the TOB. Once the information is fed into our PLC, we can then have it generate alarms should the signal stop transmitting. With the learnings from this event we will also be adding an alarm to generate an alarm should the signal not change for too many subsequent readings (3 consecutive readings with zero change in elevation). This additional alarm trigger will also be applied to the signal being received at 003B to account for any similar failure occurring at that outfall.

If you have any questions regarding this matter, please contact me at 360-355-3707, or our Facility Environmental Manager, Carter Marr at Carter.marr@weyerhaeuser.com or 780-851-3378.

In accordance with Permit Condition G1.4, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,

DocuSigned by:
Brian Hamilton
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Brian Hamilton

Operations Manager Longview Sort Yard