

Introduction:

As per Item 1.4 of the ECA Amendment and Item 7 of Order No. 1-208079516, INEOS Styrolution is submitting this written update on the site's Suspension Plan and the various benzene reduction projects occurring on site. Also as publicly announced on June 11, 2024, INEOS Styrolution has decided to permanently close the Sarnia Styrene monomer production site by June 2026. Given the closure decision, the site is undertaking significant evaluation of existing benzene emissions including robust site-wide ambient air quality modeling which will function as the roadmap for site emissions reduction/control efforts, subsequent re-startup plans and overall compliance with the Ministry of the Environment, Conservation and Parks (MECP) benzene limits. As we proceed through this benzene emissions assessment/modeling 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 July 4, 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.

Benzene Removal from Benzene Storage Tanks (TK-8 and MT-303):

The benzene material from the benzene storage tanks will be removed and subsequently transferred offsite. The tank de-inventorying will not occur simultaneous so as to reduce emissions from landing the roof and the cumulative impacts to the fence line and community.

- The tentative start date of July 15th to remove benzene from storage tanks does not appear feasible due to the following:
 - Item 1.3d of the ECA Amendment requires INEOS to implement the Suspension Plan, as approved by the MECP Director. INEOS has not received approvals from MECP, which delays the ability to remove benzene from the storage tanks. The comments in MECP's response dated June 19, 2024 were very detailed and will require a few weeks for INEOS to sufficiently address them. A revised Suspension Plan and Air Monitoring Strategy will be provided to MECP and AFN by July 16th, 2024.
 - There is a cascade of coordinated activities required to remove benzene from the storage tanks. First and foremost, INEOS requires written approval from MECP before proceeding with these steps. This includes securing resources from various third-party suppliers, as well as coordinating with third-party transportation services to receive and transport benzene (availability is limited). Logistical complexity of this non-routine activity should not be underestimated. It is currently unclear when MECP will provide approvals for the Suspension Plan so coordination with all these third-party entities is pending/ongoing.
- ECCC Interim Order was received on May 17, 2024, which changed the scope and timing of tank de-inventory activities. The Alternative Compliance Plan and additional information was submitted to ECCC on May 30, 2024 and June 12, 2024 respectively. INEOS Styrolution is still awaiting a response from ECCC to determine a path forward (see Section d below).

a) Additional Tank De-inventory

In addition to the benzene storage tanks (TK-8 and MT-303), Environment and Climate Change Canada's (ECCC) 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. On May 30, 2024, INEOS Styrolution submitted an Alternative Compliance Plan to request additional time for assessing the requirements, evaluating emissions scenarios/impacts and developing a plan that prioritizes health and safety. Third-party engineering companies provided confirmation to ECCC that meeting the timelines required by the Interim Order was not possible to execute this work safely.

Additional information was provided to ECCC on June 12, 2024, including air monitoring data and options being considered for complying within the time period set out in subsection 20(4) of ECCC's Interim Order. Engagement with ECCC is ongoing to develop a path forward.

INEOS Styrolution is currently experiencing regulatory challenges with addressing both the requirements of MECP's ECA Amendment and ECCC's Interim Order:

- ECCC's Interim Order requires tanks to be sealed with vapour control systems within 21, 28, 35, and 45 days, which directly conflicts with MECP's direction to delay any tank transfer activities until after Aamjiwnaang First Nation's (AFN) community event scheduled in late June. INEOS Styrolution has requested ECCC to extend the timelines in order to be considerate of our close neighbours and also to account for required MECP approvals. Response from ECCC is pending.
- ECA Amendment and O.Reg. 206/24 has required INEOS Styrolution to remain shutdown for an extended period of time, including through the upcoming winter months (which is an unprecedented situation with risk of damage to equipment which could result in emissions). Tank MT109 is the off-spec tank that would receive material from de-inventorying equipment required for winterization and LDAR repairs. Winterization and de-inventory is necessary before proceeding with any MT109 tank de-inventory activities required by ECCC's Interim Order.
 - Item 1.2e of MECP's ECA Amendment requires INEOS Styrolution to repair all components on the LDAR Delay of Repair list prior to restarting operations.
 - Significant winterization planning is required to de-inventory and prevent equipment rupture. Winterization of this fashion is a non-routine activity that requires careful planning, risk assessment and also logistical considerations on top of emissions mitigations. Increased off-spec material will need to be removed off-site by railcar.
- Tank MT401 is a critical part of the site's wastewater system. The site's wastewater system is required for safely decontaminating tanks and equipment and handling large rainfall events. INEOS requires more time to develop a plan to mitigate the impact on the site's wastewater system if required to take MT401 out of service. INEOS will operationally manage the material in MT401 to ensure it remains below 20% benzene in order to meet the requirements of the ECCC Interim Order.

b) Sump Cleaning

INEOS Styrolution is inquiring with vendors that specialize in cleaning sediment from sumps with their own appropriate emissions controls. Cleaning out the wastewater sumps will begin once emissions control solutions are identified and implemented such that benzene emissions are sufficiently reduced to meet compliance limits. Currently the SG202 is not being utilized to manage hydrocarbons and are very low contributors towards benzene emissions; however, they are necessary to manage rainwater on site.

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, all projects are temporarily on hold until this assessment has been completed.

4-Week Forecast – Emission-related Activities:

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

1. Transfer off-spec material to railcar
2. Begin de-inventory of ethylbenzene unit to off-spec tank for winterization
3. Isolate and decon PP-357 (Styrene 1 benzene pump on the LDAR Delay of Repair list) for LDAR repair

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