

**Introduction:**

As per Item 1.4 of the ECA Amendment, INEOS Styrolution has prepared a written update on the site’s Suspension Plan and the various benzene reduction projects occurring on site. On June 3, 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 further discuss this update.

**Benzene Removal from Storage Tanks:**

The material from each tank will be decontaminated at separate periods of time to reduce emissions from the vents and cumulative impacts to the fence line.

- Third-party supplier has proposed a contract for utilizing their dock for managing Sarnia’s benzene supply – securing a vessel around July 15<sup>th</sup> appears feasible.
- Evaluating information and proposals provided by emission control companies to establish a plan for benzene tank decontamination.
- ECCC Interim Order was received on May 17, 2024, which will increase the scope of tank cleaning activities. Currently reviewing requirements and determining a path forward (see Section d below).

**a) Planning for tank cleaning**

Action	Tentative Start Date	Status
Engage with third-party emissions control and tank cleaning companies to evaluate options for tank cleaning	May 10, 2024	Ongoing
Make arrangements with third-party supplier dock and barge	May 10, 2024	Ongoing
Complete modelling assessment to estimate emissions from tank cleaning	June 10, 2024	Incomplete
Obtain TSSA and MECP approvals for Thermal Oxidizer	June 10, 2024	Incomplete
Share updated Suspension Plan with MECP, AFN and ECCC	July 1, 2024	Incomplete

**b) MT303 Tank Cleaning**

Action	Tentative Start Date	Status
Pumping bulk material before landing internal floating roof	July 15, 2024 Exact date unknown – pending approvals and availability of Barge/Loading Dock	Incomplete
Removal of heel from tank	July 22, 2024	Incomplete

Action	Tentative Start Date	Status
Tank cleaning	July 29, 2024	Incomplete

### c) Tank 8 Cleaning

Action	Tentative Start Date	Status
Pumping material from Tank 8 before landing roof	July 29, 2024 Exact date unknown – pending approvals and availability of Barge/Loading Dock	Incomplete
Removal of heel from tank	August 12, 2024	Incomplete
Tank cleaning	August 19, 2024	Incomplete

### d) Additional Tank Cleaning

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, in addition to the benzene tanks. On May 30, 2024, INEOS Styrolution submitted an Alternative Compliance Plan to request additional time for assessing the requirements 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. 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 hold-off any tank cleaning 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.
- 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. Tank MT109 is the off-spec tank that would receive material from decontaminating the equipment required for these LDAR repairs. This work is necessary before proceeding with any MT109 tank cleaning activities required by ECCC's Interim Order.
- 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, as required by the MECP ECA Amendment and ECCC's Interim Order. 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.

### e) 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 systems have been installed on the sumps.

**Benzene Reduction Projects:**

**a) Mobile Drain System on Cart**

	<b>Milestones</b>	<b>Status</b>	<b>Expected Completion Date</b>
1	Complete design, piping drawings, concept and procedure	In Progress	July 7, 2024
2	Construct mobile pump	Incomplete	July 7, 2024
3	Construct piping to common areas	Incomplete	July 7, 2024
4	Development of new procedures, Operations input and training, complete MOC process and safety reviews	Incomplete	August 31, 2024
5	Commission and start-up equipment, pending approvals	Incomplete	October 31, 2024
6	Ongoing evaluation and improvements	Incomplete	November 30, 2024

**b) Permanent pump/piping from MS210 to MS202**

	<b>Milestones</b>	<b>Status</b>	<b>Expected Completion Date</b>
1	Complete design, P&IDs, piping drawings, concept and procedure	In Progress	August 30, 2024
2	Size and order pump (6 weeks estimated delivery time)	In Progress	October 31, 2024
3	Complete Process Safety Hazard Review and MOC reviews and develop site safety procedures for new operating scenario	In Progress	November 30, 2024
4	Construct piping	Incomplete	March 1, 2025
5	Start-up and commission pump and piping	Incomplete	March 30, 2025

### c) Manhole Emission Eliminators

	Milestones	Status	Expected Completion Date
1	Size and order manhole emissions eliminators for MH031, MH037, MH055, MH075, and MH085, along with spare carbon modules	Complete	August 31, 2024
2	Develop carbon breakthrough monitoring program	In Progress	
3	Develop waste management program to safely dispose spent carbon	In Progress	
4	Complete MOC process and safety reviews. Install manhole emissions eliminators	In Progress	

- Purchase Order was issued to company on May 16<sup>th</sup>.
- Manhole emission eliminator units were assembled and packaged by company (May 16<sup>th</sup> - May 29<sup>th</sup>).
- Manhole emission eliminator units were shipped on May 31<sup>st</sup> (estimate of 4 weeks delivery time).

### d) Vapour Recovery and/or Control Device for MS403, SG201, and SG202

	Milestones	Status	Expected Completion Date
1	Perform enhanced wastewater system emissions calculations, mapping and modeling to quantify benzene emissions and reduction potential.	In Progress	July 31, 2024
2	Develop Engineering design package and P&IDs. Complete Process Safety Hazard Analysis and reviews including design for winterization and maintenance.	In Progress	October 31, 2024
3	Complete sizing, datasheets, order equipment (control valves, PSVs, PVRVs, etc.)	Incomplete	January 1, 2025
4	Complete isometric piping drawings for permanent piping.	Incomplete	January 1, 2025
5	Submit TSSA application for variance approval and complete TSSA inspection	Incomplete	March 30, 2025
6	Commission and start-up equipment, pending approvals.	Incomplete	June 1, 2025

- Currently gathering data to begin wastewater system emissions calculations and determine where additional information is required for modelling.
- Engaging with third-party consultants to assist with benzene mapping and reduction potential of site.

### e) Tank MT302 Conversion to Benzene Service

	Milestones	Status	Expected Completion Date
1	Transfer ethylbenzene from MT302 to tank MT305D	Complete	October 31, 2024
2	Complete decontamination of MT302	Complete	
3	Complete MOC and process safety reviews.	Complete	
4	Complete regulatory inspection and repairs	In Progress	
5	Install new equipment, including internal floating roof, N2 gas blanketing system, PVRV, piping to Thermal Oxidizer, and piping for heat circulation during winter operations.	Incomplete	
6	Transfer benzene into MT302 with new emission controls	Incomplete	

### f) MT303 Tank Upgrades

Beyond the scope of work required to enclose tank MT303, there will be a regulatory tank inspection to inform any maintenance/repairs required on the tank. In addition, this tank will require a new benzene heater, pump and piping for winter operation. Without this equipment, the site can only have tank MT302 in operation as there is only one benzene tank heater currently installed at the site. The design, construction, and lead time for the installation of this equipment may extend this project until the end of 2025.

	Milestones	Status	Expected Completion Date
1	Develop Engineering design package and P&IDs. Complete Process Safety Hazard Analysis and reviews including design for winterization and maintenance.	Incomplete	December 31, 2025
2	Complete MOC and process safety reviews.	Incomplete	
3	Complete regulatory inspection and repairs.	Incomplete	
4	Install new equipment, weld close the side vents, install nitrogen blanketing system, PVRV, and piping for heat circulation during winter operations. Connect to thermal oxidizer.	Incomplete	
5	Fill tank with benzene	Incomplete	