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Memorandum

To: The Honorable Board of Directors

From: Navid H. Mehram, P.E., Wastewater Chief Operating Officer

CC: GLWA Executive Leadership

Date: March 6, 2024

RE: Sulfur Dioxide (SO₂) Train Car Derailment

On February 26, 2024, a partial derailment occurred involving a full 90-ton Sulfur Dioxide (SO₂) tank car at the Great Lakes Water Authority (GLWA) Chlorination Facility while attempting to relocate it into the De-Chlorination Bay. There was no damage to the tank car. The unit remained upright, and no team members were injured. On February 27, 2024, GLWA authorized the mobilization of Train Master, an approved vendor for Conrail, to place the tank car back on the track and move it into the SO₂ bay.

The GLWA operates the Chlorination Facility that houses and processes the Chlorine (Cl) and Sulfur Dioxide (SO₂) which are introduced into the plant effluent for disinfection and de-chlorination, respectively, prior to discharge to the environment. Both chemicals are delivered to GLWA on 90-ton tank cars. The tank cars are frequently received at the Chlorination Facility from Conrail Rail. Once the tank cars are inspected and received by GLWA team members, Conrail unhooks and exits the facility, leaving the full tank cars. The tank cars are then relocated by GLWA team members into the building bays through several track switches which allow the rail cars to be towed either to the Chlorination or De-Chlorination facility via a rail car mover.

On February 26, 2024, a delivery of SO₂ was received at the facility. While attempting to relocate the SO₂ tank car into the De-Chlorination Bay, the track switch released, and the tanker car's back wheels followed the wrong track and derailed the tank car. The derailment occurred on the first switch entering the De-Chlorination complex. Immediately following the incident, GLWA and the HAZMAT team inspected the tank car to ensure no damage or leaks to the tank. Shortly after, the team contacted Conrail regarding recommendations to correct the derailed tank car. The GLWA authorized the mobilization of Train Master, an approved vendor for Conrail, to place the tank car back on track and place it into the SO₂ bay. Furthermore, interim containment actions include the rail car moving suspended on effected tracks, inspection and assessment of effected rail tracks and switch and necessary repairs and upgrades are scheduled.

GLWA initiated an investigation to determine the cause of the derailment. The investigation included interviews, Statements of Facts from GLWA team members, document review and video review from security cameras. The investigation determined that the rail track switch either malfunctioned or became dislodged, causing the rails to alter their position and was the principal cause for the derailment.

Based on the following, GLWA will plan to establish a Standard Operating Procedure (SOP) for the track switching and tank car transport and establish appropriate preventive maintenance protocol to ensure proper operations.