O.Reg. 206/24 – Air Pollution – Discharge of Benzene from INEOS Styrolution Hourly (June 24, 2025)

Ontario Regulation 206/24: Air Pollution – Discharge of Benzene from INEOS Styrolution ("O.Reg. 206/24") requires a report to be submitted to the District Manager of the Ministry of the Environment, Conservation and Parks' ("MECP") Sarnia District Office, the Chief of the Aamjiwnaang First Nation ("AFN"), and the Ministry's Spills Action Centre within 14 days after an exceedance notification. This report describes the benzene concentration measured at eGC#3 above 90 µg/m^3 over any hour that occurred on June 24, 2025 (MECP Reference #1-0MRZH9).

This report contains the information requested in the regulation to the best of our abilities, with the understanding that eGC emission contributors cannot be considered with 100% certainty, as it is difficult to find exact source of emissions from such low concentrations. However, INEOS Styrolution has made every effort reasonable to attempt to identify any potential processes, events and/or sources from onsite activities during this period that may have contributed to the final value. The attached table summarizes these findings.

Summary of the Hourly Exceedance on June 24, 2025:

Time Period	Measured Benzene Concentration (Rolling Hourly Average - µg/m^3)	Wind Direction	Wind Speed (km/hr)
09:10	97.6	WSW	8.2

Analysis of the Contravention:

eGC#3 is located on the east side of Styrene II (see Figure 1) next to the hazardous waste laydown area. During this period, the site remains shutdown with process units and most piping decontaminated, and minimal activities occurring which could produce benzene emissions. The alert at eGC#3 was a single, 10-minute spike at 09:10 that caused an exceedance of the hourly rolling average threshold of 90µg/m^3 (see Figure 2). Our third-party consultant confirmed that the unit calibrations passed and that the reading appeared valid.

On June 24, 2025, at 09:25, the site received an exceedance alert from eGC#3. At that time, an oily water vacuum truck was offloading material into tank MT301, which has internal floating roof control designed to reduce vapour emissions and loss in storage tanks. Operations immediately stopped all work when the alert was received and checked various other sources around eGC#3 as potential benzene source contributors and no other benzene emissions, equipment leaks, or equipment malfunctions were identified. Given the wind direction and the proximity to eGC#3, it is believed that normal rim and deck seal losses from tank MT301 was the cause of the increased benzene emissions. Tank transfers into MT301 was stopped and Operations is currently working to connect tank MT301 to the thermal oxidizer located at MT303 to further control tank benzene emissions moving forward.

Corrective Action:	Implementation Date:
Investigation initiated after the exceedance alert was received.	June 24, 2025.
Investigation around eGC#3 to find any potential sources of benzene that may have contributed to the exceedance.	June 24, 2025. Elevated emissions from tank fittings at the top of tank MT301 believed to be the source of increased emissions.
Stopped transferring oily water into tank MT301.	June 24, 2025. The transferring of oily water into tank MT301 was stopped, reduced readings at eGC#3 observed, and no other alerts received.
Connect and commission tank MT301 to the thermal oxidizer at MT303.	Week ending July 11, 2025.

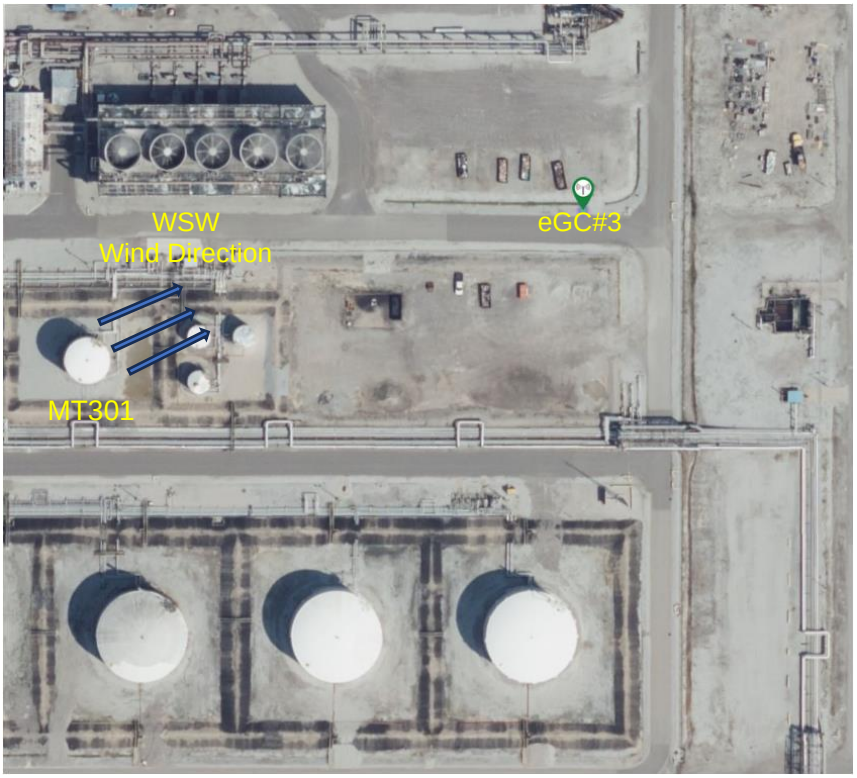

Figure 1: Aerial view of eGC#3 and the proximity of tank MT301 (including wind direction)

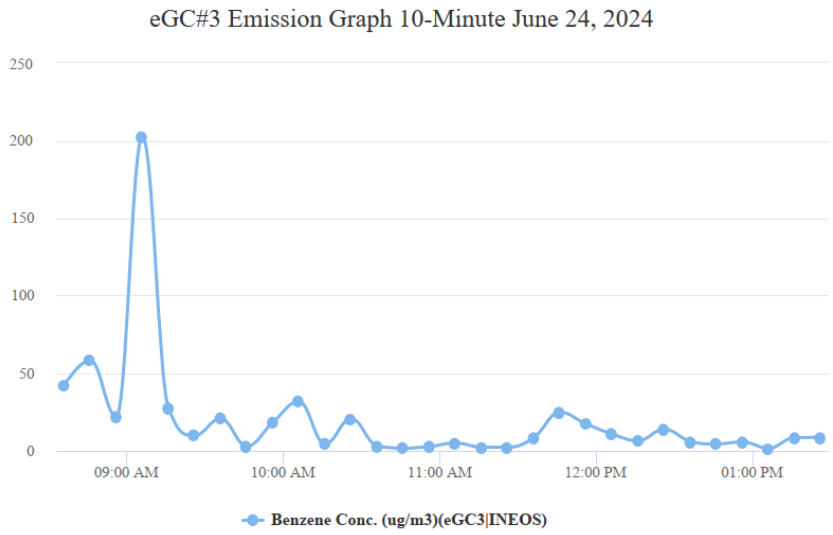

Figure 2: eGC#3 10-minute benzene emission graph capturing the elevated reading that skewed the hourly-average