

Introduction:

As per Item 1.4 of the ECA Amendment, INEOS Styrolution is submitting this written update on the site's Suspension Plan and the various benzene reduction projects occurring on site. In light of INEOS Styrolution's Sarnia site closure announcement, the site is undertaking significant evaluation of existing benzene emissions including robust site-wide ambient air quality modelling which will function as the roadmap for site emissions reduction/control efforts, subsequent restart plans and overall compliance with the Ministry of the Environment, Conservation and Parks (MECP) benzene limits in O.Reg.206/24. As we proceed through the benzene emissions assessment/modelling and project planning in the coming months, we expect there to be changes, perhaps some significant, to the Suspension Plan and ECA Amendment. Our goal is continued compliance with regulatory limits and orders and we ask for MECP's continued cooperation and consideration as our plans and targets evolve. Additionally, ongoing open communications with Ministry of the Environment, Conservation and Parks (MECP), Aamjiwnaang First Nation (AFN), and Environment and Climate Change Canada (ECCC) is crucial. On September 5, 2024, a joint monthly meeting will take place with the Ministry of the Environment, Conservation and Parks (MECP), Aamjiwnaang First Nation (AFN), and Environment and Climate Change Canada (ECCC) to discuss this update further along with evolving plans.

We are pleased to announce the launch of our Sarnia website: www.ineossarnia.com

This website is designed to serve as a publicly accessible, transparent resource for visitors to find emissions data, press materials, FAQs, and insights into the value that INEOS Styrolution and our employees bring to the Sarnia community. All written monthly updates regarding the site's benzene reduction efforts will be maintained on this website.

Benzene Removal from Benzene Storage Tanks (Tank 8 and MT303):

In order to expedite the approval process, MECP agreed to receive INEOS Styrolution's submission for Item 1.3 of the ECA Amendment in parts, and to review and consider approval of each part separately. On July 16, 2024, INEOS Styrolution submitted a benzene removal plan (referred to as "Part 1 submission"), along with a third-party modelling assessment for each step of the plan. Feedback received from MECP and AFN was incorporated into revised submissions, which were provided to MECP on July 24, 2024 and August 7, 2024.

- On July 25, 2024, INEOS Styrolution received MECP approvals for Part A of the benzene removal plan (transferring material above the internal floating roof height). Subsequently, INEOS Styrolution began transferring benzene via pipeline from tank MT303 to a third-party offsite on August 9, 2024 to August 11, 2024. One more transfer will be scheduled over the next few weeks, which is required prior to the implementation of Part B of the benzene removal plan.
- On August 14, 2024, INEOS Styrolution received MECP approvals for Part B of the benzene removal plan (transferring material below the internal floating roof height), which encompassed INEOS Styrolution's alternative plan to seal tank MT303 and further reduce emissions during the benzene removal from Tank 8.
 - Steps are currently being taken towards sealing tank MT303 and ensuring that compliance is being met for both the MECP approval conditions and the federal interim order. Appendix A includes a tentative schedule (start and duration) proposed for Part B of the benzene removal plan, which anticipates completion before October 16, 2024.

INEOS Styrolution is currently engaging with third-party companies to consider whether further/additional engineering is possible to further reduce emissions from Tank 8. Any changes to Tank 8 and/or the benzene removal plan will be provided in writing to MECP, AFN, ECCC and the City of Sarnia if applicable.

Suspension Plan:

On July 30, 2024, INEOS Styrolution submitted a revised suspension plan (referred to as "Part 2 submission"), which describes operations at the Sarnia site during the suspension period including

winterization and transfers of material to comply with the federal interim order requirements. On August 14, 2024, INEOS Styrolution received MECP approvals for the suspension plan.

Winterization of Units:

Winterization is required for the site to ensure that equipment continues to be safely maintained and to prevent equipment rupture or release over the winter months. As a result, winterization activities were initiated over the last few weeks of August. Material from the Styrene unit was de-inventoried and material from the off-spec tank was transferred to railcars via pipeline. All emissions were controlled by the railcar loading incinerator and flare system. As per the Suspension Plan, de-inventory activities of the EB unit were internally assessed and it was determined that emissions would not be elevated as a result of these activities. Therefore, de-inventory of the EB unit will commence over the next few weeks.

Repair of LDAR DOR Items:

As per Item 1.2(e) of the ECA Amendment, INEOS Styrolution must repair all LDAR components on the Delay of Repair list. To address this requirement, Operations identified a way to safely isolate 1PP-357B (Tank 8 pump) in order to deinventory the pump and replace the pump seal (LDAR leaker). Emissions were minimized while this LDAR repair was completed on August 28, 2024.

Alternative Compliance Plan – ECCC Interim Order:

In addition to the benzene storage tanks (Tank 8 and MT-303), ECCC's Interim Order requires Tank MT109 (off-spec material for the ethylbenzene unit) and MT401 (oily water tank) to be sealed with vapour control system if they remain in high benzene service. INEOS Styrolution's Alternative Compliance Plan was approved by ECCC on July 18, 2024, which requires the benzene concentration in tanks MT109 and MT401 to be reduced below 20% wt. before October 16, 2024. INEOS Styrolution will be working towards completing this over the next few weeks as per the described activities in the Suspension Plan.

Benzene Reduction Projects:

In light of the site's recent closure announcement, INEOS Styrolution is completing site-wide benzene air emissions modelling to assess reduction projections and feasibility of re-start in order to meet the benzene compliance limits of O.Reg. 206/24. Several of these benzene reduction projects only provide impact on the premise of restarting. As a result, benzene reduction projects are temporarily on hold until this assessment has been completed.

Sump Cleaning:

The wastewater treatment system has currently ceased normal operations during the suspension period, which INEOS Styrolution would like MECP approvals to minimize emissions of benzene for the purposes of section 33 of the PCIS. The majority of the basins continue to collect water (rainwater, condensate, or run-off from within the process units), which is routed to a number of sumps on site. There is no hydrocarbon routinely or expected to enter SG202; alternatively, floating roof storage tanks are accepting process water. Benzene levels in SG202 are currently low, as confirmed by the latest DMAP samples.

During the Suspension Period, SG201 continues to collect process water and condensate from the units. The benzene levels in the wastewater sumps are very low right now (as per DMAP samples).

However SG212 continues to be utilized to collect water, condensate and residual hydrocarbons that is washed from process equipment and piping for decontamination. As a result, INEOS Styrolution is planning a project to minimize benzene emissions from this sump vent with at least 95% removal efficiency. Further engagement with MECP will occur in the coming weeks to ensure it meets MECPs requirements.

INEOS Styrolution is inquiring with vendors that specialize in cleaning sediment from sumps with appropriate emissions controls. Cleaning out the wastewater sumps will be initiated once technical assessments are completed and emissions control solutions are identified and implemented such that benzene emissions are sufficiently reduced to meet compliance limits.

4-Week Forecast – Emission-related Activities:

The following activities are anticipated to occur in the month of September:

1. Transfer off-spec material to railcars for winterization and compliance with the federal interim order.
2. De-inventory ethylbenzene unit and transfer to railcars for winterization.
3. Continue to implement Part A of the benzene removal plan.
4. Implement Part B of the benzene removal plan to seal Tank MT303 and then remove all benzene from Tank 8. A break-down of tentative scheduling for this activity is included in Appendix A.

Ongoing communication related to these activities and specific timing will take place during the daily calls with MECP and AFN.

Investigation of Benzene Sources:

There were two benzene exceedances reported in August during the Suspension Period:

- PLM Station #10 reported 21.8 $\mu\text{g}/\text{m}^3$ over the 2-week period of July 30, 2024 – August 13, 2024 (which exceeds the O.Reg.206/24 limit of 14 $\mu\text{g}/\text{m}^3$ averaged over 2-weeks).
- eGC #3 reported 125.65 $\mu\text{g}/\text{m}^3$ on August 28, 2024 at 9:00am (which exceeds the O.Reg. 206/24 limit of 90 $\mu\text{g}/\text{m}^3$ hourly).

Investigative handheld monitoring was conducted immediately after notification was provided to MECP, SAC and the AFN to investigate potential sources of benzene that may have caused the exceedance. As per O.Reg. 206/24, additional details will be provided within 14 days after the notification was provided. The root cause analysis report will summarize the investigation and include corrective actions with implementation dates to reduce the risk of a similar discharge happening again.