Tennessee Operations
Aerospace and Automotive Products
2300 North Wright Road
Alcoa, TN 37701-3141 USA

ELECTRONIC COORESPONDENCE

June 23, 2024

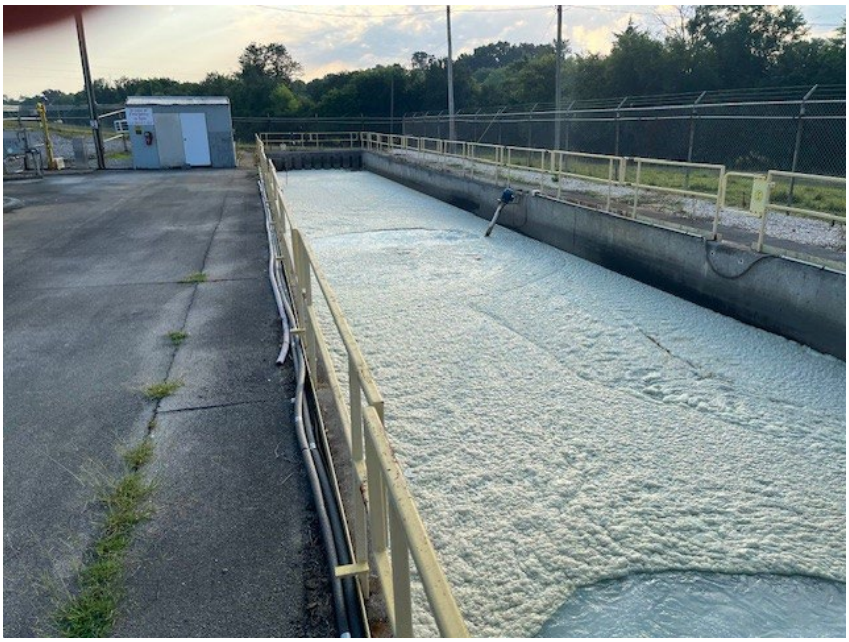
Tennessee Department of Environment & Conservation
Division of Water Resources
Att: Sarah Snyder
3711 Middlebrook Pike
Knoxville, TN 37921

Re: TN0067199 – ILLICIT DISCHARGE TO DUNCAN BRANCH – 80" USED ROLLING OIL, JUNE 2024

Dear Ms. Snyder:

As required by Arconic US, LLC – North Plant's National Pollutant Discharge Elimination System (NPDES) permit (TN0067199) – Section 2.3.1, a 24-hour report of noncompliance is initiated. Arconic US, LLC became aware of an illicit discharge to Duncan Creek via north plant outfall 001 at approximately 8:00 am EDT. Notification was made after routine outfall inspections by facility contractors noticed a floating foam film on the surface of Outfall 001 prior to discharge to Duncan Branch.

Figure 1. (Foam Film on Surface of 001 Basin)



Foam visible in the outfall is often caused by the introduction of various oils in the storm drain system, which tends to foam through the agitation created by the aerators that are situated throughout the length of the basin.

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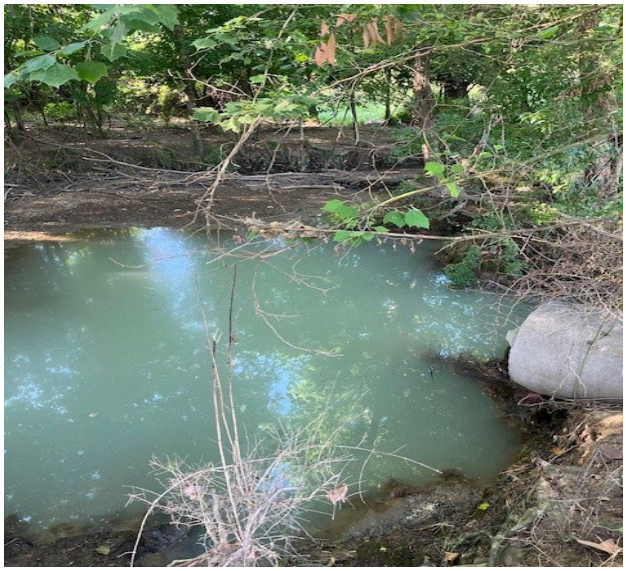
Additionally, the discharge point of 001 to Duncan Branch was inspected and turbid color contrast with the upstream portion was noted by the inspector. As stated in the NPDES permit section 1.1.2, “The authorized discharge(s) shall not result in total suspended solids, turbidity, or color in such amounts or character that will result in any objectionable appearance to the water, considering the nature and location of the water.” This color contrast is in direct violation of the terms and conditions of TN0067199.

Figure 2. (Color Contrast Observed in Duncan Branch)



An internal communication was initiated to departmental personnel to investigate their respective areas for signs of upset conditions. Plant personnel reported that an upset condition was observed at the 80” Rolling Mill used oil tank. A PLC malfunction was reported that controlled the level sensors for used oil, and new oil tanks. Because the level sensor component of the PLC was compromised, the system thought the clean oil tank was full, and the dirty oil was empty, and called for oil to be added to the dirty oil tank. This resulted in an overflow for some time, and the area was inundated with oil until it reached the nearest storm drain. A sample was taken of the oil and compared to what was taken from the outfall 001 basin and compared through internal quality control personnel. The basin oil was found to have a 25 viscosity, and Ester at 26% which is commensurate with the facilities hot rolling oils.

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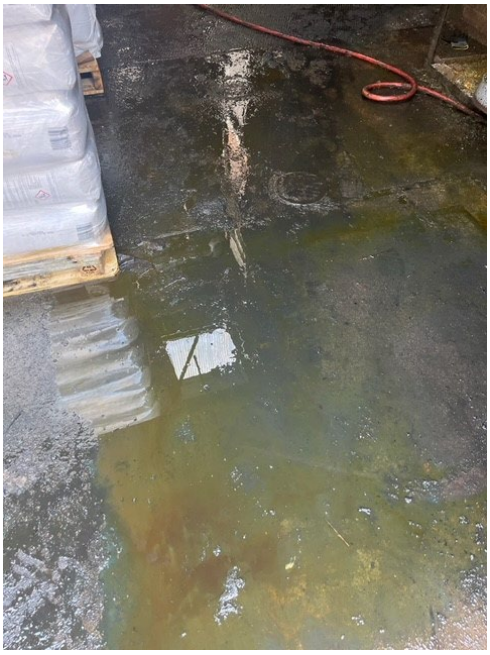
Figure 3. (Oil Overflow at Used Oil Tank)



Discharges to Duncan Branch were restricted by closing off all discharge ports stemming from 001. Storm drains were inspected to confirm that no additional product was entering the basin from the plant. The area where the spill had occurred was immediately cleaned up upon discovery and the drain that was initially impacted was sealed off with a drain plug. The 001 basin has an internal spill control system that allows it to be pumped back to a holding tank at the facility's wastewater treatment plant. The basin was pumped back, while regular process flows were diverted utilizing the facility's "01E" basin.

We as a facility are still in the process of evaluating the issue and determining a root cause to the PLC problem. We will be conducting a group problem solving analysis to analyze the problem from different angles to identify if process improvements or additional measures need to be taken to reduce the likelihood of similar events in the future. This process will be done in collaboration with multiple levels of leadership throughout the plant.

In the meantime, if you have any questions or would like to discuss, please contact Ryan Hennessey at 865-977-2403 or ryan.hennessey@arconic.com with any questions.

Sincerely,

Ryan Hennessey
Environmental Engineer
Tennessee Operations

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