

**O.Reg. 206/24 – Air Pollution – Discharge of Benzene from INEOS Styrolution
(June 11-13, 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 on the eGCs above 90 µg/m³ over any hour or 30 µg/m³ over any rolling 24-hour period that occurred during the period of June 11-13, 2025 (MECP Reference #1-OKFOLL and 1-OKR2B).

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 Exceedances from June 11-13, 2025:

Time Period	Measured Benzene Concentration (Rolling Hourly Average - µg/m ³)	Wind Direction	Wind Speed (km/hr)
June 11, 2025; 20:00	eGC#3 - 119.98	SW	8.96
June 11, 2025; 22:00	eGC#3 – 226.55	W	3.18
June 11, 2025; 23:00	eGC#3 – 163.14	SW	5.62
June 12, 2025; 17:00	eGC#2 – 120.65	E	8.45
June 12, 2025; 23:00	eGC#1 – 97.71	ENE	5.69
June 13, 2025; 11:00	eGC#2 – 155.00	ENE	10.24

Summary of the Rolling 24 Hour Exceedances from June 11-13, 2025:

Time Period	Measured Benzene Concentration (Rolling 24-hour Average - µg/m ³)	Wind Direction	Wind Speed (km/hr)
June 11, 2025; 23:06	eGC#3 – 30.73	SE	10.48

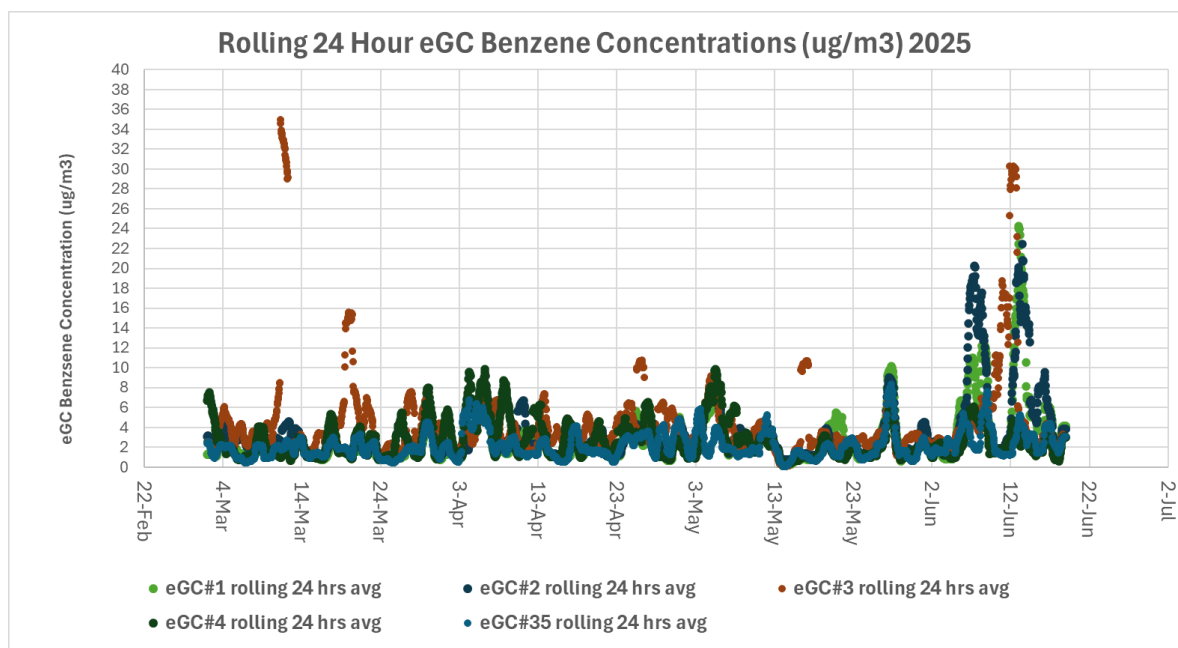
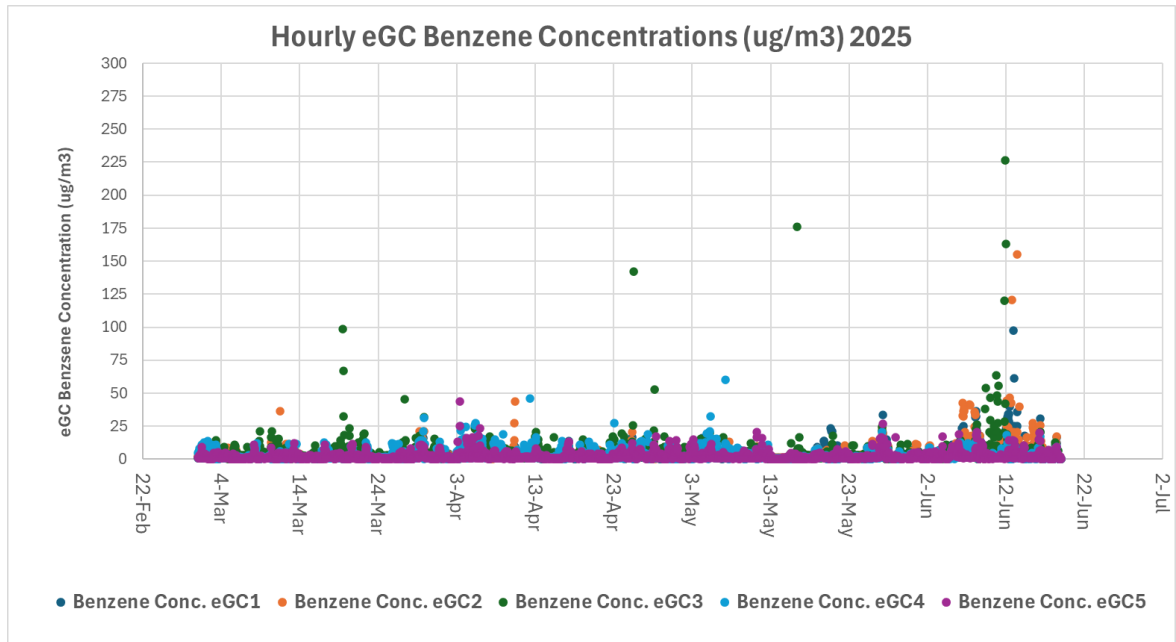
Analysis of the Contravention:

From June 2nd to June 13th, 2025, the site had an external contractor completing removal of residual hydrocarbons from the pipes and equipment within the processing units and in some lines connected to storage tanks. This work was completed as part of the final decommissioning of the process equipment and piping at the site. A significant amount of equipment was brought to site and connected to the existing systems to provide an enclosed, safe system for the removal of hydrocarbons. The site process equipment is complex with large vessels and miles of piping that has been in an idled state for over a year. Despite the extensive planning by both the external contractor and internal resources, the site experienced the exceedances listed above during the process. Our third-party environmental consultant confirmed that the unit calibrations passed and that the readings appeared valid.

The exceedances occurred due to cumulative impact of various activities and emissions sources related to the site decommissioning. A key contributor was the temporary cooling system provided by the external contractor. This system consisted of two heat exchangers and a knock-out drum, intended to cool the mixed steam (with added chemistry)/hydrocarbon stream before it entered a tank for separation. This system was vented to flare to remove any light or non-condensable material. The temporary system was not able to adequately cool the process steam, resulting in

hotter effluent to the tank, and hotter cooling water to the sewer system. Based on process data and handheld readings obtained over the course of the three days, the evidence suggests that there were the following cumulative sources leading to the exceedances:

1. Hotter water to the sewer system produced emissions from historical contamination.
2. A hotter process stream resulted in a higher temperature in MT-301, which resulted in elevated emissions, despite its internal floating roof control system.
3. Fugitive leaks in the piping/equipment, which were promptly detected and rectified.
4. Increased flaring, as part of the removal of hydrocarbon from the system



Figures: eGC hourly and rolling 24 hour benzene emission graph