

## 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.

A Sarnia website ([www.ineossarnia.com](http://www.ineossarnia.com)) was launched 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 transferred benzene via pipeline from tank MT303 to a third-party offsite on the following dates:
  - August 9, 2024 to August 11, 2024, and
  - September 10, 2024 to September 12, 2024.
- 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.
  - Sealing of tank MT303 is currently being finalized before any benzene transfers occur from Tank 8, to ensure that compliance is being met for both the MECP approval conditions and the federal interim order. Please refer to the updated schedule for the benzene removal plan in Appendix A, which anticipates completion before October 16, 2024.

## 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. This is why material from the units and off-

spec storage tanks were de-inventoried and transferred to railcars via pipeline over the last two months. All emissions were controlled by the railcar loading incinerator and flare system.

### Repair of LDAR DOR Items:

INEOS Styrolution has repaired all LDAR components on the Delay of Repair list, as per Item 1.2(e) of the ECA Amendment.

### 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 taken out of high benzene service (i.e. benzene concentration below 20% wt) before October 16, 2024. Over the last month, the material in tank MT109 has been transferred to another off-spec storage tank and diluted repeatedly to reduce its benzene concentration. In addition, tank MT401 has been skimmed and diluted as well. INEOS Styrolution has scheduled a third-party company to take samples from these tanks in early October to verify compliance, as per the ECCC Interim Order requirements.

## 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 and Emissions Control:

The wastewater treatment system has currently ceased normal operations during the suspension period, which INEOS Styrolution would like MECP approvals to minimize benzene emissions from the sumps 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 committed to minimize benzene emissions from this sump vent:

	Milestones	Status	Expected Completion Date
1	Complete design, sizing and order equipment.	In Progress	February 28, 2025
2	Complete Process Safety Hazard Review and MOC reviews.	Incomplete	
3	Update carbon breakthrough monitoring program.	In Progress	
4	Install carbon beds with at least 95% destruction efficiency to SG-212 sump vent, with spare carbon available as needed.	Incomplete	

Further engagement with MECP will occur in the coming weeks to ensure this project meets the PCIS requirements.

INEOS Styrolution has inquired 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 installed 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 October:

1. De-inventory ethylbenzene unit and transfer to railcars for winterization.
2. Implement Part B of the benzene removal plan to seal Tank MT303 and then remove all benzene from Tank 8. 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.